Attachments

February

2021

Shire of YILGARN

"good country for hardy people"

Minutes

Ordinary Meeting of Council

17 December 2020

Table of Content

1. DECLARATION OF OPENING/ANNOUNCEMENT OF VISITORS

The Presiding Member declared the meeting open at 4pm

2. ANNOUNCEMENTS FROM THE PRESIDING MEMBER

Nil

3. ATTENDANCE

Presiding Member	Cr W Della Bosca	President
Members	Cr B Close	Deputy President
	Cr J Cobden	
	Cr G Guerini	
	Cr P Nolan	
	Cr L Rose	
	Cr S Shaw	
Council Officers	P Clarke	Chief Executive Officer
	C Watson	Executive Manager Corporate Services
	R Bosenberg	Executive Manager Infrastructure
	N Warren	Executive Manager Regulatory Services
	L Della Bosca	Minute Taker
Apologies:	Nil	
Observers:	Mrs. Kay Crafter, Acting Police Sargent Charlie Jenkins, Senior Police Constable Martin Reid. Mr. Joshua Thurlow and Mr. Aiden Mullan.	
Leave of Absence:	Nil	

4 PRESENTATIONS, PETITIONS, DEPUTATIONS

Mineral Resources Limited

Mr Joshua Thurlow and Mr Aiden Mullan attended Council and gave a presentation on Mineral Resources Limited activities in the Yilgarn.

Mr Thurlow began by informing Council of Mineral Resources Limited's (MRL) decision to peruse a different option for the Parkers Range Project Haul Road, which was originally based heavily on use of the Emu Fence Road (North and South) to Koolyanobbing. A further option is to haul from the mine onto the Emu Fence Road south of the Great Eastern Highway, then east on the Great Eastern Highway before turning onto the Mt Walton Road into Carina Mine site, from there the loads will be trained. In the longer term a private haul road to Koolyanobbing is being considered.

Mr Mullan gave an overview of the activities starting at the Parkers Range project early in January 2021 which include mobilisation to site, the upgrade of the detour alignment and the deviation construction which will take 4-6 weeks. Work on Emu Fence Road south of the Great Eastern Highway will also start with an estimated time line of 3 months to completion.

Mr Aiden Mullen then passed back over to Mr Thurlow who confirmed that approval from the Department of Water and Environmental Regulation had been received, for the transporting of the by-product, from the processing of Lithium Hydroxide, from the Kemerton Lithium plant to a disused pit in Koolyanobbing. Mr Thurlow acknowledged that the Appeal Convenor had been in touch with MRL regarding the Shire of Yilgarn's appeal against the transportation and storage of the Lithium Hydroxide in the Shire of Yilgarn and due process would be given. Other options for the use of the by-product are still being investigated. The options include a stabiliser for road material, a filtration product and a strengthening agent for cement. The Kemerton Lithium plant is expected to start production in April/May 2021 however most of the by-product is expected to be used for testing in relation to alternative use with some being stored onsite.

Mr. Thurlow thanked Council for their time and invited questions.

Cr Nolan enquired if the private haul road would run parallel to the Emu Fence Road?

Mr Thurlow confirmed that the proposed private haul road would run parallel to the Emu Fence road if it is a viable option.

Cr Nolan enquired if MRL had been crossing the Parkers Range Road in unlicensed vehicles, which is causing damage to the road?

Mr Thurlow confirmed that heavy vehicles had been crossing the Parkers Range Road and that any damage done to the road due to these actions will be fixed and paid for by MRL.

Cr Rose enquire if MRL intend to leave any road constructed in the Shire of Yilgarn in a well maintained state.

Mr Joshua Thurlow confirmed that any road built by MRL is designed to last for 20 years.

Peter Clarke, CEO, advised that within the written agreement between MRL and the Shire of Yilgarn there are requirements to construct the haulage roads to a standard that meets Main Roads WA RAV ratings and further, conditions are imposed on the amount that MRL must contribute to a Shire of Yilgarn Reserve Fund, via the amount of ore transported, for upkeep of the roads in the future and that the roads in question must be returned to Council to an acceptable standard at the end of the mine life.

Shire President, Cr Wayne Della Bosca, thanked Mr Thurlow and Mr Mullan for their time.

Mr Joshua Thurlow and Mr. Aiden Mullan left the meeting at 4.19pm

5. DECLARATION OF INTEREST

Cr Wayne Della Bosca declared an Impartiality Interest pursuant to Regulation 11 of the Local Government (Rules of Conduct) Regulations 2007 in agenda item 9.1.3- Local Roads and Community Infrastructure Program-Round 2 due to being a member of the Yilgarn Bowling Club.

Peter Clarke declared an Impartiality Interest pursuant to Regulation 11 of the Local Government (Rules of Conduct) Regulations 2007 in agenda item 9.1.3- Local Roads and Community Infrastructure Program-Round 2 due to being a member of the Yilgarn Bowling Club.

Robert Bosenberg declared an Impartiality Interest pursuant to Regulation 11 of the Local Government (Rules of Conduct) Regulation 2007 in agenda item 9.1.3 - Local Roads and Community Infrastructure Program-Round 2 due to being a member of the Yilgarn Bowling Club.

6. RESPONSE TO PREVIOUS PUBLIC QUESTIONS TAKEN ON NOTICE

Nil

6.1 PUBLIC QUESTION TIME

Mrs. Kay Crafter attended Public Question Time and posed the following question:

Question: I have worked in my office on Arcturus Street for 10 years and over this time the pumps at the Antares Street, Sewerage Pumping Station have frequently stopped working causing sewerage to overflow into the compensating dam with the smell emanating from this being absolutely putrid. Can the pumps be fixed this year please?

The Shire President deferred the above question to the Executive Manager Regulatory Services for an appropriate response.

Response: *The Executive Manager Regulatory Services, Mr Nic Warren, advised that the pump system is currently being addressed as the Shire is well aware of the problem and Council staff are working with Yilgarn Plumbing to rectify what they believe is a faulty valve which is causing the pumps to fail.*

Mr Warren indicated that he would keep Council and Mrs Crafter informed of the progress of the above works, but did indicate that systems such as these will be subject to breakdowns on occasions in the future however, not to the extent that is currently being experienced at this particular pumping station.

7. CONFIRMATION OF MINUTES

7.1 Ordinary Meeting of Council, Thursday 19 November 2020

179/2020

Moved Cr Guerini/Seconded Cr Close

That the minutes from the Ordinary Council Meeting held on 19 November 2020 be confirmed as a true record of proceedings

CARRIED (7/0)

7.2 Sub Regional Road Group (SRRG) meeting, Monday 12 October 2020

180/2020

Moved Cr Close/Seconded Cr Rose

That the minutes from the SRRG meeting held on the 12 October 2020 be received

CARRIED (7/0)

7.3 Great Eastern Country Zone (GECZ) meeting, Thursday 26 November 2020

181/2020

Moved Cr Close/Seconded Cr Guerini

That the minutes from the GECZ meeting held on the 26 November 2020 be received

CARRIED (7/0)

7.4 Local Emergency Management Committee (LEMC) meeting, Thursday 26 November 2020

182/2020

Moved Cr Close/Seconded Cr Guerini

That the minutes from the LEMC meeting held on the 26 November 2020 be received

CARRIED (7/0)

7.5 Wheatbelt East Organisation of Councils (WEROC) Annual General meeting and WEROC Board meeting held on Thursday 26 November

183/2020

Moved Cr Shaw/Seconded Cr Cobden

That the minutes from the WEROC Annual General meeting and the minutes from the WEROC Board meeting held on the 26 November 2020 be received

CARRIED (7/0)

7.6 Shire of Yilgarn Tourism Committee meeting, Monday 7 December 2020

Recommendation contained within the minutes for Council consideration

RECOMMENDATION TO COUNCIL
Moved K Crafter Seconded A Carnicelli;
That it be recommended to Council that the $30,000 identified in the 2020/2021 Budget for Town Entrance Statement Development be re-directed to the formulation of a Tourism Marketing Strategy, followed a website, strategy and social media proposal in order that tourism promotion and development for the district is undertaken in a structured method.

184/2020
Moved Cr Cobden/Seconded Cr Shaw
That the minutes from the Shire of Yilgarn Tourism meetings held on the 7 December 2020 be received and the recommendation within be adopted.

CARRIED BY ABSOLUTE MAJORITY (7/0)

8. DELEGATES' REPORTS

Cr Della Bosca announced the following:

- Attended the Central East Aged Care Alliance meeting on The 23 November 2020
- Attended the Southern Cross Aquatic Centre Pool Opening on the 28 November 2020
- Attended the Wheatbelt North East Sub Regional Road Group meeting on the 8 December 2020

Cr Close announced the following

- Attended the Great Eastern Country Zone meeting on the 26 November 2020
- Attended the Wheatbelt East Regional Organisation of Councils meetings on the 26 November 2020
- Attended the Local Emergency Management Committee meeting on the 26 November 2020
- Attended the Wheatbelt North East Sub Regional Road Group meeting on the 8 December 2020
- Attended the Intractable Waste Disposal Facility Community Liaison Committee meeting on the 8 December 2020

Cr Shaw announced the following

- Attended the Southern Cross Aquatic Centre Pool Opening on the 28 November 2020

Cr Cobden announced the following

- Attended the Southern Cross Aquatic Centre Pool Opening on the 28 November 2020
- Attended the Yilgarn Community Support Group Inc.Christmas Party on the 1 December 2020
- Attended the Shire of Yilgarn Tourism Committee meeting on the 7 December 2020
- Attended the Southern Cross District High School Presentation Evening 8 December 2020
- Attended the St Joseph's School Presentation Evening on the 9 December 2020
- Attended the Museum Christmas Party

Cr Rose announce the following:

- Attended the Southern Cross Aquatic Centre Pool Opening on the 28 November 2020
- Attended the Museum Christmas Party
- Attended the Moorine Rock Primary School Presentation Evening on the 12 December 2020

Cr Nolan announce the following

- Attended the Southern Cross Aquatic Centre Pool Opening on the 28 November 2020
- Attended the Intractable Waste Disposal Facility Community Liaison Committee meeting on the 8 December 2020
- Attended the AgCare meeting on the 14 December 2020

9. OFFICERS REPORTS

9.1 Officers Report – Chief Executive Officer

9.1.1 Risk Management Framework

File Reference	**1.1.12.3**
Disclosure of Interest	**Nil**
Voting Requirements	**Absolute Majority**
Attachments	**Risk Management Procedures & Risk Management Policy**

Purpose of Report

To present to Council for consideration and adoption Risk Management Procedures and Risk Management Policy**.**

Background

During the conduct of the 2019 Regulation 17 Review, the Consulting Accounting firm engaged to undertake the Review identified that the Shire of Yilgarn did not have an appropriate Risk Management Framework in place, which included the provision of Risk Management Procedures and associated Policy, with this Finding Rating identified as being significant.

Comment

Upon receipt of the Regulation 17 Review, staff have worked with Local Government Insurance Services (LGIS) to develop the above Procedures and Policy.

Future Agenda Reports prepared by Managers to Council will identify the risks as per the Measures of Consequence and Risk Matrix as identified in the Policy. See example as contained within this Agenda Item under Risk Implications.

Statutory Environment

2019 Regulation 17 Review.

Strategic Implications

Shire of Yilgarn Strategic Community Plan 2020-2030 – Civic Leadership Objectives – 4.1.2 Maintain a high level of corporate governance, responsibility and accountability.

Policy Implications

Subject to Council approval, The above Procedures and Policy will be included in Council's appropriate Manuals.

Financial Implications

Nil

Risk Implications

Risk Category	Description	Rating (Consequence x Likelihood	Mitigation Action
Health/People			
Financial Impact			
Service Interruption			
Compliance			
Reputational			
Property			
Environment			

Risk Matrix

Consequence / Likelihood		Insignificant	Minor	Moderate	Major	Catastrophic
		1	2	3	4	5
Almost Certain	5	Moderate (5)	High (10)	High (15)	Extreme (20)	Extreme (25)
Likely	4	Low (4)	Moderate (8)	High (12)	High (16)	Extreme (20)
Possible	3	Low (3)	Moderate (6)	Moderate (9)	High (12)	High (15)
Unlikely	2	Low (2)	Low (4)	Moderate (6)	Moderate (8)	High (10)
Rare	1	Low (1)	Low (2)	Low (3)	Low (4)	Moderate (5)

Officer Recommendation and Council Decision

185/2020
Moved Cr Nolan/Seconded Cr Shaw

That Council adopts the Risk Management Procedures and Risk Management Policy as presented by staff in order that it complies with recommendations arising from the Regulation 17 Review relating appropriate Risk Management frameworks being put in place.

CARRIED BY ABSOLUTE MAJORITY (7/0)

*Acting Police Sargent Charlie Jenkins left the meeting at 4.36pm

9.1 Reporting Officer – Chief Executive Officer

9.1.2 Covalent Lithium – Water Pipeline Submission

File Reference	**3.2.1.23**
Disclosure of Interest	**Nil**
Voting Requirements	**Simple Majority**
Attachments	**Submission Documentation**

Purpose of Report

To present to Council a formal submission provided by Covalent Lithium seeking approval for the construction of a water pipeline predominately within Shire of Yilgarn road reserves from Moorine Rock to Covalent's Mt. Holland Lithium Mining project.

Background

The Mount Holland Lithium Project is an integrated project consisting of a mine, concentrator and refinery to produce battery quality lithium hydroxide for the international market. It is a 50-50 joint venture (JV) between subsidiaries of Wesfarmers Limited (ASX:WES) and Sociedad Química y Minera de Chile S.A. (SQM:NYSE). Covalent is the manager for the JV and is responsible for the development and operation of the Project.

Centred on the Earl Grey hard-rock lithium deposit south of Southern Cross, the Project will produce between 45,000 and 50,000 tonnes per annum (tpa) of battery quality lithium hydroxide at the proposed Kwinana refinery. The refinery will receive approximately 490,000 tpa of lithium concentrate (spodumene) from the concentrator.

The Mt Holland Project involves the construction of a mine, concentrator and supporting non-process infrastructure including a village, power station, aerodrome and roads. These activities require access to a reliable supply of clean water that can be used in the process plant, for dust suppression, cleaning of mining equipment and the village. Volumes are expected to range from 1,800kL per day to 4,300kL per day, with the higher water volumes being required during summer.

After consideration of various alternatives, a new water pipeline from the Goldfields Pipeline to the Mt Holland mine site was determined to be the most commercially viable, reliable and environmentally sensitive solution.

Investigations into the feasibility of extracting and treating ground water sources in the vicinity of the Mt Holland site are cost prohibitive due to the hyper saline nature of the water. The processing of hyper saline water also generates a waste stream (removed salt and impurities) that must be further treated prior to disposal.

Comment

The CEO, EMI and EMRS have been liaising with Covalent Lithium representatives regarding the Water Pipeline and other logistical issues associated with the Mt. Holland Mine during the past 12 months. Council has been kept abreast of these discussions via monthly Briefing Session reports.

On Friday, 27 November 2020 the CEO, EMI and EMRS met with Covalent Lithium's Mt. Holland Mine Project Manager and Contractors associated with the construction of the pipeline, to discuss the final logistical issues prior to providing this formal submission to Council for approval. Throughout the above planning stages the EMI has continually objected to the pipeline being located within the roads running surface and it is noted in 4.2 of the Submission it states that this may be the case, as is highlighted below:-

"The majority of the pipeline will be constructed with a minimum of 1.5m between the edge of the road and the centre of the pipeline. Where this is not possible due to existing constraints i.e. TECs, the route will be diverted only to the extent reasonably necessary. In these locations the alternative route will be selected by assessing the viability of the following options in order of precedence:

1. *Divert the pipeline around the constraint i.e. behind the tree, by increasing the distance from the edge of the road. The pipeline remains underground.*
2. *Divert the pipeline around the constraint but above ground. The distance from the edge of the road will increase. This option will be considered where there are clearing constraints and/or root zones that need to be protected.*
3. *Move the pipeline closer to the road to the extent necessary to avoid the obstacle.* ***In some instances this may result in the pipeline being located in the shoulder or running surface****. The exact location will vary depending on the location of the obstacle however typically this will not exceed three meters from the edge of the obstruction".*

The EMI is of the opinion that if the pipeline is placed within the roads running surface, it will affect the structural integrity of the surface and contribute to ongoing maintenance issues.

Statutory Environment

Nil

Strategic Implications

Shire of Yilgarn Strategic Community Plan 2020-2030 – Economic - Safety and of transport networks are maintained and improved.

Policy Implications

Nil

Financial Implications

Nil.

Risk Implications

Risk Category	Description	Rating (Consequence x Likelihood	Mitigation Action
Health/People	Ensure that all safety aspects associated with trenching works	Moderate (6)	Contractors to prepare Traffic Management Plan
Financial Impact	Nil	Nil	Nil
Service Interruption	Ensure that no road closures (other than single) occurs	Low (4)	Traffic Management Plan to address
Compliance	Nil	Nil	Nil
Reputational	Nil	Nil	Nil
Property	Shire Road Reserve	Moderate (9)	Integrity of road running surface not impacted
Environment	Verge Clearing	Moderate (6)	Contractors to meet all Clearing Permit Requirements

Risk Matrix

Consequence / Likelihood		Insignificant	Minor	Moderate	Major	Catastrophic
		1	2	3	4	5
Almost Certain	5	Moderate (5)	High (10)	High (15)	Extreme (20)	Extreme (25)
Likely	4	Low (4)	Moderate (8)	High (12)	High (16)	Extreme (20)
Possible	3	Low (3)	Moderate (6)	Moderate (9)	High (12)	High (15)
Unlikely	2	Low (2)	Low (4)	Moderate (6)	Moderate (8)	High (10)
Rare	1	Low (1)	Low (2)	Low (3)	Low (4)	Moderate (5)

Officer Recommendation and Council Decision

186/2020
Moved Cr Close/Seconded Cr Nolan

That Council approves of Covalent Lithium constructing a pipeline, both underground and above ground, subject to vegetation conditions and granite outcrops, on Shire of Yilgarn Road Reserves (Granich Road, Stubbs Road, Parkers Range Road, Armanasco Road, Southern Cross South Road, Merenda North Road, King Ingram Road and Marvel Loch-Forrestania Road) for the supply of potable water to Covalent's Mt Holland Project subject to the following:-

1. ***That under no circumstances is the pipeline to be laid within the running surface of the road pavements (it is considered that the road pavement area is from gravel shoulder to gravel shoulder, this is to be identified prior to commencement of works);***
2. ***That Traffic Management Plans be presented to the Executive Manager Infrastructure for approval prior to any work commencing;***
3. ***During the construction period, whether night time or during daylight hours, open trenches, up to a maximum of two (2) kms, must be sufficiently delineated to alert motorists of the exposed trenches.***
4. ***During the construction period a suitable dust suppressant (not saltwater) must be applied to gravel carriageway adjacent to work areas***
5. ***Pipeline crossing on bitumen roads must be horizontally drilled, not open trenching***
6. ***Open trenching is allowed on gravel road intersection crossings only subject to the following:***
    a) ***All works to be carried out during daylight hours***
    b) ***No open trenching to be left overnight on carriageways, all trenching across carriageway (at intersections) must be backfilled compacted and left in a safe trafficable state***
    c) ***Detour roads/tracks that are required while trenching across carriageways, must have a minimum five (5)meters trafficable width***
    d) ***All such detours must have appropriate traffic management plans***
7. ***Following completion of ten (10) kilometres sections of pipelaying, backfilling and reinstatements of trenches, Covalent representative and Councils Executive Manager Infrastructure carry out an inspection of completed re-instatement works to identify any short fallings of re-instatement works, any identified areas that need rectifying must be completed immediately***

CARRIED (7/0)

9.1 Officers Report – Chief Executive Officer

9.1.3 Local Roads & Community Infrastructure Program – Round 2

File Reference	**1.6.26.33**
Disclosure of Interest	**CEO Member of Yilgarn Bowling Club** **EMI Member of Yilgarn Bowling Club**
Voting Requirements	**Absolute Majority**
Attachments	**Nil**

Purpose of Report

To present to Council potential projects under the Australian Governments Round 2 of the Local Roads and Community Infrastructure (LRCI) Funding Program as part of the Government's COVID-19 stimulus package to local governments .

Background

On 30 October 2020 the Hon. Michael McCormack MP, Deputy Prime Minister and Minister for Infrastructure, Transport and Regional Development and the Hon. Mark Coulton, Minister for Regional Health, Regional Communications and Local Government forwarded the following email addressed to the Shire President:-

"We are writing to you following the 2020-21 Budget, where we have again demonstrated our commitment to partner with local governments as they play a critical role as part of the national recovery from the COVID-19 pandemic, delivering local jobs, through local projects.

As the closest tier of government to the people it serves, local governments remain an essential support for communities across Australia, helping them through this downturn and planning for the recovery.

Under the initial funding available through the LRCI Program, local government areas such as yours have identified more than 2,200 projects, providing opportunities and support for local jobs, firms and procurement in all areas of the nation. The LRCI Program Extension will continue to assist local governments to deliver local road and community infrastructure projects, as well as create local job opportunities particularly where employment in other sectors have been negatively impacted.

We encourage you to identify projects to maximise the opportunity for a range of workers to be retained, redeployed and employed to deliver ready to roll-out projects that provide economic stimulus and benefits to communities.

Under the LRCI Program Extension, Shire of Yilgarn will receive an additional funding allocation of $659,586. This funding will be available from 1 January 2021, with the Program being extended until the end of 2021.

Program Guidelines and Grant Agreements are currently being drafted and will be provided in the coming weeks. In the meantime, we encourage you to consider projects you may wish to nominate for funding under the Program Extension.

We look forward to continuing to work with you to deliver priority local road and community infrastructure projects".

Comment

Councillors were advised of the additional funding at the November 2020 Briefing Session and a list of projects, including those that did not prioritise highly enough in the first round of funding, were presented for consideration.

The following Projects are those that were listed at the Briefing Session, excluding Projects already approved under Round 1.

Project	Amount
Footpath – Spica Street (Centaur to Phoenix Streets)	$60,000
Electric Vehicle Charger	
All Ability Playground	
New Lighting Tower – Recreation Ground	$50,000
New Synthetic Bowling Green Surface ($250,000 Project with $30,000 contribution from Bowling Club)	$220,000
Interactive Information Signage	$80,000
Tourism Townsite Entrance Signage	$89,586
Mobile Phone Tower	
Upgrade Sections Guerini/Panizza Road	
Nunn Road Culvert Upgrade	
Newland and Garbin Road Upgrade	
Sandalwood Road Upgrade	
Audio/Visual System Recreation Complex	$30,000
Yilgarn Recreation Complex - Generator	$20,000
Outdoor Netball Courts Upgrade	
Constellation Park – Perimeter Fencing	$30,000
Constellation Park – Additional Rotunda/Shade Shelter/Seating	$60,000
Caravan Park - Generator	$20,000
Lake Polaris Beautification	
	$659,586
	$659,586
	$0

It should be noted that the funding does not have to be expended on the above projects until 31 December 2021.

Policy Implications

Nil

Statutory Environment

Australian Government Guidelines in respect to COVID-19 Local Roads and Community Infrastructure Program.

Strategic Implications

Shire of Yilgarn Strategic Community Plan 2020-2030 – Civic Leadership – Maintain a high level of corporate governance, responsibility and accountability.

Financial Implications

Nil impact upon Council's Budget as projects fully funded by the Australian Government under the LRCI Program.

Risk Implications

Risk Category	Description	Rating (Consequence x Likelihood	Mitigation Action
Health/People	Projects benefit residents of the district	Moderate (6)	Nil
Financial Impact	Nil	Nil	Nil
Service Interruption	Nil	Nil	Nil
Compliance	Australian Government's LRCI Funding Program	Low (4)	Requirement to provide Progress Reports to Funding Provider
Reputational	Nil	Nil	Nil
Property	Shire community Infrastructure upgrades	Moderate (8)	Insurance Premiums associated with upgrades
Environment	Nil	Nil	Nil

Risk Matrix						
Consequence / Likelihood		Insignificant	Minor	Moderate	Major	Catastrophic
		1	2	3	4	5
Almost Certain	5	Moderate (5)	High (10)	High (15)	Extreme (20)	Extreme (25)
Likely	4	Low (4)	Moderate (8)	High (12)	High (16)	Extreme (20)
Possible	3	Low (3)	Moderate (6)	Moderate (9)	High (12)	High (15)
Unlikely	2	Low (2)	Low (4)	Moderate (6)	Moderate (8)	High (10)
Rare	1	Low (1)	Low (2)	Low (3)	Low (4)	Moderate (5)

Officer Recommendation

That Council submits the following projects to the Australian Government's Department of Infrastructure, Transport, Regional Development and Communications for approval under the Local Roads and Community Infrastructure Round 2 Program:-

1.	*Footpath – Spica Street (Centaur to Phoenix Streets)*	*$ 60,000*
2.	*New Lighting Tower – Recreation Ground*	*$ 65,000*
3.	*New Synthetic Bowling Green ($250,000 Project with $30,000 Contribution from Yilgarn Bowling Club)*	*$220,000*
4.	*Interactive Information Signage*	*$ 80,000*
5.	*Tourism Townsite Entrance Signage*	*$ 74,586*
6.	*Audio/Visual System Recreation Complex*	*$ 30,000*
7.	*Yilgarn Recreation Complex – Generator Evacuation Centre*	*$ 20,000*
8.	*Constellation Park Perimeter Fencing*	*$ 30,000*
9.	*Constellation Park – Additional Rotunda/Shade Shelter/Seating*	*$ 60,000*
10.	*Caravan Park – Generator*	*$ 20,000*
	TOTAL	*$659,586*

Council Decision

187/2020
Moved Cr Close Seconded Cr Shaw

That the agenda item be re-presented at the February 2021 Council meeting in order for the presented projects to be considered further.

CARRIED (7/0)

REASON FOR ALTERATION TO RECOMMENDATION

Following the advice from the CEO that Work Schedules relating to specific projects under the Local Roads and Community Infrastructure Program Additional Funding Allocation did not have to be submitted until June 2021, it was considered appropriate to defer a decision/commitment to projects at this time to allow for further investigation by Council staff regarding more accurate costings associated with the projects and to consider other potential projects that were listed within the table presented.

9.2 Reporting Officer– Executive Manager Corporate Services

9.2.1 Financial Reports

File Reference	**8.2.3.2**
Disclosure of Interest	**Nil**
Voting Requirements	**Simple Majority**
Attachments	**Financial Reports**

Purpose of Report

To consider the Financial Reports

Background

Enclosed for Council's information are various financial reports that illustrate the progressive position of Council financially on a month-by-month basis.

The following reports are attached and have been prepared as at the 30 November 2020.

- Rates Receipt Statement
- Statement of Investments
- Monthly Statement of Financial Activity
- Own Source Revenue Ratio

Councillors will be aware that it is normal practice for all financial reports to be indicative of Council's current Financial Position as at the end of each month.

Comment

Nil

Statutory Environment

Local Government (Financial Management) Regulations 1996 Regulation 34(i)(a) and Regulation 17.

Strategic Implications

Nil

Policy Implications

Nil

Financial Implications

Nil

Officer Recommendation and Council Decision

188/2020
Moved Cr Rose/Seconded Cr Cobden

That Council endorse the various Financial Reports as presented for the period ending 30 November 2020

CARRIED (7/0)

9.2 Reporting Officer– Executive Manager Corporate Services

9.2.2 Accounts for Payment

File Reference	**8.2.1.2**
Disclosure of Interest	**Nil**
Voting Requirements	**Simple Majority**
Attachments	**Accounts for Payment**

Purpose of Report

To consider the Accounts for Payment

Background

Municipal Fund – Cheque Numbers 40967 to 40977 totalling $5714.94 Municipal Fund- EFT Numbers 10718 to 10835 totalling $352,147.02 Municipal Fund – Cheque Numbers 1672 to 1679 totalling $190,812.15, Municipal Fund Direct Debit Numbers 15217.1 to 15217.12 totalling $19,934.99, Trust Fund – Cheque Numbers 6260 to 6262 (DPI Licensing), totalling $27,039.15, Trust Fund - Cheque Numbers 402546 to 402550, totalling $153,647.31 are presented for endorsement as per the submitted list.

Comment

Nil

Statutory Environment

Sections 5.42 and 5.44 of the Local Government Act 1995 and Local Government (Financial Management) Regulations 1996, Regulation No 12 and 13

Strategic Implications

Nil

Policy Implications

Council has provided delegation to the Chief Executive Officer to make payments from the Shire of Yilgarn Municipal, Trust or other Fund.

Financial Implications

Drawdown of Bank funds

Officer Recommendation and Council Decision

189/2020
Moved Cr Close/Seconded Cr Cobden

Municipal Fund – Cheque Numbers 40966 to 40977 totalling $5714.94 Municipal Fund-EFT Numbers 10718 to 10835 totalling $352,147.02 Municipal Fund – Cheque Numbers 1672 to 1679 totalling $190,812.15, Municipal Fund Direct Debit Numbers 15217.1 to 15217.12 totalling $19,934.99, Trust Fund – Cheque Numbers 6260 to 6262 (DPI Licensing), totalling $27,039.15, Trust Fund - Cheque Numbers 402546 to 402550, totalling $153,647.31 are presented for endorsement as per the submitted list.

CARRIED (7/0)

9.2 Reporting Officer – Executive Manager Corporate Services

9.2.3 Council Support for Officer Training

File Reference	**Employee File**
Disclosure of Interest	**Nil**
Voting Requirements	**Simple Majority**
Attachments	**Nil**

Purpose of Report

Council is requested to consider the financial support for the further education of Council's Administrative Services Officer (ASO).

Background

Councils ASO has expressed an interest in undertaking a Diploma of Community Development course offered by the North Metropolitan TAFE. This course commences in early 2021 and has a duration of 12 months if studied part time. Dependent upon prior learning / experience the cost of the course is expected to be within the range of $3,500 to $5,000.

Comment

Mrs Jodie Karra, Councils ASO, is currently required to undertake much of the Community Development functions of Council, this includes annual projects such as Australia Day and ANZAC Day events and seniors' luncheons as well as ad-hoc events offered by Country Arts WA and other promoters.

While Community Development is not Mrs Karra's primary duty, it forms a significant part of her employment. With this in mind, Mrs Karra has expressed a desire to enhance her skills by undertaking formal training that is relevant to her position within Council.

It will be proposed that Council offer to pay 50% of the cost of the Diploma of Community Development with Mrs Karra either directly financing the remainder or by entering into a suitable salary sacrifice agreement. It will also be proposed that if Mrs Karra withdraws from the diploma course prior to completion, then the full cost will be recovered.

Statutory Environment

Nil

Strategic Implications

Nil

Policy Implications

Nil

Financial Implications

Councils 2020/2021 budget has an inclusion of $35,000 for Training and Conferences for Administration staff of which $12,670 has been utilised.

Officer Recommendation

That Council

1. ***agrees to the payment of course fees associated with a Diploma of Community Development offered by the North Metropolitan TAFE, to be undertaken by Councils Administrative Services Officer;***
2. ***offer the Administrative Services Officer a suitable salary sacrifice agreement for the value of 50% of the above-mentioned course fees; and***
3. ***recover the full cost of the above course fees should the Administrative Services Officer not complete the qualification.***

Council Decision

189/2020
Moved Cr Nolan/Seconded Cr Guerini

That Council

1. ***agrees to the payment of course fees associated with a Diploma of Community Development offered by the North Metropolitan TAFE, to be undertaken by Councils Administrative Services Officer;***
2. ***offer the Administrative Services Officer a suitable salary sacrifice agreement for the value of 50% of the above-mentioned course fees; and***
3. ***recover the full cost of the above course fees should the Administrative Services Officer not complete the qualification***
4. ***that Council's management team develop a Policy in respect to further education/training of employees that specifically addresses financial commitments/contributions by Council and the employee. Such a Policy would then allow management to act on such requests immediately.***

CARRIED (7/0)

REASON FOR ALTERATION TO RECOMMENDATION
It was considered by Council that a Policy on the education and training of employees which specifically detailed financial commitments and contributions by both Council and the employee would make the process simpler for all concerned and allow management to approve applications by staff in accordance with the Policy directions and negate the need for matters such as this to be presented to Council.

*Acting Police Sargent Charlie Jenkins re-joined the meeting at 4.44pm

9.2 Reporting Officer– Executive Manager Corporate Services

9.2.4 2019/2020 Audit and Management Report

File Reference	**8.2.3.3**
Disclosure of Interest	**Nil**
Voting Requirements	**Absolute Majority**
Attachments	**Attachment 1 – 2019/2020 Annual Report including the Annual Financial Report incorporating the Independent Auditor's Report.**

Purpose of Report

Council is requested to accept the Annual Report incorporating the Annual Financial Report and Independent Auditor's Report for the year ending 2019/2020.

Background

The Local Government Act 1995 requires Council to prepare and accept an Annual Report for each Financial Year by the 31 December of the year after that financial year. If the Auditor's report is not available in time for the Annual Report to be accepted by 31 December after that financial year, the annual report is to be accepted by the local government no later than 2 months after the Auditor's report becomes available.

Comment

The Annual Report for the financial year ending 30 June 2020 has been provided to Councillors for their consideration and acceptance.

The Audited Financial Statements and the Independent Audit Report are also included in the Annual Report. Following the acceptance of the Annual Report, Council is required to give public notice of the availability of the Annual Report as soon as practicable.

It is also a requirement that a General Meeting of Electors is to be held on a day set by Council not more than 56 days after acceptance of the Annual Report, 14 days local public notice of this meeting is to be given.

Statutory Environment

Local Government Act 1995 –

5.53. Annual reports

(1) The local government is to prepare an annual report for each financial year.

(2) The annual report is to contain —

(a) a report from the mayor or president; and

(b) a report from the CEO; and

[(c), (d) deleted]

(e) an overview of the plan for the future of the district made in accordance with section 5.56, including major initiatives that are proposed to commence or to continue in the next financial year; and

(f) the financial report for the financial year; and

(g) such information as may be prescribed in relation to the payments made to employees; and

(h) the auditor's report prepared under section 7.9(1) or 7.12AD(1) for the financial year; and

(ha) a matter on which a report must be made under section 29(2) of the *Disability Services Act 1993*; and

(hb) details of entries made under section 5.121 during the financial year in the register of complaints, including —

(i) the number of complaints recorded in the register of complaints; and

(ii) how the recorded complaints were dealt with; and

(iii) any other details that the regulations may require;

and

(i) such other information as may be prescribed.

[Section 5.53 amended by No. 44 of 1999 s. 28(3); No. 49 of 2004 s. 42(4) and (5); No. 1 of 2007 s. 6; No. 5 of 2017 s. 7(1).]

5.54. Acceptance of annual reports

(1) Subject to subsection (2), the annual report for a financial year is to be accepted* by the local government no later than 31 December after that financial year.

** Absolute majority required.*

(2) If the auditor's report is not available in time for the annual report for a financial year to be accepted by 31 December after that financial year, the annual report is to be accepted by the local government no later than 2 months after the auditor's report becomes available.

[Section 5.54 amended by No. 49 of 2004 s. 49.]

5.55. Notice of annual reports

The CEO is to give local public notice of the availability of the annual report as soon as practicable after the report has been accepted by the local government.

5.55A. Publication of annual reports

The CEO is to publish the annual report on the local government's official website within 14 days after the report has been accepted by the local government.

[Section 5.55A inserted by No. 5 of 2017 s. 8.]

The recommendation that follows is consistent with the legislative requirements.

Strategic Implications

There are no strategic implications as a result of this report.

Policy Implications

There are no policy implications as a result of this report.

Financial Implications

There are no financial implications as a result of this report.

Committee Recommendation and Council Decision

190/2020
Moved Cr Shaw/Seconded Cr Close

That Council:

1. ***accept the Annual Report for 2019/2020 including the Audited Financial Report and Auditor's Audit Report for period ended 30 June 2020; and***

2. ***conducts the 2019/20 Annual Meeting of Electors in the Shire of Yilgarn Council Chambers on Tuesday 9th February 2021 commencing at 6.00 pm.***

CARRIED BY ABSOLUTE MAJORITY (7/0)

9.4 Reporting Officer– Executive Manager Regulatory Services

9.4.1 Covalent Lithium – Referral of a Works Approval – Earl Grey Lithium Project

File Reference	**7.2.1.21**
Disclosure of Interest	**Nil**
Voting Requirements	**Simple Majority**
Attachments	**Correspondence from Department of Water and Environmental Regulation**

Purpose of Report

To consider a response to the Department of Water and Environmental Regulation, regarding a works approval for the Covalent Lithium Earl Grey Lithium Project.

Background

The Shire is in receipt of correspondence from the Department of Water and Environmental Regulation (DWER), relating to a submission by Covalent Lithium Pty Ltd, for a works approval under Division 3 Part V of the Environmental Protection Act 1986 (EP Act) for the Earl Grey Lithium Project, on mining tenements M77/1066 and G77/129. The application is in relation to the construction of a processing plant under Category 5 – Processing or beneficiation of metallic or non-metallic ore.

Comment

The following documents are attached for Councillors perusal:

- W6460 – Invitation to Comments;
- W6460 – WA Application Form; &
- W6460 Supporting Documentation.

Key points from the submission are as follows:

- Proposed construction period : Q1 2021 to December 2021;
- Proposed Environmental Commissioning Period: August 2022 to May 2023;
- Design Capacity: 2 Mtpa of ROM;
- The concentrator requires a total disturbance footprint of 96.30 ha, most of which is located on previously cleared/disturbed land. There will be a requirement for clearing of ruderal regrowth.
- Possible discharges or emissions include:
    - Gaseous and particulate emissions;
    - Wastewater discharges;
    - Noise;
    - Contaminated or potentially contaminated stormwater;
    - Dust;
    - Waste and leachate;
    - Electromagnetic radiation.

Statutory Environment

Environmental Protection Act 1986

Strategic Implications

Goal
A prosperous future for our community.

Outcome
Businesses in the Shire remain competitive and viable.

Strategy
Continue to provide an efficient and effective approval process.

Policy Implications

Nil

Financial Implications

Nil

Officer Recommendation and Council Decision

191/2020
Moved Cr Nolan/Seconded Cr Guerini

Council endorse the following response to the Department of Water and Environmental Regulation:

In regards to the application from Covalent Lithium Pty Ltd for a works approval under Division 3 Part V of the Environmental Protection Act 1986 (EP Act) for the Earl Grey Lithium Project, on mining tenements M77/1066 and G77/129 for the construction of a processing plant under Category 5 – Processing or beneficiation of metallic or non-metallic ore; the Shire of Yilgarn have no objections to the proposal.

CARRIED (7/0)

9.4 Reporting Officer– Executive Manager Regulatory Services

9.4.2 Miscellaneous Mining Licence 77/320 – Request for Comment

File Reference	**7.2.1.21**
Disclosure of Interest	**Nil**
Voting Requirements	**Simple Majority**
Attachments	**- Aerial Map**
	- Tenure Map

Purpose of Report

To consider a response to the Department of Planning, Lands and Heritage – Lands Division, regarding a Miscellaneous Mining Licence 77/320 at Moorine Rock for Ardea Exploration Pty Ltd.

Background

The Shire has received email correspondence from the Department of Planning, Lands and Heritage – Lands Division, which states:

The Department of Planning, Lands and Heritage – Lands Division (DPLH) is considering a request from the Department of Mines, Industry Regulation and Safety (DMIRS) to approve Miscellaneous Mining Licence 77/320 to Ardea Exploration Pty Ltd. The licence area is shown on the attached Aerial and Tenure maps and is over the following crown land parcels:

- *Unallocated Crown Land (UCL) Polygon Number 969297*
- *Reserve 20911 (Shire of Yilgarn managed reserve for "Sanitary and Rubbish Disposal Site").*
- *Reserve 2893 (Water Corporation managed reserve for "Water Catchment & Conservation of Flora and Fauna").*
- *Great Eastern Highway*

Could Shire please provide any comments it may have in regards to this proposal over the above UCL Land parcel?

It should be noted that Lands' approval to DMIRS will be subject to them liaising with the responsible agencies the remaining land parcels being Reserve 20911 (the Shire), Reserve 2893 (Water Corporation) and Great Eastern Highway (Main Roads).

Comment

Whilst the correspondence did not advise what the miscellaneous mining licence would be utilised for, based on the Aerial Map and current discussions with Covalent Lithium, it is for the proposed water pipeline to the Covalent Lithium Earl Grey site.

It should be noted, DPLH's approval, if granted, will be conditional on DMIRS liaising with relevant landowners, of which the Shire is one, prior to the licence being issued.

Statutory Environment

Environmental Protection Act 1986

Strategic Implications

Goal
A prosperous future for our community.

Outcome
Businesses in the Shire remain competitive and viable.

Strategy
Continue to provide an efficient and effective approval process.

Policy Implications

Nil

Financial Implications

Nil

Officer Recommendation and Council Decision

192/2020
Moved Cr Cobden/Seconded Cr Close

Council endorse the following response to the Department of Planning, Lands and Heritage – Lands Division:

The Shire of Yilgarn have no objection to the proposed Miscellaneous Mining Licence 77/320 at Moorine Rock for Ardea Exploration Pty Ltd.

CARRIED (7/0)

Department of **Planning, Lands and Heritage**

GOVERNMENT OF WESTERN AUSTRALIA

Legend

- Townsites
- Cadastre (View 1)
- Water Mains
  - Existing
- Roads
  - National Highway
  - Minor

Miscellaneous Licence 77/320

DPLH BUSINESS USE ONLY

Internal Spatial Viewer

N

0 0.23 0.5 Kilometres

1: 9,028

at A4

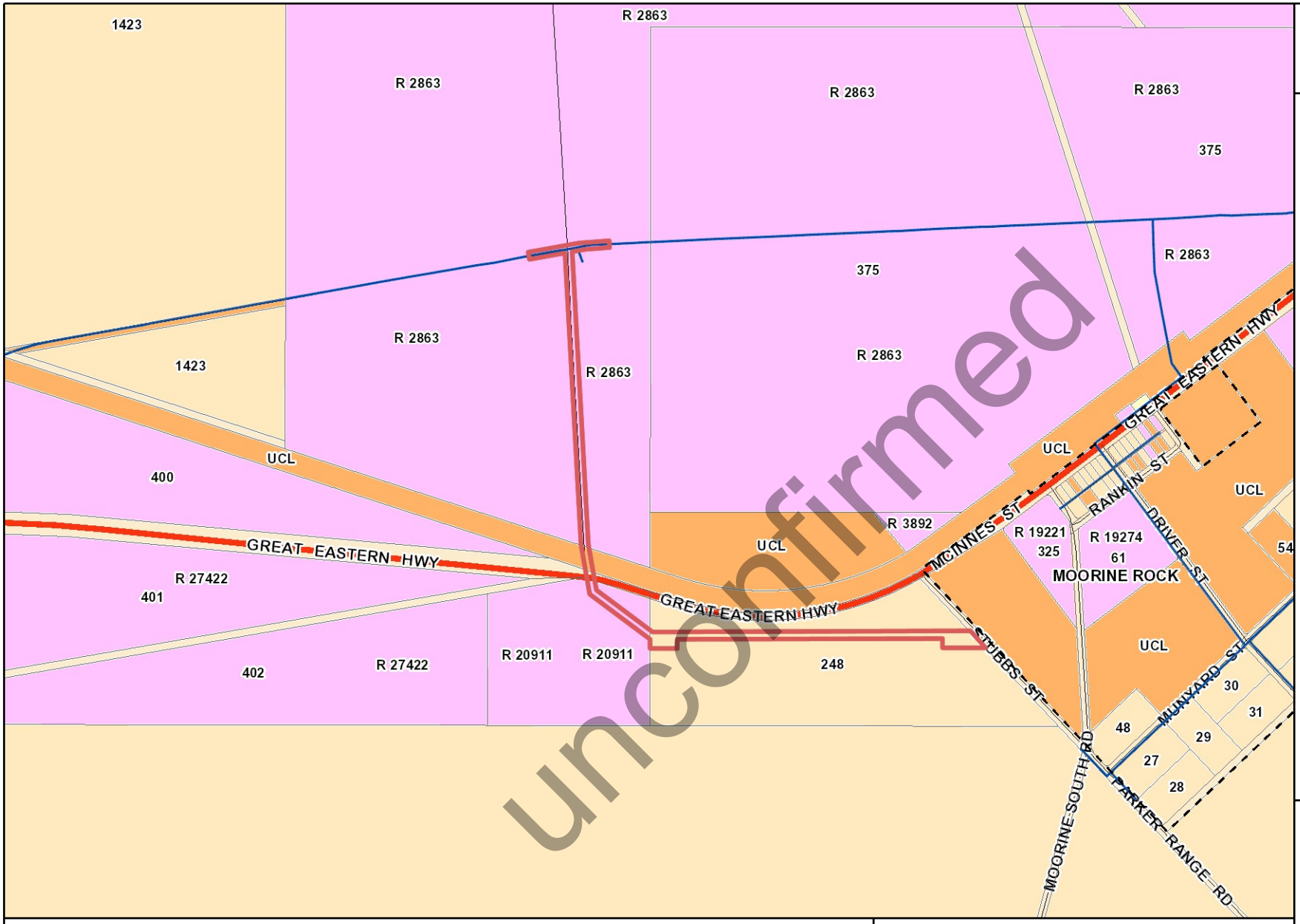
Projection: WGS 1984 Web Mercator Auxiliary Sphere

Notes:

The data that appears on the map may be out of date, not intended to be used at the scale displayed, or subject to license agreements. The map should only be used in matters related to Department of Planning, Lands and Heritage business.

Map was produced using DPLH's InQuiry.

Date produced: 06-Oct-2020



Department of **Planning, Lands and Heritage**

GOVERNMENT OF WESTERN AUSTRALIA

Legend

- Townsites
- Cadastre (View 1)

Water Mains

- Existing

Roads

- National Highway
- Minor

Land Tenure Small Scale 256K

- Crown Allotment (Type 2)
- Lot on Survey (Type 1)
- Unallocated Crown Land
- Reserve

Land Tenure Small Scale 64K

- Crown Allotment (Type 2)
- Lot on Survey (Type 1)
- Public Road
- Unallocated Crown Land
- Reserve

Land Tenure Small Scale 16K

- Crown Allotment (Type 2)
- Lot on Survey (Type 1)
- Public Road
- Unallocated Crown Land
- Reserve

Land Tenure Small Scale 4K

Notes:

The data that appears on the map may be out of date, not intended to be used at the scale displayed, or subject to license agreements. The map should only be used in matters related to Department of Planning, Lands and Heritage business.

Map was produced using DPLH's InQuiry.

Miscellaneous Licence 77/320

DPLH BUSINESS USE ONLY

Internal Spatial Viewer

N

0 0.46 0.9 Kilometres

1: 18,056 at A4

Projection: WGS 1984 Web Mercator Auxiliary Sphere

Date produced: 06-Oct-2020

9.4 Reporting Officer– Executive Manager Regulatory Services

9.4.3 Development Application – 13 Taurus Street, Southern Cross – Shed Extension

File Reference	**3.1.3.6**
Disclosure of Interest	**Nil**
Voting Requirements	**Simple Majority**
Attachments	**Nil**

Purpose of Report

To consider a Development Application seeking a reduced setback and increased floor area for a residential shed at 13 Taurus Street, Southern Cross.

Background

The Shire is in receipt of a Development Application, which seeks approval to install a 7.5 by 3.7 metre extension to the existing shed at the rear of 13 Taurus Street, Southern Cross. The proposed extension is to be built up to the rear boundary line

The existing shed is a 9 by 7.5 metre build, with a 3 metre pitch, the extension will be installed to suit the existing profile, height and width of the existing shed. The total floor area of the shed and extension will be 95.25m^2.

The property is zoned "residential" under the Shire of Yilgarn Town Planning Scheme 2 (TPS2), with the zoning described as:

> *The Residential Zone is to be used primarily for single houses on separate lots. Other uses, listed in Table 1, may be permitted at the discretion of Council if they are considered to be an integral part of the residential environment and where Council is satisfied that they will benefit the community and not result in being a nuisance.*

Clause 4.2 of the TPS2 states:

> *Any development that is permitted under the provisions of Part II and Part III of this Scheme shall conform to the requirements for that use as specified in Table 2 - Development Table, or in the Residential Planning Codes for residential development.*

Clause 6.1.3 of the TPS2 states:

> *Notwithstanding that a single house does not require the prior approval of the Council pursuant to the Scheme, any person who wishes Council to vary any particular provision of the R-Codes relating to the erection of a single house shall, at the time of lodging an application for a building licence or earlier, apply in writing to Council, seeking Council's approval for the variation.*

The Council may approve the variation with or without conditions or may refuse to approve the variation. The Council shall, before granting its approval, satisfy itself that:

a) the variation requested is one which the Council has the power to approve; and
b) approval of that variation would not compromise the objectives of the R-Codes.

The subject property is zoned R10, with the Residential Design Codes (R-Codes) design principles for outbuildings on properties zoned R40 or less, written as follows:

Outbuildings must not detract from the streetscape or the visual amenity of residents or neighbouring properties, and is deemed to comply whereby the outbuildings:

i. are not attached to a dwelling;
ii. are non-habitable;
iii. collectively do not exceed 60m2 in area or 10 per cent in aggregate of the site area, whichever is the lesser;
iv. do not exceed a wall height of 2.4m;
v. do not exceed ridge height of 4.2m;
vi. are not within the primary or secondary street setback area;
vii. do not reduce the amount of open space required in Table 1; and
viii. are set back in accordance with Tables 2a and 2b.

Table 2A and 2B require a boundary setback of 1 metre, for a 3 metre high wall with no major openings that is less than 9 metres in length.

Comment

The applicants wish to reduce the setback, such that the shed form part of the boundary fence. As per the above, Council have discretion to approve the variation, on the provision it does not compromise the objectives of the R-Codes.

In assessing the proposal (layout below), the proposed addition:

i. will not be attached to the existing dwelling;
ii. is not habitable;
iii. Council Policy 4.6 permits a maximum outbuilding size of 90m^2, an increase to the maximum floor area of 5.25m^2 is sought. This increase is deemed as insignificant, with only a 6% increase required from the existing maximum;
iv. Council Policy 4.6 permits a maximum wall height of 3m, of which the proposed is 3m;
v. Council Policy 4.6 permits a maximum ridge height of 3.6m, of which the proposed is 3.6m;
vi. Location is not within a primary or secondary street setback;
vii. Does not reduce the amount of open space by less than 60%; and
viii. Whilst the setback is less than that required under Table 1 of the R-Codes, the affected boundary adjoins the right-of-way and does not affect any adjoining neighbours.
There is already a precedence of premises utilising outbuildings as the boundary along this right-of-way, being 58 and 60 Altair Street.

Council has the discretion to approve the reduced boundary setback, allowing the shed addition to form the rear boundary along the right of way, and an increase in the maximum floor area to 95.25m^2.

It is the reporting officers' opinion that approving the proposal will not unduly affect the design principles of the R-Codes, nor will it unduly affect and adjoining neighbours.

Statutory Environment

Planning and Development Act 2005

Strategic Implications

Nil

Policy Implications

Council Policy Manual – 4.6 Outbuildings in Residential and Townsite Zoned Areas

Financial Implications

Planning and building application fee revenue

Officer Recommendation and Council Decision

193/2020
Moved Cr Cobden/Seconded Cr Rose

Council endorse the proposed shed extension at 13 Taurus Street, Southern Cross, allowing a 3.7 by 7.5 metre extension to the existing shed, which will maintain the same profile as the existing shed.

In approving of the proposal, Council endorse the following variations to the Residential Design Codes:

- ***Required boundary setback of 1 metre to be reduced to a nil setback, allowing the shed wall to form the boundary; and***
- ***Increase the maximum shed size of 90m^2, to allow a floor area of 95.25m^2.***

CARRIED (7/0)

9.4 Reporting Officer– Executive Manager Regulatory Services

9.4.4 Disposal of Lots 5 & 6, 50 Antares Street, Southern Cross

File Reference	**3.1.3.1**
Disclosure of Interest	**Nil**
Voting Requirements	**Simple majority**
Attachments	**Valuations**

Purpose of Report

To consider the disposal of Lots 5 & 6, 50 Antares Street, Southern Cross to the Central East Aged Care Alliance (CEACA).

Background

Since the inception of CEACA, and following its success in obtaining Government funding to construct the 71 Independent Living Units in the 11 CEACA Member Local Governments, it has always been under the premise that participating Shires would relinquish control of the land and buildings and transfer the ownership of the Units to CEACA.

The Shire of Yilgarn have been progressing through the process of obtaining a survey strata subdivision of the existing lot to enable the transfer of Lot 5 and 6 to CEACA. The subdivision is now in the final stages, with the next step to transfer the lots into CEACA's ownership.

Whilst there has always been a premise that the land would be transferred to CEACA for nil payment, the Shire of Yilgarn still as a responsibility under Section 3.58 of the Local Government Act 1995 to advertise of the disposal.

As required by Section 3.58 Subclause 4 of the Act, a valuation was obtained from Opteon Property Group Pty Ltd for the land only, as CEACA already maintain ownership of the buildings as these were funded by CEACA. The individual lots were valued at $5,000 each. A copy of the valuations are included as attachments.

The proposed disposal was advertised in the Kalgoorlie Miner on the 5th December 2020, and has been placed on the Shire of Yilgarn website and notice board.

Comment

A minimum public notice period of 14 days is required under the Act, however upon receiving the valuation there was insufficient time between the earliest advertising date and the December meeting of Council to achieve the minimum notice period.

In the interest of avoiding delays in the disposal process, it is proposed that upon the closing date for public submissions, being the 20th December 2020, should no contentious or substantiated objections be received, Council agree to proceed with the disposal.

In the event a contentious or substantiated objection is received (determined by the Executive Staff), the matter will be returned to Council for a determination at the February 2021 meeting of Council.

It should be noted that CEACA funded the construction of the two dwellings currently on Lot 5 & 6 Antares Street, on the provision that the land would be transferred into CEACA's name.

Should Council agree to the above, and no contentious or substantiated comments are received by the 21st December 2020, then the disposal of land to CEACA will commence via land transfer. The Shire of Yilgarn will be responsible for payment of both sale and purchase fees to the settlement agency.

Statutory Environment

Section 3.58 of the Local Government Act 1995 (the Act):

3.58. Disposing of property

(1) In this section —

***dispose** includes to sell, lease, or otherwise dispose of, whether absolutely or not;*

***property** includes the whole or any part of the interest of a local government in property, but does not include money.*

(2) Except as stated in this section, a local government can only dispose of property to —

- *(a) the highest bidder at public auction; or*
- *(b) the person who at public tender called by the local government makes what is, in the opinion of the local government, the most acceptable tender, whether or not it is the highest tender.*

(3) A local government can dispose of property other than under subsection (2) if, before agreeing to dispose of the property —

- *(a) it gives local public notice of the proposed disposition —*
  - *i. describing the property concerned; and*
  - *ii. giving details of the proposed disposition; and*
  - *iii. inviting submissions to be made to the local government before a date to be specified in the notice, being a date not less than 2 weeks after the notice is first given; and*
- *(b) it considers any submissions made to it before the date specified in the notice and, if its decision is made by the council or a committee, the decision and the reasons for it are recorded in the minutes of the meeting at which the decision was made.*

(4) The details of a proposed disposition that are required by subsection (3)(a)(ii) include —

- *(a) the names of all other parties concerned; and*
- *(b) the consideration to be received by the local government for the disposition; and*
- *(c) the market value of the disposition —*

i. as ascertained by a valuation carried out not more than 6 months before the proposed disposition; or(ii) as declared by a resolution of the local

ii. government on the basis of a valuation carried out more than 6 months before the proposed disposition that the local government believes to be a true indication of the value at the time of the proposed disposition.

(5) This section does not apply to —

(a) a disposition of an interest in land under the Land Administration Act 1997 section 189 or 190; or

(b) a disposition of property in the course of carrying on a trading undertaking as defined in section 3.59; or

(c) anything that the local government provides to a particular person, for a fee or otherwise, in the performance of a function that it has under any written law; or

(d) any other disposition that is excluded by regulations from the application of this section.

Strategic Implications

GOAL: An inclusive, secure and welcoming community that encourages families, youth and the aged to remain and contribute to our Shire in the long term.

OUTCOME: High Quality and well maintained Ages Care facilities.

STRATEGY: Support the Central East Aged Care Alliance (CEACA) Independent Living Unit's precinct in Southern Cross.

Policy Implications

Nil

Financial Implications

Valuation Costs:	$1,210
Sale of land settlement costs:	$875.06
Purchase of land settlement costs:	$1405.53

Officer Recommendation and Council Decision

194/2020
Moved Cr Guerini/Seconded Cr Shaw

Council endorses the disposal of Lots 5 and 6, 50 Antares Street, Southern Cross to the Central East Aged Care Alliance for Nil payment, on the provision that no contentious or substantiated objections are received during the public notice period for the disposal.

CARRIED (7/0)

10 APPLICATION FOR LEAVE OF ABSENCE

Nil

11 MOTIONS FOR WHICH PREVIOUS NOTICE HAS BEEN GIVEN

Nil

12 NEW BUSINESS OF AN URGENT NATURE INTROUDUCED BY DECISION OF THE MEETING

195/2020
Moved Cr Close/Seconded Cr Nolan
That the new business be accepted for consideration by Council

CARRIED (7/0)

12 Late Item - Reporting Officer– Executive Manager Regulatory Services

12.1 Miscellaneous Mining Licence 77/322 – Request for Comment

File Reference	**1.6.26.17**
Disclosure of Interest	**Nil**
Voting Requirements	**Simple Majority**
Attachments	**- DMIRS Correspondence**

Purpose of Report

To consider a response to the Department of Mines, Industry Regulation and Safety, regarding a Miscellaneous Mining Licence 77/322 at Moorine Rock for MH Gold Pty Ltd and SQM Australia Pty Ltd.

Background

The Shire has received correspondence from the Department of Mines, Industry Regulation and Safety (DMIRS), seeking the Shires comments in relation to a proposed miscellaneous licence. The correspondence from DMIRS has been attached for Councillors perusal.

The purpose of the Miscellanous Licence, as per the application, is for a communications facility, drainage channel, pipeline, power generation and transmission facility, a power line, a pump station, a road, a water management facility and a workshop and storage facility.

Comment

Through talks with Covalent Lithium, it has been advised that this miscellaneous licence is one of two options for the proposed water pipeline to the Earl Grey Lithium Mine. The other option is as per agenda item 9.4.2 of the December 2020 Council meeting.

Report 9.1.2 of the December 2020 Council meeting tables the overall pipeline project, with this forming a section of the proposed route.

The proposal also affects private property, and whilst Covalent Lithium have already had discussions with the private owners, if Councillors have nil objections to the proposal, then it should be on the condition that private owners are consulted and satisfied with any agreements in place for the use of their land prior to DMIRS issuing the licence.

Statutory Environment

Environmental Protection Act 1986

Strategic Implications

Goal
A prosperous future for our community.

Outcome
Businesses in the Shire remain competitive and viable.

Strategy
Continue to provide an efficient and effective approval process.

Policy Implications

Nil

Financial Implications

Nil

Officer Recommendation and Council Decision

196/2020
Moved Cr Close/Seconded Cr Nolan

Council endorse the following response to Department of Mines, Industry Regulation and Safety:

The Shire of Yilgarn has no objection to the proposed Miscellaneous Mining Licence 77/322 at Moorine Rock for MH Gold Pty Ltd & SQM Australia Pty Ltd, on the provision that affected private landowners are consulted and are satisfied by agreements in place for the use of their land as part of this licence purpose.

CARRIED (7/0)

12 Late Item - Reporting Officer– Executive Manager Regulatory Services

12.2 Renewal of Lease M267924 – Marvel Loch – Request for Comment

File Reference	**1.6.37.1**
Disclosure of Interest	**Nil**
Voting Requirements	**Simple Majority**
Attachments	**- Lot 14 Aerial View and SLIP Map**
	- Lot 17 Aerial View and SLIP Map

Purpose of Report

To consider a response to the Department of Planning, Lands and Heritage, regarding a renewal of lease M267924 for residential purposes.

Background

The Department of Planning, Lands and Heritage (DPLH) is currently investigating the renewal of Lease No. M267924 for "Residential Purposes" for a further ten years.

The lease covers Lots 14 and 17 on Deposited Plan 222780, the street addresses are 5 Oxide Street, Marvel Loch, and 2 Oxide Street, Marvel Loch respectively.

The lease was transferred to Hanking Gold Mining Pty Ltd during the previous lease term and will expire on 31 December 2020. DPLH proposes to issue a new lease to Hanking Gold Mining Pty Ltd commencing 1 January 2021.

As part of DPLH's referral process, they have asked the Shire for any comments regarding the proposal.

The aerial view and SLIP map have been provided as attachments.

Comment

There are no outstanding health, planning or building orders placed on these properties, nor are there any outstanding rates.

As such, the reporting officer sees no reason for objection for the renewal of lease.

Statutory Environment

Nil

Strategic Implications

Goal
A prosperous future for our community.

Outcome
Businesses in the Shire remain competitive and viable.

Strategy
Continue to provide an efficient and effective approval process.

Policy Implications

Nil

Financial Implications

Nil

Officer Recommendation and Council Decision

197/2020
Moved Cr Rose/Seconded Cr Nolan

Council endorse the following response to Department of Planning, Lands and Heritage:

The Shire of Yilgarn has no objection to the proposed renewal of lease M267924 for Lots 14 and 17 on Deposited Plan 222780 to Hanking Gold Mining Pty Ltd.

CARRIED (7/0)

12 Officers Report – Chief Executive Officer

12.3 Marvel Loch Progress Association – Grant Application Re-stumping of Hall

File Reference	**1.3.3.4**
Disclosure of Interest	**Nil**
Voting Requirements	**Simple Majority**
Attachments	**Nil**

Purpose of Report

To submit to Council a request by the Marvel Loch Progress Association for Council's support in the Association applying for grant funding under a CBH grant program for community facilities.

Background

The Secretary of the Marvel Loch Progress Association, Ms Shannon Carnicelli, forwarded the following letter to Council on Tuesday, 15 December 2020:-

"The Marvel Loch Progress Association is looking to apply for a grant from CBH to have the old stumping on the Marvel Loch Town Hall replaced with new Concreted Adjustable Steel Stumps. We had a stumping expert, especially for old buildings, come through on his way to Kalgoorlie a year or so ago, and he advised us that the stumps in play now are sagging and are affecting the stage area, which is starting to drop, he stated that these new Adjustable Stumps will fix the issues the Hall now has and will also allow for any adjustments that may need to be facilitated in the future.

We knew this was going to be an expensive prospect and looked at what we could do to raise the money. We have seen that the CBH Grant has also helped other Regional Communities with extensive works to their Community Halls and we would also like to apply for their help but need the Shire's written approval to do so. The Shire's help with this approval means our community will be able to continue to use the hall for many more years to come and will help preserve what little is left of our Town's history. Our last Hall, there used to be 3, is nearing its 85th Birthday and it means a lot, and is a monument, to our small community. It is often used for Sports, Meetings and Live Music, and we very much encourage it's use.

We much appreciate and thank you for taking the time to review our request. The CBH Grant must be in by February 2021".

Comment

The CEO contacted Ms Carnicelli to ascertain the total costs associated with the proposed re-stumping works and to enquire whether the Progress Association was contributing financially to the works. Ms Carnicelli responded advising that the quotation obtained for the re-stumping works was $33,220.00 Incl GST.

Ms Carnicelli further advised that the Progress Association will be applying for the full $20,000 CBH Grant, with the Association also seeking financial support from Mining companies and the Shire. The Progress Association would also contribute what they can afford towards the project and ultimately, it all depends on the success of the Progress Association's grant application to CBH.

Whilst it is positive to see the Marvel Loch Progress Association taking action to source funding for Marvel Loch Hall upgrades, it is considered by staff that there are other structural issues relating to the Hall and therefore, it would be prudent for Council to seek a Building Condition Report to seek a true indication of the overall condition of the structure, which is similar to the process Council undertook with the Bodallin Hall. At that time Council engaged SW19 Pty Ltd., to prepare such a report at a cost of $2,500. SW19 Pty Ltd is a firm that specialises in providing reports detailing specific defect identification.

Statutory Environment

Nil

Strategic Implications

Shire of Yilgarn Strategic Community Plan 2020-2030 – Social Objectives – Maintain/increase percentage of residents in recreation, culture and leisure activities for all demographics in the Shire – 1.1.5 Provide support to local sport, recreation and community groups.

Policy Implications

Nil

Financial Implications

Potential costs being allocated in the 2021/2022 Budget.

Risk Implications

Risk Category	Description	Rating (Consequence x Likelihood	Mitigation Action
Health/People	To have a meeting place for the residents of Marvel Loch	Moderate (9)	Repairs to the Hall would ensure that the venue is maintained
Financial Impact	Potential for significant costs for remedial works	High (12)	Annual Budget allocations
Service Interruption	Nil	Nil	Nil
Compliance	Meeting Public Building requirements	High (16)	Building Condition Report to provide information on remedial works
Reputational	Meeting the needs of Marvel Loch community	High (12)	Providing a facility that meets the need of the community
Property	Shire Building	High (15)	Ensuring that a Council facility is maintained to high standards
Environment	Nil	Nil	Nil

Risk Matrix

Consequence / Likelihood		Insignificant	Minor	Moderate	Major	Catastrophic
		1	2	3	4	5
Almost Certain	5	Moderate (5)	High (10)	High (15)	Extreme (20)	Extreme (25)
Likely	4	Low (4)	Moderate (8)	High (12)	High (16)	Extreme (20)
Possible	3	Low (3)	Moderate (6)	Moderate (9)	High (12)	High (15)
Unlikely	2	Low (2)	Low (4)	Moderate (6)	Moderate (8)	High (10)
Rare	1	Low (1)	Low (2)	Low (3)	Low (4)	Moderate (5)

Officer Recommendation and Council Decision

198/2020
Moved Cr Shaw/Seconded Cr Cobden

That whilst Council supports the Marvel Loch Progress Association in its grant application to CBH for re-stumping of the Marvel Loch Hall, Council advises the Association that at this stage it is reluctant to contribute funds for these specific works until a Building Condition Report is prepared to identify any other structural issues associated with the Hall.

Council further advises the Marvel Loch Progress Association that such a Report will enable Council and the Association to consider the overall structural integrity of the building and to potentially prioritise remedial works in line with financial capabilities.

CARRIED (7/0)

13 MEETING CLOSED TO THE PUBLIC-CONFIDENTIAL ITEMS

Nil

14 CLOSURE

The President thanked Councillors and staff for their time and hard work this year and wished everyone a Happy Christmas and New Year.

As there was no further business to discuss, the Shire President declared the meeting closed at 4.59pm.

I, Wayne Della Bosca confirm the above Minutes of the Meeting held on Thursday, 17 December 2020, are confirmed on Thursday, 18 February 2021 as a true and correct record of the December 2020 Ordinary Meeting of Council.

Wayne Della Bosca
SHIRE PRESIDENT

Shire of YILGARN

"good country for hardy people"

Audit Committee Meeting Minutes

17th December 2020

Table of Content

1. DECLARATION OF OPENING

The Presiding Member declared the meeting open at 2pm

2. ATTENDANCE

Cr W Della Bosca	Member	(Chair)
Cr S Shaw	Member	
Cr J Cobden	Member	
Mrs. J Della Bosca	Community Member	
Mr. P Clarke	Chief Executive Officer	
Mr. C Watson	Executive Manager Corporate Services	
Mrs. N Mwale	Manager of Finance	
Apologies:	Nil	
Observers:	Cr Bryan Close, Cr Gary Guerini, Cr Phil Nolan, Cr Linda Rose, Robert Bosenberg, Nic Warren, Laura Della Bosca	
Leave of Absence:	Nil	

3. RESPONSE TO PREVIOUS PUBLIC QUESTIONS TAKEN ON NOTICE

Nil

4. PUBLIC QUESTION TIME

Nil

5. CONFIRMATION OF MINUTES OF PREVIOUS MEETING

Minutes of the Audit Committee Meeting, 20th February 2020

AC4/2020
Moved Cr Shaw/Seconded Cr Cobden
That the minutes of the Audit Committee Meeting held on 20 February, 2020 be confirmed as a true and correct record of proceedings.

CARRIED (4/0)

6. DECLARATIONS BY MEMBERS AND OFFICERS

Nil

7. STATUS OF ACTIONS PREVIOUSLY TABLED

All actions resulting from items previously tabled are complete.

8. RISK DEVELOPMENTS

No change

9. PRESENTATIONS

Mr Wen-Shien Chai of Moore Australia, Councils Auditor, attended the meeting via teleconference and discussed audit processes and outcomes.

Mr Chai explained the reason for his meeting with Councils Audit Committee and explained the contents of the Audit Concluding Memorandum. Mr. Chai indicated that it was a clean audit with the only matters of note being significant adverse trends with Councils Operating Surplus Ratio, Asset Sustainability Ratio and Asset Renewal Funding Ratio which are below both the DLGSCI industry and the Office of the Auditor Generals benchmarks.

Mr Chai then went to explain the implications to the Annual Financial Report being presented from the recently implemented *Local Government (Financial Management) Amendment Regulations 2020.* These amendments to the regulations had the following effects:

1. Regulation 17, Land vested with Council has been removed;
2. Regulation 17A, Plant, Furniture & Equipment to be valued at cost;
3. Land Under Roads is to be recognised at Nil cost; and
4. A new class of asset, Vested Improvements, to be introduces and valued at fair value.

In conclusion, Mr Chai gave a brief overview of the audit processes undertaken and of the new Accounting Standards that became applicable to Local Governments in the reporting year.

Mr Chai thanked the Committee for their time and attention and left the meeting.

The Executive Manager Corporate Services gave a brief update on the work carried out to Councils asset useful lives and associated depreciation rates and indicated that this work will result in a positive improvement to the three ratios mentioned by Mr Chai. However, the actual result will only be verifiable at the conclusion of the 2020/2021 financial year.

The Executive Manager then thanked the Council Manager of Finance for the hard work put in to achieve the positive and clean audit.

10. Officers report – Executive Manager Corporate Services

10.1 2019/20 Audit & Management Report

File Reference	**8.2.3.3**
Disclosure of Interest	**Nil**
Voting Requirements	**Absolute Majority**
Attachments	**Attachment 1 – 2019/2020 Annual Report including the Annual Financial Report incorporating the Independent Auditor's Report.** **Attachment 2 – Management Report for Year Ending 30 June 2020.** **Attachment 3 – CEO's Report relating to Audit.**

Purpose of Report

The Audit Committee is requested to endorse the Annual Financial Report, Management Report and Chief Executive Officers Report relating to the Annual Financial Report for the year ending 2019/2020.

Background

The purpose and responsibilities of the Audit Committee is outlined in Part 7 of the Local Government Act 1995.

One of the Audit Committee's responsibilities is to examine the reports of the auditor including the management report. The committee would then determine if any matters raised in the reports require action to be taken by the local government and to ensure that appropriate action is implemented.

The Audit Committee is also to receive and authorise a report relating to the audit prepared by the Chief Executive Officer that is subsequently to be sent to the Minister. This report outlines actions intended to be undertaken in relation to matters identified by the auditor.

Comment

Prior to the consideration of this report, Councils appointed Auditor will discuss the conduct of the audit and any issues which arose within the attached Management Report.

The auditor's completed the audit for the financial year ended 30 June 2020. The attached reports include the Chief Executive Officer's response to both the Management Report for the year ended 30 June 2020 and the Independent Auditor's Report for the same period that is submitted for the Committee's attention.

Statutory Environment

Local Government Act 1995 –

7.9. Audit to be conducted

(1) An auditor is required to examine the accounts and annual financial report submitted for audit and, by the 31 December next following the financial year to which the accounts and report relate or such later date as may be prescribed, to prepare a report thereon and forward a copy of that report to —

(a) the mayor or president; and

(b) the CEO of the local government; and

(c) the Minister.

(2) Without limiting the generality of subsection (1), where the auditor considers that —

(a) there is any error or deficiency in an account or financial report submitted for audit; or

(b) any money paid from, or due to, any fund or account of a local government has been or may have been misapplied to purposes not authorised by law; or

(c) there is a matter arising from the examination of the accounts and annual financial report that needs to be addressed by the local government, details of that error, deficiency, misapplication or matter, are to be included in the report by the auditor.

(3) The Minister may direct the auditor of a local government to examine a particular aspect of the accounts and the annual financial report submitted for audit by that local government and to —

(a) prepare a report thereon; and

(b) forward a copy of that report to the Minister, and that direction has effect according to its terms.

(4) If the Minister considers it appropriate to do so, the Minister is to forward a copy of the report referred to in subsection (3), or part of that report, to the CEO of the local government to be dealt with under section 7.12A.

7.12 A Duty of local government with respect to audits

(1) A local government is to do everything in its power to —

(a) assist the auditor of the local government to conduct an audit and carry out his or her other duties under this Act in respect of the local government; and

(b) ensure that audits are conducted successfully and expeditiously.

(2) Without limiting the generality of subsection (1), a local government is to meet with the auditor of the local government at least once in every year.

(3) A local government is to examine the report of the auditor prepared under section 7.9(1), and any report prepared under section 7.9(3) forwarded to it, and is to —

(a) determine if any matters raised by the report, or reports, require action to be taken by the local government; and

(b) ensure that appropriate action is taken in respect of those matters.

(4) A local government is to —

(a) prepare a report on any actions under subsection (3) in respect of an audit conducted in respect of a financial year; and

(b) forward a copy of that report to the Minister, by the end of the next financial year, or 6 months after the last report prepared under section 7.9 is received by the local government, whichever is the latest in time.

Local Government (Financial Management) Regulations 1996 –

51 Annual financial report to be signed etc. by CEO and given to Department

(1) After the annual financial report has been audited in accordance with the Act the CEO is to sign and append to the report a declaration in the form of Form 1.

(2) A copy of the annual financial report of a local government is to be submitted to the Departmental CEO within 30 days of the receipt by the local government's CEO of the auditor's report on that financial report.

Local Government (Audit) Regulations 1996 –

10. Report by auditor

(1) An auditor's report is to be forwarded to the persons specified in section 7.9(1) within 30 days of completing the audit.

(2) The report is to give the auditor's opinion on —

(a) the financial position of the local government; and

(b) the results of the operations of the local government.

(3) The report is to include —

(a) any material matters that in the opinion of the auditor indicate significant adverse trends in the financial position or the financial management practices of the local government; and

(b) any matters indicating non-compliance with Part 6 of the Act, the Local Government (Financial Management) Regulations 1996 or applicable financial controls in any other written law; and

(c) details of whether information and explanations were obtained by the auditor; and

(d) a report on the conduct of the audit; and

(e) the opinion of the auditor as to whether or not the following financial ratios included in the annual financial report are supported by verifiable information and reasonable assumptions —
(i) the asset consumption ratio; and
(ii) the asset renewal funding ratio.

(4A) In subregulation (3)(e) —

asset consumption ratio has the meaning given in the Local Government (Financial Management) Regulations 1996 regulation 50(2);

asset renewal funding ratio has the meaning given in the Local Government (Financial Management) Regulations 1996 regulation 50(2).

(4) Where it is considered by the auditor to be appropriate to do so, the auditor is to prepare a management report to accompany the auditor's report and to forward a copy of the management report to the persons specified in section 7.9(1) with the auditor's report.

The recommendation that follows is consistent with the legislative requirements.

Strategic Implications

There are no strategic implications as a result of this report.

Policy Implications

There are no policy implications as a result of this report.

Financial Implications

There are no financial implications as a result of this report.

Officer Recommendation

AC5/2020
Moved Cr Shaw/Seconded Cr Cobden
That the Audit Committee:

1. ***accepts the Annual Financial Report, inclusive of the Independent Auditors Report to the Electors of the Shire of Yilgarn, for the year ending 30 June 2020;***
2. ***accepts the Chief Executive Officer's Report and recommends a copy of said report be forwarded to the Minister; and***
3. ***endorses the presented Shire of Yilgarn Annual Report for the financial period ending 30 June 2020 and recommends its presentation to the December 2020 meeting of Council for formal acceptance.***

CARRIED BY ABSOLUTE MAJORITY (4/0)

11. CLOSURE OF MEETING

With there being no further business to discuss the Presiding Member closed the meeting at 2.24pm

Cr Wayne Della Bosca
Shire President

Shire of YILGARN

"good country for hardy people"

Minutes

Annual Electors Meeting

9 February 2021

1 ATTENDANCE AND APOLOGIES

The Presiding Member declared the meeting open at 6:00 pm.

Presiding Member	Cr W Della Bosca	President
Members	Cr B Close	
	Cr G Guerini	
	Cr P Nolan	
	Cr Cobden	
	Cr Rose	
Council Officers	P Clarke	Chief Executive Officer
	C Watson	Executive Manager Corporate Services
	R Bosenberg	Executive Manager Infrastructure
	N Warren	Executive Manager Regulator Services
Electors:	Mrs K Crafter, Mr G Kent and Mr P Cobden	
Apologies:	Cr S Shaw, Mrs D Della Bosca	
Leave of Absence:	Nil	

2 PUBLIC QUESTION TIME

Nil

3 CONFIRMATION OF PREVIOUS MINUTES

AE1/2021
Moved Cr Nolan/Seconded Cr Rose
That the minutes from the Annual Electors Meeting held on the Thursday, 11 February 2020 be confirmed as a true record of proceedings.

CARRIED

It was noted by the Chief Executive Officer that the only Business Arising from the previous Minutes of the Annual Electors meeting was:

1. That the matter raised by Mrs Della Bosca regarding the Caravan Park signage located near the corner of Altair Street and Great Eastern Highway was restricting drivers views when turning east onto Great Eastern Highway had been rectified by the Executive Manager Infrastructure by repositioning the signage to improve site distances for oncoming traffic.

4 ADOPTION OF THE ANNUAL REPORT AND FINANCIAL STATEMENTS FOR THE 2019/2020 FINANCIAL YEAR

AE2/2021
Moved Cr Cobden/Seconded Cr Guerini
That the Shire of Yilgarn Annual Report and Financial Statements for the 2019/2020 financial year be received and adopted.

CARRIED

5 ADOPTION OF THE 2019/2020 AUDITORS REPORT

AE3/2021
Moved Cr Nolan/Seconded Cr Cobden
That the Auditors Report for the 2019/2020 financial year be received and adopted.

CARRIED

6 ADOPTION OF THE SHIRE PRESIDENTS REPORT

AE4/2021
Moved Cr Cobden/Seconded Cr Rose
That the Shire Presidents Report for the 2019/2020 financial year be received and adopted.

CARRIED

7 ADOPTION OF THE CHEIF EXECUTIVE OFFICERS REPORT

AE5/2021
Moved Mrs Crafter/Seconded Cr Nolan
That the Chief Executive Officers Report for the 2019/2020 financial year be received and adopted.

CARRIED

8 GENERAL BUSINESS OR OTHER BUSINESS AT THE DISCRETION OF THE SHIRE PRESIDENT OR AS APPROVED BY THE ELECTORS PRESENT

8.1 TOURISM POMOTION

Mrs. Crafter noted in the Annual Report under the Shire Profile relating to tourism, there was no mention of the Bungalbin Ranges as an attraction for tourism.

The CEO advised that the Bungalbin Ranges had not been widely promoted in the past however, with Council resolving to progress the development of a Tourism Marketing Strategy in the 2020/2021 financial year, it will see Bungalbin and the Helena Aurora Ranges heavily promoted as a major tourism attraction in the Yilgarn.

9 CLOSURE

With there being no further business to discuss, the Presiding Member closed the meeting at 6:05 pm.

Attachment 9.1.1

Shire of YILGARN

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Delegations Register

Adopted by Council	Thursday 17 March 2016
Reviewed	Thursday 16 March 2017
Reviewed	Thursday 15 February 2018
Reviewed	Thursday 21 February 2019
Reviewed	Thursday 20 February 2020
Amended	December 2020

Index

Food Act

FOOD01	Appointment of Designated Officer and Authorised Officer

Health Act

HEALTH01	Public Health
HEALTH02	Miscellaneous Provisions and Relevant Regulation Administration and Notices of Breach

Asbestos Act

ASBESTOS01	Health (Asbestos Regulations) 1992

~~**Litter Act**~~

~~LITTER01~~	~~Authorised Officers and Withdrawal of Infringement Notices~~

Planning and Development Act

PLAN01	Advertising “SA” Planning Applications

Delegation No: LGA1	Administration of Local Laws

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
On-Delegated:	No
Chief Executive Instruction/Procedure:	

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2. Local Government Act 1995, Section 3.18(1)

Legal (Subsidiary):

1. Local Government Act 1995, Sections 9.1 and 9.4.

Council delegates its authority and power to the Chief Executive Officer, to administer its Local Laws, and initiate legal action if considered necessary,

Subject to -

1.0 Compliance with Sections 9.1(1) and 9.4 of the Local Government Act 1995.

3.18. Performing executive functions

(1) A local government is to administer its local laws and may do all other things that are necessary or convenient to be done for, or in connection with, performing its functions under this Act.

Delegation No: LGA2	Agreement as to Payment of Rates and Service Charges

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Corporate Services

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995, Section 6.49.
2.

Council delegates its authority and power to the Chief Executive Officer to make an agreement with a person for the payment of rates and service charges,

Subject to-

(a) The requirements of Councils Rates Collection policy; and

(b) The arrangements agreed to being on the basis that the total debt outstanding will be extinguished by 30 June next following.

6.49. Agreement as to payment of rates and service charges

A local government may accept payment of a rate or service charge due and payable by a person in accordance with an agreement made with the person.

Delegation No: LGA3	Altering Thoroughfare Alignments

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Infrastructure

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995, Section 3.51(3)

Council delegates its authority and power to the Chief Executive Officer to give notice of any proposal to-

1.0 Fix or alter the level of, or the alignment of, a public thoroughfare; or

2.0 Drain water from a public thoroughfare or other public place onto adjoining land;

Subject to –

(a) the notice being in accordance with Section 3.51(4) of the *Local Government Act 1995.*

3.51. Affected owners to be notified of certain proposals
(1) In this section —
person having an interest*, in relation to doing anything, means a person who —*
(a) is the owner of the land in respect of which that thing is done, or any land that is likely to be adversely affected by doing that thing; or(b) is shown on the title to any of the land mentioned in paragraph (a) as holding an interest in any of that land; or
(c) is prescribed for the purposes of this section.
(2) This section applies to —
(a) fixing or altering the level of, or the alignment of, a public thoroughfare; or
(b) draining water from a public thoroughfare or other public place onto adjoining land.
(3) Before doing anything to which this section applies, a local government is to —
(a) give notice of what is proposed to be done giving details of the proposal and inviting submissions from any person who wishes to make a submission; and
(b) allow a reasonable time for submissions to be made and consider any submissions made.
(4) The notice is to be given —
(a) in writing to each person having an interest; and
(b) if any land is likely to be adversely affected by the doing of the thing, by local public notice.

Delegation No: LGA4	Amending the Rate Record

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Corporate Services

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995, Section 6.39(2)(b).

Council delegates its authority and power to the Chief Executive Officer to determine whether to amend the rate record for the preceding five years,

Subject to-

(a) Compliance with the requirements of Section 6.39 of the *Local Government Act 1995*.

6.39. Rate record

(1) As soon as practicable after a local government has resolved to impose rates in a financial year it is to ensure that a record is compiled, at the time and in the form and manner prescribed, for that financial year of —

(a) all rateable land in its district; and

(b) all land in its district on which a service charge is imposed.

(2) A local government —

(a) is required, from time to time, to amend a rate record for the current financial year to ensure that the information contained in the record is current and correct and that the record is in accordance with this Act; and

(b) may amend the rate record for the 5 years preceding the current financial year.

.

Delegation No: LGA5	Expression of Interest for Goods and Services

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Not Applicable
Chief Executive Instruction/Procedure:	

Legal (Parent):

3. Local Government Act 1995, Section 5.42.
4.

Legal (Subsidiary):

1. Local Government (Functions & General) Regulations 1996, as amended.

Council delegates its authority and power to the Chief Executive Officer to-

1.0 Seek expressions of interest with respect to the supply of the goods or services before entering the tender process, because the CEO believes that there is good reason to make a preliminary selection from amongst prospective tenderers due to-

(i) the nature of the goods or services; or

(ii) the cost of preparing plans, specifications or other information for the purpose of adequately describing the goods or services required,

and the CEO believes it would be advantageous to the local government if tenders were invited only from persons it considers to be capable of satisfactorily supplying the goods or services.

2.0 Determine in writing the criteria for the preliminary selection of prospective tenderers,

Subject to-

(i) Compliance with Regulation 21(1) of the Local Government (Functions and General) Regulations 1996;

(ii) The goods or services being listed in the Shires Adopted Annual Budget;

(iii) The criteria, once determined, is to be incorporated in the expression of interest documentation.

3.0 Consider any submissions of expression of interest that have not been rejected and decide which ones could satisfactorily supply the goods or services,

Subject to-

(a) Compliance with Regulation 23(3) of the Local Government (Functions and General) Regulations 1996; and

(b) Compliance with Regulations 14(2), 15(2), 17(2)(c) and 18(3) of the Local Government (Functions and General) Regulations 1996.

3.57. Tenders for providing goods or services

(1) A local government is required to invite tenders before it enters into a contract of a prescribed kind under which another person is to supply goods or services.

(2) Regulations may make provision about tenders.

Delegation No: LGA6	Tendering for Goods and Services

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Not Applicable
Chief Executive Instruction/Procedure:	

Legal (Parent):

5. Local Government Act 1995, Section 3.57.
6. Local Government Act 1995, Section 5.42.

Legal (Subsidiary):

1. Local Government (Financial Management) Regulations 1996, as amended.

Council delegates its authority and power to the Chief Executive Officer to-

1.0 Call tenders for works or services prior to entering in to contract with others in respect to supply of goods or services exceeding $150,000;

2.0 Call tenders for the provision of works or services not exceeding a value of $150,000 and to accept what is to be deemed the most advantageous tender;

3.0 Determine in writing the criteria for deciding which tender should be accepted, subject to Regulation 14(2a) of the Local Government (Functions and General) Regulations 1996;

Subject to-

(iv) Tenders called subject to (1) and (2) above, are to comply with Council's Purchasing Policy.

(v) The goods or services being listed in the Shires Adopted Annual Budget;

(vi) The criteria, once determined in (3) above, it is to be incorporated in the tender documentation.

3.57. Tenders for providing goods or services
(1) A local government is required to invite tenders before it enters into a contract of a prescribed kind under which another person is to supply goods or services.
(2) Regulations may make provision about tenders.

Delegation No: LGA7	Crossing from Public Thoroughfare to Private Land or Private Thoroughfare

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Infrastructure

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government (Uniform Provisions) Regulations, Regulations 12, 13 and 14.
2. Local Government Act 1995, Section 3.25(1)(b), Section 3.26(2) and (3),
3. Local Government Act, Schedule 9.1(7).

The Chief Executive Officer delegates his/her authority and power to the Executive Manager Infrastructure to-

1.0 Approve or refuse an application from an owner of land, to construct a crossing giving access from a public thoroughfare to the land, or a private thoroughfare serving the land, and impose conditions in respect to the approval,
Subject to-
(a) The requirements of Regulation 14(2) of the *Local Government (Uniform Provisions) Regulations 1996*.

2.0 Issue a notice under Section 3.25(1)(b) to a person who has not complied with a condition imposed on a permission given under (1) above.

3.0 Do anything that is considered necessary to achieve, so far as is practicable, the purpose for which the notice was given under (2) above.

4.0 Recover the cost of anything done under (3) above as a debt due from the person who failed to comply with the notice issued

Subject to-

(a) Notification being given to Council prior to legal action commencing.

5.0 Issue a notice under Regulation 13(1) of the *Local Government (Uniform Provisions) Regulations 1996* to the owner or occupier of private land to construct or repair a crossing from a public thoroughfare to the land, or a private thoroughfare serving the land

Subject to-

(a) The requirements of Regulation 14(2) of the *Local Government (Uniform Provisions) Regulations 1996.*

3.25. Notices requiring certain things to be done by owner or occupier of land
(1) A local government may give a person who is the owner or, unless Schedule 3.1 indicates otherwise, the occupier of land a notice in writing relating to the land requiring the person to do anything specified in the notice that —
(b) is for the purpose of remedying or mitigating the effects of any offence against a provision prescribed in Schedule 3.1, Division 2
3.26. Additional powers when notices given
(2) If the person who is given the notice (notice recipient) fails to comply with it, the local government may do anything that it considers necessary to achieve, so far as is practicable, the purpose for which the notice was given.
(3) The local government may recover the cost of anything it does under subsection (2) as a debt due from the person who failed to comply with the notice.

Delegation No: LGA8	Disposal of Property by Way of Lease

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
On-Delegated:	No
Chief Executive Instruction/Procedure:	

Legal (Parent):

1. Local Government Act 1995, Section 5.42.

Legal (Subsidiary):

1. Local Government Act 1995, Section 3.58.
2. Function and General Regulations 1996, Regulation 30.

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Council delegates its authority and power to the Chief Executive Officer to dispose of property by way of lease,

Subject to-

1.0 Compliance with the requirements of Section 3.58 of the Local Government Act 1995 and Regulation 30 of the *Local Government (Functions and General) Regulations* 1996.

2.0 The lease fee being in accordance with Council's Schedule of Fees and Charges; and

3.0 Any lease term not to exceed five years.

3.58. Disposing of property
(1) In this section —
dispose *includes to sell, lease, or otherwise dispose of, whether absolutely or not;*
property *includes the whole or any part of the interest of a local government in property, but does not include money.*
(2) Except as stated in this section, a local government can only dispose of property to —
(a) the highest bidder at public auction; or
(b) the person who at public tender called by the local government makes what is, in the opinion of the local government, the most acceptable tender, whether or not it is the highest tender.
(3) A local government can dispose of property other than under subsection (2) if, before agreeing to dispose of the property —
(a) it gives local public notice of the proposed disposition; and
(b) it considers any submissions made to it before the date specified in the notice and, if its decision is made by the council or a committee, the decision and the reasons for it are recorded in the minutes of the meeting at which the decision was made.
This section does not apply to —
(d) any other disposition that is excluded by regulations from the application of this section.

Delegation No: LGA9	Disposal of Surplus Equipment, Materials, Tools, Etc

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Managers – Corporate Services, Infrastructure, Regulatory Services

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995, Sections 3.58
2. Local Government (Functions and General) Regulations, Regulation 30.

Council delegate its authority and power to the Chief Executive Officer to dispose of surplus equipment, materials, tools, etc with a market value of less than $2,000 by-

1.0 Calling a request for proposals; or

2.0 Holding of a surplus goods sale at the Council depot; or

3.0 Any other fair means;

Subject to-

(a) The items not being listed on Councils Asset Register; and

(b) The items being either no longer required, no longer serviceable or are outmoded.

3.58. Disposing of property
(1) In this section —
dispose *includes to sell, lease, or otherwise dispose of, whether absolutely or not;*
property *includes the whole or any part of the interest of a local government in property, but does not include money.*
(2) Except as stated in this section, a local government can only dispose of property to —
(a) the highest bidder at public auction; or
(b) the person who at public tender called by the local government makes what is, in the opinion of the local government, the most acceptable tender, whether or not it is the highest tender.
(3) A local government can dispose of property other than under subsection (2) if, before agreeing to dispose of the property —
(a) it gives local public notice of the proposed disposition; and
(b) it considers any submissions made to it before the date specified in the notice and, if its decision is made by the council or a committee, the decision and the reasons for it are recorded in the minutes of the meeting at which the decision was made.
This section does not apply to —
(d) any other disposition that is excluded by regulations from the application of this section.

Delegation No: LGA10	Due Date for Payment of Rates and Service Charges

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	No
Chief Executive Instruction/Procedure:	

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995, Section 6.50(1) and (2).

Council delegates its authority and power to the Chief Executive Officer to determine the date a rate or service charge becomes due and payable,

Subject to-

(a) the date to be determined is not to be earlier than 35 days after the date of issue on the rate notice.

6.50. Rates or service charges due and payable
(1) Subject to —
(a) subsections (2) and (3); and
(b) any concession granted under section 6.47; and
(c) the Rates and Charges (Rebates and Deferments) Act 1992,
a rate or service charge becomes due and payable on such date as is determined by the local government.
(2) The date determined by a local government under subsection (1) is not to be earlier than 35 days after the date noted on the rate notice as the date the rate notice was issued.

Delegation No: LGA11	Entry to Any Land in an Emergency

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Managers – Infrastructure, Regulatory Services

Legal (Parent):

1. Local Government Act 1995, Section 5.42.

Legal (Subsidiary):

1. Local Government Act 1995, Section 3.34.

Council delegates its authority and power to the Chief Executive Officer to enter any land in an emergency and perform any of the local governments functions considered appropriate to deal with the emergency subject to the following conditions-

1.0 The CEO is to give notice of intended entry of land where it is practicable to do so, as required by Section 3.34(5).

3.34. Entry in an emergency

(1) In an emergency a local government may lawfully enter any land, premises or thing immediately and without notice and perform any of its functions as it considers appropriate to deal with the emergency.

(2) For the purposes of this section, an emergency exists where the local government or its CEO is of the opinion that the circumstances are such that compliance with the requirements for obtaining entry other than under this section would be impractical or unreasonable because of, or because of the imminent risk of —

(a) injury or illness to any person; or

(b) a natural or other disaster or emergency; or

(c) such other occurrence as is prescribed for the purposes of this section.

(3) A local government may use reasonable force to exercise the power of entry given by subsection (1).

(4) A local government may exercise the power of entry given by subsection (1) at any time while the emergency exists and for so long subsequently as is reasonably required.

(5) Although notice of an intended entry under this section is not generally required, a local government is to give notice of an intended entry of land under this section to the owner or occupier of the land where it is practicable to do so.

Delegation No: LGA12	Excavation on Public Thoroughfares

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
On-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Infrastructure

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995, Section 3.25(1)(b), Section 3.26(2) and (3),
2. Local Government Act, Schedule 9.1(6)
3. Local Government (Uniform Provisions) Regulations, Regulation 11.

The Chief Executive Officer delegates his/her authority and power to the Executive Manager Infrastructure to-

1.0 Grant permission to a person to make or make and leave, an excavation of specified dimensions and in a specified way in a specified part of a public thoroughfare or on a specified part of land adjoining a public thoroughfare, and impose conditions in respect to the permission,

Subject to-

(a) The requirements of Regulation 11 of the *Local Government (Uniform Provisions) Regulations 1996*;

2.0 Issue a notice under Section 3.25(1)(b) to a person who has not complied with a condition imposed on a permission given under (1) above.

3.0 Do anything that is considered necessary to achieve, so far as is practicable, the purpose for which the notice was given under (2) above.

4.0 Recover the cost of anything done under (3) above as a debt due from the person who failed to comply with the notice issued subject to notification being given to Council prior to legal action commencing.

Schedule 9.1(6) Dangerous excavation in or near public thoroughfare
Regulations may be made about dangerous excavations in public thoroughfares or land adjoining public thoroughfares.

Regulation 11. Dangerous excavation in or near public thoroughfare — Sch. 9.1 cl. 6
(1) If there is, in a public thoroughfare or land adjoining a public thoroughfare, an excavation that the local government considers to be dangerous, the local government may —
(a) fill in or fence the excavation; or
(b) in writing request the owner or occupier of the land to fill in or securely fence the excavation.

Delegation No: LGA13	Executing and Affixing of Common Seal to Documents

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	President and CEO Jointly where required
Sub-Delegated:	No
Chief Executive Instruction/Procedure:	

Legal (Parent):

1. Local Government Act 1995, Section 5.42.

Legal (Subsidiary):

1. Local Government Act, Section 9.49A(4)

1.0 Council delegate its authority and power to the President and the Chief Executive Officer to execute documents and affix the Common Seal thereto, where such documents result from the following transactions:

1.1 Where land is disposed of pursuant to Section 3.58 of the Local Government Act 1995 (As Amended).

1.2 Where land is acquired pursuant to Section 3.55 and 3.59 of the Local Government Act 1995 (As Amended).

1.3 In respect of leases of land and licence to occupy municipal property where approved by the Council.

1.4 In respect of leases for the purchase of plant and equipment approved by the Council.

1.5 In respect of borrowings approved by the Council.

1.6 In respect of easements and legal agreements over land for the purpose of drainage or conditions arising from subdivision of land and planning approvals.

1.7 In respect of withdrawal of caveats and surrender of easements where the Chief Executive Officer considers that the Council's interests have been satisfied.

1.8 In respect of contracts of employment approved by the Council.

1.9 In respect of agreements required for funding of Council works and services considered with the resolution of the Council or requiring renewal of the agreement for funding currently provided.

1.10 In respect of the final adoption of local laws by the Council.

Subject to-

(a) Meeting the requirements detailed in Councils Policy on Use of the Shire Common Seal; and

(b) Council being notified via a report to be submitted to each Council Meeting in relation to the execution of documents and affixing of the Common Seal.

9.49A. Execution of documents

(4) A local government may, by resolution, authorise the chief executive officer, another employee or an agent of the local government to sign documents on behalf of the local government, either generally or subject to conditions or restrictions specified in the authorisation.

Delegation No: LGA14	Gates and Other Devices Across Thoroughfares

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Infrastructure

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995, Section 3.25(1)(b), Section 3.26(2) and (3),
2. Local Government Act, Schedule 9.1(5)
3. Local Government Act, Schedule 3.1
3. Local Government (Uniform Provisions) Regulations, Regulation 9.

The Chief Executive Officer delegates his/her authority and power to the Executive Manager Infrastructure to-

1.0 Grant permission to a person to have a gate or other device across a public thoroughfare under the care, control and management of the Shire, and impose conditions in respect to the permission,

Subject to-

(a) The requirements of Regulation 9 of the *Local Government (Uniform Provisions) Regulations 1996*; and

(b) A register of gates and other devices being kept in accordance with Clause 9(8) of the *Local Government (Uniform Provisions) Regulations 1996*.

2.0 Issue a notice under Section 3.25(1)(b) to a person who has not complied with a condition imposed on a permission given under (1) above.

3.0 Do anything that is considered necessary to achieve, so far as is practicable, the purpose for which the notice was given under (2) above.

4.0 Recover the cost of anything done under (3) above as a debt due from the person who failed to comply with the notice issued subject to notification being given to Council prior to legal action commencing.

Schedule 9.1(5) Gates across public thoroughfares

(1) Regulations may be made under which a local government may authorise a person to have across a public thoroughfare that is under its control or management a gate or other device that enables motor traffic to pass and prevents the straying of livestock.

(2) Regulations may include provisions for ensuring that a gate that has been placed across a public thoroughfare with the authority of a local government is not left open.

Delegation No: LGA15	Investment of Surplus Funds

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Corporate Services

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995, Section 6.14.
2. Local Government (Financial Management Regulations) 1996, Regulation 19.
3. Trustees Act 1962, Part III

Council delegates its authority and power to the Chief Executive Officer to invest money held in the municipal or trust funds that is not required for the time being for any purpose in accordance with Part III of the Trustees Act 1962,

Subject to-

1.0 Compliance with the established and documented internal control procedures to ensure control over the investments; and

2.0 Compliance with Regulation 19(2) of the *Local Government (Financial Management) Regulations 1996*; and

3.0 Compliance with Council Policy – Surplus Funds Investments.

6.14. Power to invest
(1) Money held in the municipal fund or the trust fund of a local government that is not, for the time being, required by the local government for any other purpose may be invested as trust funds may be invested under the Trustees Act 1962 Part III.
(2A) A local government is to comply with the regulations when investing money referred to in subsection (1).
(2) Regulations in relation to investments by local governments may —
(a) make provision in respect of the investment of money referred to in subsection (1); and
[(b) deleted]
(c) prescribe circumstances in which a local government is required to invest money held by it; and
(d) provide for the application of investment earnings; and
(e) generally provide for the management of those investments.

Regulation 19. Investments, control procedures for
(1) A local government is to establish and document internal control procedures to be followed by employees to ensure control over investments.
(2) The control procedures are to enable the identification of —
(a) the nature and location of all investments; and
(b) the transactions related to each investment.

Delegation No: LGA17	Tenders - Minor Variation to Contracts

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	No
Chief Executive Instruction/Procedure:	

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government (Functions and General) Regulations, Regulation 20.
2.

Council delegates its authority and power to the Chief Executive Officer to-

1.0 Make a minor variation to a contract for goods or services before the Shire enters the contract with the successful tenderer,

subject to-

(a) the tenderer agreeing to the minor variations; and

(b) the variation is minor having regard to the total goods or services that tenderers were invited to supply (deliverables and price).

2.0 Select the next most advantageous tender if the successful tenderer does not want to accept the contract with the variation, or the local government and the tenderer cannot reach agreement, subject to Regulation 20(2) of the Local Government (Functions and General) Regulations 1996.

20. Variation of requirements before entry into contract

(1) If, after it has invited tenders for the supply of goods or services and chosen a successful tenderer but before it has entered into a contract for the supply of the goods or services required, the local government wishes to make a minor variation in the goods or services required, it may, without again inviting tenders, enter into a contract with the chosen tenderer for the supply of the varied requirement subject to such variations in the tender as may be agreed with the tenderer.

(2) If —

(a) the chosen tenderer is unable or unwilling to enter into a contract to supply the varied requirement; or

(b) the local government and the chosen tenderer cannot agree on any other variation to be included in the contract as a result of the varied requirement, that tenderer ceases to be the chosen tenderer and the local government may, instead of again inviting tenders, choose the tenderer, if any, whose tender the local government considered it would be the next most advantageous to it to accept.

(3) In subregulation (1) —

minor variation means a variation that the local government is satisfied is minor having regard to the total goods or services that tenderers were invited to supply.

Delegation No: LGA18	Appointment of Authorised Persons

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Not Applicable
Chief Executive Instruction/Procedure:	

Legal (Parent):

7. Local Government Act 1995 (As Amended) – Sections 3.24, 9.10 and 9.23.
8. Local Government Act 1995 (As Amended) – Section 5.42

Legal (Subsidiary):

1. Shire of Yilgarn Local Laws.

1.0 Council delegate its authority and power to the Chief Executive Officer to appoint authorised persons to exercise the-

1.1 Powers and duties set out in the *Local Government Act* 1995 in respect of-

(a) Section 3.25(1) – Notices requiring certain things to be done by owner or occupier of land.

(b) Section 3.27 – Things local government can do on land that is not local government property.

(c) Section 3.31 – Entering property.

(d) Section 3.39 – Power to remove and impound.

(e) Section 3.40A (1) – Abandoned vehicle wreck may be taken.

(f) Section 9.11 – Person found commit breach of Act to give name on demand.

(g) Section 9.13 – Onus of proof in vehicle offences may be shifted.

(h) Section 9.16 – Giving a Notice.

(i) Section 9.17 – Content of Notice.

(j) Section 9.19 – Extension of Time.

(k) Section 9.20 – Withdrawal of Notice.

(l) Section 9.24(1), (2) – Enforcement and legal proceedings – Commencing prosecutions – Offence against the Act or Shire's Local Laws.

(m) Section 9.29(2) – Enforcement and legal proceedings – Representing local government in court.

1.2 Duties and functions set out in the Shire's local laws.

Delegation No: LGA19	Objection to Rate Record – Extension of Time

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Corporate Services

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995, Section 6.76(4) and (5).
2.

Council delegates its authority and power to the Chief Executive Officer to-

1.0 Determine applications by a person for an extension of time to make an objection to the rate record,

Subject to-

(a) Any extension granted being no longer than 30 days.

2.0 Consider any objection to the rate record and either disallow it or allow it, wholly or in part,

Subject to –

(a) Giving written notice of the decision made under (2) above in accordance with Section 6.76(6) of the *Local Government Act 1995.*

6.76. Grounds of objection

(1) A person may, in accordance with this section, object to the rate record of a local government on the ground —

(a) that there is an error in the rate record —

(i) with respect to the identity of the owner or occupier of any land; or

(ii) on the basis that the land or part of the land is not rateable land; or

(b) if the local government imposes a differential general rate, that the characteristics of the land recorded in the rate record as the basis for imposing that rate should be deleted and other characteristics substituted.

(2) An objection under subsection (1) is to —

(a) be made to the local government in writing within 42 days of the service of a rate notice under section 6.41; and

(b) identify the relevant land; and

(c) set out fully and in detail the grounds of objection.

(3) An objection under subsection (1) may be made by the person named in the rate record as the owner of land or by the agent or attorney of that person.

(4) The local government may, on application by a person proposing to make an objection, extend the time for making the objection for such period as it thinks fit.

(5) The local government is to promptly consider any objection and may either disallow it or allow it, wholly or in part.

(6) After making a decision on the objection the local government is to promptly serve upon the person by whom the objection was made written notice of its decision on the objection and a statement of its reason for that decision.

Delegation No: LGA20	Payments From Municipal Fund and Trust Fund

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	The following staff authorised to issue purchase orders: Exec Mngr Corporate Services to $150,000; Exec Mngr Infrastructure to $150,000; Exec Mngr Regulatory Services to $150,000; Finance Mngr to $10,000; Mechanic to $10,000; Build Mtce Officer to $5,000; Assets Officer to $5,000 Authority to make payments in accordance with Council Policy

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995, Section 6.7(2)
2. Local Government Act 1995, Section 6.8
3. Local Government Act 1995, Section 6.10
4. Local Government Act 1995, Section 3.1
5. Local Government (Financial Management) Regulations, Regulations 5, 11, 12 and 13.

Council delegates its authority and power to the Chief Executive Officer to-

1. Sign and issue purchase orders to incur liabilities from the Municipal Fund or the Trust Fund on behalf of the Shire,

   Subject to-
   (a) Compliance with Council Purchasing Policy & Council Signing of Cheques Policy; and
   (b) Purchase orders only being issued for items of expenditure detailed within the adopted annual budget, or for payments that have been authorised by a resolution of Council in advance, or authorised in advance by the president in an emergency.
2. Authorise and make payments by cheque or electronic funds transfer (EFT) from the Municipal Fund or the Trust Fund,

   Subject to-
   (a) The payment(s) only being for items of expenditure detailed within the adopted annual budget, or for payments that have been authorised by a resolution of Council in advance, or authorised in advance by the President in an emergency; and
   (b) Compliance with the requirements of Regulation 13 of the *Local Government (Financial Management) Regulations 1996*.

11. Payments, procedures for making etc.

(1) A local government is to develop procedures for the authorisation of, and the payment of, accounts to ensure that there is effective security for, and properly authorised use of —

(a) cheques, credit cards, computer encryption devices and passwords, purchasing cards and any other devices or methods by which goods, services, money or other benefits may be obtained; and(b) petty cash systems.

Delegation No: LGA21	Performing Functions Outside Own District

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	No
Chief Executive Instruction/Procedure:	

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2. Local Government Act 1995, Section 3.20

Legal (Subsidiary):

1.

Council delegates its authority and power to the Chief Executive Officer to determine whether things done by the Shire in performing its executive function will be done outside its own district,

Subject to-

1.0 Compliance with the requirements of Section 3.20 of the Local Government Act 1995; and

2.0 Details of the actions taken are to be recorded on the appropriate file and a report on the actions taken is to be presented to Council at its next ordinary meeting.

3.20. Performing functions outside district
(1) Things done by a local government in performing its executive functions may be done outside its own district but before it can do anything on land outside its own district that is not local government property of that local government it is required to have obtained the consent of —
(a) the owner of the land; and
(b) if the land is occupied, the occupier of the land; and
(c) if the land is under the control or management of any other person, that other person.
(2) This section does not apply to anything that a local government does in the district of another local government if it is done on behalf of the local government of that district.

Delegation No: LGA22	Private Works On, Over or Under Public Places

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Infrastructure

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995, Section 3.25(1)(b), Section 3.26(2) and (3),
2. Local Government Act, Schedule 9.1(8)
3. Local Government (Uniform Provisions) Regulations, Regulation 17.
4. Shire's Thoroughfares Local Laws.

The Chief Executive Officer delegates his/her authority and power to the Executive Manager Infrastructure to-

1.0 Grant permission to a person to construct anything on, over, or under a public thoroughfare or other public place that is Local Government property, and impose conditions in respect to the permission,

Subject to-

(a) The requirements of Regulation 17 of the *Local Government (Uniform Provisions) Regulations 1996*; and

(b) Having regard for the requirements contained in the Shires Thoroughfares Local Laws.

2.0 Issue a notice under Section 3.25(1)(b) to a person who has not complied with a condition imposed on a permission given under (1) above.

3.0 Do anything that is considered necessary to achieve, so far as is practicable, the purpose for which the notice was given under (2) above.

4.0 Recover the cost of anything done under (3) above as a debt due from the person who failed to comply with the notice issued subject to notification being given to Council prior to legal action commencing.

17. Private works on, over, or under public places — Sch. 9.1 cl. 8
(1) A person must not, without lawful authority, construct anything on, over, or under a public thoroughfare or other public place that is local government property.
Penalty: a fine of $5 000.
(2) Subregulation (1) does not apply to the construction of things by or on behalf of the Crown.
(3) A person may apply to the local government for permission to construct a specified thing on, over, or under a specified public thoroughfare or public place that is local government property.

Delegation No: LGA23	Plans – Thoroughfares Levels & Alignments

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Infrastructure

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995, Sections 3.52(4), 5.94 and 5.96

Council delegates its authority and power to the Chief Executive Officer to keep plans of levels and alignments of public thoroughfares under the care, control and management of the Council and to ensure those plans are available for public inspection during office hours,

Subject to-

1.0 Compliance with the requirements of Sections 3.52(4), 5.94 and 5.96 of the *Local Government Act 1995.*

3.52. Public access to be maintained and plans kept

(1) This section applies in respect of a thoroughfare only if it is in the metropolitan area or on land that has been constituted a townsite under section 10 of the Land Act 1933 5.

(2) Except to the extent that it is authorised by law to close them or restrict their use, a local government is to ensure that public thoroughfares are kept open for public use.

(3) In fixing or altering the level of, or the alignment of, a public thoroughfare, a local government is to ensure that access by vehicle to land adjoining the thoroughfare can be reasonably provided.

(4) A local government is to keep plans of the levels and alignments of public thoroughfares that are under its control or management, and make those plans available for public inspection.

Delegation No: LGA24	Recovery of Rates Accruing where Land is sold or disposed of and notice is not given

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Corporate Services

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995, Section 9.68(5)
2.
3.

The Chief Executive Officer delegates his/her authority and power to the Executive Manager Corporate Services to recover rates accruing on land, from a person, whether principal or agent, until such time the required notice of the sale or disposal of the land is given.

9.68. Local government to be notified of disposal of land

(1) When a person, whether as principal or agent, sells or otherwise disposes of rateable land in the district of a local government, the principal or the agent, is required to give to the local government, within 21 days after the sale or disposal, written notice of the sale or disposal.

(2) The notice is to include a plan or description of the land and the name and address of the person to whom the person giving the notice disposed of the land.

(3) If the sale or disposal is effected by an agent, the principal is not required to give notice under subsection (1) if the agent has done so, but the principal is to ensure that the notice is given.

(4) A person who does not comply with the requirements of this section commits an offence.

(5) If the notice is not given as required by this section, the local government may recover rates accruing until the required notice is given as if the sale or disposal had not taken place but this subsection does not affect —

(a) the principal's liability to be punished for an offence against this section; or

(b) the liability of the principal or of the new owner for rates under section 6.55.

Delegation No: LGA25	Recovery of Unpaid Rate or Service Charge

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Corporate Services

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995, Section 6.56(1).
2. Local Government Act 1995, Section 6.60(2).

The Chief Executive Officer delegates his/her authority and power to the Executive Manger Corporate Services to determine if -

1.0 Court action should be taken to recover an unpaid rate or service charge that is due and payable,

Subject to-

(a) Recovery action having been taken in accordance with Council's Rates and Charges Recovery Policy.

2.0 Notice should be given to the lessee of the land requiring the lessee to pay to the local government any rent as it falls due in satisfaction of the rate or service charge.

6.56. Rates or service charges recoverable in court

(1) If a rate or service charge remains unpaid after it becomes due and payable, the local government may recover it, as well as the costs of proceedings, if any, for that recovery, in a court of competent jurisdiction.

(2) Rates or service charges due by the same person to the local government may be included in one writ, summons, or other process.

6.60. Local government may require lessee to pay rent

(1) In this section —

lease includes an agreement whether made orally or in writing for the leasing or subleasing of land and includes a licence or arrangement for the use of land;

lessor and lessee mean the parties to a lease and their respective successors in title.

(2) If payment of a rate or service charge imposed in respect of any land is due and payable, notice may be given to the lessee of the land requiring the lessee to pay to the local government any rent as it falls due in satisfaction of the rate or service charge.

(3) The local government is to give to the lessor a copy of the notice with an endorsement that the original of it has been given to the lessee.

(4) The local government may recover the amount of the rate or service charge as a debt from the lessee if rent is not paid in accordance with the notice.

(5) Where an amount is paid under this section to the local government —

(a) the payment discharges the payer from any liability to any person to pay that amount as rent; and

(b) where as between a lessor and lessee the lessor is liable to pay the rate or service charge, the amount paid may be set off by the lessee against the rent payable to the lessor; and

(c) if the amount exceeds the rent due, or if there is no rent due, the amount may be set off by the lessee against accruing rent, or the balance recovered from the lessor in a court of competent jurisdiction.

(6) To the extent that an agreement purports to preclude a lessee from setting off or recovering payments made to a local government under this section, the agreement is of no effect.

Delegation No: LGA26	Removal and Impounding of Goods

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
On-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub delegated to Executive Manager Infrastructure, Executive Manager Regulatory Services

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995 (As Amended) – Sections 3.39, 3.40, 3.40A, 3.46, 3.47, 3.47A and 3.48.
2. Local Government (Functions and General) Regulations 1996 – Regulations 29 and 29A.

The Chief Executive Officer delegates his/her authority and power to the Executive Manger Infrastructure and the Executive Manger Regulatory Services to undertake the functions and duties required under Subdivision 4 of Division 3 of Part 3 of the Local Government Act 1995, in respect to-

1.0	Section 3.40	-	Removal of Vehicle and Impounding of Goods.
2.0	Section 3.40A	-	Removal of Abandoned Vehicles.
3.0	Section 3.46	-	Withholding of goods pending payment of costs.
4.0	Section 3.47	-	The disposal of confiscated goods.
5.0	Section 3.47A	-	Disposal of sick or injured animals.
6.0	Section 3.48	-	Recovery of costs incurred in the impounding exercise

Subject to-

(a) Compliance with the requirements of Regulations 29 and 29A of the *Local Government (Functions and General) Regulations 1996.*

3.39. Power to remove and impound

(1) An employee authorised by a local government for the purpose may remove and impound any goods that are involved in a contravention that can lead to impounding.

29. Contraventions that may lead to impounding of goods

(1) A contravention of a regulation or local law made under the Act can lead to the impounding of goods involved in the contravention if —
(a) it occurs in a public place; and
(b) either —
(i) the presence of the goods —
(I) presents a hazard to public safety; or
(II) obstructs the lawful use of any place; or
(ii) where the regulation or local law prohibits or regulates the placement of the goods, the goods are located in a place contrary to that regulation or local law.
(1a) A contravention of a regulation or local law made under the Act can lead to the impounding of goods that are animals (if they are involved in the contravention) whether or not the contravention takes place in a private or a public place.

29A. Abandoned vehicle wrecks, value etc. prescribed for

For the purposes of the definition of abandoned vehicle wreck in section 3.40A(5)(c) of the Act —
(a) the prescribed value is "$200"; and (b) the prescribed manner in which that value is to be calculated is that the value is to be based on the local private sale value of a vehicle of the same, or a similar, model, year and condition.

Delegation No: LGA27	Temporary Road Closures

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
On-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub delegated to Exec Manager Infrastructure,

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995, Sections 3.50, 3.50A and 3.51.
2. Local Government Functions and General Regulations 1996, Regulations 4, 5 and 6.
3. Road Traffic (Events on Roads) Regulations 1991.

Council delegate its authority and power to the Chief Executive Officer to determine applications for the temporary closure of a thoroughfare, and to undertake the necessary action for the closure of thoroughfares to vehicles -

1.0 In cases of emergency; or

2.0 Where in the opinion of the CEO that due to heavy rain a thoroughfare is likely to be damaged by the passage of traffic of a particular class, or by the passage of traffic generally; or

3.0 For the conduct of an Event in accordance with the *Road Traffic (Events on Roads) Regulations 1991*;

4.0 Where the Council is undertaking repair and maintenance works to a thoroughfare;

Subject to-

(a) Having regard for the requirements of Sections 3.50 and 3.50A of the *Local Government Act 1995*, and Clauses 4, 5 and 6 of the *Local Government (Functions and General) Regulations 1996.*

3.50. Closing certain thoroughfares to vehicles
(1) A local government may close any thoroughfare that it manages to the passage of vehicles, wholly or partially, for a period not exceeding 4 weeks.
(1a) A local government may, by local public notice, order that a thoroughfare that it manages is wholly or partially closed to the passage of vehicles for a period exceeding 4 weeks.
(2) The order may limit the closure to vehicles of any class, to particular times, or to such other case or class of case as may be specified in the order and may contain exceptions.
3.50A. Partial closure of thoroughfare for repairs or maintenance
Despite section 3.50, a local government may partially and temporarily close a thoroughfare, without giving local public notice, if the closure —
(a) is for the purpose of carrying out repairs or maintenance; and
(b) is unlikely to have a significant adverse effect on users of the thoroughfare.
3.51. Affected owners to be notified of certain proposals

Delegation No: LGA28	Notices Requiring Certain Things to be Done by Owner or Occupier of Land

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Regulatory Services

Legal (Parent):

1. Local Government Act 1995, Section 5.42.
2.

Legal (Subsidiary):

1. Local Government Act 1995, Section 3.25.
2. Local Government Act 1995, Section 3.26

The Chief Executive Officer delegates his/her authority and power to the Executive Manager Regulatory Services to-

1.0 Issue a notice in writing to the owner or occupier of land requiring them to do anything specified in Division 1 of Schedule 3.1 of the Local Government Act 1995.

2.0 Do anything that is considered necessary to achieve, so far as practicable, the purpose for which the notice was given, including recovering the cost of anything done as a debt due from the person who failed to comply with the notice.

3.25. Notices requiring certain things to be done by owner oroccupier of land
(1) A local government may give a person who is the owner or, unless Schedule 3.1 indicates otherwise, the occupier of land a notice in writing relating to the land requiring the person to do anything specified in the notice that —
(a) is prescribed in Schedule 3.1, Division 1; or
(b) is for the purpose of remedying or mitigating the effects of any offence against a provision prescribed in Schedule 3.1, Division 2.
3.26. Additional powers when notices given
(1) This section applies when a notice is given under section 3.25(1).
(2) If the person who is given the notice (notice recipient) fails to comply with it, the local government may do anything that it considers necessary to achieve, so far as is practicable, the purpose for which the notice was given.
(3) The local government may recover the cost of anything it does under subsection (2) as a debt due from the person who failed to comply with the notice.

Delegation No: LGA29	Write-Off of Debts other than Rates & Service Charges

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
On-Delegated:	No
Chief Executive Instruction/Procedure:	

Legal (Parent):

9. Local Government Act 1995, Section 5.42.
10.

Legal (Subsidiary):

1. Local Government Act 1995, Sections 6.12
2.

Council delegates its authority and power to the Chief Executive Officer to write-off of a debt other than rates or a service charge,

Subject to-

(a) the amount of the request or application not exceeding $300.00
(b) the debt being irrecoverable or uneconomical to recover

6.12. Power to defer, grant discounts, waive or write off debts

(1) Subject to subsection (2) and any other written law, a local government may —
(a) when adopting the annual budget, grant a discount or other incentive for the early payment of any amount of money; or*
(b) waive or grant concessions in relation to any amount of money; or
(c) write off any amount of money, which is owed to the local government.
** Absolute majority required.*
(2) Subsection (1)(a) and (b) do not apply to an amount of money owing in respect of rates and service charges.
(3) The grant of a concession under subsection (1)(b) may be subject to any conditions determined by the local government.

Delegation No: LGA30	Donations and Discount Hire Fees

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
On-Delegated:	No
Chief Executive Instruction/Procedure:	

Legal (Parent):

11. Local Government Act 1995, Section 5.42.
12.

Legal (Subsidiary):

1. Local Government Act 1995, Sections 6.12
2.

Council delegates its authority and power to the Chief Executive Officer to consider requests for Donations and Waiver of Hire Fees,

Subject to-

a) The donation and /or waiver of hire fees request is:
    a. less than $500
    b. for a non-profit group that is located in the Shire of Yilgarn
    c. for an event that will be held within the Shire and is a general community benefit
b) All Donations and Waiver of Hire Fees to be recorded in the Annual Report each year.

6.12. Power to defer, grant discounts, waive or write off debts
(1) Subject to subsection (2) and any other written law, a local government may —
(a) when adopting the annual budget, grant a discount or other incentive for the early payment of any amount of money; or*
(b) waive or grant concessions in relation to any amount of money; or
(c) write off any amount of money, which is owed to the local government.
** Absolute majority required.*
(2) Subsection (1)(a) and (b) do not apply to an amount of money owing in respect of rates and service charges.
(3) The grant of a concession under subsection (1)(b) may be subject to any conditions determined by the local government.

Delegation No: BUILD01	Extension of Period of Duration of Occupancy Permit or Building Approval Certificate

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Regulatory Services

Legal (Parent):

1. Building Act 2011, Section 127.
2.

Legal (Subsidiary):

1. Building Act 2011, Section 65
2.

Council delegates its authority and power to the Chief Executive Officer to approve or refuse to approve applications submitted under Section 65 of the Building Act.

65. Extension of period of duration

(1) A person may apply to extend the time in which the following can have effect —

(a) an occupancy permit that has been granted or modified to have effect for a limited period only; or

(b) a building approval certificate that has been granted to have effect for a limited period only.

Delegation No: BUILD02	Grant of Occupancy Permit or Building Approval Certificate

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub delegated to Executive Manager Regulatory Services

Legal (Parent):

1. Building Act 2011, Section 127.
2.

Legal (Subsidiary):

1. Building Act 2011, Section 58
2. Building Act 2011, Section 62

Council delegates its authority and power to the Chief Executive Officer to approve, modify or refuse to approve applications submitted under Section 58 of the Act, and may impose conditions in accordance with Section 62 of the Building Act.

58. Grant of occupancy permit, building approval certificate
(1) A permit authority to which an application is made must grant or modify the occupancy permit or grant the building approval certificate applied for if it is satisfied —
(a) that the applicant has complied with section 54; and
(b) that the building surveyor who signed the certificate of construction compliance or certificate of building compliance —
(i) is entitled under the Registration Act to sign certificates of construction compliance or certificates of building compliance for buildings or incidental structures of a kind that is the subject of the application;
62. Conditions imposed by permit authority
(1) A permit authority that, on an application, grants or modifies an occupancy permit or grants a building approval certificate, may impose conditions on the occupancy permit or modification or building approval certificate in addition to any provided for in the regulations.

Delegation No: BUILD03	Applications for the Use of Battery Powered Smoke Alarms in Dwellings

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Regulatory Services

Legal (Parent):

1. Building Act 2011, Section 127.
2. Building Regulations 2012, Regulation 61

Legal (Subsidiary):

1.
2.

Council delegates its authority and power to the Chief Executive Officer to approve or refuse to approve an application for the use of battery powered smoke alarms within a dwelling, or a part of a dwelling,

Subject to –

1.0 The CEO being satisfied that, at the time of giving the approval, installing a smoke alarm connected to the mains power supply would involve —

(a) a sufficient problem of a structural nature; or

(b) a sufficient problem of any other nature, the cause of which is not within the control of the owner.

127. Delegation: special permit authorities and local governments
(1) A special permit authority or a local government may delegate any of its powers or duties as a permit authority under another provision of this Act.
61. Local government approval of battery powered smoke alarms
(1) The local government of the district in which a dwelling is located may approve of the use, in the dwelling or a part of the dwelling, of a battery powered smoke alarm (rather than one that is connected to the mains power supply) if satisfied that, at the time of giving the approval, installing a smoke alarm connected to the mains power supply would involve —
(a) a sufficient problem of a structural nature; or
(b) a sufficient problem of any other nature, the cause of which is not within the control of the owner.

Delegation No: BUILD04	Issue of Building Permit or Demolition Permits

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub delegated to Executive Manager Regulatory Services

Legal (Parent):

1. Building Act 2011, Section 127.
2.

Legal (Subsidiary):

1. Building Act 2011, Section 21
2. Building Act 2011, Section 22
3. Building Act 2011, Section 119
4. Building Regulations 2012

Council delegates its authority and power to the Chief Executive Officer to approve or refuse plans, specifications and an application for a demolition permit submitted under the Building Act 2011,

Subject to-

(a) Compliance with Sections 21 and 22 of the *Building Act 2011*.

(b) Notice being given to the applicant informing of their review rights under Section 119 of the *Building Act 2011*.

21. Grant of demolition permit
(1) The permit authority to which an application for a demolition permit is made must grant the demolition permit if it is satisfied —

22. Further grounds for not granting an application
(1) A permit authority to which an application is made may refuse to grant the building permit or demolition permit applied for if it appears to the permit authority that there is an error in the information provided for the application or in a document that accompanied the application.

119. Building and demolition permits
A person who applies for a building permit or demolition permit may apply to the State Administrative Tribunal for a review of the decision of the permit authority —
(a) to refuse to grant a building permit or demolition permit; or
(b) in relation to a condition imposed on the grant of a building permit or demolition permit; or
(c) in relation to a condition added or varied under section 27(3).

Delegation No: BUILD05	Building Act 2011 – Appointment of Authorised Persons

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	No
Chief Executive Instruction/Procedure:	

Legal (Parent):

1. Building Act 2011, Section 127.
2. Building Act 2011, Section 96

Legal (Subsidiary):

1. Building Regulations 2012.
2.

Council delegates its authority and power to the Chief Executive Officer to appoint authorised persons for the purposes of the Building Act 2011 and the Building Regulations 2012,

Subject to-

1.0 Any appointment being in writing to the employee so appointed;

2.0 The employees exercising the Delegation, keeping a written record of details of how the Delegation was exercised, when the delegation was exercised, the persons or classes of persons directly affected by the exercise of the power or the discharge of the duty.

96. Authorised persons

(3) A local government may, by instrument in writing, designate a person employed by the local government under the Local Government Act 1995 section 5.36, as an authorised person for the purposes of this Act in relation to buildings and incidental structures located, or proposed to be located, in the district of the local government.

127. Delegation: special permit authorities and local governments

(1) A special permit authority or a local government may delegate any of its powers or duties as a permit authority under another provision of this Act.

(2) A delegation of a special permit authority's powers or duties may be only to an employee of the special permit authority, or to an employee of one of the legal entities that comprise the special permit authority.

(3) A delegation of a local government's powers or duties may be only to a local government employee.

Delegation No: BUILD06	Building Act 2011 – Commencement of Legal Proceedings

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Regulatory Services

Legal (Parent):

1. Building Act 2011, Section 133.
2.

Legal (Subsidiary):

1. Building Act 2011, Section 96.
2. Building Regulations 2012

Council delegates its authority and power to the Chief Executive Officer to commence proceedings for an alleged offence under the Building Act 2011 and Building Regulations 2012.

133. Prosecutions
(1) A prosecution for an offence against this Act may be commenced by, and only by —
(a) a permit authority or a person authorised to do so by a permit authority; or
(b) a local government or a person authorised to do so by a local government.

Delegation No: BUILD07	Issue and Revocation of Building Orders

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Regulatory Services

Legal (Parent):

1. Building Act 2011, Section 127.
2.

Legal (Subsidiary):

1. Building Act 2011, Section 110
2. Building Act 2011, Section 117
2. Building Regulations 2012

Council delegates its authority and power to the Chief Executive Officer to-

1.0 Make a building order in respect of one or more of the following-

(a) Particular building work;

(b) Particular demolition work; or

(c) A particular building or incidental structure.

2.0 Revoke a building order,

Subject to compliance with Section 117(1) of the Building Act 2011 by serving written notice to each person to whom the order is directed.

110. Building orders
(1) A permit authority may make an order (a building order) in respect of one or more of the following —
(a) particular building work;
(b) particular demolition work;
(c) a particular building or incidental structure, whether completed before or after commencement day.
117. Revocation of building order
(1) A permit authority may, by notice in writing, revoke a building order at any time and must serve each person to whom the order is directed with a copy of the notice.

Delegation No: BFIRE01	Bushfires Act – Authorised Officers - Bushfire Control Officers, Prescribed Officers and Officers to Carry Out Enforcement Proceedings

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO and CBFCO Jointly
On-Delegated:	No
Chief Executive Instruction/Procedure:	

Legal (Parent):

1. Bushfires Act 1954, Sections 59(3), 59(5), 59A(2).
2. Bushfires Infringement Regulations, Regulation 4.

Legal (Subsidiary):

1. .
2.

Council delegates its authority and power to the Chief Executive Officer and Chief Bush Fire Control Officer jointly to carry out enforcement proceedings and to perform the specified duties under the Bushfires Act.

59. Prosecution of offences

(3) A local government may, by written instrument of delegation, delegate authority generally, or in any class of case, or in any particular case, to its bush fire control officer, or other officer, to consider allegations of offences alleged to have been committed against this Act in the district of the local government and, if the delegate thinks fit, to institute and carry on proceedings in the name of the local government against any person alleged to have committed any of those offences in the district, and may pay out of its funds any costs and expenses incurred in or about the proceedings.

(5) Notwithstanding that a local government has under subsection (3) conferred authority on a delegate, the local government is not precluded from exercising but may itself exercise the authority.

4. Prescribed officers

For the purposes of section 59A(5) of the Act a prescribed officer is —

(a) in the case of an infringement notice issued by a local government, or at the request of a local government, or by a person acting pursuant to a delegation made by a local government pursuant to section 59(3) of the Act —

the chief executive officer, mayor or president of the local government;

Delegation No: BFIRE02	Bushfires Act – Powers and Duties

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	No
Chief Executive Instruction/Procedure:	

Legal (Parent):

1. Bushfires Act 1954, Section 48.
2.

Legal (Subsidiary):

1. .
2.

Council delegates its authority and power to the Chief Executive Officer to perform all the functions and duties of the local government under the Bushfires Act 1954,

Subject to-

(a) This power and authority cannot be sub-delegated by virtue of Section 48(3) of the Bushfires Act.

(b) The exclusion of powers and duties prescribed in the Act including those that require a resolution by the local government.

(c) where the exercise of authority relates to the determination of firebreaks in alternative positions, or alternative action to abate fire hazards, the CEO shall liaise with the Chief Bushfire Control Officer on each specific variation request.

48. Delegation by local governments
(1) A local government may, in writing, delegate to its chief executive officer the performance of any of its functions under this Act.
(2) Performance by the chief executive officer of a local government of a function delegated under subsection (1) —
(a) is taken to be in accordance with the terms of a delegation under this section, unless the contrary is shown; and
(b) is to be treated as performance by the local government.
(3) A delegation under this section does not include the power to subdelegate.
(4) Nothing in this section is to be read as limiting the ability of a local government to act through its council, members of staff or agents in the normal course of business.

Delegation No: BFIRE03	Prohibited and Restricted Burning Times Variation

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	President and Chief Bushfire Control Officer Jointly
On-Delegated:	No
Chief Executive Instruction/Procedure:	

Legal (Parent):

1. Bushfires Act 1954, Section 17(10).
2. Bushfires Act 1954, Section 18(5C)

Legal (Subsidiary):

1. Bushfires Act 1954, Section 17(7) and (8)
2. Bushfires Act 1954, Section 18(5) and (5C)

Council delegates its authority and power to the Shire President and Chief Bushfire Control Officer jointly to-

1.0 Vary the prohibited burning times within the district of the Shire of Yilgarn,

Subject to-

(a) The appropriate notice being given as required by Section 17(8) of the *Bushfires Act 1954*.

2.0 Vary the restricted burning times within the district of the Shire of Yilgarn –

(a) The appropriate notice being given as required by Section 18(5C) of the *Bushfires Act 1954*.

NB: Where agreement cannot be reached, then the matter shall be presented to Council for determination

17. Prohibited burning times may be declared by Minister

(7) Subject to subsection (7B), in any year in which a local government considers that seasonal conditions warrant a variation of the prohibited burning times in its district the local government may, after consultation with an authorised CALM Act officer if forest land is situated in the district, vary the prohibited burning times in respect of that year in the district or a part of the district by —

(a) shortening, extending, suspending or reimposing a period of prohibited burning times; or

(b) imposing a further period of prohibited burning times.

(7B) A variation of prohibited burning times shall not be made under subsection (7) if that variation would have the effect of shortening or suspending those prohibited burning times by, or for, more than 14 successive days.

(10) A local government may by resolution delegate to its mayor, or president, and its Chief Bush Fire Control Officer, jointly its powers and duties under subsections (7) and (8).

18. Restricted burning times may be declared by FES Commissioner

(5) Subject to subsection (5B) in any year in which a local government considers that seasonal conditions so warrant the local government may, after consultation with an authorised CALM Act officer if forest land is situated in its district —

(a) vary the restricted burning times in respect of that year in the district or a part of the district by —

(i) shortening, extending, suspending or reimposing a period of restricted burning times; or

(ii) imposing a further period of restricted burning times; or

(b) vary the prescribed conditions by modifying or suspending all or any of those conditions.

(5B) A variation shall not be made under subsection (5) if that variation would have the effect of —

(a) shortening the restricted burning times by; or

(b) suspending the restricted burning times, or any prescribed condition, for, more than 14 successive days during a period that would, in the absence of the variation under subsection (5), be part of the restricted burning times for that zone in that year.

Delegation No: CVAN01	Caravan Park and Camping Grounds Act – Authorised Persons

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
On-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Regulatory Services

Legal (Parent):

1. Caravan Park and Camping Grounds Act 1995, Section 17(1).
2.

Legal (Subsidiary):

1. Caravan Park and Camping Grounds Regulations 1997.
2.

Council delegates its authority and power to the Chief Executive Officer to perform the duties of an authorised person under the Caravan Park and Camping Grounds Act 1995 and the Caravan Park and Camping Ground Regulations 1997.

17. Appointment of authorised person

(1) The chief executive officer of the Department or a local government —

(a) may appoint such persons to be authorised persons for the purposes of this Act as the chief executive officer or the local government considers necessary; and

(b) must issue each person appointed under paragraph (a) with an identity card, in the prescribed form, certifying that the person is an authorised person under this Act.

Delegation No: CoVEH01	Control of Vehicles (Off-road Areas) Act – Authorised Officer

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Infrastructure Executive Manager Regulatory Services

Legal (Parent):

1. Control of Vehicles (Off-road Areas) Act 1978, Section 38(3).
2.

Legal (Subsidiary):

1. Control of Vehicles (Off-road Areas) Regulations 1979.
2.

Council delegates its authority and power to the Chief Executive Officer to perform the duties of an authorised officer under the Control of Vehicles (Off-road Areas) Act 1978, for the whole of the district of the Shire of Yilgarn.

38. Authorised officers, who are, functions of etc.

(3) A local government may by resolution appoint —

(a) any employee of the local government; and

(b) where the Minister by notice published in the Government Gazette authorises the local government to do so, any member of the council of that local government, to be an authorised officer for the purposes of this Act either in respect of the whole of its district or any part thereof defined in the appointment.

Delegation No: DOG01	Dog Act – Authorised Persons, Registration Officer and Officers to Carry Out Enforcement Proceedings

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
On-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub delegated to Executive Manager Regulatory Services and Shire Ranger

Legal (Parent):

1. Dog Act 1976, Section 10AA.
2.

Legal (Subsidiary):

1. Dog Act 1976, Sections 11, 12 and 44(2)
2. Dog Regulations 2013.

The Chief Executive Officer delegates his/her authority and power to the Executive Manger Regulatory Services and Shire Ranger as Registration Officers and Authorised Officers under the Dog Act 1976,

The Chief Executive Officer delegates his/her authority and power to the Administrative Services Officer, Rates/Debtors Officer, CRC Coordinator, HR/Payroll Officer, Finance Officer and Executive Assistant as Registration Officers under the Dog Act 1976,

Subject to -

1.0 The Officers and/or Employees exercising the Delegation, keeping a written record of details of how the Delegation was exercised, when the delegation was exercised, the persons or classes of persons directly affected by the exercise of the power on the discharge of the duty.

10AA. Delegation of local government powers and duties
(1) A local government may, by absolute majority as defined in the Local Government Act 1995 section 1.4, delegate to its chief executive officer any power or duty of the local government under another provision of this Act.

11. Staff and services
(1) For the purposes of this Act a local government may establish and maintain one or more dog management facilities and may appoint, under and subject to the provisions of the Local Government Act 1995, fit and proper persons to administer those facilities and otherwise to carry out the objects of this Act.

44. Enforcement proceedings
(2) Any proceedings under this Act, whether civil or penal, may be taken —
(a) by any police officer, in the name of the Crown; or
(b) by any employee of a local government authorised in that behalf by the local government, in the name of the local government; or
(c) by any person aggrieved.

Delegation No: CAT01	Cat Act – Authorised Persons

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
On-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub delegated to Executive Manager Regulatory Services and Shire Ranger

Legal (Parent):

1. Cat Act 2011, Section 44.
2.

Legal (Subsidiary):

1. Cat Act 2011, Sections 45(1)

The Chief Executive Officer delegates his/her authority and power to the Executive Manger Regulatory Services, Shire Ranger the Administrative Services Officer, Rates/Debtors Officer, CRC Coordinator, HR/Payroll Officer, Finance Officer and Executive Officer Chief Executive Officer as Authorised Persons under the Cat Act 2011,

Subject to -

1.0 The Officers and/or Employees exercising the Delegation, keeping a written record of details of how the Delegation was exercised, when the delegation was exercised, the persons or classes of persons directly affected by the exercise of the power on the discharge of the duty.

44. Delegation by local government

(1) The local government may delegate to its CEO the exercise of any of its powers or the discharge of any of its duties under another provision of this Act.

45. Delegation by CEO of local government

(1) A CEO may delegate to any employee of the local government the exercise of any of the CEO's powers or the discharge of any of the CEO's duties under another provision of this Act.

Delegation No: FOOD01	Food Act 2008 – Appointment of Designated Officers and Authorised Officers

Date Adopted:	17 March 2016	**Delegate:**	Environmental Health Officers
Date Last Reviewed:	20 February 2020	***Sub-Delegated:***	No
Policy Reference:		***Chief Executive Instruction/Procedure:***	

Legal (Parent):	**Legal (Subsidiary):**
1. Food Act 2008, Section 122. 2. Food Act 2008, Section 126.	1. Food Regulations 2009. 2. Food Act 2008, Sections 38, 62, 65, 66, 67.

Council delegates authority to and appoints -

1.0 The ~~Nic Warren,~~ Executive Manager Regulatory Services, as a Designated Officer for the purposes of sections 126(3), (6) and (7) of the *Food Act 2008* and the *Food Regulations 2009.*

2.0 The ~~Nic Warren,~~ Executive Manager Regulatory Services (Environmental Health Officer), as Designated Officer for the purposes of sections 126(2) of the *Food Act 2008* and the F*ood Regulations 2009,* and

3.0 The ~~Nic Warren,~~ Executive Manager Regulatory Services (Environmental Health Officer), as Authorised Officers for the purposes of sections 38 and 62, 65, 66 and 67 of the *Food Act 2008* and *Food Regulations 2009*, for all food premise types.

38. Powers of authorised officers

62. Grounds for serving improvement notice

65. Prohibition order

66. Certificate of clearance to be given in certain circumstance

67. Request for re-inspection

122. Appointment of authorised officers
(1) An enforcement agency may appoint a person to be an authorised officer for the purposes of this Act if
(a) the enforcement agency, having regard to any guidelines issued by the CEO under subsection (2), considers the person has appropriate qualifications and experience to perform the functions of an authorised officer; or
(b) the person holds office as an environmental health officer under the Health Act 1911.
126. Infringement notices
(1) In this section —
designated officer means an authorised officer designated by an enforcement agency under subsection (13) to be a designated officer;
prescribed means prescribed by the regulations.

Delegation No: HEALTH01	Public Health Act 2016

Date Adopted:	16 March 2017
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	Executive Manager Regulatory Services
Sub-Delegated:	No
Chief Executive Instruction/Procedure:	

Legal (Parent):

1. Public Health Act 2016
2. Health (Miscellaneous Provisions) Act 1911

Legal (Subsidiary):

1.

As per Section 312 of the Public Health Act 2016, Executive Manager Regulatory Services~~,~~ ~~Nic Warren,~~ is designated as an Authorised Officer

312. Environmental health officers to be authorised officers for certain purposes

(1) If, immediately before this section comes into operation, a person holds an appointment as an environmental health officer under the Health Act, then, on this section coming into operation, the person is to be taken —

(a) to have been designated as an authorised officer under section 24(1) by the local government that appointed the person as an environmental health officer; and

(b) to have been so designated for the purposes of —

(i) Parts 8, 9, 14 and 16; and

(ii) the Health Act sections 145(1), 157(2), 173 (paragraph (a) of the definition of authorised person), 181, 183, 184(1), 257, 262(3), 265(1), 267(1)(c), 268(a), 277(1)(b) and (3), 280(2), 349(1), 351(1), (2) and (5), 352(1) and (2), 358(2) and 375; and

(iii) the Dog Act 1976; and

(iv) the Tobacco Products Control Act 2006; and

(v) the Food Act 2008; and

(vi) the Cat Act 2011.

Delegation No: HEALTH02	Health (Miscellaneous Provisions) Act 1911 and Relevant Regulations Administration and Notices of Breach

Date Adopted:	16 March 2017	**Delegate:**	CEO and Executive Manager Regulatory Services
Date Last Reviewed:	20 February 2020	***Sub-Delegated:***	No
Policy Reference:		***Chief Executive Instruction/Procedure:***	

Legal (Parent):	**Legal (Subsidiary):**
1. Health (Miscellaneous Provisions) Act 1911, Part IV, V, VI and VII. 2.	1.

Council delegates its authority, powers and functions under-

1.0 The *Health (Miscellaneous Provisions) Act* 1911 (as amended) to the Chief Executive Officer and Nic Warren, Executive Manager Regulatory Services (Environmental Health Officer), relating to:

(i) Part IV - Division 2, Division 4 and Division 7;
(ii) Part V – Divisions 1, 2 and 3;
(iii) Part VI; and
(iv) Part VII – Division 1

Subject to the conditions of-

(a) With respect to Part IV – Divisions 2, 4 and 7, authority is limited to the approval of applications under Section 107; the forming of opinions; the issuing of notices, requisitions, directions and orders, subject to prior consultation with and agreement of the Council; the carrying out or causing to be carried out, works in default of duly served notices, but does not include the undertaking or contracting of works, the provision of sanitary conveniences or receptacles, the making of charges for works or the supply of pans or receptacles for refuse.

(b) With respect to Part V – Division 1 and 2, authority is limited to the forming of opinions and issuing of notices and directions subject to prior consultation with and agreement of the Council, but does not include the carrying out of works in default of duly served notices.

(c) With respect to Part VII Division 1, authority extends to the issuing of requisitions and, in the case of default, the causing of requisite work to be done, subject to prior discussion with and agreement of the Council.

(v) *The Health (Miscellaneous Provisions) Act* 1911 and the Regulations, Local-Laws and orders made thereunder relating to issue such notices as are deemed necessary for breaches of the Act,

Subject to the conditions of-

(a) Any non-compliance with any notice will be referred to the Council before proceeding with legal action.

2.0 Section 107 of the *Health (Miscellaneous Provisions) Act* 1911 (as amended) to Nic Warren, Executive Manager Regulatory Services (Environmental Health Officer), relating to the approval of applications for effluent disposal systems.

3.0 The *Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974* to Peter Clarke, Chief Executive Officer, and Nic Warren, Executive Manager Regulatory Services (Environmental Health Officer).

Delegation No: ASBESTOS01	Health (Asbestos Regulations) 1992

Date Adopted:	16 March 2017
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO and Executive Manager Regulatory Services
Sub-Delegated:	No
Chief Executive Instruction/Procedure:	

Legal (Parent):

1. Health (Miscellaneous Provisions) Act 1911
2. Criminal Procedure Act 2004

Legal (Subsidiary):

1. Health (Asbestos) Regulations 1992
2.

Council delegates its authority and power to the Executive Manager Regulatory Services as an Authorised Officer to issue infringements.

Council delegates its authority and power to the Chief Executive Officer as an Approved Officer to withdraw infringements.

Health (Asbestos) Regulations 1992

15D. Infringement notices

(5) A local government may, in writing, appoint persons or classes of persons to be authorised officers or approved officers for the purposes of the Criminal Procedure Act 2004 Part 2.

Delegation No: LITTER01	Litter Act – Authorised Officers – Withdrawal of Infringement Notices

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	CEO
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Regulatory Services

Legal (Parent):

1. Litter Act 1979, Section 30(4a).
2.

Legal (Subsidiary):

1. Litter Regulations 1981.
2.

Council delegates its authority and power to the Chief Executive Officer to withdraw infringement notices under the Litter Act.

26. Authorised officers, appointment and jurisdiction of etc.

(1) For the purposes of this Act an authorised officer is —

(a) any member of the Police Force;

(b) any person appointed as such pursuant to subsection (2) within the area of jurisdiction entrusted to him by the appointment;

(c) within the district of a local government, any person who is —

(i) a member of the council of the local government; or

(ii) an employee of the local government; or

(iii) an honorary inspector appointed by the local government under section 27AA.

30. Infringement notices

(4) An infringement notice may, whether or not the prescribed penalty has been paid, be withdrawn, at any time within 28 days after the service of the notice, by the sending of a notice, in the prescribed form, to the alleged offender at his last known place of residence or business, advising the alleged offender that the infringement notice has been withdrawn, and, in that event, the amount of any prescribed penalty that has been paid shall be refunded.

(4a) A withdrawal notice sent under subsection (4) shall be signed by a person appointed in writing to withdraw infringement notices by the public authority on behalf of which the infringement notice was served.

Delegation No: PLAN01	**Advertising "SA" Planning Applications**

Date Adopted:	17 March 2016
Date Last Reviewed:	20 February 2020
Policy Reference:	

Delegate:	Chief Executive Officer
Sub-Delegated:	Yes
Chief Executive Instruction/Procedure:	Sub-Delegated to Executive Manager Regulatory Services

Legal (Parent):

1. Town Planning Scheme 2.
2.

Legal (Subsidiary):

1. Planning and Development Act 2005

Council delegates its authority and power to the Chief Executive Officer to-

Advertise in a newspaper circulating within the district and by other means deemed appropriate, applications for developments or approval under "SA" conditions of the Shire of Yilgarn Town Planning Scheme No.2.

Shire of Yilgarn Town Planning Scheme No.2

3.2.2"SA" means that the use is not permitted unless the Council has granted planning approval after giving notice in accordance with clause 6.3

GOVERNMENT OF WESTERN AUSTRALIA
Department of Local Government, Sport and Cultural Industries

Local Government Act 1995 Review
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LOCAL GOVERNMENT ACT REVIEW ▶▶▶ DELIVERING FOR THE COMMUNITY

Guidelines for Local Government CEO Recruitment and Selection, Performance Review and Termination

Local Government (Administration) Amendment Regulations 2021

February 2021

Contents

Preface

The *Local Government Legislation Amendment Act 2019* includes a requirement for model standards covering the recruitment and selection, performance review and termination of employment of local government Chief Executive Officers (CEOs). These reforms are intended to ensure best practice and greater consistency in these processes between local governments.

The accompanying guidelines outline the recommended practice for local governments in undertaking these processes. These guidelines will assist local governments in meeting the model standards prescribed in the *Local Government (Administration) Amendment Regulations 2021*.

The standards and guidelines have been developed by the Department of Local Government, Sport and Cultural Industries (Department), in consultation with representatives from the Public Sector Commission, the Ombudsman, the Western Australian Local Government Association (WALGA) and Local Government Professionals WA (LGPro). The Department gratefully acknowledges the participation and contribution of these representatives.

The Department notes that the content of these guidelines does not necessarily reflect the views or policies of the organisations or individuals that have been consulted.

Part 1 – Recruitment and Selection

One of the fundamental roles of the council is the employment of the local government's CEO. The CEO is responsible for implementing the council's strategic vision and leading the local government administration.

Principles

A local government must select a CEO in accordance with the principles of merit, equity and transparency. A local government must not exercise nepotism, bias or patronage in exercising its powers. Additionally, a local government must not unlawfully discriminate against applicants. Section 5.40 of the *Local Government Act* 1995 (Act) lists a number of general principles of employment that apply to local governments.

Recruitment and Selection Standard

The minimum standard for recruitment and selection will be met if:

S1.1 The council has identified and agreed to the qualifications and selection criteria necessary to effectively undertake the role and duties of the CEO within that particular local government context.

S1.2 The council has approved, by absolute majority, the Job Description Form (JDF) which clearly outlines the qualifications, selection criteria and responsibilities of the position. The JDF is made available to all applicants.

S1.3 The local government has established a selection panel to conduct the recruitment and selection process. The panel must include at least one independent person who is not a current elected member, human resources consultant, or staff member of the local government.

S1.4 The local government attracts applicants through a transparent, open and competitive process (this is not necessary for vacancies of less than one year). The local government must advertise a vacancy for the position of CEO in the manner prescribed.

S1.5 The local government has assessed the knowledge, experience, qualifications and skills of all applicants against the selection criteria.

S1.6 The local government has verified the recommended applicant's work history, qualifications, referees and claims made in their job application.

S1.7 The appointment is merit-based, with the successful applicant assessed as clearly demonstrating how their knowledge, skills and experience meet the selection criteria.

Recruitment and Selection Standard cont.

S1.8 The appointment is made impartially and free from nepotism, bias or unlawful discrimination.

S1.9 The council has endorsed by absolute majority the final appointment.

S1.10 The council has approved the employment contract by absolute majority.

S1.11 The local government re-advertises the CEO position and undertakes a recruitment and selection process after each instance where a person has occupied the position for ten (10) consecutive years.

Guidelines

Recruitment and selection process

The council of the local government should act collectively throughout the recruitment and selection process. To uphold the integrity of the process, the council must resist any attempt to influence the outcome through canvassing or lobbying.

The local government should carefully consider the role of the CEO. This includes the CEO's legislated powers and functions and their role as the head of the administrative arm of the local government. In determining the selection criteria for the position of CEO, it will be important for a local government to consider the needs of the community and the specific skills and experience that will be required of the CEO in that particular local government. The competencies the council looks for in its CEO should reflect the council's strategic community plan.

Once the essential skills and experience which form the selection criteria for the position have been established, the local government must set out the selection criteria (essential and desirable) and the responsibilities of the position in a Job Description Form (JDF). If emphasis is placed on certain selection criteria, this should be highlighted in the JDF so that applicants are aware of this. For example, some level of project management experience will usually be an important criterion, but if the local government is undertaking a major development such as a new recreation centre, added emphasis may need to be given to this criterion.

The JDF must be approved by an absolute majority of the council.

Advertising

The local government should ensure that applicants are clearly informed about the application process, such as the application requirements, the closing date for applications and how applications are to be submitted. It is essential that this process is transparent and that each step in the process is documented. Associated records must be kept in a manner consistent with the *State Records Act 2000* (WA).

It is a requirement that a local government is to give Statewide public notice if the position of CEO becomes vacant. Statewide public notice must contain:

- details of the remuneration and benefits offered;
- details of the place where applications are to be submitted;
- the date and time applications close;
- the duration of the proposed contract;
- a web address where the JDF can be accessed;
- contact details for a person who can provide further information; and
- any other relevant information.

In order to attract the best possible pool of applicants for the position of CEO, it is recommended that local governments use a diverse range of advertising methods, mediums and platforms (in addition to the advertising requirement under section 5.36(4) of the Act). For example:

- advertising on the local government's website;
- posting on online jobs boards (e.g. SEEK);
- sharing the advertisement via professional networks; and
- undertaking an executive search.

A local government must publicly advertise the CEO position if the same person has remained in the job for 10 consecutive years. This requirement does not prevent the incumbent CEO from being employed for another term, provided they are selected in accordance with the standards for recruitment and selection.

Selection panel and independent person

Local governments are required to establish a selection panel to conduct and facilitate the recruitment and selection process. The selection panel should be made up of elected members (the number of which is determined by the council) and must include at least one independent person. The independent person cannot be a current elected member, human resources consultant, or staff member of the local government. Examples of who the independent person could be include:

- former elected members or staff members of the local government;
- former or current elected members (such as a Mayor or Shire President) or staff members of *another* local government;
- a prominent or highly regarded member of the community; or
- a person with experience in the recruitment of CEOs and senior executives.

The panel are responsible for assessing applicants and making a recommendation to council regarding the most suitable applicant or applicants. The essence of the role of an independent panel member is to bring an impartial perspective to the process and reduce any perception of bias or nepotism.

It is essential that prior to a person's appointment to a selection panel they are informed of the duties and responsibilities of their role and that of the panel. It is recommended that local governments develop a policy or terms of reference to facilitate this process that incorporate the standards for recruitment at Division 2 of the *Local Government (Administration) Amendment Regulations (No.2) 2020*. A policy should include important information that outlines:

- The primary functions of the panel;
- Roles and responsibilities panel members;
- Composition of the panel;
- Duration of term;
- Desirable criteria for appointment to the panel;
- A requirement that panel members sign a confidentially agreement and agree to the duties and responsibilities of their role; and
- Any other information the local government deems necessary for the panel to effectively carry out their role.

Independent human resources consultant

A local government should seek independent advice from a human resources consultant where the council lacks the capacity or expertise to facilitate the recruitment and selection process (or any aspect of it). A member of the human resources team within a local government must not be involved in the recruitment of a new CEO.

The consultant should not be associated with the local government or any of its council members. The consultant can be an independent human resources professional, recruitment consultant, or recruitment agency.

An independent human resources consultant can provide advice to the selection panel on how to conduct the recruitment process, or a local government may engage a consultant to support it in undertaking certain aspects of the recruitment process, such as one or more of the following:

- development or review of the JDF;
- development of selection criteria;
- development of assessment methods in relation to the selection criteria;
- drafting of the advertisement;
- executive search;
- preliminary assessment of the applications;
- shortlisting;
- drafting questions for interview;
- coordinating interviews;
- preparing the selection summary assessment and recommendation;

- arranging for an integrity check and/or police clearance; and
- assisting the council in preparing the employment contract.

The consultant is not to be directly involved in determining which applicant should be recommended for the position, their role is not one of decision-maker.

It is recommended that rigorous checks be conducted on any independent consultants before they are engaged to ensure they have the necessary skills and experience to effectively assist the council. Local government recruitment experience may be beneficial but is not a requirement.

The independent human resources consultant must be able to validate their experience in senior executive recruitment and appointments. It is important to note that if the local government uses a consultant or agency to assist in finding applicants, they will require an employment agent licence under the *Employment Agents Act 1976* (WA).

A good independent human resources consultant will bring expertise, an objective perspective and additional human resources to what is a complex and time-consuming process. Given the time and effort involved in finding a competent CEO, and the cost of recruiting an unsuitable CEO, there can be a good business case for spending money on a human resources consultant.

If a decision is made to engage an independent human resources consultant, it is imperative that the council maintains a high level of involvement in the process and enters into a formal agreement (contract) with them. In order to manage the contract efficiently, and ensure an effective outcome, regular contact with the consultant is required during the recruitment process. As with any contractor engagement, the local government must ensure their procurement and tender processes comply with the Act and the procurement policy of the local government.

Council's responsibilities

A human resources consultant cannot undertake the tasks for which the council is solely responsible. An independent consultant cannot and should not be asked to:

- Conduct interviews: This should be done by the selection panel. However, council may decide to interview applicants recommended by the selection panel. A consultant can provide support with interviews, providing advice on the recruitment and selection process and writing up recommendations. The consultant may also arrange referee reports and checks of applicants.
- Make the decision about who to appoint to the position of CEO: Only the council can make this decision, drawing upon advice from the selection panel.
- Negotiate the terms and conditions of employment: Noting that the consultant should be able to provide advice on remuneration constraints and other terms and conditions.

Creating Diversity

In order to ensure all applicants are given an equal opportunity for success, selection methods need to be consistent and objective. In a structured interview, each applicant should have the opportunity to answer the same primary questions with follow-up questions used to illicit further detail or clarification. Behavioural-based interview

questions are objective and gauge the applicants' suitability, reducing biases in assessment (see examples below).

Basing a selection decision on the results of a number of selection methods can help to reduce procedural shortcomings and ensure the best applicant is chosen. Psychometric, ability and aptitude testing are considered to be valid, reliable and objective. While applicants with extensive experience and reputable education may appear to be more qualified, an objective assessment of each person's ability and personal traits can help to provide a clearer picture of the applicant.

Where possible, it is recommended that local governments ensure diversity on the selection panel. This may be achieved by ensuring gender, ethnicity, age and experiential diversity is represented on the panel. Diversity is also a consideration when selecting an independent person for the selection panel, particularly where there is a lack of diversity on the council. A diverse selection panel will assist in making quality decisions regarding suitable applicants.

Individuals are often unaware of biases they may have. For this reason, it is helpful for the selection panel to undertake training about unconscious biases. Awareness of unconscious biases assists individuals in preventing those biases from interfering in their decision making. For example, if there are considerable discrepancies in the assessment scores between two panel members, discussion will be required to ensure bias has not influenced these scores. Allowing team members to acknowledge and recognise prejudices is essential to managing those biases. The following biases should be addressed:

- "Similar-to-me" effect - if interviewers share the same characteristics with the applicants or view those characteristics positively, they are more likely to score them highly;
- "Halo" effect – interviewers may let one quality (such as race, gender, looks, accent, experience, etc.) positively or negatively affect the assessment of the applicant's other characteristics.

Due Diligence

It is essential that the local government ensures that the necessary due diligence is undertaken to verify an applicant's qualifications, experience and demonstrated performance. This includes:

- verifying an applicant's qualifications such as university degrees and training certificates;
- verifying the applicant's claims (in relation to the applicant's character, details of work experience, skills and performance) by contacting the applicant's referees. Referee reports should be in writing in the form of a written report, or recorded and verified by the referee;
- requesting that an applicant obtains a national police clearance as part of the application process; and
- ensuring no conflicts of interests arise by looking to outside interests such as board membership and secondary employment.

A council may wish to contact a person who is not listed as an applicant's referee,

such as a previous employer. This may be useful in obtaining further information regarding an applicant's character and work experience, and verifying related claims. The applicant should be advised of this and be able to provide written comments to the council.

A search of social media and whether an applicant has an online presence may also assist in identifying potential issues. For example, an applicant may have expressed views which are in conflict with the local government's values. This should be made clear in the application information. To ensure the integrity of the recruitment process, a council must act collectively when performing due diligence.

Selection

Once the application period closes, the selection panel, or consultant on behalf of the selection panel, must assess applications and identify a shortlist of applicants to be interviewed.

In shortlisting applicants for the interview phase, the selection panel should consider the transferable skills of applicants and how these would be of value in the role of CEO. The selection panel should not overlook applicants who do not have experience working in the local government sector.

It is important that the assessment process is consistent for all applicants. For example, each applicant is asked the same interview questions which are related to the selection criteria and each are provided with the same information and undertake the same assessments.

Elected members should declare any previous association with an applicant or any potential conflict of interest at the time of shortlisting if they are part of the selection panel. Similarly, if the interviews involve the full council, the elected member should make an appropriate declaration before the interviews commence. If the potential conflict of interest is significant or a member's relationship with an applicant may result in claims of nepotism, patronage or bias, the council may need to consider whether to exclude the elected member from the process. The decision should be documented and recorded for future reference.

Selecting an applicant should be based on merit; that is, choosing an applicant that is best suited to the requirements of the position and the needs of the local government. This involves the consideration and assessment of applicants' skills, knowledge, qualifications and experience against the selection criteria required for the role. As part of the selection process, a council may consider it appropriate for each of the preferred candidates to do a presentation to council.

The appointment decision by the council should be based on the assessment of all measures used, including:

- assessment technique(s) used (e.g. interview performance);
- quality of application;
- referee reports;
- verification and sighting of formal qualifications and other claims provided by the applicant; and
- other vetting assessments used (e.g. police checks, integrity checks, etc.).

Employment contract

In preparing the CEO's employment contract, the council must ensure the contract includes the necessary provisions required under section 5.39 of the Act and associated regulations.

Section 5.39 of the Act provides that a CEO's employment contract must not be for a term exceeding five years. The term of a contract for an acting or temporary position cannot exceed one year.

Further, the employment contract is of no effect unless it contains:

- the expiry date of the contract;
- the performance review criteria; and
- as prescribed under regulation 18B of the Administration Regulations, the maximum amount of money (or a method of calculating such an amount) to which the CEO is to be entitled if the contract is terminated before the expiry date. The amount is not to exceed whichever is the lesser of:
    - the value of one year's remuneration under the contract; or
    - the value of the remuneration that the CEO would have been entitled to, had the contract not been terminated.

It is recommended that the council seeks independent legal advice to ensure that the contract is lawful and able to be enforced. In particular, advice should be sought if there is any doubt as to the meaning of the provisions of the contract.

Councils should be aware that CEO remuneration is determined by the Salaries and Allowances Tribunal and the remuneration package may not fall outside the band applicable to the particular local government.

The CEO's employment contract should clearly outline grounds for termination and the termination process in accordance with the standards in regulations.

The council of the local government must approve, by absolute majority, the employment contract and the person they appoint as CEO.

Appointment

A decision to make an offer of employment to a preferred applicant must be made by an absolute majority of council. If the preferred applicant accepts the offer and the proposed terms of the contract without negotiation, there is no further requirement for council to endorse the applicant and the contract. However, if there is a process of negotiation to finalise the terms and conditions of the contract, council is required to endorse the appointment and approve the CEO's employment contract by absolute majority. In both instances, the employment contract must be signed by all parties.

The council should notify both the successful individual and the remaining unsuccessful applicants as soon as possible before publicly announcing the CEO appointment.

The successful applicant should not commence duties with the local government as CEO until the employment contract has been signed.

The unsuccessful applicants (including those not interviewed) should be notified of the outcome of their application. It is recommended that the local government creates a template letter for unsuccessful applicants that can be easily personalised with the applicants' details and sent out quickly.

The council should keep a record of their assessment of the unsuccessful applicant(s) and provide the unsuccessful applicant(s) with the opportunity to receive feedback on their application, or interview performance if they were granted an interview. Should an unsuccessful applicant request feedback, it is recommended that a member of the selection panel provides this. If a recruitment consultant is used, they may undertake this task.

Confidentiality

The local government should ensure that all information produced or obtained during the recruitment and selection process is kept confidential. This includes applicants' personal details, assessment details, the selection report and outcome of the process. This ensures privacy requirements are met and maintains the integrity of the process. It is recommended that selection panel members and councillors sign a confidentiality agreement to ensure that they are aware of their obligations.

CEO induction

Local governments should ensure that they provide the CEO with all of the necessary information on the local government's processes, policies, procedures and systems at the commencement of the CEO's employment.

New CEOs are eligible to participate in the Local Government CEO Support Program which is a joint initiative of the Department and LG Pro to provide mentoring and general support to those appointed to the position of CEO in a local government for the first time. The program runs for six to nine months from the time a CEO is appointed and involves the CEO being matched with a mentor that best meets their needs.

The program provides the CEO with an opportunity (through meetings and on-going correspondence) to discuss a wide range of issues with their appointed mentor in the strictest confidence. The program is aimed at addressing the individual needs of the CEO. Examples of issues that may be covered include the following:

- Role of the CEO
- Governance
- Strategic and long-term planning
- Legislative framework
- Relationships and dealing with council members
- Risk management
- Resource management
- Managing the business of Council
- Family considerations

Part 2 – Performance Review

Principles

The standards regarding CEO performance review are based on the principles of fairness, integrity and impartiality.

Performance Review Standards

The minimum standard for performance review will be met if:

S2.1 Performance criteria is specific, relevant, measurable, achievable and time-based.

S2.2 The performance criteria and the performance process are recorded in a written document, negotiated with and agreed upon by the CEO and council.

S2.3 The CEO is informed about how their performance will be assessed and managed and the results of their performance assessment.

S2.4 The collection of evidence regarding performance outcomes is thorough and comprehensive.

S2.5 Assessment is made free from bias and based on the CEO's achievements against documented performance criteria, and decisions and actions are impartial and transparent.

S2.6 The council has endorsed the performance review assessment by absolute majority.

Guidelines

Section 5.38 of the Act provides that, for a CEO who is employed for a term of more than one year, the performance of a CEO is to be reviewed formally at least once in every year of their employment.

In addition to this minimum requirement, it is recommended that the council engages in regular discussions with the CEO regarding their performance against the performance criteria, including progress and ways that the CEO can be supported. Any changes to the CEO's performance agreement such as changes to the performance criteria should also be discussed, and agreed to, between the council and the CEO, as the matter arises.

Employment contract and performance agreement

Section 5.39, of the Act requires the employment contract to specify the performance criteria for the purpose of reviewing the CEO's performance. This will include ongoing permanent performance criteria. A local government may wish to have a separate additional document called a "performance agreement" which includes the

performance review criteria in the employment contract, additional criteria (e.g. the performance indicators in relation to specific projects) and how the criteria will be assessed. The performance agreement should be negotiated and agreed upon by the CEO and the council. The performance agreement may also set out the CEO's professional development goals and outline a plan to achieve these goals.

Performance Criteria

Setting the performance criteria is an important step. One of the CEO's key responsibilities is to oversee the implementation of council's strategic direction, and so it is important to align the CEO's performance criteria to the goals contained in the council's Strategic Community Plan and Corporate Business Plan. Accordingly, as these plans are updated, the CEO's performance criteria should be updated to reflect the changes.

In leading the administrative arm of a local government, the CEO is responsible for undertaking core tasks, the achievement of which will contribute to the effectiveness of the council. It is important that the outcomes associated with these tasks are measurable and clearly defined. These could be in relation to:

- service delivery targets from the council's Strategic Community Plan;
- budget compliance;
- organisational capability;
- operational and project management;
- financial performance and asset management;
- timeliness and accuracy of information and advice to councillors;
- implementation of council resolutions;
- management of organisational risks;
- leadership (including conduct and behaviour) and human resource management; and
- stakeholder management and satisfaction.

Performance criteria should focus on the priorities of the council and, if appropriate, can be assigned priority weighting in percentages. The council and CEO should set goals related to target outcomes for future achievement in the performance criteria. Goals should be specific, measurable, achievable, relevant and time-based.

Following the determination of the performance criteria and goals, the council will need to determine how to measure the outcomes of each criteria. It is important to relate performance indicators to the selection criteria used in selecting the CEO. For example, if the CEO has been selected due to their financial experience and ability to improve the local government's finances, indicators regarding improved revenue and reduced expenses are obvious starting points.

Considering the context within which the local government is operating is important. For example, if a significant financial event occurs, such as a downturn in the economy, financial performance indicators will likely need to be adjusted. It is important that such contextual factors are given appropriate weighting and that goals are flexible to allow regular adjustment. Adjustments may be initiated by either the CEO or the council. Councils need to be realistic in terms of their expectations of a CEO's performance and provide appropriate resources and support to facilitate the

achievement of performance criteria.

Performance review panel

It is recommended that the council delegates the CEO performance review to a panel (e.g. comprising certain council members and an independent observer). The panel has a duty to gather as much evidence as possible upon which to base their assessments. The role of the review panel includes developing the performance agreement in the first instance, conducting the performance review and reporting on the findings and recommendations of the review to council. It is also recommended that council develop a policy to guide the performance review process. A policy might include the composition of the panel, primary functions, the role and appointment of an independent consultant, and the responsibilities of review panel members.

Independent consultant

If a council lacks the resources and expertise to meet the expected standard of performance review, the council should engage an external facilitator to assist with the process of performance appraisal and the development of the performance agreement. The local government should ensure that the consultant has experience in performance review and, if possible, experience in local government or dealing with the performance review of senior executives. The consultant should not have any interest in, or relationship with, the council or the CEO.

With guidance from the performance review panel, a consultant can facilitate the following tasks:

- setting performance criteria;
- preparing the performance agreement;
- collecting performance evidence;
- writing the performance appraisal report;
- facilitating meetings between the performance review panel;
- assisting with the provision of feedback to the CEO;
- formulating plans to support improvement (if necessary); and
- providing an objective view regarding any performance management-related matters between the concerned parties.

Assessing performance

It is a requirement of the regulations that the process by which the CEO's performance will be reviewed is documented and agreed to by both parties. Council and the CEO must also agree on any performance criteria that is in addition to what is specified in the CEO's contract of employment. The option to include additional criteria for performance review purposes by agreement provides a degree of flexibility for both parties in response to changing circumstances and priorities.

It is essential that CEO performance is measured in an objective manner against the performance criteria alone. It is important that reviews are impartial and not skewed by personal relationships between the review panel and the CEO. Close personal relationships between the panel members and the CEO can be just as problematic as extremely poor relationships. Evidence of CEO performance may come from an array of sources, many of which the CEO themselves can and should provide to the

council as part of regular reporting. These sources include:

- achievement of key business outcomes;
- interactions with the council and progress that has been made towards implementing the council's strategic vision;
- audit and risk committee reports;
- workforce metrics (e.g. the average time to fill vacancies, retention rate, information about why people leave the organisation and staff absence rate);
- incident reports (e.g. results of occupational health and safety assessments, the number and nature of occupational health and safety incident reports, and the number and nature of staff grievances);
- organisational survey results;
- relationships (e.g. with relevant organisations, stakeholder groups, and professional networks); and
- insights from key stakeholders (this could be done by way of a survey to obtain stakeholder input).

It is important that, in addition to looking at the achievement of key performance indicators (KPIs), the council considers the following:

- How the CEO has achieved the outcomes. In particular, whether or not their methods are acceptable and sustainable.
- The extent to which current performance is contingent upon current circumstances. Has the CEO demonstrated skills and behaviours to address and manage changes in circumstances which have affected his or her performance? (for example, the impact of COVID-19.)
- What the CEO has done to ensure the wellbeing of staff and to maintain trust in the local government.

The council should consider the attention the CEO has given to ensuring equal employment opportunity, occupational health and safety, privacy, managing potential conflicts of interest, and complying with procurement process requirements.

Addressing performance issues

Once the CEO's performance has been assessed, it is essential that any areas requiring attention or improvement are identified, discussed with the CEO and a plan is agreed and put in place to address these. The plan should outline the actions to be taken, who is responsible for the actions and an agreed timeframe.

The performance review panel must decide on an appropriate course of action that will address the performance issue. This may include professional development courses, training, counselling, mediation, mentoring or developing new work routines to ensure specific areas are not neglected. The performance review panel should then arrange for regular discussion and ongoing feedback on the identified performance issues, ensuring improvements are being made.

It is important to keep in mind that a local government falling short of its goals is not always attributable to the CEO. External factors may have resulted in initial performance expectations becoming unrealistic. Failure to meet performance criteria does not necessarily mean the CEO has performed poorly and, for this reason,

performance and outcome should be considered separately. Where ongoing issues have been identified, the council will need to take a constructive approach and seek to develop the CEO's competency in that area.

While there are obligations on the council to manage the CEO in regard to their performance, when it extends into potential wrongdoing (misconduct), the council should be referring the matter to the Public Sector Commission or Corruption and Crime Commission. This provides an independent process to follow and ensures probity, natural justice and oversight of allegations.

Confidentiality

The council must ensure that accurate and comprehensive records of the performance management process are created. Any information produced must be kept confidential.

Part 3 – Termination

Principles

The standards for the termination of a local government CEO's employment (other than for reasons such as voluntary resignation or retirement) are based on the principles of fairness and transparency. Procedural fairness is a principle of common law regarding the proper and fair procedure that should apply when a decision is made that may adversely impact upon a person's rights or interests.

Termination Standards

The minimum standards for the termination of a CEO's contract will be met if:

S3.1 Decisions are based on assessment of the CEO's performance as measured against the documented performance criteria in the CEO's contract.

S3.2 Performance issues have been identified as part a performance review (conducted within the preceding 12 months) and the CEO has been informed of the issues. The council has given the CEO a reasonable opportunity to improve and implement a plan to remedy the performance issues, but the CEO has not subsequently remedied these issues to the satisfaction of the local government.

S3.3 The principle of procedural fairness is applied. The CEO is informed of their rights, entitlements and responsibilities in the termination process. This includes the CEO being provided with notice of any allegations against them, given a reasonable opportunity to respond to those allegations or decisions affecting them, and their response is genuinely considered.

S3.4 Decisions are impartial and transparent.

S3.5 The council of the local government has endorsed the termination by absolute majority.

S3.6 The required notice of termination (which outlines the reasons for termination) is provided in writing.

Guidelines

Reasons for termination

The early termination of a CEO's employment may end due to:

- poor performance;
- misconduct; or
- non-performance or repudiation of contract terms.

There is a difference between poor performance and serious misconduct. Poor performance is defined as an employee not meeting the required performance criteria or demonstrating unacceptable conduct and behaviour at work, it includes:

- not carrying out their work to the required standard or not doing their job at all;
- not following workplace policies, rules or procedures;
- unacceptable conduct and behaviour at work;
- disruptive or negative behaviour at work;
- not meeting the performance criteria set out in the employment contract and/or performance agreement unless these are outside the CEO's control;
- not complying with an agreed plan to address performance issues;
- failing to comply with the provisions of the *Local Government Act 1995* and other relevant legislation;
- failing to follow council endorsed policies.

Serious misconduct can include when an employee:

- causes serious and imminent risk to the health and safety of another person or to the reputation or revenue of the local government; or
- behaves unlawfully or corruptly; or
- deliberately behaves in a way that's inconsistent with continuing their employment.

Examples of serious misconduct can include:

- matters arising under section 4(a), (b) and (c) of the *Corruption, Crime and Misconduct Act 2003*;
- theft;
- fraud;
- assault;
- falsification of records;
- being under the influence of drugs or alcohol at work; or
- refusing to carry out appropriate and lawful resolutions of council.

Misconduct is also defined in section 4 of the *Corruption, Crime and Misconduct Act 2003* (WA). Under this Act, misconduct can be either serious or minor and the obligation to notify the Public Sector Commission (PSC) or the Corruption and Crime Commission (CCC) is paramount.

Termination on the basis of misconduct is covered by employment law. A local government should seek independent legal, employment or industrial relations advice prior to a termination. A council should also seek independent advice during the termination process including advice on the relevant employment legislation affecting CEO employment and the application of that legislation to their specific circumstances. This will ensure that a council complies with employment law during the entire termination process.

A local government is required to endorse the decision to terminate a CEO's employment by way of an absolute majority decision. A local government must certify that the termination was in accordance with the adopted standards in regulations.

Opportunity to improve and mediation

If a CEO is deemed to have been performing poorly, the council must be transparent and inform the CEO of this. It is important that the CEO is given an opportunity to remedy the issues within a reasonable timeframe as agreed between the CEO and the council. The council should clearly outline the areas in need of improvement, and with the CEO's input, determine a plan to address any issues. If a plan for improvement is put in place and the CEO's performance remains poor, then termination may be necessary. If a local government decides to terminate the employment of the CEO it must have conducted a performance review in the previous 12 months in accordance with section 5.38 of the Act.

Where the concerns or issues relate to problematic working relationships or dysfunctional behaviour, it is recommended that a council engages an independent accredited mediator to conduct a mediation between the parties. A mediation session may be useful in assisting parties to understand and address issues before the situation escalates to a breakdown in the working relationship (which affects the ability of the CEO to effectively perform their duties) and the subsequent termination of the CEO's employment.

Termination report

The council should prepare a termination report which outlines the reasons for termination, the opportunities and assistance provided to the CEO to remedy any issues, and an explanation of the CEO's failure to do so. Council must provide prior opportunities and support to the CEO to assist them in remedying the issues which form the basis of the termination. It is a requirement of the regulations that council must provide written notice to the CEO outlining the reasons for their decision to terminate. In addition, council must certify that the termination of the CEO's employment was carried out in accordance with the standards set out in regulations.

Confidentiality

Local governments should ensure that the termination process is kept confidential. The CEO is to be informed of their rights and entitlements. Notice of termination of employment is required to be given in writing. Where possible, the news of termination of employment should also be delivered in person. The CEO should be provided with a letter outlining the reasons for, and date of, the termination of their employment.

Before making any public announcements on the termination of the CEO, a council should ensure that the entire termination process is complete, including that the CEO has been informed in writing of the termination.

Disclaimer

It is outside the scope of these guidelines to provide legal advice, and local governments should seek their own legal advice where necessary. Guidance as to legal requirements and compliance in relation to the termination of employment is provided by the Fair Work Commission at www.fwc.gov.au, the Fair Work Ombudsman at www.fairwork.gov.au and the Western Australian Industrial Relations Commission at www.wairc.wa.gov.au.

Attachment 9.2.1

Shire of YILGARN

"good country for hardy people"

SHIRE OF YILGARN

MONTHLY FINANCIAL REPORT
(Containing the Statement of Financial Activity)
For the Period Ended 31 December 2020

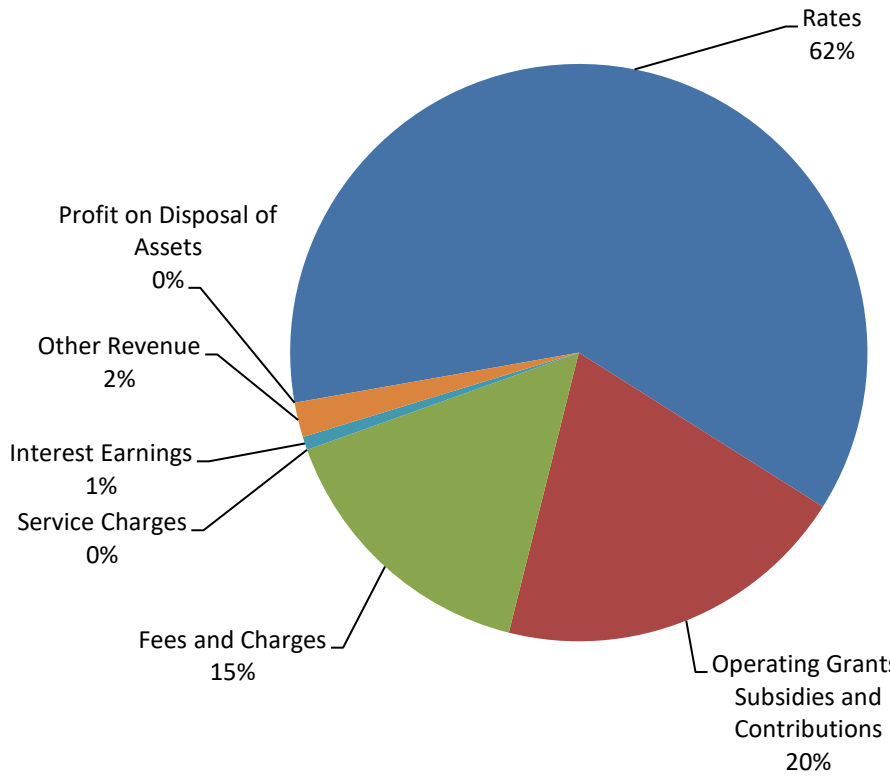
LOCAL GOVERNMENT ACT 1995

LOCAL GOVERNMENT (FINANCIAL MANAGEMENT) REGULATIONS 1996

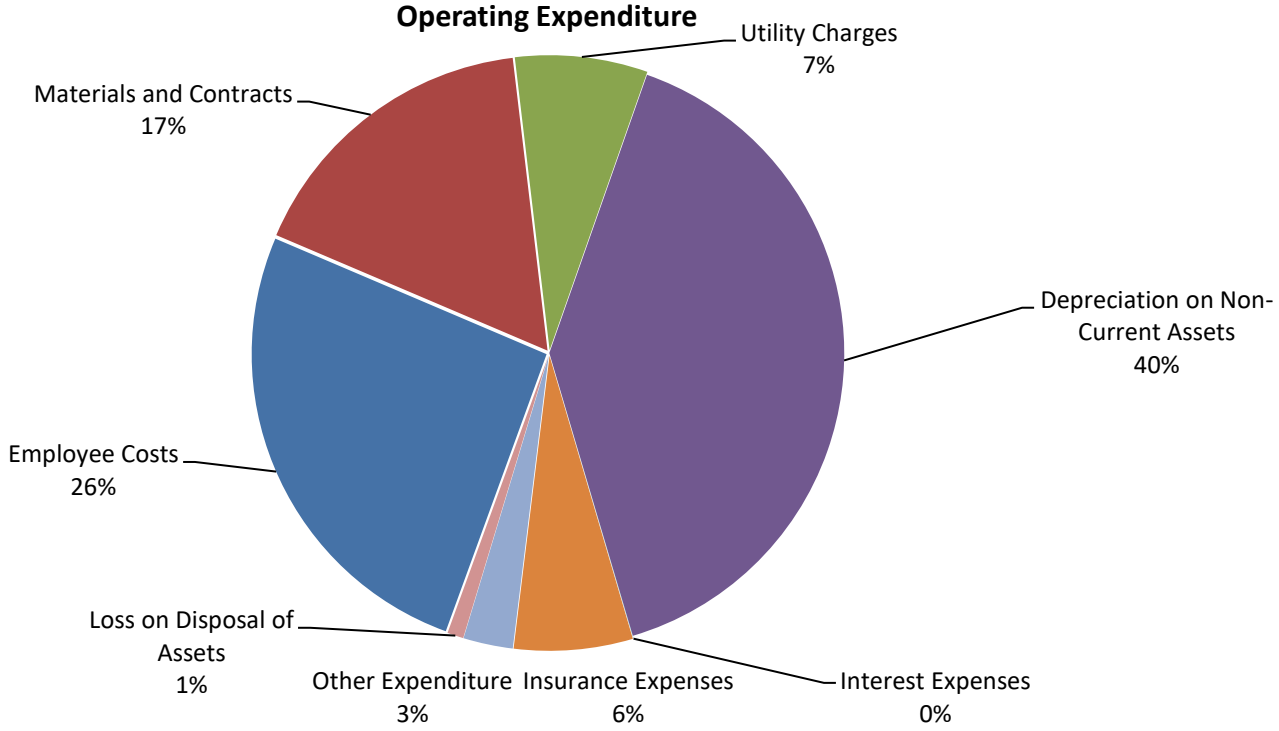
TABLE OF CONTENTS

SHIRE OF YILGARN
Information Summary
For the Period Ended 31 December 2020

Operating Revenue



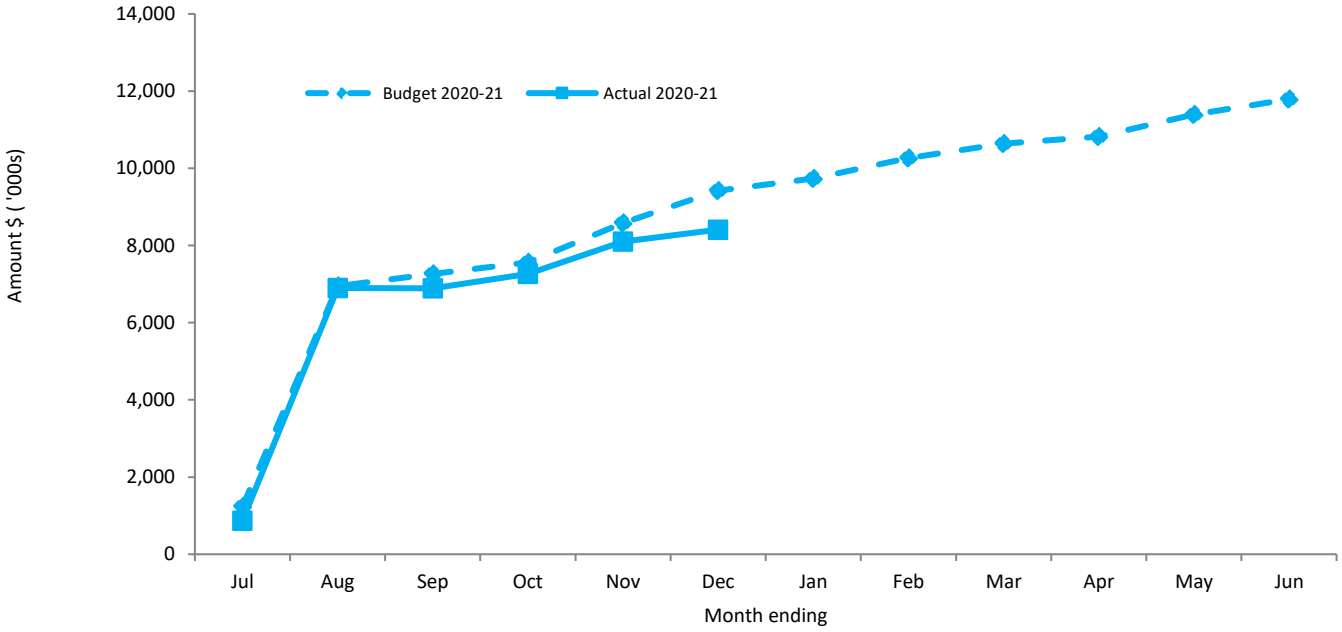
Operating Expenditure



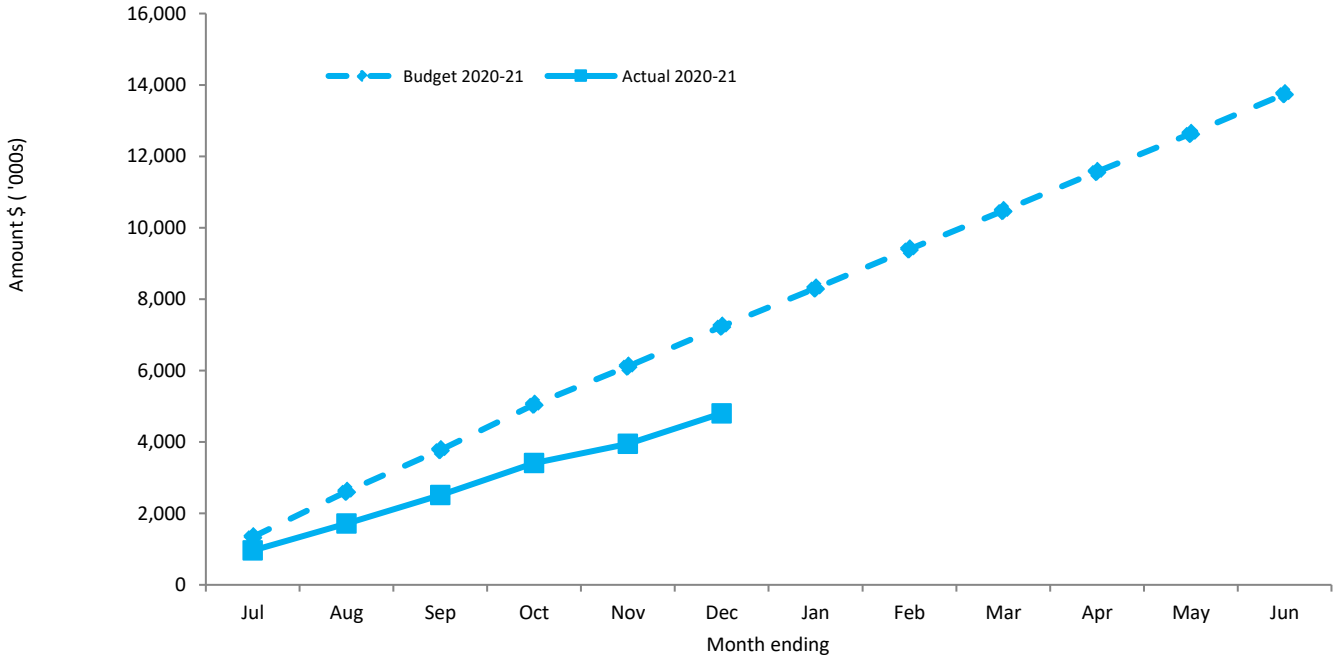
This information is to be read in conjunction with the accompanying Financial Statements and Notes.

SHIRE OF YILGARN
Information Summary
For the Period Ended 31 December 2020

Budget Operating Revenues -v- Actual (Refer Note 2)



Budget Operating Expenses -v- YTD Actual (Refer Note 2)



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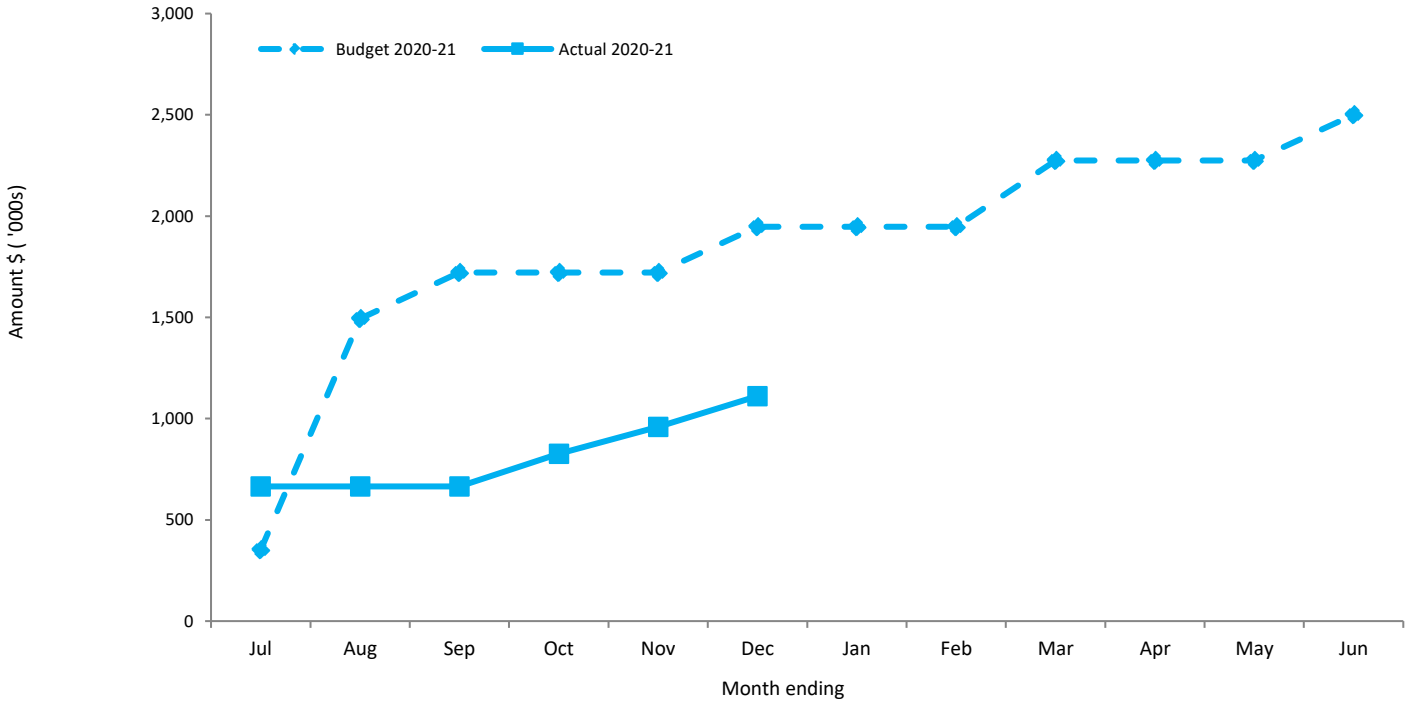
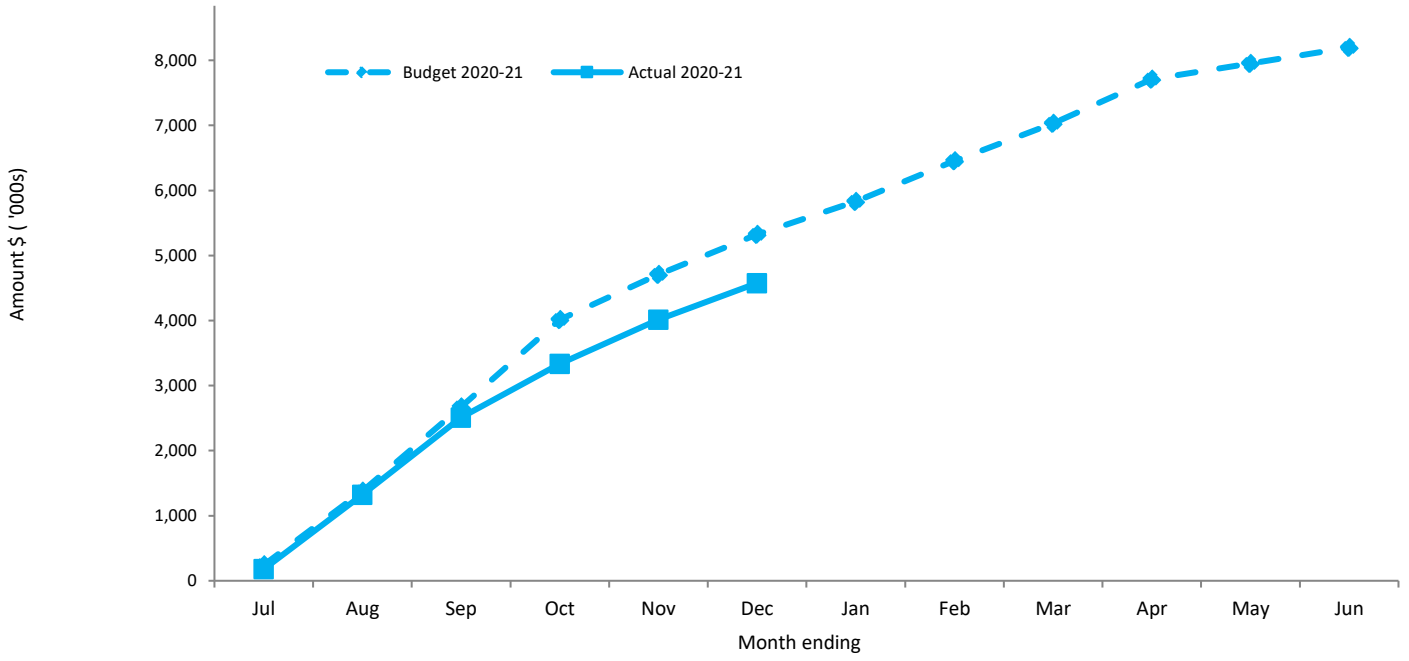
SHIRE OF YILGARN
Information Summary
For the Period Ended 31 December 2020

Budget Capital Revenue -v- Actual (Refer Note 2)





SHIRE OF YILGARN
STATEMENT OF FINANCIAL ACTIVITY
(Statutory Reporting Program)
For the Period Ended 31 December 2020

	Note	Amended Annual Budget	Amended YTD Budget (a)	YTD Actual (b)	Var. $ (b)-(a)	Var. % (b)-(a)/(a)	Var.
		$	$	$	$	%	
Opening Funding Surplus(Deficit)	3	4,186,290	4,186,290	**6,577,185**	2,390,895	57%	
Revenue from operating activities							
General Purpose Funding - Rates	9	4,051,369	4,051,369	**4,038,086**	(13,283)	(0%)	
General Purpose Funding		1,745,490	872,720	**842,514**	(30,206)	(3%)	
Law, Order and Public Safety		82,799	45,112	**22,157**	(22,955)	(51%)	
Health		1,500	750	**534**	(216)	(29%)	
Education and Welfare		177,651	88,794	**111,510**	22,716	26%	
Housing		78,000	38,988	**38,648**	(340)	(1%)	
Community Amenities		672,044	605,860	**604,798**	(1,062)	(0%)	
Recreation and Culture		57,430	53,420	**108,093**	54,673	102%	▲
Transport		188,687	89,424	**80,392**	(9,032)	(10%)	
Economic Services		1,296,337	811,089	**633,317**	(177,772)	(22%)	▼
Other Property and Services		139,464	69,726	**155,687**	85,961	123%	▲
		8,490,771	**6,727,252**	**6,635,735**			
Expenditure from operating activities							
Governance		(497,923)	(243,773)	**(196,381)**	(47,392)	(19%)	▼
General Purpose Funding		(286,084)	(143,529)	**(108,070)**	(35,459)	(25%)	▼
Law, Order and Public Safety		(478,194)	(262,004)	**(173,148)**	(88,856)	(34%)	▼
Health		(292,390)	(146,830)	**(113,020)**	(33,810)	(23%)	▼
Education and Welfare		(543,295)	(276,252)	**(169,460)**	(106,792)	(39%)	▼
Housing		(386,691)	(198,128)	**(89,361)**	(108,767)	(55%)	▼
Community Amenties		(1,155,245)	(592,756)	**(416,413)**	(176,343)	(30%)	▼
Recreation and Culture		(1,857,002)	(952,753)	**(740,858)**	(211,895)	(22%)	▼
Transport		(6,486,505)	(3,245,349)	**(2,212,769)**	(1,032,580)	(32%)	▼
Economic Services		(1,698,695)	(853,125)	**(587,783)**	(265,342)	(31%)	▼
Other Property and Services		(63,327)	(322,528)	**2,849**	(325,377)	(101%)	▼
		(13,745,351)	**(7,237,027)**	**(4,804,414)**			
Operating activities excluded from budget							
Add back Depreciation		6,616,250	3,308,070	**1,924,209**	(1,383,861)	(42%)	▼
Adjust (Profit)/Loss on Asset Disposal	8	114,589	57,294	**42,790**	(14,504)	(25%)	
Amount attributable to operating activities		**1,476,259**	**2,855,589**	**3,798,320**			
Investing Activities							
Non-operating Grants, Subsidies and Contributions	11	3,299,122	2,689,978	**1,800,289**	(889,689)	(33%)	▼
Proceeds from Disposal of Assets	8	308,000	208,000	**40,773**	(167,227)	(80%)	▼
Land and Buildings	13	(1,712,952)	(1,415,146)	**(2,777,859)**	1,362,713	96%	▲
Infrastructure Assets - Roads	13	(3,095,291)	(1,468,934)	**(1,519,820)**	50,886	3%	
Infrastructure Assets - Other	13	(2,107,951)	(1,749,060)	**(3,386,935)**	1,637,875	94%	▲
Plant and Equipment	13	(1,145,740)	(127,940)	**(246,470)**	118,530	93%	▲
Furniture and Equipment	13	(47,500)	(35,748)	**(26,760)**	(8,988)	(25%)	
Amount attributable to investing activities		**(4,502,312)**	**(1,898,850)**	**(6,116,782)**			
Financing Actvities							
Proceeds from New Debentures		1,000,000	1,000,000	1,000,000	0	0%	
Transfer from Reserves	7	546,205	641,841	**0**	641,841	(100%)	
Repayment of Debentures	10	(92,428)	0	**0**	0		
Transfer to Reserves	7	(562,327)	(110,223)	**(18,555)**	(91,668)	(83%)	▲
Amount attributable to financing activities		**891,450**	**1,531,618**	**981,445**			
Closing Funding Surplus(Deficit)	3	**2,051,687**	**6,674,647**	**5,240,168**			

▲▼ Indicates a variance between Year to Date (YTD) Budget and YTD Actual data as per the adopted materiality threshold.
Refer to Note 2 for an explanation of the reasons for the variance.

This statement is to be read in conjunction with the accompanying Financial Statements and notes.

SHIRE OF YILGARN
STATEMENT OF FINANCIAL ACTIVITY
(By Nature or Type)
For the Period Ended 31 December 2020

	Note	Amended Annual Budget	Amended YTD Budget (a)	YTD Actual (b)	Var. $ (b)-(a)	Var. % (b)-(a)/(a)	Var.
		$	$	$	$	%	
Opening Funding Surplus (Deficit)	3	4,186,290	4,186,290	**6,577,185**	2,390,895	57%	
Revenue from operating activities							
Rates	9	4,051,369	4,051,369	**4,038,086**	(13,283)	(0%)	
Operating Grants, Subsidies and Contributions	11	2,254,947	1,306,973	**1,303,741**	(3,232)	(0%)	
Fees and Charges		1,807,208	1,178,328	**1,022,633**	(155,695)	(13%)	▼
Service Charges		0	0	**0**	0		
Interest Earnings		178,160	89,070	**48,472**	(40,598)	(46%)	▼
Reimbursements		89,700	44,838	**95,206**	50,368	112%	▲
Other Revenue		104,000	53,986	**127,296**	73,310	136%	▲
Profit on Disposal of Assets	8	5,387	2,688	**0**	(2,688)	(100%)	
		8,490,771	**6,727,252**	**6,635,434**			
Expenditure from operating activities							
Employee Costs		(3,042,766)	(1,540,237)	**(1,241,959)**	(298,278)	(19%)	▼
Materials and Contracts		(2,430,971)	(1,380,255)	**(802,586)**	(577,669)	(42%)	▼
Utility Charges		(952,782)	(476,268)	**(348,917)**	(127,351)	(27%)	▼
Depreciation on Non-Current Assets		(6,616,250)	(3,308,070)	**(1,924,209)**	(1,383,861)	(42%)	▼
Interest Expenses		(16,902)	(8,451)	**(574)**	(7,877)	(93%)	
Insurance Expenses		(319,986)	(319,977)	**(312,551)**	(7,426)	(2%)	
Other Expenditure		(245,718)	(143,787)	**(130,590)**	(13,197)	(9%)	
Loss on Disposal of Assets	8	(119,976)	(59,982)	**(42,790)**	(17,192)	(29%)	
		(13,745,351)	**(7,237,027)**	**(4,804,174)**			
Operating activities excluded from budget							
Add back Depreciation		6,616,250	3,308,070	**1,924,209**	(1,383,861)	(42%)	▼
Adjust (Profit)/Loss on Asset Disposal	8	114,589	57,294	**42,790**	(14,504)	(25%)	
Amount attributable to operating activities		**1,476,259**	**2,855,589**	**3,798,258**			
Investing activities		0					
Grants, Subsidies and Contributions	11	3,299,122	2,689,978	**1,800,289**	(889,689)	(33%)	▼
Proceeds from Disposal of Assets	8	308,000	208,000	**40,773**	(167,227)	(80%)	▼
Land and Buildings	13	(1,712,952)	(1,415,146)	**(2,777,859)**	1,362,713	96%	▲
Infrastructure Assets - Roads	13	(3,095,291)	(1,468,934)	**(1,519,820)**	50,886	3%	
Infrastructure Assets - Other	13	(2,107,951)	(1,749,060)	**(3,386,935)**	1,637,875	94%	▲
Plant and Equipment	13	(1,145,740)	(127,940)	**(246,470)**	118,530	93%	▲
Furniture and Equipment	13	(47,500)	(35,748)	**(26,760)**	(8,988)	(25%)	
Amount attributable to investing activities		**(4,502,312)**	**(1,898,850)**	**(6,116,782)**			
Financing Activities							
Proceeds from New Debentures		1,000,000	1,000,000	**1,000,000**	0	0%	
Transfer from Reserves	7	546,205	641,841	**0**	(641,841)	(100%)	▼
Repayment of Debentures	10	(92,428)	0	**0**	0		
Transfer to Reserves	7	(562,327)	(110,223)	**(18,555)**	91,668	83%	▲
Amount attributable to financing activities		**891,450**	**1,531,618**	**981,445**			
Closing Funding Surplus (Deficit)	3	**2,051,687**	**6,674,647**	**5,240,106**			

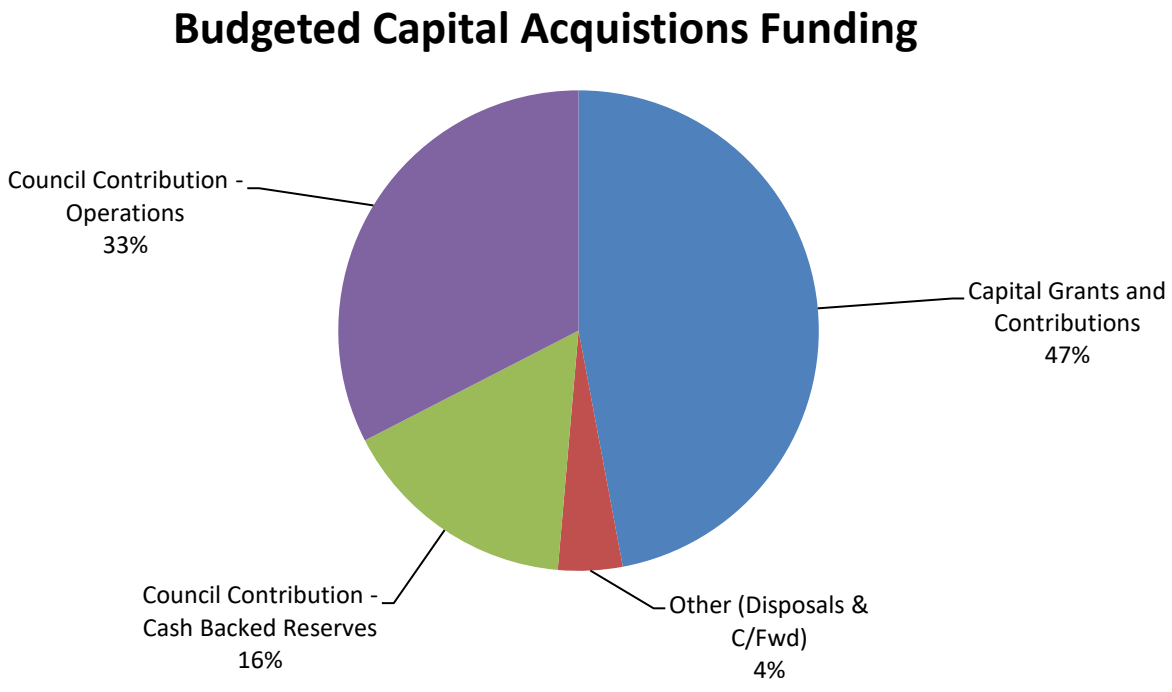
▲▼ Indicates a variance between Year to Date (YTD) Budget and YTD Actual data as per the adopted materiality threshold.
Refer to Note 2 for an explanation of the reasons for the variance.

This statement is to be read in conjunction with the accompanying Financial Statements and notes.

SHIRE OF YILGARN
STATEMENT OF CAPITAL ACQUSITIONS AND CAPITAL FUNDING
For the Period Ended 31 December 2020

Capital Acquisitions

	Note	YTD Actual New /Upgrade (a)	YTD Actual (Renewal Expenditure) (b)	Amended YTD Budget (d)	Amended Annual Budget	YTD Actual Total (c) = (a)+(b)	Variance (d) - (c)
		$	$	$	$	$	$
Land and Buildings	13	2,698,967	78,892	1,415,146	1,712,952	**2,777,859**	(1,362,713)
Infrastructure Assets - Roads	13	1,519,820	0	1,468,934	3,095,291	**1,519,820**	(50,886)
Infrastructure Assets - Footpaths	13	0	0	24,666	196,264	**0**	24,666
Infrastructure Assets - Refuse	13	12,167	0	12,246	24,500	**12,167**	79
Infrastructure Assets - Sewerage	13	8,980	0	13,998	28,000	**8,980**	5,018
Infrastructure Assets - Drainage	13	0	12,086	7,068	14,172	**12,086**	(5,018)
Infrastructure Assets - Parks & Ovals	13	17,294	0	110,242	117,509	**17,294**	92,948
Infrastructure Assets - Other	13	3,336,408	0	1,580,840	1,727,506	**3,336,408**	(1,755,568)
Plant and Equipment	13	246,470	0	127,940	1,145,740	**246,470**	(118,530)
Furniture and Equipment	13	26,760	0	35,748	47,500	**26,760**	8,988
Capital Expenditure Totals		7,866,866	90,978	4,796,828	8,109,434	**7,957,844**	(3,161,016)
Capital acquisitions funded by:							
Capital Grants and Contributions				**2,663,346**	**3,344,992**	**1,867,538**	
Other (Disposals & C/Fwd)				**208,000**	**308,000**	**66,228**	
Council Contribution - Cash Backed Reserves				**1,141,841**	**1,141,841**	**0**	
Council Contribution - Operations				**(216,359)**	**2,314,601**	**6,024,078**	
Capital Funding Total				**4,796,828**	**8,109,434**	**7,957,844**	



Note 1: Significant Accounting Policies

(a) Basis of Accounting

This statement comprises a special purpose financial report which has been prepared in accordance with Australian Accounting Standards (as they apply to local governments and not-for-profit entities), Australian Accounting Interpretations, other authoritative pronouncements of the Australian Accounting Standards Board, the Local Government Act 1995 and accompanying regulations. Material accounting policies which have been adopted in the preparation of this statement are presented below and have been consistently applied unless stated otherwise. Except for cash flow and rate setting information, the report has also been prepared on the accrual basis and is based on historical costs, modified, where applicable, by the measurement at fair value of selected non-current assets, financial assets and liabilities.

Critical Accounting Estimates

The preparation of a financial report in conformity with Australian Accounting Standards requires management to make judgements, estimates and assumptions that effect the application of policies and reported amounts of assets and liabilities, income and expenses. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances; the results of which form the basis of making the judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

(b) The Local Government Reporting Entity

All Funds through which the Council controls resources to carry on its functions have been included in this statement. In the process of reporting on the local government as a single unit, all transactions and balances between those funds (for example, loans and transfers between Funds) have been eliminated. All monies held in the Trust Fund are excluded from the statement, but a separate statement of those monies appears at Note 12.

(c) Rounding Off Figures

All figures shown in this statement are rounded to the nearest dollar.

(d) Rates, Grants, Donations and Other Contributions

Rates, grants, donations and other contributions are recognised as revenues when the local government obtains control over the assets comprising the contributions. Control over assets acquired from rates is obtained at the commencement of the rating period or, where earlier, upon receipt of the rates.

(e) Goods and Services Tax

Revenues, expenses and assets are recognised net of the amount of GST, except where the amount of GST incurred is not recoverable from the Australian Taxation Office (ATO). Receivables and payables are stated inclusive of GST receivable or payable. The net amount of GST recoverable from, or payable to, the ATO is included with receivables or payables in the statement of financial position. Cash flows are presented on a gross basis. The GST components of cash flows arising from investing or financing activities which are recoverable from, or payable to, the ATO are presented as operating cash flows.

(f) Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, cash at bank, deposits available on demand with banks and other short term highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value and bank overdrafts. Bank overdrafts are reported as short term borrowings in current liabilities in the statement of financial position.

(g) Trade and Other Receivables

Trade and other receivables include amounts due from ratepayers for unpaid rates and service charges and other amounts due from third parties for goods sold and services performed in the ordinary course of business.

Receivables expected to be collected within 12 months of the end of the reporting period are classified as current assets. All other receivables are classified as non-current assets. Collectability of trade and other receivables is reviewed on an ongoing basis. Debts that are known to be uncollectible are written off when identified. An allowance for doubtful debts is raised when there is objective evidence that they will not be collectible.

(h) Inventories

General

Inventories are measured at the lower of cost and net realisable value. Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

Land Held for Resale

Land held for development and sale is valued at the lower of cost and net realisable value. Cost includes the cost of acquisition, development, borrowing costs and holding costs until completion of development. Finance costs and holding charges incurred after development is completed are expensed. Gains and losses are recognised in profit or loss at the time of signing an unconditional contract of sale if significant risks and rewards, and effective control over the land, are passed on to the buyer at this point. Land held for sale is classified as current except where it is held as non-current based on Council's intentions to release for sale.

Note 1: Significant Accounting Policies

(i) Fixed Assets

All assets are initially recognised at cost. Cost is determined as the fair value of the assets given as consideration plus costs incidental to the acquisition. For assets acquired at no cost or for nominal consideration, cost is determined as fair value at the date of acquisition. The cost of non-current assets constructed by the local government includes the cost of all materials used in the construction, direct labour on the project and an appropriate proportion of variable and fixed overhead. Certain asset classes may be revalued on a regular basis such that the carrying values are not materially different from fair value. Assets carried at fair value are to be revalued with sufficient regularity to ensure the carrying amount does not differ materially from that determined using fair value at reporting date.

All non-current assets having a limited useful life are systematically depreciated over their useful lives in a manner which reflects the consumption of the future economic benefits embodied in those assets

Buildings	30 to 50 years
Furniture and Equipment	4 to 10 years
Plant and Equipment	5 to 10 years
Sealed roads and streets	
formation	not depreciated
pavement	50 years
seal	
bituminous seals	30 years
asphalt surfaces	25 years
Gravel Roads	
formation	not depreciated
pavement	50 years
gravel sheet	15 years
Formed roads	
formation	not depreciated
pavement	50 years
Footpaths - slab	12 years
Sewerage piping	50 years
Water supply piping & drainage systems	50 years
Airfields and runways	30 years
Refuse disposal sites	not depreciated

(k) Trade and Other Payables

Trade and other payables represent liabilities for goods and services provided to the Council prior to the end of the financial year that are unpaid and arise when the Council becomes obliged to make future payments in respect of the purchase of these goods and services. The amounts are unsecured, are recognised as a current liability and are normally paid within 30 days of recognition.

(l) Employee Benefits

The provisions for employee benefits relates to amounts expected to be paid for long service leave, annual leave, wages and salaries and are calculated as follows:

(i) Wages, Salaries, Annual Leave and Long Service Leave (Short-term Benefits)

The provision for employees' benefits to wages, salaries, annual leave and long service leave expected to be settled within 12 months represents the amount the Shire has a present obligation to pay resulting from employees services provided to balance date. The provision has been calculated at nominal amounts based on remuneration rates the Shire expects to pay and includes related on-costs.

(ii) Annual Leave and Long Service Leave (Long-term Benefits)

The liability for long service leave is recognised in the provision for employee benefits and measured as the present value of expected future payments to be made in respect of services provided by employees up to the reporting date using the project unit credit method. Consideration is given to expected future wage and salary levels, experience of employee departures and periods of service. Expected future payments are discounted using market yields at the reporting date on national government bonds with terms to maturity and currency that match as closely as possible, the estimated future cash outflows. Where the Shire does not have the unconditional right to defer settlement beyond 12 months, the liability is recognised as a current liability.

(m) Interest-bearing Loans and Borrowings

All loans and borrowings are initially recognised at the fair value of the consideration received less directly attributable transaction costs. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the effective interest method. Fees paid on the establishment of loan facilities that are yield related are included as part of the carrying amount of the loans and borrowings.

Borrowings are classified as current liabilities unless the Council has an unconditional right to defer settlement of the liability for at least 12 months after the balance sheet date.

Note 1: Significant Accounting Policies

Borrowing Costs

Borrowing costs are recognised as an expense when incurred except where they are directly attributable to the acquisition, construction or production of a qualifying asset. Where this is the case, they are capitalised as part of the cost of the particular asset.

(n) Provisions

Provisions are recognised when: The council has a present legal or constructive obligation as a result of past events; it is more likely than not that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated. Provisions are not recognised for future operating losses. Where there are a number of similar obligations, the likelihood that an outflow will be required in settlement is determined by considering the class of obligations as a whole. A provision is recognised even if the likelihood of an outflow with respect to any one of item included in the same class of obligations may be small.

(o) Current and Non-Current Classification

In the determination of whether an asset or liability is current or non-current, consideration is given to the time when each asset or liability is expected to be settled. The asset or liability is classified as current if it is expected to be settled within the next 12 months, being the Council's operational cycle. In the case of liabilities where Council does not have the unconditional right to defer settlement beyond 12 months, such as vested long service leave, the liability is classified as current even if not expected to be settled within the next 12 months. Inventories held for trading are classified as current even if not expected to be realised in the next 12 months except for land held for resale where it is held as non current based on Council's intentions to release for sale.

(p) Nature or Type Classifications

Rates

All rates levied under the Local Government Act 1995. Includes general, differential, specific area rates, minimum rates, interim rates, back rates, ex-gratia rates, less discounts offered. Exclude administration fees, interest on instalments, interest on arrears and service charges.

Operating Grants, Subsidies and Contributions

Refer to all amounts received as grants, subsidies and contributions that are not non-operating grants.

Non-Operating Grants, Subsidies and Contributions

Amounts received specifically for the acquisition, construction of new or the upgrading of non-current assets paid to a local government, irrespective of whether these amounts are received as capital grants, subsidies, contributions or donations.

Profit on Asset Disposal

Profit on the disposal of assets including gains on the disposal of long term investments. Losses are disclosed under the expenditure classifications.

Fees and Charges

Revenues (other than service charges) from the use of facilities and charges made for local government services, sewerage rates, rentals, hire charges, fee for

Service Charges

Service charges imposed under Division 6 of Part 6 of the Local Government Act 1995. Regulation 54 of the Local Government (Financial Management) Regulations 1996 identifies these as television and radio broadcasting, underground electricity and neighbourhood surveillance services. Exclude rubbish removal charges. Interest and other items of a similar nature received from bank and investment accounts, interest on rate instalments, interest on rate arrears and interest on debtors.

Interest Earnings

Interest and other items of a similar nature received from bank and investment accounts, interest on rate instalments, interest on rate arrears and interest on debtors.

Other Revenue / Income

Other revenue, which can not be classified under the above headings, includes dividends, discounts, rebates etc.

Employee Costs

All costs associate with the employment of person such as salaries, wages, allowances, benefits such as vehicle and housing, superannuation, employment expenses, removal expenses, relocation expenses, worker's compensation insurance, training costs, conferences, safety expenses, medical examinations, fringe benefit tax, etc.

Materials and Contracts

All expenditures on materials, supplies and contracts not classified under other headings. These include supply of goods and materials, legal expenses,

Utilities (Gas, Electricity, Water, etc.)

Expenditures made to the respective agencies for the provision of power, gas or water. Exclude expenditures incurred for the reinstatement of roadwork on behalf of these agencies.

Insurance

All insurance other than worker's compensation and health benefit insurance included as a cost of employment.

Loss on asset disposal

Loss on the disposal of fixed assets.

Depreciation on non-current assets

Depreciation expense raised on all classes of assets.

Interest expenses

Interest and other costs of finance paid, including costs of finance for loan debentures, overdraft accommodation and refinancing expenses.

Other expenditure

Statutory fees, taxes, provision for bad debts, member's fees or State taxes. Donations and subsidies made to community groups.

(r) Program Classifications (Function/Activity)

Shire operations as disclosed in these financial statements encompass the following service orientated activities/programs.

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 1: Significant Accounting Policies

GOVERNANCE

Objective:

To provide a decision making process for the efficient allocation of scarce resources.

Activities:

Includes the activities of members of council and the administrative support available to the council for the provision of governance of the district. Other costs

GENERAL PURPOSE FUNDING

Objective:

To collect revenue to allow for the provision of services.

Activities:

Rates, general purpose government grants and interest revenue.

LAW, ORDER, PUBLIC SAFETY

Objective:

To provide services to help ensure a safer and environmentally conscious community.

Activities:

Supervision and enforcement of various local laws relating to fire prevention, animal control and other aspects of public safety including emergency services.

HEALTH

Objective:

To provide an operational framework for environmental and community health.

Activities:

Inspection of food outlets and their control, provision of meat inspection services, noise control and waste disposal compliance.

EDUCATION AND WELFARE

Objective:

To provide services to disadvantaged persons, the elderly, children and youth.

Activities:

Maintenance of child minding centre, playgroup centre, senior citizen centre and aged care centre. Provision and maintenance of home and community care programs and youth services.

HOUSING

Objective:

To provide and maintain elderly residents housing.

Activities:

Provision and maintenance of elderly residents housing.

COMMUNITY AMENITIES

Objective:

To provide services required by the community.

Activities:

Rubbish collection services, operation of rubbish disposal sites, litter control, construction and maintenance of urban storm water drains, protection of the environment and administration of town planning schemes, cemetery and public conveniences.

RECREATION AND CULTURE

Objective:

To establish and effectively manage infrastructure and resource which will help the social well being of the community.

Activities:

Maintenance of public halls, civic centres, aquatic centre, beaches, recreation centres and various sporting facilities. Provision and maintenance of parks, gardens and playgrounds. Operation of library, museum and other cultural facilities.

TRANSPORT

Objective:

To provide safe, effective and efficient transport services to the community.

Activities:

Construction and maintenance of roads, streets, footpaths, depots, cycle ways, parking facilities and traffic control. Cleaning of streets and maintenance of street trees, street lighting etc.

Note 1: Significant Accounting Policies

ECONOMIC SERVICES

Objective:

To help promote the shire and its economic wellbeing.

Activities:

Tourism and area promotion including the maintenance and operation of a caravan park. Provision of rural services including weed control, vermin control and standpipes. Building Control.

OTHER PROPERTY AND SERVICES

Objective:

To monitor and control Shire overheads operating accounts.

Activities:

Private works operation, plant repair and operation costs and engineering operation costs.

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 2: Explanation of Material Variances

The material variance thresholds are adopted annually by Council as an indicator of whether the actual expenditure or revenue varies from the year to date budget materially.
The material variance adopted by Council for the 2020/21 Year is $30,000 or 10% whichever is the greater.

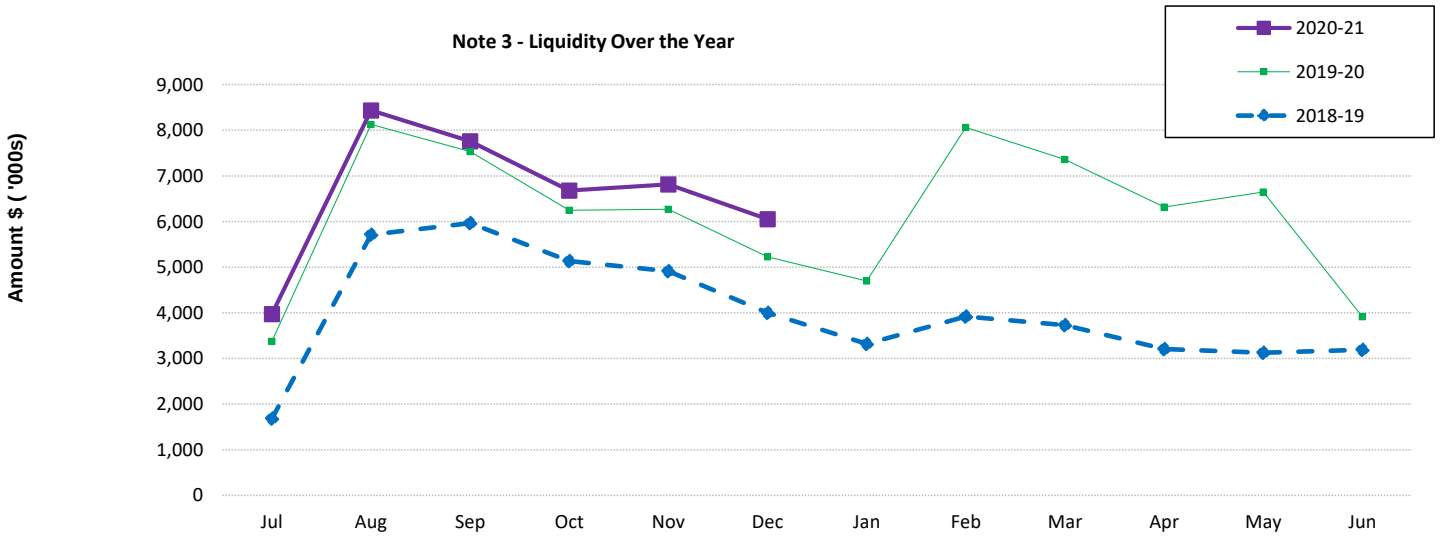
Reporting Program	Var. $	Var. %	Var.	Timing/ Permanent	Explanation of Variance
Operating Revenues	$	%			
Recreation and Culture	54,673	102%	▲	Permanent	$42,235 Court resurfacing contribution and New turf donations toMoorine Rock Tennis Club
Economic Services	(177,772)	(22%)	▼	Permanent	Lower than expected Standpipe Water Sales
Other Property and Services	85,961	123%	▲	Permanent	$47,291 LGIS Insurance Surplus Distribution Offset
Operating Expense					
Governance	(47,392)	(19%)	▼	Timing	Schedule wide expenditure unders
General Purpose Funding	(35,459)	(25%)	▼	Timing	Schedule wide expenditure unders
Law, Order and Public Safety	(88,856)	(34%)	▼	Permanent	Lower than expected Depreciation due to review of Asset Useful Lives
Health	(33,810)	(23%)	▼	Timing	Expenditure delayed
Education and Welfare	(106,792)	(39%)	▼	Permanent	Lower than expected Depreciation due to review of Asset Useful Lives
Housing	(108,767)	(55%)	▼	Permanent	Lower than expected Depreciation due to review of Asset Useful Lives
Community Amenties	(176,343)	(30%)	▼	Permanent	Lower than expected Depreciation due to review of Asset Useful Lives
Recreation and Culture	(211,895)	(22%)	▼	Permanent	Lower than expected Depreciation due to review of Asset Useful Lives
Transport	(1,032,580)	(32%)	▼	Permanent	Lower than expected Depreciation due to review of Asset Useful Lives
Economic Services	(265,342)	(31%)	▼	Permanent	Lower than expected Depreciation due to review of Asset Useful Lives
Other Property and Services	(325,377)	(101%)	▼	Permanent	Lower than expected Depreciation due to review of Asset Useful Lives
Capital Revenues					
Grants, Subsidies and Contributions	(889,689)	(33%)	▼	Timing	Sealing works just completed, payments to be made in February 2021
Proceeds from Disposal of Assets	(167,227)	(80%)	▼	Timing	Plant replacement program currently at tender or to be tendered
Capital Expenses					
Land and Buildings	1,362,713	96%	▲	Timing	Swimming Pool construction completed.
Infrastructure - Other	1,637,875	94%	▲	Timing	Swimming Pool construction completed.
Plant and Equipment	118,530	93%	▲	Timing	Budgeted less than actual spend on purchasing the plant
Financing					
Loan Principal	0			Timing	A loan for the Swimming Pool was approved in September 2020

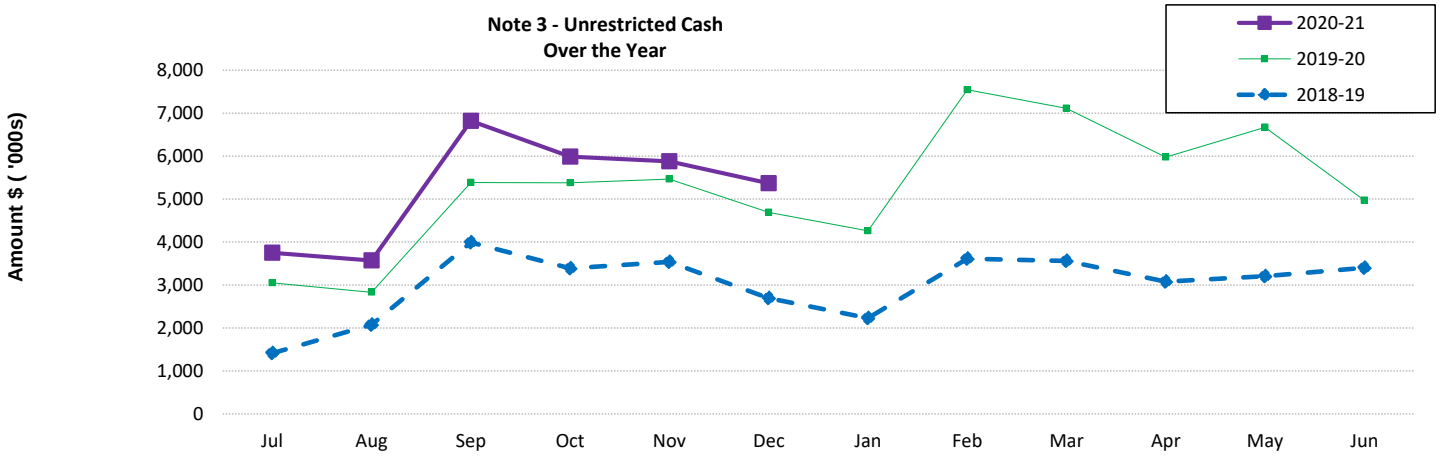
SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 3: Net Current Funding Position

Positive=Surplus (Negative=Deficit)

	Note	Last Years Closing 30 Jun 2020	This Time Last Year 31 Dec 2019	Current 31 Dec 2020
		$	$	$
Current Assets				
Cash Unrestricted	4	4,974,915	3,400,902	5,370,145
Cash Restricted	4	4,536,844	6,581,762	4,555,400
Receivables - Rates	6	589,115	489,049	983,951
Receivables - Other	6	90,219	62,213	230,428
Interest/ATO Receivable/Trust		213,737	53,653	(2,469)
Loans Receivable-Clubs/Institutions		0	6,000	0
Inventories		27,554	29,909	16,634
		10,432,385	10,623,487	11,154,088
Less: Current Liabilities				
Payables		(1,434,941)	(312,267)	(49,802)
Provisions		(562,476)	(246,963)	(267,089)
		(1,997,417)	(559,230)	(316,891)
Less: Cash Reserves	7	(4,536,844)	(6,581,762)	(4,555,400)
Add back Leave Reserve		294,167	290,294	295,387
Net Current Funding Position		**4,186,290**	**3,772,790**	**6,577,185**





SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 4: Cash and Investments

	Unrestricted	Restricted	Trust	Total Amount	Institution	Interest Rate	Maturity Date
	$	$	$	$			
(a) **Cash Deposits**							
Muni Funds - Bank Working Acc	120,573			120,573	Westpac	0.00%	At Call
Muni Funds - Bank Investment Acc	1,556,558			1,556,558	Westpac	0.05%	At Call
Trust Fund Bank			254,558	254,558	Westpac	0.00%	At Call
Cash On Hand	1,350			1,350			
(b) **Term Deposits**							
Muni Funds - Notice Saver (31 Days)	3,691,664			3,691,664	Westpac	0.50%	31 Days from Call
Reserve Funds - Notice Saver (90 Days)		4,555,400		4,555,400	Westpac	0.60%	90 Days from Call
Total	**5,370,145**	**4,555,400**	**254,558**	**10,180,103**			

Comments/Notes - Investments

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 5: Budget Amendments

Amendments to original budget since budget adoption. Surplus/(Deficit)

GL Code	Description	Council Resolution	Classification	Non Cash Adjustment	Increase in Available Cash	Decrease in Available Cash	Amended Budget Running Balance
				$	$	$	$
	Budget Adoption						**0**
	Nil						
	Changes Due to Timing						**0**
	Nil						
				0	**0**	**0**	**0**

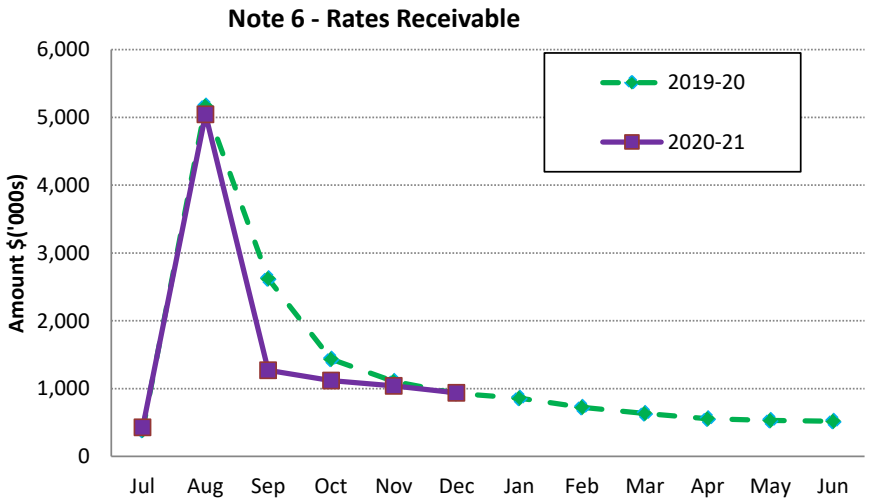
SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

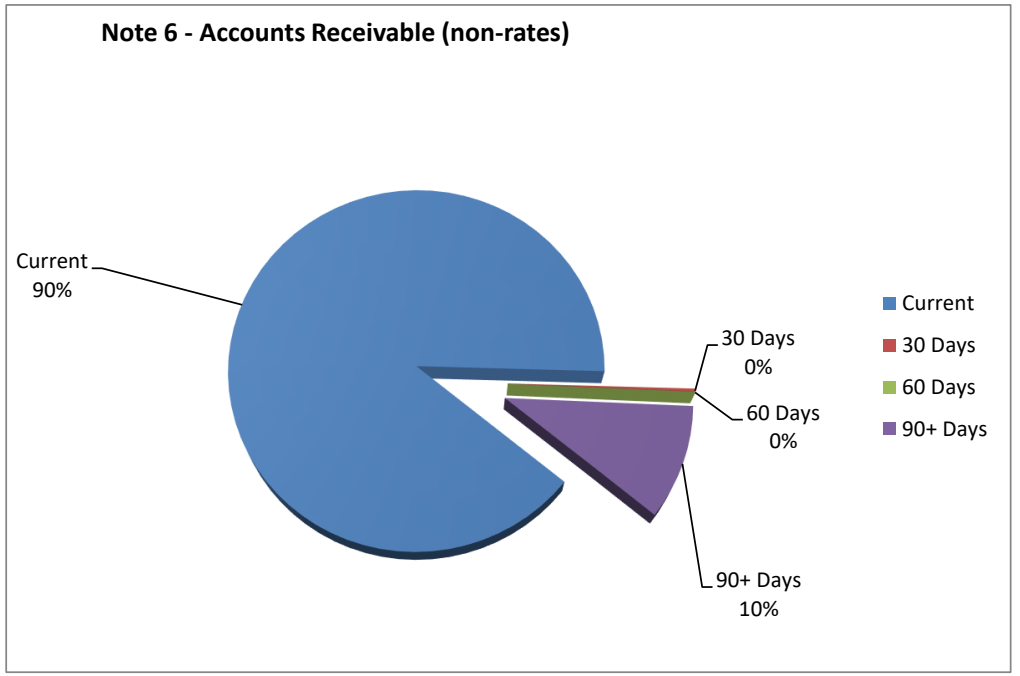
Note 6: Receivables

Receivables - Rates Receivable	31 Dec 2020	30 June 2020
	$	$
Opening Arrears Previous Years	596,721	489,049
Levied this year	4,038,085	3,842,364
Less Collections to date	(3,616,736)	(3,734,693)
Equals Current Outstanding	**1,018,070**	**596,721**
Net Rates Collectable	**1,018,070**	**596,721**
% Collected	78.03%	86.22%

Receivables - General	Current	30 Days	60 Days	90+ Days	Total
	$	$	$	$	$
Receivables - General	206,498	566	15	23,349	230,428
Balance per Trial Balance					
Sundry Debtors					230,428
Receivables - Other					0
Total Receivables General Outstanding					**230,428**

Amounts shown above include GST (where applicable)





Comments/Notes - Receivables General

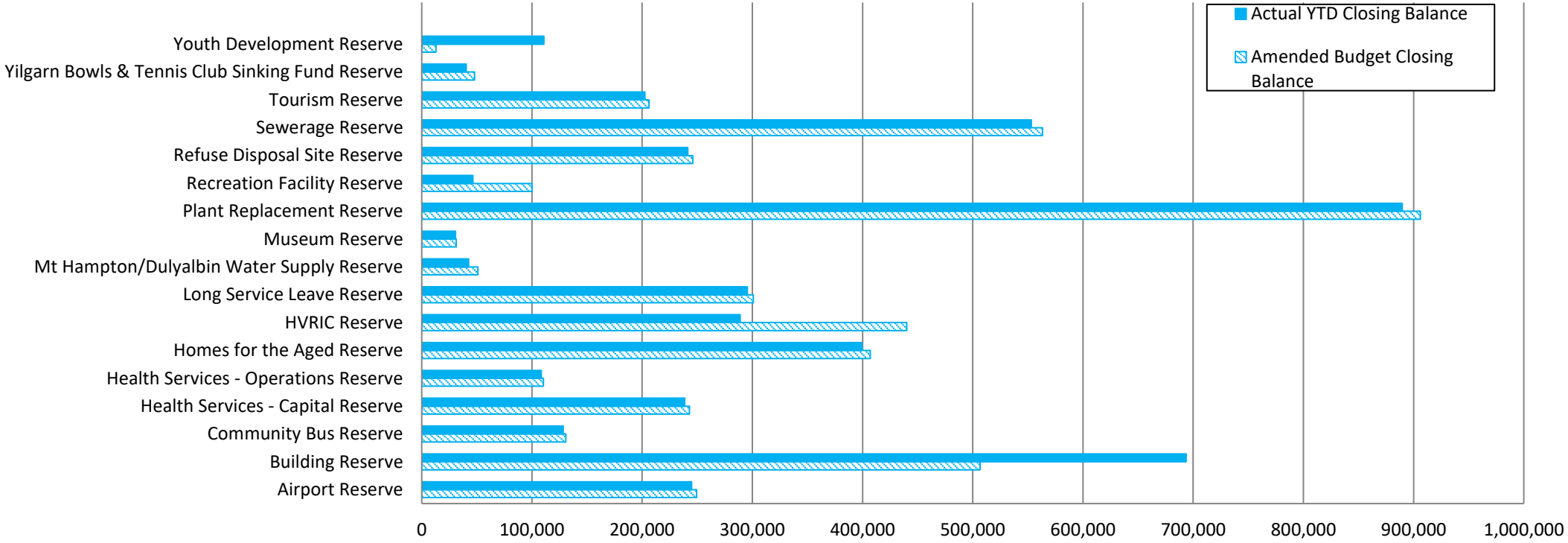
SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 7: Cash Backed Reserve

Name	Opening Balance	Amended Budget Interest Earned	Actual Interest Earned	Amended Budget Transfers In (+)	Actual Transfers In (+)	Amended Budget Transfers Out (-)	Actual Transfers Out (-)	Amended Budget Closing Balance	Actual YTD Closing Balance
	$	$	$	$	$	$	$	$	$
Airport Reserve	243,777	5,569	1,011	0	0	0	0	249,346	244,788
Building Reserve	690,794	15,780	2,865	200,000	0	(400,000)	0	506,574	693,659
Community Bus Reserve	127,798	2,919	530	0	0	0	0	130,717	128,328
Health Services - Capital Reserve	237,541	5,426	985	0	0	0	0	242,967	238,526
Health Services - Operations Reserve	107,921	2,465	651	0	0	0	0	110,386	108,572
Homes for the Aged Reserve	397,909	9,089	1,447	0	0	0	0	406,998	399,356
HVRIC Reserve	287,984	0	933	152,104	0	0	0	440,088	288,917
Long Service Leave Reserve	294,167	6,720	1,220	0	0	0	0	300,887	295,388
Mt Hampton/Dulyalbin Water Supply Reserve	42,483	8,470	176	0	0	0	0	50,953	42,659
Museum Reserve	30,554	755	127	0	0	0	0	31,309	30,681
Plant Replacement Reserve	885,969	20,238	3,675	0	0	0	0	906,207	889,644
Recreation Facility Reserve	46,205	0	192	100,000	0	(46,205)	0	100,000	46,397
Refuse Disposal Site Reserve	240,510	5,494	997	0	0	0	0	246,004	241,507
Sewerage Reserve	550,806	12,582	2,285	0	0	0	0	563,388	553,091
Tourism Reserve	201,669	4,607	836	0	0	0	0	206,276	202,505
Yilgarn Bowls & Tennis Club Sinking Fund Reserve	40,332	7,587	168	0	0	0	0	47,919	40,499
Youth Development Reserve	110,425	2,522	457	0	0	(100,000)	0	12,947	110,882
	4,536,844	**110,223**	**18,555**	**452,104**	**0**	**(546,205)**	**0**	**4,552,966**	**4,555,400**

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 7 - Year To Date Reserve Balance to End of Year Estimate



SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 8: Disposal of Assets

Asset Number	Asset Description	YTD Actual Net Book Value	YTD Actual Proceeds	YTD Actual Profit	YTD Actual (Loss)	Amended Budget Net Book Value	Amended Budget Proceeds	Amended Budget Profit	Amended Budget (Loss)
		$	$	$	$	$	$	$	$
	Plant and Equipment								
1865	TRAILER - SIDE TIPPER - YL7059	0	0			54,040	35,000		(19,040)
1866	TRAILER - SIDE TIPPER - YL7016	0	0			54,040	35,000		(19,040)
1875	TRACTOR - JOHN DEERE - YL5410	0	0			19,613	25,000	5,387	
1998	TRUCK- 2015 MITSUBISHI FUSO CANTER 4X2 -YL4949	52,444	25,455		(26,989)	41,235	25,000		(16,235)
1999	TRUCK- 2015 MITSUBISHI FUSO CANTER 815 -YL046	0	0			37,405	25,000		(12,405)
2000	UTE - 2015 ISUZU NPS 65 -155 - YL311	56,573	40,773		(15,800)	45,290	25,000		(20,290)
2017	2017 - TOYOTA LANDCRUISER SINGLE CAB LC70 WORMATE -YL645	0	0			41,649	38,000		(3,649)
2036	2019 HOLDEN COLORADO LTZ -CREW CAB 4WD UTILITY -YL252	0	0			34,622	30,000		(4,622)
2038	2019 TOYOTA PRADO DSL WGN A/T VX -YL1	0	0			51,598	40,000		(11,598)
2047	2019 TOYOTA KLUGER AWD V6 WAGON A/T GXL - SILVER(YL50)	0	0			43,097	30,000		(13,097)
		109,017	**66,228**	**0**	**(42,790)**	**422,589**	**308,000**	**5,387**	**(119,976)**

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 9: Rating Information		Number		YTD Acutal				Amended Budget			
	Rate in	of Properties	Rateable Value	Rate Revenue	Interim Rates	Back Rates	Total Revenue	Rate Revenue	Interim Rate	Back Rate	Total Revenue
RATE TYPE	$		$	$	$	$	$	$	$	$	$
Differential General Rate											
Non - Rateable	0.0000	123	337,864	0	0	0	0	0	0	0	0
GRV - Residential/Industrial	11.2332	507	3,565,582	386,578	0	0	386,578	382,556	0	0	382,556
GRV - Commercial	7.9074	41	1,010,886	77,588	0	0	77,588	77,588	0	0	77,588
GRV - Minesite	15.8148	7	531,973	83,750	0	0	83,750	83,750	0	0	83,750
GRV - Single Persons Quarters	15.8148	12	781,934	122,504	6,179	0	128,683	122,505	0	0	122,505
UV - Rural	1.7575	402	104,207,876	1,826,511	149	0	1,826,660	1,830,465	0	0	1,830,465
UV - Mining Tenement	17.3923	554	8,618,039	1,490,102	0	0	1,490,102	1,490,102	0	0	1,490,102
Sub-Totals		**1,646**	**119,054,154**	**3,987,033**	**6,328**	**0**	**3,993,361**	**3,986,966**	**0**	**0**	**3,986,966**
	Minimum										
Minimum Payment	**$**										
GRV - Residential/Industrial	500.00	117	153,808	58,500	(1,000)	0	57,500	58,500	0	0	58,500
GRV - Commercial	400.00	7	20,061	2,800	0	0	2,800	2,800	0	0	2,800
GRV - Minesite	400.00	3	2,408	1,200	0	0	1,200	1,200	0	0	1,200
GRV - Single Persons Quarters	400.00	3	1,075	1,200	0	0	1,200	1,200	0	0	1,200
UV - Rural	400.00	40	289,145	16,400	(400)	0	16,000	16,000	0	0	16,000
UV - Mining Tenement	400.00	229	275,026	91,600	0	0	91,600	91,600	0	0	91,600
Sub-Totals		**399**	**741,523**	**171,700**	**(1,400)**	**0**	**170,300**	**171,300**	**0**	**0**	**171,300**
		2,045	**119,795,677**	**4,158,733**	**4,928**	**0**	**4,163,661**	**4,158,266**	**0**	**0**	**4,158,266**
Concession							(158,824)				(140,000)
Amount from General Rates							**4,004,837**				**4,018,266**
Ex-Gratia Rates							33,248				33,104
							4,038,085				**4,051,370**

Comments - Rating Information

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 10: Information on Borrowings

(a) Debenture Repayments

Particulars	Actual		Amended Budget	
	Principal	Interest	Principal	Interest
	$	$	$	$
Recreation and Culture				
Loan 98 - Yilgarn Aquatic Centre	-	-	92,428	16,902
	0	0	92,428	16,902

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 11: Grants and Contributions

	Grant Provider	Type	Opening Balance (a)	Amended Budget Operating	Amended Budget Capital	YTD Budget	Annual Budget (d)	Expected (d)+(e)	YTD Actual Revenue	YTD Actual (Expended) (c)	Unspent Grant (a)+(b)+(c)
				$	$	$			$	$	$
General Purpose Funding											
Grants Commission - General	WALGGC	Operating	0	778,999	0	389,498	778,999	778,999	463,268	(463,268)	0
Grants Commission - Roads	WALGGC	Operating	0	776,331	0	388,164	776,331	776,331	325,225	(325,225)	0
Local Roads & Community Infrastructure	Fed. Dept. Infra	Non-operating	0	0	943,500	943,500	943,500	943,500	471,761	(557,530)	(85,769)
Law, Order and Public Safety											
FESA Grant - Operating Bush Fire Brigade	Dept. of Fire & Emergency Serv.	Operating - Tied	0	64,199	0	32,094	64,199	64,199	16,050	(16,050)	0
FESA Grant - Capital Bush Fire Brigade	Dept. of Fire & Emergency Serv.	Non-operating	0	0	42,600	42,600	42,600	42,600	42,663	(42,663)	0
Education & Welfare											
DRD Grant - Community Resource Centre Operations	Regional Development	Operating - Tied	0	102,252	0	51,126	102,252	102,252	77,970	(77,970)	0
Centrelink Commissions	Centrelink	Operating	0	5,219	0	2,604	5,219	5,219	5,741	(5,741)	0
Grant - Seniors Week	Council on the Aged	Operating - Tied	0	800	0	396	800	800	0	0	0
Community Amenities											
Grants - Various Community Development Programs	Various	Operating	0	1,000	0	498	1,000	1,000	1,000	0	0
Recreation and Culture											
Sport & Recreation Grant - Swimming Pool	Dept. Sport & recreation	Non-operating	0	0	175,000	175,000	175,000	175,000	175,000	(175,000)	0
Transport											
Main Roads - Direct Grant	Main Roads WA	Non-operating	0	0	352,420	352,420	352,420	352,420	352,420	(352,420)	0
Heavy Vehicle Road Improvement Contributions	Various	Non-operating	0	0	145,000	72,498	145,000	145,000	67,249	0	67,249
Roads To Recovery Grant - Cap	Roads to Recovery	Non-operating	0	0	906,164	453,082	906,164	906,164	134,199	(192,069)	0
RRG Grants - Capital Projects	Regional Road Group	Non-operating	0	0	780,308	624,246	780,308	780,308	624,246	(1,072,396)	0
Skeleton Weed LAG Program	State Skeleton Weed Committee	Operating - Tied	(46,164)	326,567	0	326,567	326,567	326,567	316,000	(118,103)	151,733
TOTALS			**(46,164)**	**2,055,367**	**3,344,992**	**3,854,293**	**5,400,359**	**5,400,359**	**3,072,792**	**(3,398,436)**	**133,213**
SUMMARY											
Operating - Tied	Tied - Operating Grants, Subsidies and Contributions		(46,164)	493,818	0	410,183	493,818	493,818	410,020	(212,123)	151,733
Non-operating	Non-operating Grants, Subsidies and Contributions		0	0	3,344,992	2,663,346	3,344,992	3,344,992	1,867,538	(2,392,079)	(18,520)
TOTALS			**(46,164)**	**2,055,367**	**3,344,992**	**3,854,293**	**5,400,359**	**5,400,359**	**3,072,792**	**(3,398,436)**	**133,213**

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 12: Trust Fund

Funds held at balance date over which the Shire has no control and which are not included in this statement are as follows:

Description	Opening Balance 01 Jul 2020	Amount Received	Amount Paid	Closing Balance 31 Dec 2020
	$	$	$	$
Police Licensing	5,757	767,937	(767,937)	**5,757**
Builders Levy	6,597	22,743	(3,264)	**26,076**
Transwa Bookings	2,979	13,818	(12,897)	**3,900**
Staff Personal Dedns	42,307	53,918	(68,605)	**27,620**
Housing Tenancy Bonds	11,620	2,780	(5,140)	**9,260**
Security Key System - Key Bonds	50	1,780	0	**1,830**
Skeleton Weed	53,887	0	(53,887)	**0**
Clubs & Groups	789	3,860	(4,430)	**219**
Third Party Contributions	6,338	250	(250)	**6,338**
Rates Overpaid	17,655	14,864	(18,108)	**14,411**
Retention Monies	0	304,710	(151,676)	**153,034**
	316,407	**1,198,453**	**(1,265,300)**	**249,560**

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 13: Capital Acquisitions

Assets	Account	YTD Actual New/Upgrade	YTD Actual Renewal	YTD Actual Total YTD	Amended Budget Annual Budget	Amended Budget YTD Budget	Amended Budget YTD Variance	Strategic Reference / Comment
		$	$	$	$	$	$	
Level of completion indicator, please see table at the end of this note for further detail.								
Land & Buildings								
Education & Welfare								
Homes for the Aged Capital Works - LRCI Grant Courtyard Improvements	J08401	(84,728)	0	(84,728)	(169,500)	(169,500)	84,772	
Homes for the Aged - Units 6 Capital Works	J08403	(2,398)	0	(2,398)	(49,498)	(24,738)	22,340	
Homes for the Aged - Units 7 Capital Works	J08404	(48,219)	0	(48,219)	(49,498)	(24,738)	(23,481)	
Education & Welfare Total		**(135,345)**	**0**	**(135,345)**	**(268,496)**	**(218,976)**	**83,631**	
Housing								
2 Libra Place - Electrical Rewire - Full House	J09200	0	0	0	(8,000)	(3,996)	3,996	
120 Antares Street - Reroof premises	J09400	(23,072)	0	(23,072)	(26,227)	(26,227)	3,155	
Housing Total		**(23,072)**	**0**	**(23,072)**	**(34,227)**	**(30,223)**	**7,151**	
Community Amenities								
Sewarage Southern Cross								
Southern Cross Sewarage Scheme - Containerised filtration & Treatment system inc insta	E10351	(105,034)	0	(105,034)	(123,750)	(123,750)	18,716	
Community Amenities Total		**(105,034)**	**0**	(105,034)	**(123,750)**	**(123,750)**	**18,716**	
Recreation And Culture								
Swimming Areas and Beaches								
Swimming Pool - Land & Building Capital - Facility Design & Project Management	E11250	(2,434,904)	0	(2,434,904)	(974,596)	(974,595)	(1,460,309)	
Other Recreation & Sport								
SX Sports Complex Building - Replace Basketball Court Flooring, Update Ladies toilet	SPRT10	0	(60,147)	(60,147)	(110,409)	(55,188)	(4,959)	
Heritage								
Yilgarn History Museum - Replace Boundry Fences	J11502	0	0	0	(24,848)	(12,414)	12,414	
Recreation And Culture Total		**(2,434,904)**	**(60,147)**	(2,495,051)	**(1,109,853)**	**(1,042,197)**	**(1,452,854)**	
Transport								
Depot - Capital Works - Upgrade Nursery Shed, Old Depot Office Painting, new Signage	J14602	0	(8,667)	(8,667)	(36,832)	0	(8,667)	
Transport Total		**0**	**(8,667)**	(8,667)	**(36,832)**	**0**	**(8,667)**	

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 13: Capital Acquisitions

Assets	Account	YTD Actual New/Upgrade	YTD Actual Renewal	YTD Actual Total YTD	Amended Budget Annual Budget	Amended Budget YTD Budget	Amended Budget YTD Variance	Strategic Reference / Comment
		$	$	$	$	$	$	
Economic Services								
Caravan Park Improvements -New Storage/Laundry Building with Carport	J13203	(612)	0	(612)	(65,539)	0	(612)	
Economic Services Total		**(612)**	**0**	**(612)**	**(65,539)**	**0**	**(612)**	
Other Property & Services								
Public - Adminstration								
Administration Centre - Land & Building - Replace Facades & Exterior Paint, external Wo	J14601	0	(1,411)	(1,411)	(37,423)	0	(1,411)	
Public - Adminstration Total	**Total**	**0**	**(1,411)**	**(1,411)**	**(37,423)**	**0**	**(1,411)**	
Infrastructure - Maintenance								
Administration Centre - Land & Building - Replace Facades & Exterior Paint	J14602	0	(8,667)	(8,667)	(36,832)	0	(8,667)	
Infrastructure - Maintenance Total	**Total**		**(8,667)**	**(8,667)**	**(36,832)**	**0**	**(8,667)**	
Land & Building Total		**(2,698,967)**	**(78,892)**	**(2,777,859)**	**(1,712,952)**	**(1,415,146)**	**(1,362,713)**	
Furniture & Office Equip.								
Other Community Amenities								
Cemetery -Plant & Equipment Capital	E10755	0	0	0	(8,500)	(4,248)	4,248	
Other Community Amenities Total		**0**	**0**	**0**	**(8,500)**	**(4,248)**	**4,248**	
Other Recreation & Sport								
Parks & Gradens -Plant & Equipment Capital-LCRI Grant upgrade Park BBQ	E11357	(21,943)	0	(21,943)	(24,000)	(24,000)	2,057	
Other Recreation & Sport Total		**(21,943)**	**0**	**(21,943)**	**(24,000)**	**(24,000)**	**2,057**	

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 13: Capital Acquisitions

Assets	Account	YTD Actual New/Upgrade	YTD Actual Renewal	YTD Actual Total YTD	Amended Budget Annual Budget	Amended Budget YTD Budget	Amended Budget YTD Variance	Strategic Reference / Comment
		$	$	$	$	$	$	
Other Property & Services								
Depot - Furniture & Equipmment	E12352	(4,817)	0	(4,817)	(15,000)	(7,500)	2,683	
Other Property & Services Total		**(4,817)**	**0**	**(4,817)**	**(15,000)**	**(7,500)**	**2,683**	
Furniture & Office Equip Total		**(26,760)**	**0**	**(26,760)**	**(47,500)**	**(35,748)**	**8,988**	
Plant , Equip. & Vehicles								
Recreation And Culture								
Swimming Pool -Plant & Equipment - LCRI Grant Swimming Pool Covers	E11252	(8,634)	0	(8,634)	(60,000)	(60,000)	51,366	
Recreation And Culture Total		**(8,634)**	**0**	**(8,634)**	**(60,000)**	**(60,000)**	**51,366**	
Transport								
YL 7059 - Trailer-Side Tipper - Replace Asset 1865	E12350	0	0	0	(120,000)	0	0	
YL 7016 - Trailer-Side Tipper - Replace Asset 1866	E12350	0	0	0	(120,000)	0	0	
YL 5410 - Tractor - John Deere - Replace Asset 1875	E12350	0	0	0	(71,500)	0	0	
YL4949 - Truck - 2015 Mitsubishi Fuso Canter 4x2- Replace Asset 1998	E12350	(85,547)	0	(85,547)	(92,500)	0	(85,547)	
YL046 - Truck - 2015 Mitsubishi Fuso Canter 815- Replace Asset 1999	E12350	0	0	0	(87,500)	0	0	
YL311 - UTE -2015 ISUZU NPS 65-155 - 4x4 Ute - Replace Asset 2000	E12350	(85,547)	0	(85,547)	(92,500)	0	(85,547)	
YL645 -Toyota LandCruiser CAB LC70- 4x4 Ute (Workmate)- Replace Asset 2017	E12350	0	0	0	(65,500)	0	0	
New Asset - Street Sweeper	E12350	0	0	0	(190,000)	0	0	
New Asset - Electronic Signage Trailer	E12350	(35,940)	0	(35,940)	(35,940)	(35,940)	0	
New Asset - Mulcer (Bobcat Attachment)	E12350	(30,803)	0	(30,803)	(32,000)	(32,000)	1,197	
Transport Total		**(237,836)**	**0**	**(237,836)**	**(907,440)**	**(67,940)**	**(169,896)**	
Other Property & Services								
YL 252 -Holden Colorado LTZ-CREW CAB 4WD UTILITY(EMRS) - Replace Asset 2036	E14656	0	0	0	(57,000)	0	0	
YL 1 - Toyota Prado- DSL WGN A/T VX(CEO) - Replace Asset 2038	E14656	0	0	0	(66,300)	0	0	
YL 50 - Toyota Kluger - AWD V6 Wagon A/T GXL - SILVER(EMCS) - Replace Asset 2047	E14656	0	0	0	(55,000)	0	0	
Other Property & Services Total		**0**	**0**	**0**	**(178,300)**	**0**	**0**	
Plant , Equip. & Vehicles Total		**(246,470)**	**0**	**(246,470)**	**(1,145,740)**	**(127,940)**	**(118,530)**	

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 13: Capital Acquisitions

Assets	Account	YTD Actual New/Upgrade	YTD Actual Renewal	YTD Actual Total YTD	Amended Budget Annual Budget	Amended Budget YTD Budget	Amended Budget YTD Variance	Strategic Reference / Comment
		$	$	$	$	$	$	
Infrastructure - Roads (Non Town)								
R2030 - M40 - 10 Mm Bitumen Reseal - Slk 3.0 - 9.0.0(20/21)	RRG14	(179,743)	0	(179,743)	(194,327)	(97,152)	(82,591)	
R2030 - Koolyanobbing Road - Construct to 7 mSeal - slk 11.0 - 14.0(20/21)	RRG15	(530,905)	0	(530,905)	(613,939)	(613,936)	83,031	
R2030 - Koolyanobbing Road -10 Mm Reseal - slk 8.0 - 11.0(20/21)	RRG16	(100,711)	0	(100,711)	(102,176)	(51,072)	(49,639)	
R2030 - Moorine South Rd 10Mm Bitumen Reseal - Slk 16.5 - 24.5(20/21)	RRG17	(228,203)	0	(228,203)	(270,398)	(135,192)	(93,011)	
R2R - Crampthorn Road - Construct to 7M Seal- slk 8.5 - 10.0(20/21)	R2R22	0	0	0	(328,017)	0	0	
R2R - Bodallin South Road - Construct To 7M Seal - slk 6.5 - 7.7(20/21)	R2R23	0	0	0	(293,252)	(70,170)	70,170	
R2R - Bodallin South Road - Bitumen Reseal - slk 4.9 - 6.4(20/21)	R2R24	(33,595)	0	(33,595)	(41,009)	0	(33,595)	
R2R - Southern Cross South Rd- Formation & Gravel Overlay slk 47.8 -51.3(20/21)	R2R25	(129,424)	0	(129,424)	(145,698)	(145,698)	16,274	
R2R - Gatley Road - Formation & Gravel Overlay - slk 2.5 -4.5(20/21)	R2R26	(14,200)	0	(14,200)	(98,188)	0	(14,200)	
RRU - Kent Road - Formation & Gravel -slk 18.3-20.3(20/21)	RRU12	0	0	0	(97,836)	0	0	
RRU - Nulla Nulla Sth Road - Formation & Gravel -slk 30.0-32.5(20/21)	RRU17	0	0	0	(102,245)	0	0	
RRU - Cockatoo Tank Road - Formation & Gravel Overlay - slk 7.0 -9.0(20/21)	RRU18	0	0	0	(108,086)	0	0	
RRU - Emu Fence Road - Formation & Gravel Overlay - slk 137.5 - 139.5(20/21)	RRU19	(94,894)	0	(94,894)	(102,030)	(102,030)	7,136	
RRU - Koolyanobbing Road Bitumen Reseal - Slk 31.0 - 33.0(19/20)	RRU20	(1,589)	0	(1,589)	(58,151)	0	(1,589)	
RRU - Brennand Road Formation & Gravel Overlay - Slk 13.5- 15.5(20/21)	RRU21	(81,003)	0	(81,003)	(99,382)	(99,381)	18,378	
LRCI - Three Boys Road Construct To 7M Seal - Slk 1.8 - 3.3(20/21)	RRU22	0	0	0	(227,341)	0	0	
LRCI- Moorine South Road -Sliplane - Moorine South & Bennett Roads(20/21)	RRU23	(95,434)	0	(95,434)	(95,488)	(95,485)	51	
Infrastructure - Roads (Non Town) Total		**(1,489,701)**	**0**	**(1,489,701)**	**(2,977,563)**	**(1,410,116)**	**(79,585)**	
Infrastructure - Roads (Non Town) Total		**(1,489,701)**	**0**	**(1,489,701)**	**(2,977,563)**	**(1,410,116)**	**(79,585)**	

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 13: Capital Acquisitions

Assets	Account	YTD Actual New/Upgrade	YTD Actual Renewal	YTD Actual Total YTD	Amended Budget Annual Budget	Amended Budget YTD Budget	Amended Budget YTD Variance	Strategic Reference / Comment
		$	$	$	$	$	$	
Infrastructure - Roads (Town)								
TRU - Achener Street - Bitumen Reseal, Antares - Sirius St (19/20 & 20/21)	TRU05	0	0	0	(61,738)	(30,858)	30,858	
TRU - Cnr Altair/Geh - Concrete Crossover Corner Parking areat (20/21)	TRU06	(9,323)	0	(9,323)	(8,326)	(4,158)	(5,165)	
TRU - Bituminise Depot Parking & Depot Entrance (20/21)	TRU07	(10,557)	0	(10,557)	(36,850)	(18,408)	7,851	
TRU - Pegasi Street - Drainage & Sea(20/21)	TRU08	(10,239)	0	(10,239)	(10,814)	(5,394)	(4,845)	
Infrastructure - Roads (Town) Total		**(30,119)**	**0**	**(30,119)**	**(117,728)**	**(58,818)**	**28,699**	
Infrastructure - Roads (Town) Total		**(30,119)**	**0**	**(30,119)**	**(117,728)**	**(58,818)**	**28,699**	
Infrastructure - Road Total		**(1,519,820)**	**0**	**(1,519,820)**	**(3,095,291)**	**(1,468,934)**	**(50,886)**	
Infrastructure - Footpaths								
Transport								
Concrete Footpath - Spica Street - Southern Cross	J12101	0	0	0	(49,364)	(24,666)	24,666	
LRCI Grant -Concrete Footpath - Beaton Rd -Antares ST To Cemetery Southern Cross	J12102	0	0	0	(146,900)	0	0	
Infrastructure - Footpaths Total		**0**	**0**	**0**	**(196,264)**	**(24,666)**	**24,666**	
Infrastructure - Footpaths Total		**0**	**0**	**0**	**(196,264)**	**(24,666)**	**24,666**	
Infrastructure - Refuse								
Community Amenities								
SX Refuse Disposal Site - Capital -Install security Cameras,Solar lighting	J10107	(12,167)	0	(12,167)	(24,500)	(12,246)	79	
Infrastructure - Refuse Total		**(12,167)**	**0**	**(12,167)**	**(24,500)**	**(12,246)**	**79**	
Infrastructure - Refuse Total		**(12,167)**	**0**	**(12,167)**	**(24,500)**	**(12,246)**	**79**	

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 13: Capital Acquisitions

Assets	Account	YTD Actual New/Upgrade	YTD Actual Renewal	YTD Actual Total YTD	Amended Budget Annual Budget	Amended Budget YTD Budget	Amended Budget YTD Variance	Strategic Reference / Comment
		$	$	$	$	$	$	
Infrastructure - Sewerage								
Community Amenities								
SX Sewerage Scheme - Capital - Access Chamber Upgrade	E10350	0	0	0	(17,500)	(8,748)	8,748	
ML SewerageScheme - Capital - Access Chamber Upgrade	E10450	(8,980)	0	(8,980)	(10,500)	(5,250)	(3,730)	
Infrastructure - Sewerage Total		**(8,980)**	**0**	**(8,980)**	**(28,000)**	**(13,998)**	**5,018**	
Infrastructure - Sewerage Total		**(8,980)**	**0**	**(8,980)**	**(28,000)**	**(13,998)**	**5,018**	
Infrastructure - Drainage								
Community Amenities								
Southern Cross Drainage - Infrastructure Capital	J10901	0	(12,086)	(12,086)	(14,172)	(7,068)	(5,018)	
Infrastructure - Drainage Total		**0**	**(12,086)**	**(12,086)**	**(14,172)**	**(7,068)**	**(5,018)**	
Infrastructure - Drainage Total		**0**	**(12,086)**	**(12,086)**	**(14,172)**	**(7,068)**	**(5,018)**	
Infrastructure - Parks & Ovals								
Community Amenities								
Rotary Park- Replace 3x Picnic settings/Seating & Install Water Fountain	J10711	0	0	0	(14,509)	(7,242)	7,242	
Recreation & Culture								
Toddler Playground Equipment - Constellation Park - Shade sails, W D Fountain	E11352	(17,294)	0	(17,294)	(103,000)	(103,000)	85,706	
Infrastructure - Parks & Ovals Total		**(17,294)**	**0**	**(17,294)**	**(117,509)**	**(110,242)**	**92,948**	
Infrastructure - Parks & Ovals Total		**(17,294)**	**0**	**(17,294)**	**(117,509)**	**(110,242)**	**92,948**	
Infrastructure - Other								
Swimming Areas and Beaches								
Swimming Pool - Infrastructure Capital -Contracted works to be completed	E11251	(3,336,408)	0	(3,336,408)	(1,507,506)	(1,507,506)	(1,828,902)	
Swimming Areas and Beaches Total		**(3,336,408)**	**0**	**(3,336,408)**	**(1,507,506)**	**(1,507,506)**	**(1,828,902)**	

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 December 2020

Note 13: Capital Acquisitions

		YTD Actual			Amended Budget			
Assets	**Account**	**New/Upgrade**	**Renewal**	**Total YTD**	**Annual Budget**	**YTD Budget**	**YTD Variance**	**Strategic Reference / Comment**
		$	$	$	$	$	$	
Other Recreation & Sport								
Sx Youth Recreational Works -Infra Capital - LRCI Grant -Construction-Sx Skate Park	E11350	0	0	0	(220,000)	(73,334)	73,334	
Other Recreation & Sport Total		**0**	**0**	**0**	**(220,000)**	**(73,334)**	**73,334**	
Infrastructure - Other Total		**(3,336,408)**	**0**	**(3,336,408)**	**(1,727,506)**	**(1,580,840)**	**(1,755,568)**	
Capital Expenditure Total		**(7,866,866)**	**(90,978)**	**(7,957,844)**	**(8,109,434)**	**(4,796,828)**	**(3,161,016)**	

Level of Completion Indicators

- 0%
- 20%
- 40%
- 60%
- 80%
- 100%
- Over 100%

Percentage YTD Actual to Annual Budget

Expenditure over budget highlighted in red.

Attachment 9.2.2

Shire of YILGARN

"good country for hardy people"

SHIRE OF YILGARN

MONTHLY FINANCIAL REPORT
(Containing the Statement of Financial Activity)
For the Period Ended 31 January 2021

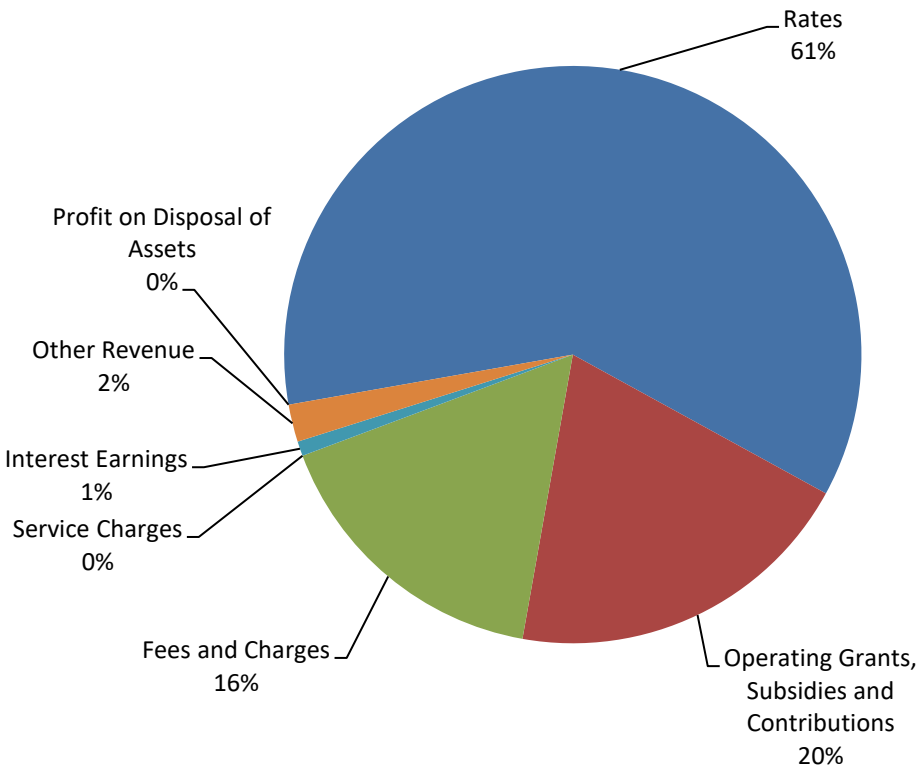
LOCAL GOVERNMENT ACT 1995

LOCAL GOVERNMENT (FINANCIAL MANAGEMENT) REGULATIONS 1996

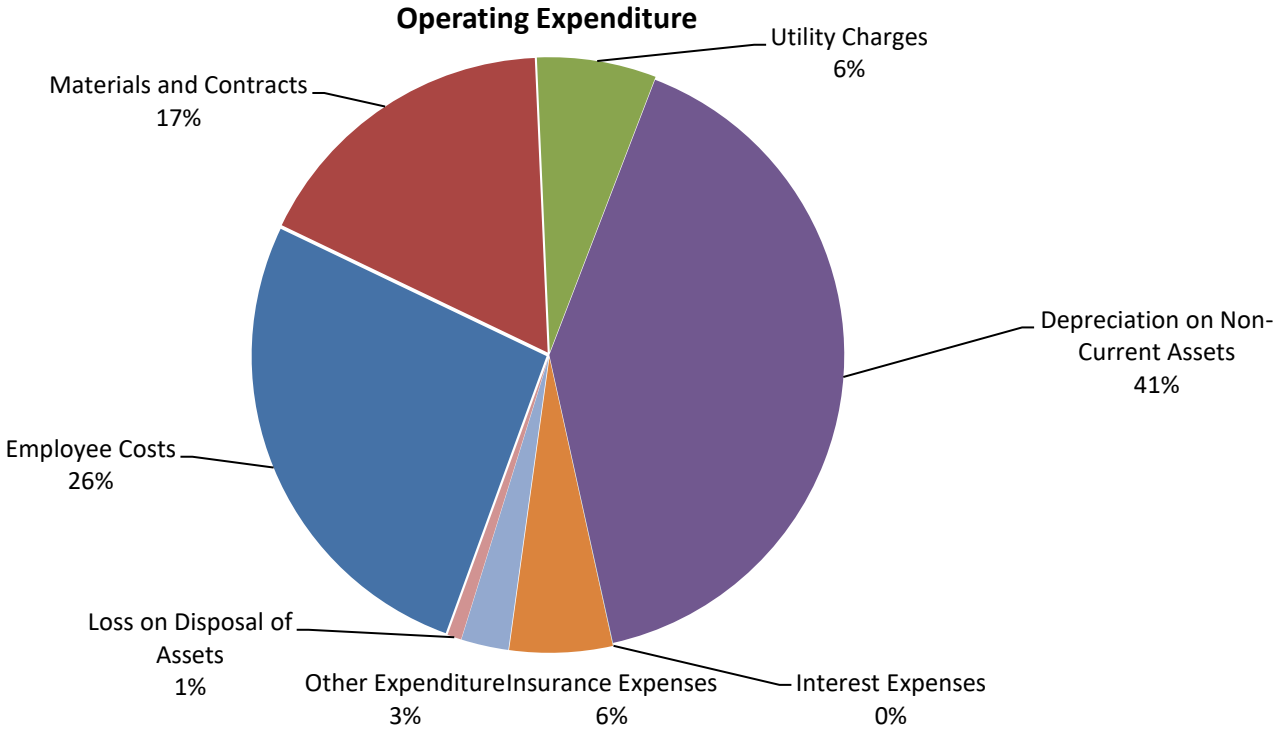
TABLE OF CONTENTS

SHIRE OF YILGARN
Information Summary
For the Period Ended 31 January 2021

Operating Revenue



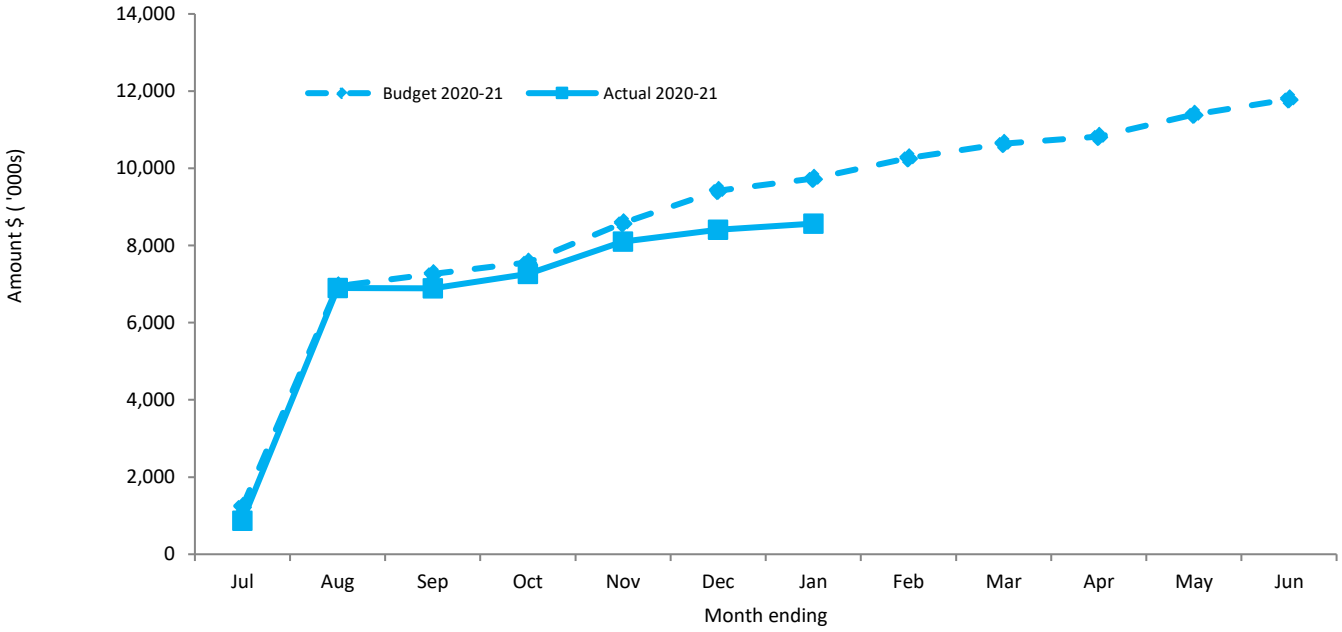
Operating Expenditure



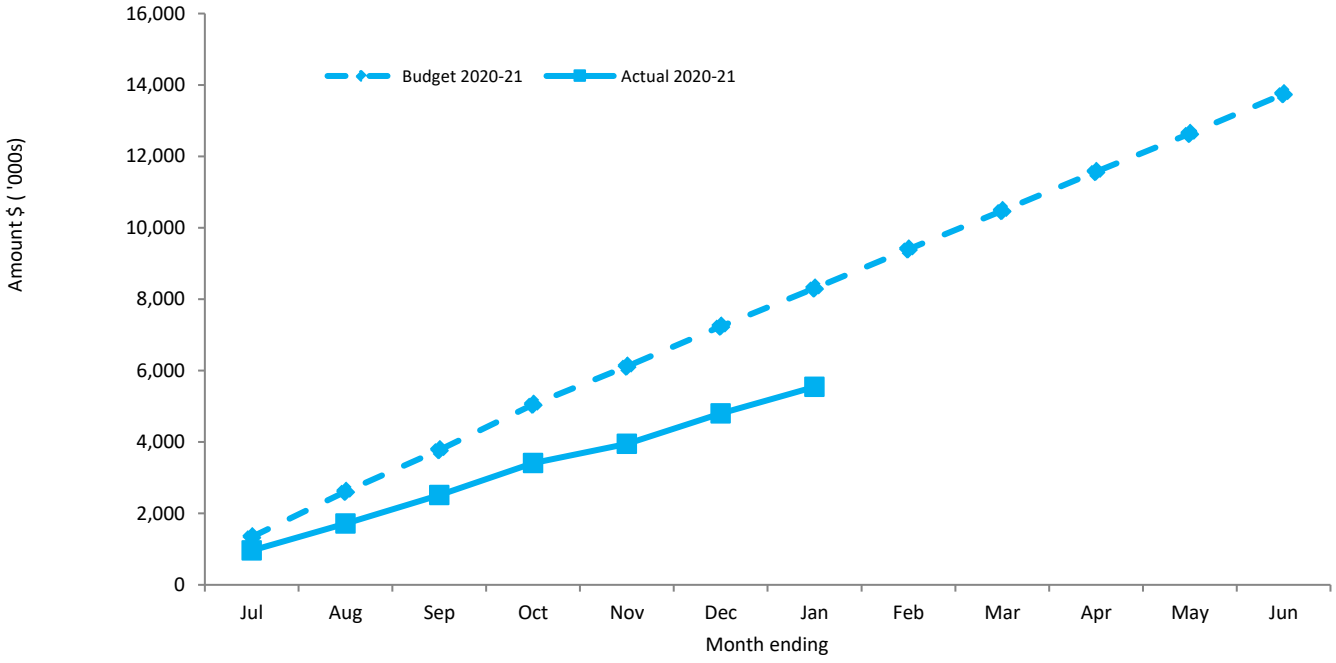
This information is to be read in conjunction with the accompanying Financial Statements and Notes.

SHIRE OF YILGARN
Information Summary
For the Period Ended 31 January 2021

Budget Operating Revenues -v- Actual (Refer Note 2)



Budget Operating Expenses -v- YTD Actual (Refer Note 2)



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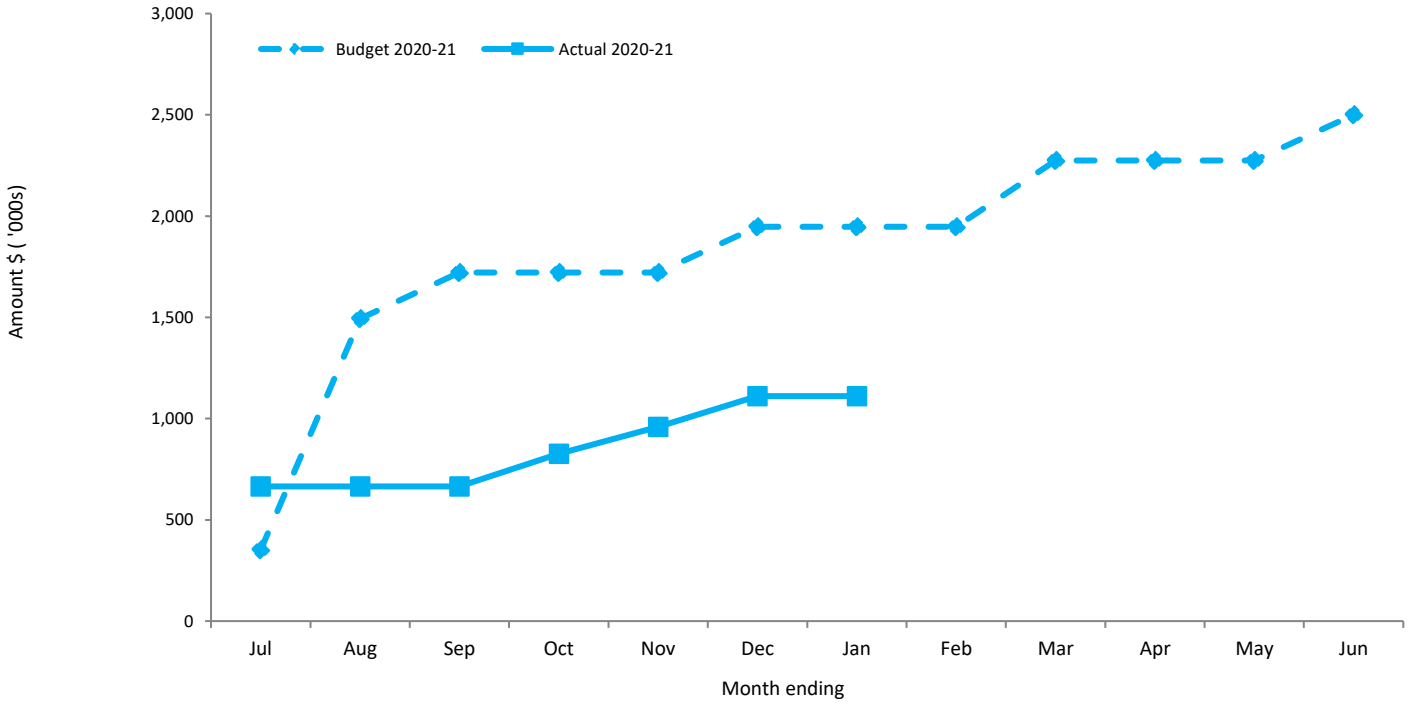
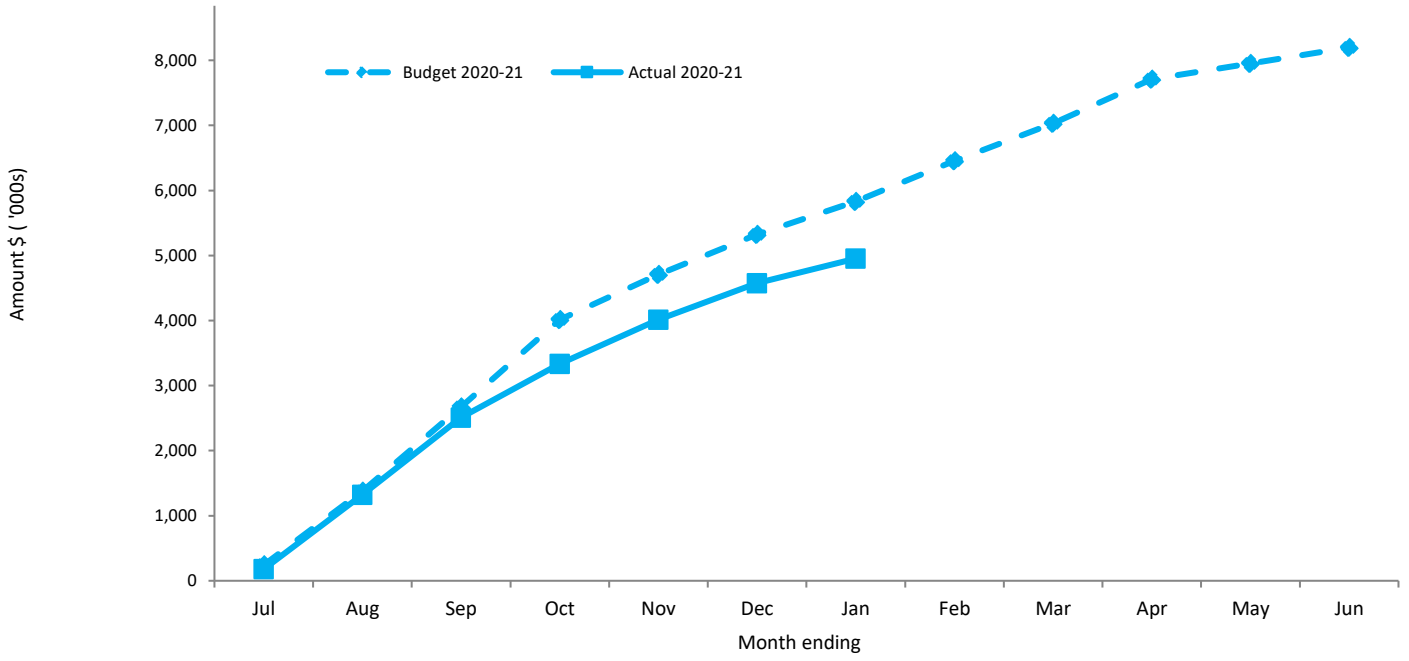
SHIRE OF YILGARN
Information Summary
For the Period Ended 31 January 2021

Budget Capital Revenue -v- Actual (Refer Note 2)





SHIRE OF YILGARN
STATEMENT OF FINANCIAL ACTIVITY
(Statutory Reporting Program)
For the Period Ended 31 January 2021

	Note	Amended Annual Budget	Amended YTD Budget (a)	YTD Actual (b)	Var. $ (b)-(a)	Var. % (b)-(a)/(a)	Var.
		$	$	$	$	%	
Opening Funding Surplus(Deficit)	3	4,186,290	4,186,290	**5,945,576**	1,759,285	42%	
Revenue from operating activities							
General Purpose Funding - Rates	9	4,051,369	4,051,369	**4,048,250**	(3,119)	(0%)	
General Purpose Funding		1,745,490	888,563	**856,584**	(31,979)	(4%)	
Law, Order and Public Safety		82,799	51,389	**38,688**	(12,701)	(25%)	
Health		1,500	875	**770**	(105)	(12%)	
Education and Welfare		177,651	120,635	**116,565**	(4,070)	(3%)	
Housing		78,000	45,486	**43,628**	(1,858)	(4%)	
Community Amenities		672,044	616,880	**623,818**	6,938	1%	
Recreation and Culture		57,430	54,085	**109,169**	55,084	102%	▲
Transport		188,687	104,328	**92,786**	(11,542)	(11%)	
Economic Services		1,296,337	877,908	**679,205**	(198,703)	(23%)	▼
Other Property and Services		139,464	81,347	**157,547**	76,200	94%	▲
		8,490,771	**6,892,865**	**6,767,010**			
Expenditure from operating activities							
Governance		(497,923)	(275,103)	**(240,265)**	(34,838)	(13%)	▼
General Purpose Funding		(286,084)	(167,284)	**(125,843)**	(41,441)	(25%)	▼
Law, Order and Public Safety		(478,194)	(297,986)	**(191,844)**	(106,142)	(36%)	▼
Health		(292,390)	(171,454)	**(129,551)**	(41,903)	(24%)	▼
Education and Welfare		(543,295)	(320,720)	**(194,695)**	(126,025)	(39%)	▼
Housing		(386,691)	(229,422)	**(99,568)**	(129,854)	(57%)	▼
Community Amenties		(1,155,245)	(687,722)	**(479,790)**	(207,932)	(30%)	▼
Recreation and Culture		(1,857,002)	(1,101,915)	**(822,506)**	(279,409)	(25%)	▼
Transport		(6,486,505)	(3,785,493)	**(2,554,213)**	(1,231,280)	(33%)	▼
Economic Services		(1,698,695)	(993,989)	**(634,886)**	(359,103)	(36%)	▼
Other Property and Services		(63,327)	(275,331)	**(70,035)**	(205,296)	(75%)	▼
		(13,745,351)	**(8,306,419)**	**(5,543,196)**			
Operating activities excluded from budget							
Add back Depreciation		6,616,250	3,859,415	**2,255,741**	(1,603,674)	(42%)	▼
Adjust (Profit)/Loss on Asset Disposal	8	114,589	66,843	**42,790**	(24,053)	(36%)	
Amount attributable to operating activities		**1,476,259**	**2,512,704**	**3,522,346**			
Investing Activities							
Non-operating Grants, Subsidies and Contributions	11	3,299,122	2,846,040	**1,800,289**	(1,045,751)	(37%)	▼
Proceeds from Disposal of Assets	8	308,000	208,000	**66,227**	(141,773)	(68%)	▼
Land and Buildings	13	(1,712,952)	(1,435,325)	**(2,818,479)**	1,383,154	96%	▲
Infrastructure Assets - Roads	13	(3,095,291)	(1,717,250)	**(1,581,022)**	(136,228)	(8%)	
Infrastructure Assets - Other	13	(2,107,951)	(1,796,597)	**(3,418,300)**	1,621,703	90%	▲
Plant and Equipment	13	(1,145,740)	(127,940)	**(316,005)**	188,065	147%	▲
Furniture and Equipment	13	(47,500)	(37,706)	**(28,207)**	(9,499)	(25%)	
Amount attributable to investing activities		**(4,502,312)**	**(2,060,778)**	**(6,295,497)**			
Financing Actvities							
Proceeds from New Debentures		1,000,000	1,000,000	**1,000,000**	0	0%	
Transfer from Reserves	7	546,205	641,841	**0**	641,841	(100%)	
Repayment of Debentures	10	(92,428)	0	**(2,167)**	2,167		
Transfer to Reserves	7	(562,327)	(110,223)	**(20,508)**	(89,715)	(81%)	▲
Amount attributable to financing activities		**891,450**	**1,531,618**	**977,325**			
Closing Funding Surplus(Deficit)	3	**2,051,687**	**6,169,834**	**4,149,750**			

▲▼ Indicates a variance between Year to Date (YTD) Budget and YTD Actual data as per the adopted materiality threshold.
Refer to Note 2 for an explanation of the reasons for the variance.

This statement is to be read in conjunction with the accompanying Financial Statements and notes.

SHIRE OF YILGARN
STATEMENT OF FINANCIAL ACTIVITY
(By Nature or Type)
For the Period Ended 31 January 2021

	Note	Amended Annual Budget	Amended YTD Budget (a)	YTD Actual (b)	Var. $ (b)-(a)	Var. % (b)-(a)/(a)	Var.
		$	$	$	$	%	
Opening Funding Surplus (Deficit)	3	4,186,290	4,186,290	**5,945,576**	1,759,285	42%	
Revenue from operating activities							
Rates	9	4,051,369	4,051,369	**4,048,250**	(3,119)	(0%)	
Operating Grants, Subsidies and Contributions	11	2,254,947	1,350,759	**1,319,791**	(30,968)	(2%)	
Fees and Charges		1,807,208	1,269,058	**1,100,037**	(169,021)	(13%)	▼
Service Charges		0	0	**0**	0		
Interest Earnings		178,160	103,915	**54,797**	(49,118)	(47%)	▼
Reimbursements		89,700	52,311	**104,187**	51,876	99%	▲
Other Revenue		104,000	62,317	**139,648**	77,331	124%	▲
Profit on Disposal of Assets	8	5,387	3,136	**0**	(3,136)	(100%)	
		8,490,771	**6,892,865**	6,766,710			
Expenditure from operating activities							
Employee Costs		(3,042,766)	(1,786,694)	**(1,471,715)**	(314,979)	(18%)	▼
Materials and Contracts		(2,430,971)	(1,549,325)	**(953,135)**	(596,190)	(38%)	▼
Utility Charges		(952,782)	(555,646)	**(362,329)**	(193,317)	(35%)	▼
Depreciation on Non-Current Assets		(6,616,250)	(3,859,415)	**(2,255,741)**	(1,603,674)	(42%)	▼
Interest Expenses		(16,902)	(8,451)	**(574)**	(7,877)	(93%)	
Insurance Expenses		(319,986)	(319,977)	**(312,634)**	(7,343)	(2%)	
Other Expenditure		(245,718)	(156,932)	**(143,988)**	(12,944)	(8%)	
Loss on Disposal of Assets	8	(119,976)	(69,979)	**(42,790)**	(27,189)	(39%)	
		(13,745,351)	**(8,306,419)**	(5,542,906)			
Operating activities excluded from budget							
Add back Depreciation		6,616,250	3,859,415	**2,255,741**	(1,603,674)	(42%)	▼
Adjust (Profit)/Loss on Asset Disposal	8	114,589	66,843	**42,790**	(24,053)	(36%)	
Amount attributable to operating activities		**1,476,259**	**2,512,704**	3,522,334			
Investing activities							
Grants, Subsidies and Contributions	11	3,299,122	2,846,040	**1,800,289**	(1,045,751)	(37%)	▼
Proceeds from Disposal of Assets	8	308,000	208,000	**66,227**	(141,773)	(68%)	▼
Land and Buildings	13	(1,712,952)	(1,435,325)	**(2,818,479)**	1,383,154	96%	▲
Infrastructure Assets - Roads	13	(3,095,291)	(1,717,250)	**(1,581,022)**	(136,228)	(8%)	
Infrastructure Assets - Other	13	(2,107,951)	(1,796,597)	**(3,418,300)**	1,621,703	90%	▲
Plant and Equipment	13	(1,145,740)	(127,940)	**(316,005)**	188,065	147%	▲
Furniture and Equipment	13	(47,500)	(37,706)	**(28,207)**	(9,499)	(25%)	
Amount attributable to investing activities		**(4,502,312)**	**(2,060,778)**	(6,295,497)			
Financing Activities							
Proceeds from New Debentures		1,000,000	1,000,000	**1,000,000**	0	0%	
Transfer from Reserves	7	546,205	641,841	**0**	(641,841)	(100%)	▼
Repayment of Debentures	10	(92,428)	0	**(2,167)**	(2,167)		
Transfer to Reserves	7	(562,327)	(110,223)	**(20,508)**	89,715	81%	▲
Amount attributable to financing activities		**891,450**	**1,531,618**	977,325			
Closing Funding Surplus (Deficit)	3	**2,051,687**	**6,169,834**	4,149,739			

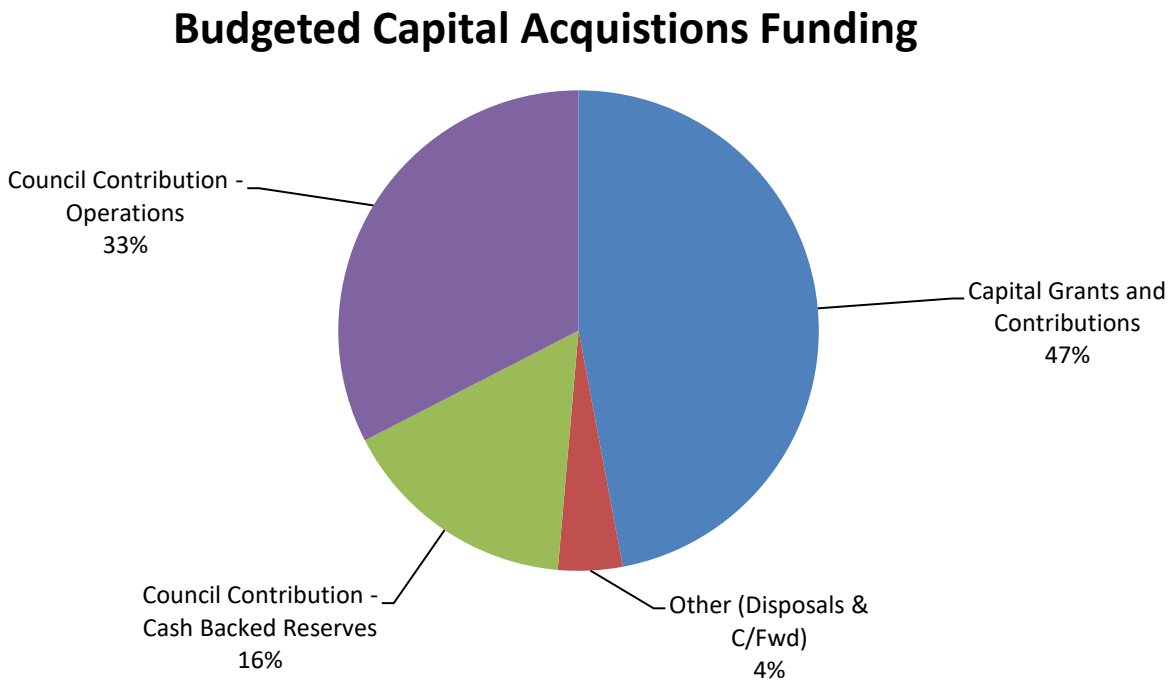
▲▼ Indicates a variance between Year to Date (YTD) Budget and YTD Actual data as per the adopted materiality threshold.
Refer to Note 2 for an explanation of the reasons for the variance.

This statement is to be read in conjunction with the accompanying Financial Statements and notes.

SHIRE OF YILGARN
STATEMENT OF CAPITAL ACQUSITIONS AND CAPITAL FUNDING
For the Period Ended 31 January 2021

Capital Acquisitions

	Note	YTD Actual New /Upgrade (a)	YTD Actual (Renewal Expenditure) (b)	Amended YTD Budget (d)	Amended Annual Budget	YTD Actual Total (c) = (a)+(b)	Variance (d) - (c)
		$	$	$	$	$	$
Land and Buildings	13	2,739,314	79,165	1,435,325	1,712,952	**2,818,479**	(1,383,154)
Infrastructure Assets - Roads	13	1,581,022	0	1,717,250	3,095,291	**1,581,022**	136,228
Infrastructure Assets - Footpaths	13	0	0	28,777	196,264	**0**	28,777
Infrastructure Assets - Refuse	13	12,167	0	14,287	24,500	**12,167**	2,120
Infrastructure Assets - Sewerage	13	18,233	0	16,331	28,000	**18,233**	(1,902)
Infrastructure Assets - Drainage	13	0	12,086	8,246	14,172	**12,086**	(3,840)
Infrastructure Assets - Parks & Ovals	13	34,606	0	111,449	117,509	**34,606**	76,843
Infrastructure Assets - Other	13	3,341,208	0	1,617,507	1,727,506	**3,341,208**	(1,723,701)
Plant and Equipment	13	316,005	0	127,940	1,145,740	**316,005**	(188,065)
Furniture and Equipment	13	28,207	0	37,706	47,500	**28,207**	9,499
Capital Expenditure Totals		8,070,762	91,251	5,114,818	8,109,434	**8,162,013**	(3,047,195)
Capital acquisitions funded by:							
Capital Grants and Contributions				**2,831,491**	**3,344,992**	**1,879,736**	
Other (Disposals & C/Fwd)				**208,000**	**308,000**	**66,228**	
Council Contribution - Cash Backed Reserves				**1,141,841**	**1,141,841**	**0**	
Council Contribution - Operations				**(66,514)**	**2,314,601**	**6,216,049**	
Capital Funding Total				**5,114,818**	**8,109,434**	**8,162,013**	



Note 1: Significant Accounting Policies

(a) Basis of Accounting

This statement comprises a special purpose financial report which has been prepared in accordance with Australian Accounting Standards (as they apply to local governments and not-for-profit entities), Australian Accounting Interpretations, other authoritative pronouncements of the Australian Accounting Standards Board, the Local Government Act 1995 and accompanying regulations. Material accounting policies which have been adopted in the preparation of this statement are presented below and have been consistently applied unless stated otherwise. Except for cash flow and rate setting information, the report has also been prepared on the accrual basis and is based on historical costs, modified, where applicable, by the measurement at fair value of selected non-current assets, financial assets and liabilities.

Critical Accounting Estimates

The preparation of a financial report in conformity with Australian Accounting Standards requires management to make judgements, estimates and assumptions that effect the application of policies and reported amounts of assets and liabilities, income and expenses. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances; the results of which form the basis of making the judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

(b) The Local Government Reporting Entity

All Funds through which the Council controls resources to carry on its functions have been included in this statement. In the process of reporting on the local government as a single unit, all transactions and balances between those funds (for example, loans and transfers between Funds) have been eliminated. All monies held in the Trust Fund are excluded from the statement, but a separate statement of those monies appears at Note 12.

(c) Rounding Off Figures

All figures shown in this statement are rounded to the nearest dollar.

(d) Rates, Grants, Donations and Other Contributions

Rates, grants, donations and other contributions are recognised as revenues when the local government obtains control over the assets comprising the contributions. Control over assets acquired from rates is obtained at the commencement of the rating period or, where earlier, upon receipt of the rates.

(e) Goods and Services Tax

Revenues, expenses and assets are recognised net of the amount of GST, except where the amount of GST incurred is not recoverable from the Australian Taxation Office (ATO). Receivables and payables are stated inclusive of GST receivable or payable. The net amount of GST recoverable from, or payable to, the ATO is included with receivables or payables in the statement of financial position. Cash flows are presented on a gross basis. The GST components of cash flows arising from investing or financing activities which are recoverable from, or payable to, the ATO are presented as operating cash flows.

(f) Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, cash at bank, deposits available on demand with banks and other short term highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value and bank overdrafts. Bank overdrafts are reported as short term borrowings in current liabilities in the statement of financial position.

(g) Trade and Other Receivables

Trade and other receivables include amounts due from ratepayers for unpaid rates and service charges and other amounts due from third parties for goods sold and services performed in the ordinary course of business.

Receivables expected to be collected within 12 months of the end of the reporting period are classified as current assets. All other receivables are classified as non-current assets. Collectability of trade and other receivables is reviewed on an ongoing basis. Debts that are known to be uncollectible are written off when identified. An allowance for doubtful debts is raised when there is objective evidence that they will not be collectible.

(h) Inventories

General

Inventories are measured at the lower of cost and net realisable value. Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

Land Held for Resale

Land held for development and sale is valued at the lower of cost and net realisable value. Cost includes the cost of acquisition, development, borrowing costs and holding costs until completion of development. Finance costs and holding charges incurred after development is completed are expensed. Gains and losses are recognised in profit or loss at the time of signing an unconditional contract of sale if significant risks and rewards, and effective control over the land, are passed on to the buyer at this point. Land held for sale is classified as current except where it is held as non-current based on Council's intentions to release for sale.

Note 1: Significant Accounting Policies

(i) Fixed Assets

All assets are initially recognised at cost. Cost is determined as the fair value of the assets given as consideration plus costs incidental to the acquisition. For assets acquired at no cost or for nominal consideration, cost is determined as fair value at the date of acquisition. The cost of non-current assets constructed by the local government includes the cost of all materials used in the construction, direct labour on the project and an appropriate proportion of variable and fixed overhead. Certain asset classes may be revalued on a regular basis such that the carrying values are not materially different from fair value. Assets carried at fair value are to be revalued with sufficient regularity to ensure the carrying amount does not differ materially from that determined using fair value at reporting date.

All non-current assets having a limited useful life are systematically depreciated over their useful lives in a manner which reflects the consumption of the future economic benefits embodied in those assets

Buildings	30 to 50 years
Furniture and Equipment	4 to 10 years
Plant and Equipment	5 to 10 years
Sealed roads and streets	
formation	not depreciated
pavement	50 years
seal	
bituminous seals	30 years
asphalt surfaces	25 years
Gravel Roads	
formation	not depreciated
pavement	50 years
gravel sheet	15 years
Formed roads	
formation	not depreciated
pavement	50 years
Footpaths - slab	12 years
Sewerage piping	50 years
Water supply piping & drainage systems	50 years
Airfields and runways	30 years
Refuse disposal sites	not depreciated

(k) Trade and Other Payables

Trade and other payables represent liabilities for goods and services provided to the Council prior to the end of the financial year that are unpaid and arise when the Council becomes obliged to make future payments in respect of the purchase of these goods and services. The amounts are unsecured, are recognised as a current liability and are normally paid within 30 days of recognition.

(l) Employee Benefits

The provisions for employee benefits relates to amounts expected to be paid for long service leave, annual leave, wages and salaries and are calculated as follows:

(i) Wages, Salaries, Annual Leave and Long Service Leave (Short-term Benefits)

The provision for employees' benefits to wages, salaries, annual leave and long service leave expected to be settled within 12 months represents the amount the Shire has a present obligation to pay resulting from employees services provided to balance date. The provision has been calculated at nominal amounts based on remuneration rates the Shire expects to pay and includes related on-costs.

(ii) Annual Leave and Long Service Leave (Long-term Benefits)

The liability for long service leave is recognised in the provision for employee benefits and measured as the present value of expected future payments to be made in respect of services provided by employees up to the reporting date using the project unit credit method. Consideration is given to expected future wage and salary levels, experience of employee departures and periods of service. Expected future payments are discounted using market yields at the reporting date on national government bonds with terms to maturity and currency that match as closely as possible, the estimated future cash outflows. Where the Shire does not have the unconditional right to defer settlement beyond 12 months, the liability is recognised as a current liability.

(m) Interest-bearing Loans and Borrowings

All loans and borrowings are initially recognised at the fair value of the consideration received less directly attributable transaction costs. After initial recognition, interest-bearing loans and borrowings are subsequently measured at amortised cost using the effective interest method. Fees paid on the establishment of loan facilities that are yield related are included as part of the carrying amount of the loans and borrowings.

Borrowings are classified as current liabilities unless the Council has an unconditional right to defer settlement of the liability for at least 12 months after the balance sheet date.

Note 1: Significant Accounting Policies

Borrowing Costs

Borrowing costs are recognised as an expense when incurred except where they are directly attributable to the acquisition, construction or production of a qualifying asset. Where this is the case, they are capitalised as part of the cost of the particular asset.

(n) Provisions

Provisions are recognised when: The council has a present legal or constructive obligation as a result of past events; it is more likely than not that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated. Provisions are not recognised for future operating losses. Where there are a number of similar obligations, the likelihood that an outflow will be required in settlement is determined by considering the class of obligations as a whole. A provision is recognised even if the likelihood of an outflow with respect to any one of item included in the same class of obligations may be small.

(o) Current and Non-Current Classification

In the determination of whether an asset or liability is current or non-current, consideration is given to the time when each asset or liability is expected to be settled. The asset or liability is classified as current if it is expected to be settled within the next 12 months, being the Council's operational cycle. In the case of liabilities where Council does not have the unconditional right to defer settlement beyond 12 months, such as vested long service leave, the liability is classified as current even if not expected to be settled within the next 12 months. Inventories held for trading are classified as current even if not expected to be realised in the next 12 months except for land held for resale where it is held as non current based on Council's intentions to release for sale.

(p) Nature or Type Classifications

Rates

All rates levied under the Local Government Act 1995. Includes general, differential, specific area rates, minimum rates, interim rates, back rates, ex-gratia rates, less discounts offered. Exclude administration fees, interest on instalments, interest on arrears and service charges.

Operating Grants, Subsidies and Contributions

Refer to all amounts received as grants, subsidies and contributions that are not non-operating grants.

Non-Operating Grants, Subsidies and Contributions

Amounts received specifically for the acquisition, construction of new or the upgrading of non-current assets paid to a local government, irrespective of whether these amounts are received as capital grants, subsidies, contributions or donations.

Profit on Asset Disposal

Profit on the disposal of assets including gains on the disposal of long term investments. Losses are disclosed under the expenditure classifications.

Fees and Charges

Revenues (other than service charges) from the use of facilities and charges made for local government services, sewerage rates, rentals, hire charges, fee for

Service Charges

Service charges imposed under Division 6 of Part 6 of the Local Government Act 1995. Regulation 54 of the Local Government (Financial Management) Regulations 1996 identifies these as television and radio broadcasting, underground electricity and neighbourhood surveillance services. Exclude rubbish removal charges. Interest and other items of a similar nature received from bank and investment accounts, interest on rate instalments, interest on rate arrears and interest on debtors.

Interest Earnings

Interest and other items of a similar nature received from bank and investment accounts, interest on rate instalments, interest on rate arrears and interest on debtors.

Other Revenue / Income

Other revenue, which can not be classified under the above headings, includes dividends, discounts, rebates etc.

Employee Costs

All costs associate with the employment of person such as salaries, wages, allowances, benefits such as vehicle and housing, superannuation, employment expenses, removal expenses, relocation expenses, worker's compensation insurance, training costs, conferences, safety expenses, medical examinations, fringe benefit tax, etc.

Materials and Contracts

All expenditures on materials, supplies and contracts not classified under other headings. These include supply of goods and materials, legal expenses,

Utilities (Gas, Electricity, Water, etc.)

Expenditures made to the respective agencies for the provision of power, gas or water. Exclude expenditures incurred for the reinstatement of roadwork on behalf of these agencies.

Insurance

All insurance other than worker's compensation and health benefit insurance included as a cost of employment.

Loss on asset disposal

Loss on the disposal of fixed assets.

Depreciation on non-current assets

Depreciation expense raised on all classes of assets.

Interest expenses

Interest and other costs of finance paid, including costs of finance for loan debentures, overdraft accommodation and refinancing expenses.

Other expenditure

Statutory fees, taxes, provision for bad debts, member's fees or State taxes. Donations and subsidies made to community groups.

(r) Program Classifications (Function/Activity)

Shire operations as disclosed in these financial statements encompass the following service orientated activities/programs.

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 1: Significant Accounting Policies

GOVERNANCE

Objective:

To provide a decision making process for the efficient allocation of scarce resources.

Activities:

Includes the activities of members of council and the administrative support available to the council for the provision of governance of the district. Other costs

GENERAL PURPOSE FUNDING

Objective:

To collect revenue to allow for the provision of services.

Activities:

Rates, general purpose government grants and interest revenue.

LAW, ORDER, PUBLIC SAFETY

Objective:

To provide services to help ensure a safer and environmentally conscious community.

Activities:

Supervision and enforcement of various local laws relating to fire prevention, animal control and other aspects of public safety including emergency services.

HEALTH

Objective:

To provide an operational framework for environmental and community health.

Activities:

Inspection of food outlets and their control, provision of meat inspection services, noise control and waste disposal compliance.

EDUCATION AND WELFARE

Objective:

To provide services to disadvantaged persons, the elderly, children and youth.

Activities:

Maintenance of child minding centre, playgroup centre, senior citizen centre and aged care centre. Provision and maintenance of home and community care programs and youth services.

HOUSING

Objective:

To provide and maintain elderly residents housing.

Activities:

Provision and maintenance of elderly residents housing.

COMMUNITY AMENITIES

Objective:

To provide services required by the community.

Activities:

Rubbish collection services, operation of rubbish disposal sites, litter control, construction and maintenance of urban storm water drains, protection of the environment and administration of town planning schemes, cemetery and public conveniences.

RECREATION AND CULTURE

Objective:

To establish and effectively manage infrastructure and resource which will help the social well being of the community.

Activities:

Maintenance of public halls, civic centres, aquatic centre, beaches, recreation centres and various sporting facilities. Provision and maintenance of parks, gardens and playgrounds. Operation of library, museum and other cultural facilities.

TRANSPORT

Objective:

To provide safe, effective and efficient transport services to the community.

Activities:

Construction and maintenance of roads, streets, footpaths, depots, cycle ways, parking facilities and traffic control. Cleaning of streets and maintenance of street trees, street lighting etc.

Note 1: Significant Accounting Policies

ECONOMIC SERVICES

Objective:

To help promote the shire and its economic wellbeing.

Activities:

Tourism and area promotion including the maintenance and operation of a caravan park. Provision of rural services including weed control, vermin control and standpipes. Building Control.

OTHER PROPERTY AND SERVICES

Objective:

To monitor and control Shire overheads operating accounts.

Activities:

Private works operation, plant repair and operation costs and engineering operation costs.

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 2: Explanation of Material Variances

The material variance thresholds are adopted annually by Council as an indicator of whether the actual expenditure or revenue varies from the year to date budget materially.
The material variance adopted by Council for the 2020/21 Year is $30,000 or 10% whichever is the greater.

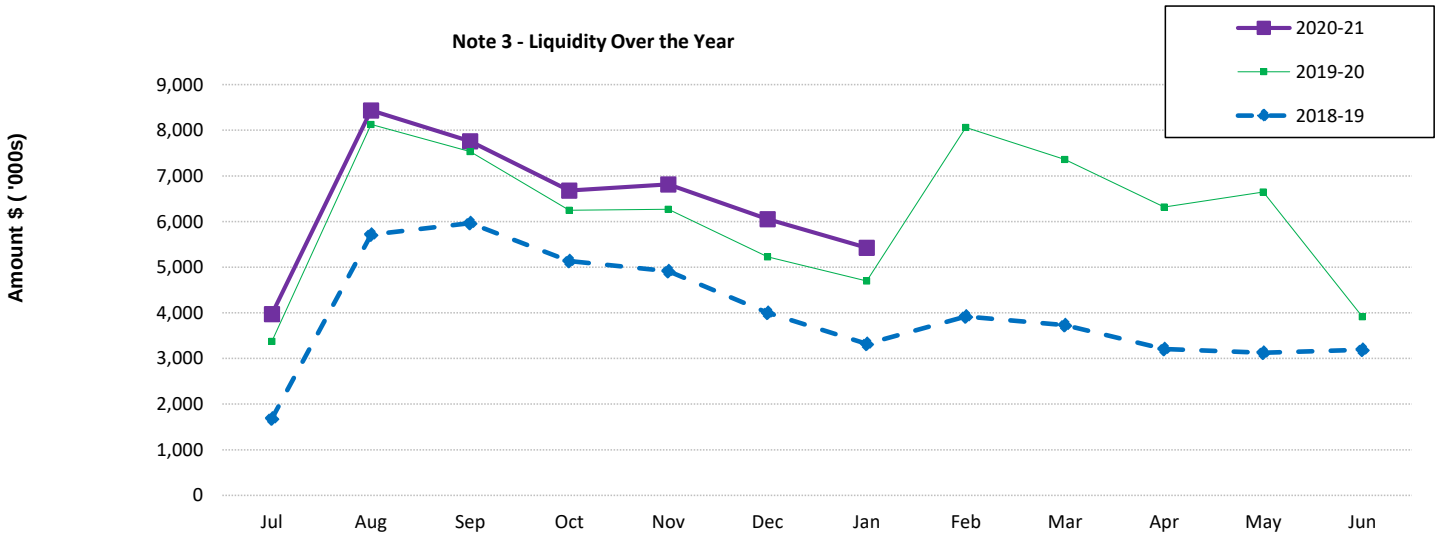
Reporting Program	Var. $	Var. %	Var.	Timing/ Permanent	Explanation of Variance
Operating Revenues	$	%			
Recreation and Culture	55,084	102%	▲	Permanent	$42,235 Court resurfacing contribution and New turf donations toMoorine Rock Tennis Club
Economic Services	(198,703)	(23%)	▼	Permanent	Lower than expected Standpipe Water Sales
Other Property and Services	76,200	94%	▲	Permanent	$47,291 LGIS Insurance Surplus Distribution Offset
Operating Expense					
Governance	(34,838)	(13%)	▼	Timing	Schedule wide expenditure unders
General Purpose Funding	(41,441)	(25%)	▼	Timing	Schedule wide expenditure unders
Law, Order and Public Safety	(106,142)	(36%)	▼	Permanent	Lower than expected Depreciation due to review of Asset Useful Lives
Health	(41,903)	(24%)	▼	Timing	Expenditure delayed
Education and Welfare	(126,025)	(39%)	▼	Permanent	Lower than expected Depreciation due to review of Asset Useful Lives
Housing	(129,854)	(57%)	▼	Permanent	Lower than expected Depreciation due to review of Asset Useful Lives
Community Amenties	(207,932)	(30%)	▼	Permanent	Lower than expected Depreciation due to review of Asset Useful Lives
Recreation and Culture	(279,409)	(25%)	▼	Permanent	Lower than expected Depreciation due to review of Asset Useful Lives
Transport	(1,231,280)	(33%)	▼	Permanent	Lower than expected Depreciation due to review of Asset Useful Lives
Economic Services	(359,103)	(36%)	▼	Permanent	Lower than expected Depreciation due to review of Asset Useful Lives
Other Property and Services	(205,296)	(75%)	▼	Permanent	Lower than expected Depreciation due to review of Asset Useful Lives
Capital Revenues					
Grants, Subsidies and Contributions	(1,045,751)	(37%)	▼	Timing	Sealing works just completed, payments to be made in February 2021
Proceeds from Disposal of Assets	(141,773)	(68%)	▼	Timing	Plant replacement program currently at tender or to be tendered
Capital Expenses					
Land and Buildings	1,383,154	96%	▲	Timing	Swimming Pool construction completed.
Infrastructure - Other	1,621,703	90%	▲	Timing	Swimming Pool construction completed.
Plant and Equipment	188,065	147%	▲	Timing	Budgeted less than actual spend on purchasing the plant
Financing					
Loan Principal	0			Timing	A loan for the Swimming Pool was approved in September 2020

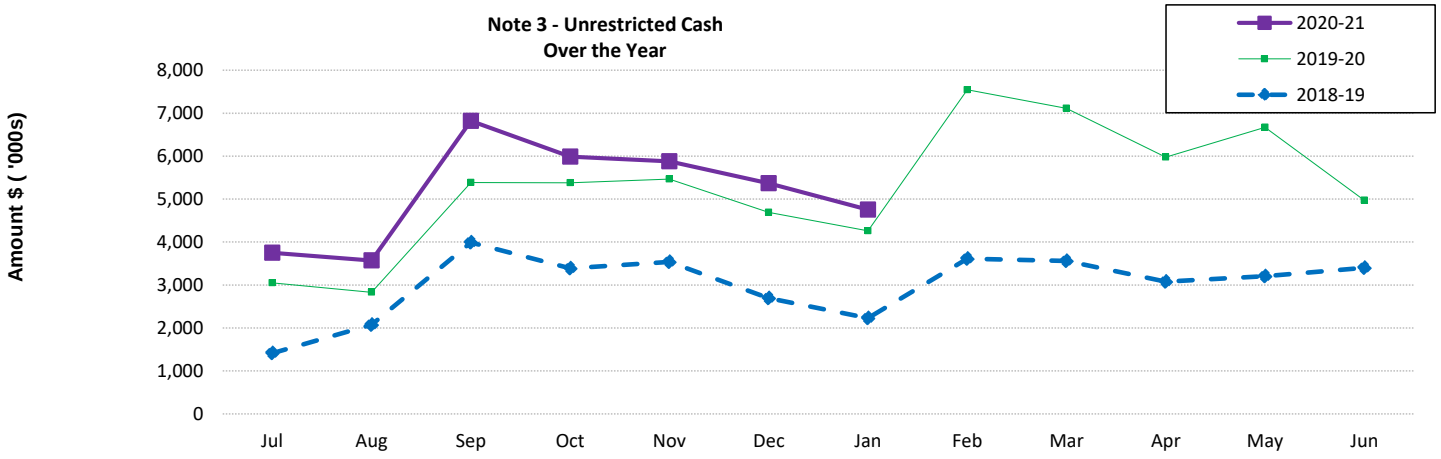
SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 3: Net Current Funding Position

Positive=Surplus (Negative=Deficit)

	Note	Last Years Closing 30 Jun 2020	This Time Last Year 31 Jan 2020	Current 31 Jan 2021
		$	$	$
Current Assets				
Cash Unrestricted	4	4,974,915	3,400,902	4,751,981
Cash Restricted	4	4,536,844	6,581,762	4,557,353
Receivables - Rates	6	589,115	489,049	930,978
Receivables - Other	6	90,219	62,213	251,152
Interest/ATO Receivable/Trust		213,737	53,653	44,929
Loans Receivable-Clubs/Institutions		0	6,000	0
Inventories		27,554	29,909	23,882
		10,432,385	10,623,487	10,560,275
Less: Current Liabilities				
Payables		(1,434,941)	(312,267)	(85,898)
Provisions		(562,476)	(246,963)	(266,962)
		(1,997,417)	(559,230)	(352,861)
Less: Cash Reserves	7	(4,536,844)	(6,581,762)	(4,557,352)
Add back Leave Reserve		294,167	290,294	295,514
Net Current Funding Position		**4,186,290**	**3,772,790**	**5,945,576**





SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 4: Cash and Investments

	Unrestricted	Restricted	Trust	Total Amount	Institution	Interest Rate	Maturity Date
	$	$	$	$			
(a) **Cash Deposits**							
Muni Funds - Bank Working Acc	30,795			30,795	Westpac	0.00%	At Call
Muni Funds - Bank Investment Acc	1,026,604			1,026,604	Westpac	0.01%	At Call
Trust Fund Bank			257,821	257,821	Westpac	0.00%	At Call
Cash On Hand	1,350			1,350			
(b) **Term Deposits**							
Muni Funds - Notice Saver (31 Days)	3,693,232			3,693,232	Westpac	0.25%	31 Days from Call
Reserve Funds - Notice Saver (90 Days)		4,557,353		4,557,353	Westpac	0.35%	90 Days from Call
Total	**4,751,981**	**4,557,353**	**257,821**	**9,567,154**			

Comments/Notes - Investments

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 5: Budget Amendments

Amendments to original budget since budget adoption. Surplus/(Deficit)

GL Code	Description	Council Resolution	Classification	Non Cash Adjustment	Increase in Available Cash	Decrease in Available Cash	Amended Budget Running Balance
				$	$	$	$
	Budget Adoption						**0**
	Nil						
	Changes Due to Timing						**0**
	Nil						
				0	**0**	**0**	**0**

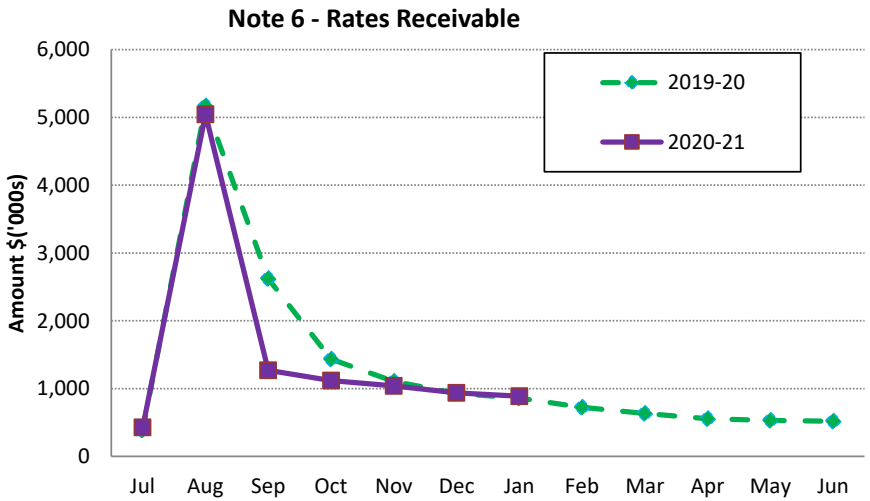
SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

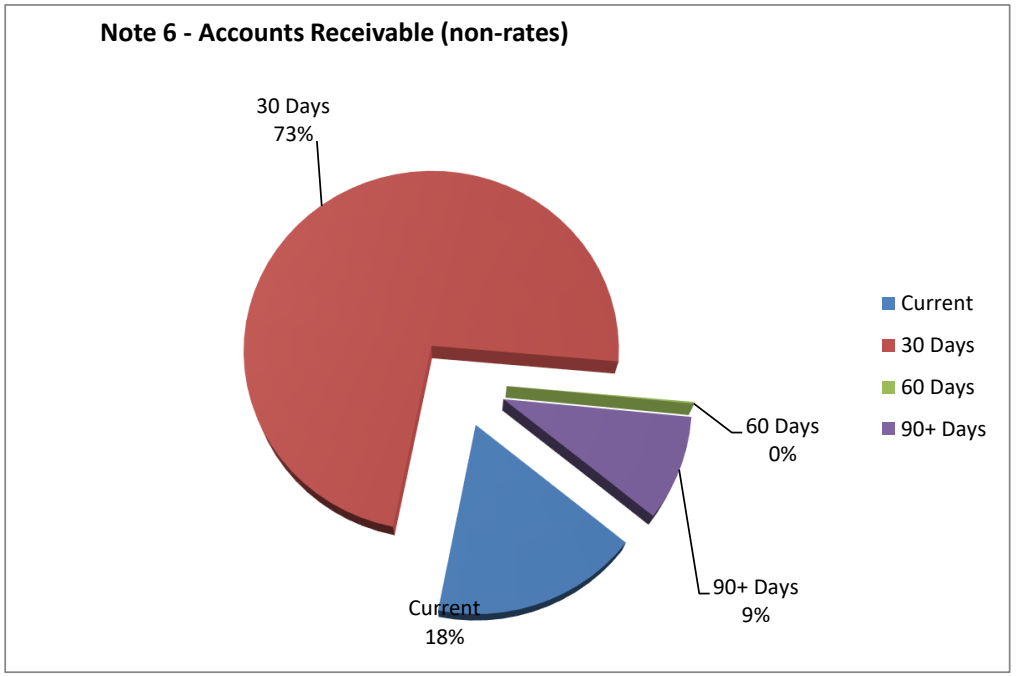
Note 6: Receivables

Receivables - Rates Receivable	31 Jan 2021	30 June 2020
	$	$
Opening Arrears Previous Years	596,721	489,049
Levied this year	4,048,249	3,842,364
Less Collections to date	(3,677,859)	(3,734,693)
Equals Current Outstanding	**967,111**	**596,721**
Net Rates Collectable	**967,111**	**596,721**
% Collected	79.18%	86.22%

Receivables - General	Current	30 Days	60 Days	90+ Days	Total
	$	$	$	$	$
Receivables - General	43,439	184,001	408	23,304	251,152
Balance per Trial Balance					
Sundry Debtors					251,152
Receivables - Other					0
Total Receivables General Outstanding					**251,152**

Amounts shown above include GST (where applicable)





Comments/Notes - Receivables General

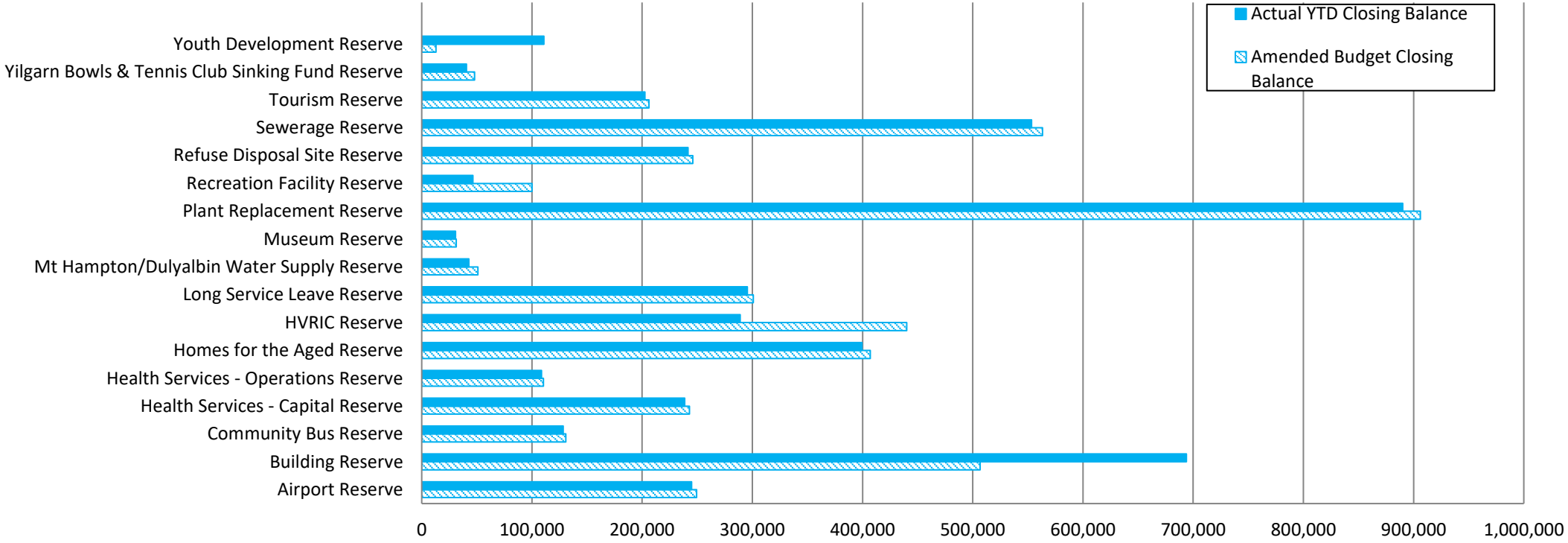
SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 7: Cash Backed Reserve

Name	Opening Balance	Amended Budget Interest Earned	Actual Interest Earned	Amended Budget Transfers In (+)	Actual Transfers In (+)	Amended Budget Transfers Out (-)	Actual Transfers Out (-)	Amended Budget Closing Balance	Actual YTD Closing Balance
	$	$	$	$	$	$	$	$	$
Airport Reserve	243,777	5,569	1,116	0	0	0	0	249,346	244,893
Building Reserve	690,794	15,780	3,163	200,000	0	(400,000)	0	506,574	693,957
Community Bus Reserve	127,798	2,919	585	0	0	0	0	130,717	128,383
Health Services - Capital Reserve	237,541	5,426	1,088	0	0	0	0	242,967	238,628
Health Services - Operations Reserve	107,921	2,465	697	0	0	0	0	110,386	108,619
Homes for the Aged Reserve	397,909	9,089	1,618	0	0	0	0	406,998	399,527
HVRIC Reserve	287,984	0	1,057	152,104	0	0	0	440,088	289,041
Long Service Leave Reserve	294,167	6,720	1,347	0	0	0	0	300,887	295,514
Mt Hampton/Dulyalbin Water Supply Reserve	42,483	8,470	194	0	0	0	0	50,953	42,677
Museum Reserve	30,554	755	140	0	0	0	0	31,309	30,694
Plant Replacement Reserve	885,969	20,238	4,056	0	0	0	0	906,207	890,025
Recreation Facility Reserve	46,205	0	212	100,000	0	(46,205)	0	100,000	46,417
Refuse Disposal Site Reserve	240,510	5,494	1,101	0	0	0	0	246,004	241,611
Sewerage Reserve	550,806	12,582	2,522	0	0	0	0	563,388	553,328
Tourism Reserve	201,669	4,607	923	0	0	0	0	206,276	202,592
Yilgarn Bowls & Tennis Club Sinking Fund Reserve	40,332	7,587	185	0	0	0	0	47,919	40,517
Youth Development Reserve	110,425	2,522	505	0	0	(100,000)	0	12,947	110,930
	4,536,844	**110,223**	**20,508**	**452,104**	**0**	**(546,205)**	**0**	**4,552,966**	**4,557,352**

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 7 - Year To Date Reserve Balance to End of Year Estimate



SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 8: Disposal of Assets

Asset Number	Asset Description	YTD Actual Net Book Value	YTD Actual Proceeds	YTD Actual Profit	YTD Actual (Loss)	Amended Budget Net Book Value	Amended Budget Proceeds	Amended Budget Profit	Amended Budget (Loss)
		$	$	$	$	$	$	$	$
	Plant and Equipment								
1865	TRAILER - SIDE TIPPER - YL7059	0	0			54,040	35,000		(19,040)
1866	TRAILER - SIDE TIPPER - YL7016	0	0			54,040	35,000		(19,040)
1875	TRACTOR - JOHN DEERE - YL5410	0	0			19,613	25,000	5,387	
1998	TRUCK- 2015 MITSUBISHI FUSO CANTER 4X2 -YL4949	52,444	25,455		(26,989)	41,235	25,000		(16,235)
1999	TRUCK- 2015 MITSUBISHI FUSO CANTER 815 -YL046	0	0			37,405	25,000		(12,405)
2000	UTE - 2015 ISUZU NPS 65 -155 - YL311	56,573	40,773		(15,800)	45,290	25,000		(20,290)
2017	2017 - TOYOTA LANDCRUISER SINGLE CAB LC70 WORMATE -YL645	0	0			41,649	38,000		(3,649)
2036	2019 HOLDEN COLORADO LTZ -CREW CAB 4WD UTILITY -YL252	0	0			34,622	30,000		(4,622)
2038	2019 TOYOTA PRADO DSL WGN A/T VX -YL1	0	0			51,598	40,000		(11,598)
2047	2019 TOYOTA KLUGER AWD V6 WAGON A/T GXL - SILVER(YL50)	0	0			43,097	30,000		(13,097)
		109,017	**66,228**	**0**	**(42,790)**	**422,589**	**308,000**	**5,387**	**(119,976)**

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 9: Rating Information		Number		YTD Acutal				Amended Budget			
	Rate in	of Properties	Rateable Value	Rate Revenue	Interim Rates	Back Rates	Total Revenue	Rate Revenue	Interim Rate	Back Rate	Total Revenue
RATE TYPE	$		$	$	$	$	$	$	$	$	$
Differential General Rate											
Non - Rateable	0.0000	123	337,864	0	0	0	0	0	0	0	0
GRV - Residential/Industrial	11.2332	507	3,405,586	390,314	0	0	390,314	382,556	0	0	382,556
GRV - Commercial	7.9074	41	981,205	77,588	0	0	77,588	77,588	0	0	77,588
GRV - Minesite	15.8148	3	529,565	83,750	0	0	83,750	83,750	0	0	83,750
GRV - Single Persons Quarters	15.8148	12	774,619	122,504	6,179	0	128,683	122,505	0	0	122,505
UV - Rural	1.7575	402	103,926,617	1,826,511	149	0	1,826,660	1,830,465	0	0	1,830,465
UV - Mining Tenement	17.3923	554	8,542,413	1,490,102	11,584	0	1,501,686	1,490,102	0	0	1,490,102
Sub-Totals		**1,642**	**118,497,869**	**3,990,769**	**17,912**	**0**	**4,008,681**	**3,986,966**	**0**	**0**	**3,986,966**
	Minimum										
Minimum Payment	**$**										
GRV - Residential/Industrial	500.00	117	153,808	58,500	(1,000)	0	57,500	58,500	0	0	58,500
GRV - Commercial	400.00	7	20,061	2,800	0	0	2,800	2,800	0	0	2,800
GRV - Minesite	400.00	3	2,408	1,200	0	0	1,200	1,200	0	0	1,200
GRV - Single Persons Quarters	400.00	3	1,075	1,200	0	0	1,200	1,200	0	0	1,200
UV - Rural	400.00	41	289,145	16,400	(400)	0	16,000	16,000	0	0	16,000
UV - Mining Tenement	400.00	224	275,026	91,600	(400)	0	91,200	91,600	0	0	91,600
Sub-Totals		**395**	**741,523**	**171,700**	**(1,800)**	**0**	**169,900**	**171,300**	**0**	**0**	**171,300**
		2,037	**119,239,392**	**4,162,469**	**16,112**	**0**	**4,178,581**	**4,158,266**	**0**	**0**	**4,158,266**
Concession							(163,580)				(140,000)
Amount from General Rates							**4,015,001**				**4,018,266**
Ex-Gratia Rates							33,248				33,104
							4,048,249				**4,051,370**

Comments - Rating Information

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 10: Information on Borrowings

(a) Debenture Repayments

Particulars	Actual		Amended Budget	
	Principal	Interest	Principal	Interest
	$	$	$	$
Recreation and Culture				
Loan 98 - Yilgarn Aquatic Centre	2,167	-	92,428	16,902
	2,167	0	92,428	16,902

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 11: Grants and Contributions

	Grant Provider	Type	Opening Balance (a)	Amended Budget Operating	Amended Budget Capital	YTD Budget	Annual Budget (d)	Expected (d)+(e)	YTD Actual Revenue	YTD Actual (Expended) (c)	Unspent Grant (a)+(b)+(c)
				$	$	$			$	$	$
General Purpose Funding											
Grants Commission - General	WALGGC	Operating	0	778,999	0	389,498	778,999	778,999	463,268	(463,268)	0
Grants Commission - Roads	WALGGC	Operating	0	776,331	0	388,164	776,331	776,331	325,225	(325,225)	0
Local Roads & Community Infrastructure	Fed. Dept. Infra	Non-operating	0	0	943,500	943,500	943,500	943,500	471,761	(608,270)	(136,509)
Law, Order and Public Safety											
FESA Grant - Operating Bush Fire Brigade	Dept. of Fire & Emergency Serv.	Operating - Tied	0	64,199	0	37,443	64,199	64,199	32,100	(32,100)	0
FESA Grant - Capital Bush Fire Brigade	Dept. of Fire & Emergency Serv.	Non-operating	0	0	42,600	42,600	42,600	42,600	42,663	(42,663)	0
Education & Welfare											
DRD Grant - Community Resource Centre Operations	Regional Development	Operating - Tied	0	102,252	0	76,689	102,252	102,252	77,970	(77,970)	0
Centrelink Commissions	Centrelink	Operating	0	5,219	0	3,038	5,219	5,219	5,741	(5,741)	0
Grant - Seniors Week	Council on the Aged	Operating - Tied	0	800	0	462	800	800	0	0	0
Community Amenities											
Grants - Various Community Development Programs	Various	Operating	0	1,000	0	581	1,000	1,000	1,000	0	0
Recreation and Culture											
Sport & Recreation Grant - Swimming Pool	Dept. Sport & recreation	Non-operating	0	0	175,000	175,000	175,000	175,000	175,000	(175,000)	0
Transport											
Main Roads - Direct Grant	Main Roads WA	Non-operating	0	0	352,420	352,420	352,420	352,420	352,420	(352,420)	0
Heavy Vehicle Road Improvement Contributions	Various	Non-operating	0	0	145,000	84,581	145,000	145,000	79,447	0	79,447
Roads To Recovery Grant - Cap	Roads to Recovery	Non-operating	0	0	906,164	453,082	906,164	906,164	134,199	(225,731)	0
RRG Grants - Capital Projects	Regional Road Group	Non-operating	0	0	780,308	780,308	780,308	780,308	624,246	(1,092,369)	0
Skeleton Weed LAG Program	State Skeleton Weed Committee	Operating - Tied	(46,164)	326,567	0	326,567	326,567	326,567	316,000	(129,420)	140,416
TOTALS			**(46,164)**	**2,055,367**	**3,344,992**	**4,053,933**	**5,400,359**	**5,400,359**	**3,101,040**	**(3,530,178)**	**83,354**
SUMMARY											
Operating - Tied	Tied - Operating Grants, Subsidies and Contributions		(46,164)	493,818	0	441,161	493,818	493,818	426,070	(239,490)	140,416
Non-operating	Non-operating Grants, Subsidies and Contributions		0	0	3,344,992	2,831,491	3,344,992	3,344,992	1,879,736	(2,496,454)	(57,062)
TOTALS			**(46,164)**	**2,055,367**	**3,344,992**	**4,053,933**	**5,400,359**	**5,400,359**	**3,101,040**	**(3,530,178)**	**83,354**

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 12: Trust Fund

Funds held at balance date over which the Shire has no control and which are not included in this statement are as follows:

Description	Opening Balance 01 Jul 2020	Amount Received	Amount Paid	Closing Balance 31 Jan 2021
	$	$	$	$
Police Licensing	5,757	806,052	(806,052)	**5,757**
Builders Levy	6,597	22,743	(3,264)	**26,076**
Transwa Bookings	2,979	14,262	(13,819)	**3,422**
Staff Personal Dedns	42,307	57,909	(68,605)	**31,611**
Housing Tenancy Bonds	11,620	2,980	(6,140)	**8,460**
Security Key System - Key Bonds	50	1,780	0	**1,830**
Skeleton Weed	53,887	0	(53,887)	**0**
Clubs & Groups	789	3,860	(4,430)	**219**
Third Party Contributions	6,338	250	(250)	**6,338**
Rates Overpaid	17,655	15,414	(18,108)	**14,961**
Retention Monies	0	304,710	(151,676)	**153,034**
	316,407	**1,241,753**	**(1,305,337)**	**252,823**

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 13: Capital Acquisitions

Assets	Account	YTD Actual New/Upgrade	YTD Actual Renewal	YTD Actual Total YTD	Amended Budget Annual Budget	Amended Budget YTD Budget	Amended Budget YTD Variance	Strategic Reference / Comment
		$	$	$	$	$	$	
Level of completion indicator, please see table at the end of this note for further detail.								
Land & Buildings								
Education & Welfare								
Homes for the Aged Capital Works - LRCI Grant Courtyard Improvements	J08401	(121,655)	0	(121,655)	(169,500)	(169,500)	47,845	
Homes for the Aged - Units 6 Capital Works	J08403	(2,398)	0	(2,398)	(49,498)	(28,861)	26,463	
Homes for the Aged - Units 7 Capital Works	J08404	(48,270)	0	(48,270)	(49,498)	(28,861)	(19,409)	
Education & Welfare Total		**(172,323)**	**0**	**(172,323)**	**(268,496)**	**(227,222)**	**54,899**	
Housing								
2 Libra Place - Electrical Rewire - Full House	J09200	0	0	0	(8,000)	(4,662)	4,662	
120 Antares Street - Reroof premises	J09400	(23,072)	0	(23,072)	(26,227)	(26,227)	3,155	
Housing Total		**(23,072)**	**0**	**(23,072)**	**(34,227)**	**(30,889)**	**7,817**	
Community Amenities								
Sewarage Southern Cross								
Southern Cross Sewarage Scheme - Containerised filtration & Treatment system inc insta	E10351	(108,403)	0	(108,403)	(123,750)	(123,750)	15,347	
Community Amenities Total		**(108,403)**	**0**	(108,403)	**(123,750)**	**(123,750)**	**15,347**	
Recreation And Culture								
Swimming Areas and Beaches								
Swimming Pool - Land & Building Capital - Facility Design & Project Management	E11250	(2,434,904)	0	(2,434,904)	(974,596)	(974,595)	(1,460,309)	
Other Recreation & Sport								
SX Sports Complex Building - Replace Basketball Court Flooring, Update Ladies toilet	SPRT10	0	(60,147)	(60,147)	(110,409)	(64,386)	4,239	
Heritage								
Yilgarn History Museum - Replace Boundry Fences	J11502	0	(273)	(273)	(24,848)	(14,483)	14,210	
Recreation And Culture Total		**(2,434,904)**	**(60,420)**	(2,495,324)	**(1,109,853)**	**(1,053,464)**	**(1,441,860)**	
Transport								
Depot - Capital Works - Upgrade Nursery Shed, Old Depot Office Painting, new Signage	J14602	0	(8,667)	(8,667)	(36,832)	0	(8,667)	
Transport Total		**0**	**(8,667)**	(8,667)	**(36,832)**	**0**	**(8,667)**	

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 13: Capital Acquisitions

Assets	Account	YTD Actual New/Upgrade	YTD Actual Renewal	YTD Actual Total YTD	Amended Budget Annual Budget	Amended Budget YTD Budget	Amended Budget YTD Variance	Strategic Reference / Comment
		$	$	$	$	$	$	
Economic Services								
Caravan Park Improvements -New Storage/Laundry Building with Carport	J13203	(612)	0	(612)	(65,539)	0	(612)	
Economic Services Total		**(612)**	**0**	**(612)**	**(65,539)**	**0**	**(612)**	
Other Property & Services								
Public - Adminstration								
Administration Centre - Land & Building - Replace Facades & Exterior Paint, external Wo	J14601	0	(1,411)	(1,411)	(37,423)	0	(1,411)	
Public - Adminstration Total	**Total**	**0**	**(1,411)**	**(1,411)**	**(37,423)**	**0**	**(1,411)**	
Infrastructure - Maintenance								
Administration Centre - Land & Building - Replace Facades & Exterior Paint	J14602	0	(8,667)	(8,667)	(36,832)	0	(8,667)	
Infrastructure - Maintenance Total	**Total**		**(8,667)**	**(8,667)**	**(36,832)**	**0**	**(8,667)**	
Land & Building Total		**(2,739,314)**	**(79,165)**	**(2,818,479)**	**(1,712,952)**	**(1,435,325)**	**(1,383,154)**	
Furniture & Office Equip.								
Other Community Amenities								
Cemetery -Plant & Equipment Capital	E10755	0	0	0	(8,500)	(4,956)	4,956	
Other Community Amenities Total		**0**	**0**	**0**	**(8,500)**	**(4,956)**	**4,956**	
Other Recreation & Sport								
Parks & Gradens -Plant & Equipment Capital-LCRI Grant upgrade Park BBQ	E11357	(23,390)	0	(23,390)	(24,000)	(24,000)	610	
Other Recreation & Sport Total		**(23,390)**	**0**	**(23,390)**	**(24,000)**	**(24,000)**	**610**	

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 13: Capital Acquisitions

Assets	Account	YTD Actual New/Upgrade	YTD Actual Renewal	YTD Actual Total YTD	Amended Budget Annual Budget	Amended Budget YTD Budget	Amended Budget YTD Variance	Strategic Reference / Comment
		$	$	$	$	$	$	
Other Property & Services								
Depot - Furniture & Equipmment	E12352	(4,817)	0	(4,817)	(15,000)	(8,750)	3,933	
Other Property & Services Total		**(4,817)**	**0**	**(4,817)**	**(15,000)**	**(8,750)**	**3,933**	
Furniture & Office Equip Total		**(28,207)**	**0**	**(28,207)**	**(47,500)**	**(37,706)**	**9,499**	
Plant , Equip. & Vehicles								
Recreation And Culture								
Swimming Pool -Plant & Equipment - LCRI Grant Swimming Pool Covers	E11252	(78,169)	0	(78,169)	(60,000)	(60,000)	(18,169)	
Recreation And Culture Total		**(78,169)**	**0**	**(78,169)**	**(60,000)**	**(60,000)**	**(18,169)**	
Transport								
YL 7059 - Trailer-Side Tipper - Replace Asset 1865	E12350	0	0	0	(120,000)	0	0	
YL 7016 - Trailer-Side Tipper - Replace Asset 1866	E12350	0	0	0	(120,000)	0	0	
YL 5410 - Tractor - John Deere - Replace Asset 1875	E12350	0	0	0	(71,500)	0	0	
YL4949 - Truck - 2015 Mitsubishi Fuso Canter 4x2- Replace Asset 1998	E12350	(85,547)	0	(85,547)	(92,500)	0	(85,547)	
YL046 - Truck - 2015 Mitsubishi Fuso Canter 815- Replace Asset 1999	E12350	0	0	0	(87,500)	0	0	
YL311 - UTE -2015 ISUZU NPS 65-155 - 4x4 Ute - Replace Asset 2000	E12350	(85,547)	0	(85,547)	(92,500)	0	(85,547)	
YL645 -Toyota LandCruiser CAB LC70- 4x4 Ute (Workmate)- Replace Asset 2017	E12350	0	0	0	(65,500)	0	0	
New Asset - Street Sweeper	E12350	0	0	0	(190,000)	0	0	
New Asset - Electronic Signage Trailer	E12350	(35,940)	0	(35,940)	(35,940)	(35,940)	0	
New Asset - Mulcer (Bobcat Attachment)	E12350	(30,803)	0	(30,803)	(32,000)	(32,000)	1,197	
Transport Total		**(237,836)**	**0**	**(237,836)**	**(907,440)**	**(67,940)**	**(169,896)**	
Other Property & Services								
YL 252 -Holden Colorado LTZ-CREW CAB 4WD UTILITY(EMRS) - Replace Asset 2036	E14656	0	0	0	(57,000)	0	0	
YL 1 - Toyota Prado- DSL WGN A/T VX(CEO) - Replace Asset 2038	E14656	0	0	0	(66,300)	0	0	
YL 50 - Toyota Kluger - AWD V6 Wagon A/T GXL - SILVER(EMCS) - Replace Asset 2047	E14656	0	0	0	(55,000)	0	0	
Other Property & Services Total		**0**	**0**	**0**	**(178,300)**	**0**	**0**	
Plant , Equip. & Vehicles Total		**(316,005)**	**0**	**(316,005)**	**(1,145,740)**	**(127,940)**	**(188,065)**	

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 13: Capital Acquisitions

Assets	Account	YTD Actual New/Upgrade	YTD Actual Renewal	YTD Actual Total YTD	Amended Budget Annual Budget	Amended Budget YTD Budget	Amended Budget YTD Variance	Strategic Reference / Comment
		$	$	$	$	$	$	
Infrastructure - Roads (Non Town)								
R2030 - M40 - 10 Mm Bitumen Reseal - Slk 3.0 - 9.0.0(20/21)	RRG14	(197,452)	0	(197,452)	(194,327)	(113,344)	(84,108)	
R2030 - Koolyanobbing Road - Construct to 7 mSeal - slk 11.0 - 14.0(20/21)	RRG15	(531,533)	0	(531,533)	(613,939)	(613,936)	82,403	
R2030 - Koolyanobbing Road -10 Mm Reseal - slk 8.0 - 11.0(20/21)	RRG16	(102,349)	0	(102,349)	(102,176)	(59,584)	(42,765)	
R2030 - Moorine South Rd 10Mm Bitumen Reseal - Slk 16.5 - 24.5(20/21)	RRG17	(228,203)	0	(228,203)	(270,398)	(157,724)	(70,479)	
R2R - Crampthorn Road - Construct to 7M Seal- slk 8.5 - 10.0(20/21)	R2R22	0	0	0	(328,017)	(82,006)	82,006	
R2R - Bodallin South Road - Construct To 7M Seal - slk 6.5 - 7.7(20/21)	R2R23	0	0	0	(293,252)	(120,093)	120,093	
R2R - Bodallin South Road - Bitumen Reseal - slk 4.9 - 6.4(20/21)	R2R24	(33,595)	0	(33,595)	(41,009)	(10,253)	(23,342)	
R2R - Southern Cross South Rd- Formation & Gravel Overlay slk 47.8 -51.3(20/21)	R2R25	(145,769)	0	(145,769)	(145,698)	(145,698)	(71)	
R2R - Gatley Road - Formation & Gravel Overlay - slk 2.5 -4.5(20/21)	R2R26	(31,516)	0	(31,516)	(98,188)	(49,095)	17,579	
RRU - Kent Road - Formation & Gravel -slk 18.3-20.3(20/21)	RRU12	0	0	0	(97,836)	0	0	
RRU - Nulla Nulla Sth Road - Formation & Gravel -slk 30.0-32.5(20/21)	RRU17	0	0	0	(102,245)	0	0	
RRU - Cockatoo Tank Road - Formation & Gravel Overlay - slk 7.0 -9.0(20/21)	RRU18	0	0	0	(108,086)	0	0	
RRU - Emu Fence Road - Formation & Gravel Overlay - slk 137.5 - 139.5(20/21)	RRU19	(94,894)	0	(94,894)	(102,030)	(102,030)	7,136	
RRU - Koolyanobbing Road Bitumen Reseal - Slk 31.0 - 33.0(19/20)	RRU20	(1,589)	0	(1,589)	(58,151)	0	(1,589)	
RRU - Brennand Road Formation & Gravel Overlay - Slk 13.5- 15.5(20/21)	RRU21	(81,003)	0	(81,003)	(99,382)	(99,381)	18,378	
LRCI - Three Boys Road Construct To 7M Seal - Slk 1.8 - 3.3(20/21)	RRU22	(7,566)	0	(7,566)	(227,341)	0	(7,566)	
LRCI- Moorine South Road -Sliplane - Moorine South & Bennett Roads(20/21)	RRU23	(95,434)	0	(95,434)	(95,488)	(95,485)	51	
Infrastructure - Roads (Non Town) Total		**(1,550,903)**	**0**	**(1,550,903)**	**(2,977,563)**	**(1,648,629)**	**97,726**	
Infrastructure - Roads (Non Town) Total		**(1,550,903)**	**0**	**(1,550,903)**	**(2,977,563)**	**(1,648,629)**	**97,726**	

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 13: Capital Acquisitions

Assets	Account	YTD Actual New/Upgrade	YTD Actual Renewal	YTD Actual Total YTD	Amended Budget Annual Budget	Amended Budget YTD Budget	Amended Budget YTD Variance	Strategic Reference / Comment
		$	$	$	$	$	$	
Infrastructure - Roads (Town)								
TRU - Achener Street - Bitumen Reseal, Antares - Sirius St (19/20 & 20/21)	TRU05	0	0	0	(61,738)	(36,001)	36,001	
TRU - Cnr Altair/Geh - Concrete Crossover Corner Parking areat (20/21)	TRU06	(9,323)	0	(9,323)	(8,326)	(4,851)	(4,472)	
TRU - Bituminise Depot Parking & Depot Entrance (20/21)	TRU07	(10,557)	0	(10,557)	(36,850)	(21,476)	10,919	
TRU - Pegasi Street - Drainage & Sea(20/21)	TRU08	(10,239)	0	(10,239)	(10,814)	(6,293)	(3,946)	
Infrastructure - Roads (Town) Total		**(30,119)**	**0**	**(30,119)**	**(117,728)**	**(68,621)**	**38,502**	
Infrastructure - Roads (Town) Total		**(30,119)**	**0**	**(30,119)**	**(117,728)**	**(68,621)**	**38,502**	
Infrastructure - Road Total		**(1,581,022)**	**0**	**(1,581,022)**	**(3,095,291)**	**(1,717,250)**	**136,228**	
Infrastructure - Footpaths								
Transport								
Concrete Footpath - Spica Street - Southern Cross	J12101	0	0	0	(49,364)	(28,777)	28,777	
LRCI Grant -Concrete Footpath - Beaton Rd -Antares ST To Cemetery Southern Cross	J12102	0	0	0	(146,900)	0	0	
Infrastructure - Footpaths Total		**0**	**0**	**0**	**(196,264)**	**(28,777)**	**28,777**	
Infrastructure - Footpaths Total		**0**	**0**	**0**	**(196,264)**	**(28,777)**	**28,777**	
Infrastructure - Refuse								
Community Amenities								
SX Refuse Disposal Site - Capital -Install security Cameras,Solar lighting	J10107	(12,167)	0	(12,167)	(24,500)	(14,287)	2,120	
Infrastructure - Refuse Total		**(12,167)**	**0**	**(12,167)**	**(24,500)**	**(14,287)**	**2,120**	
Infrastructure - Refuse Total		**(12,167)**	**0**	**(12,167)**	**(24,500)**	**(14,287)**	**2,120**	

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 13: Capital Acquisitions

Assets	Account	YTD Actual New/Upgrade	YTD Actual Renewal	YTD Actual Total YTD	Amended Budget Annual Budget	Amended Budget YTD Budget	Amended Budget YTD Variance	Strategic Reference / Comment
		$	$	$	$	$	$	
Infrastructure - Sewerage								
Community Amenities								
SX Sewerage Scheme - Capital - Access Chamber Upgrade	E10350	(9,253)	0	(9,253)	(17,500)	(10,206)	953	
ML SewerageScheme - Capital - Access Chamber Upgrade	E10450	(8,980)	0	(8,980)	(10,500)	(6,125)	(2,855)	
Infrastructure - Sewerage Total		**(18,233)**	**0**	**(18,233)**	**(28,000)**	**(16,331)**	**(1,902)**	
Infrastructure - Sewerage Total		**(18,233)**	**0**	**(18,233)**	**(28,000)**	**(16,331)**	**(1,902)**	
Infrastructure - Drainage								
Community Amenities								
Southern Cross Drainage - Infrastructure Capital	J10901	0	(12,086)	(12,086)	(14,172)	(8,246)	(3,840)	
Infrastructure - Drainage Total		**0**	**(12,086)**	**(12,086)**	**(14,172)**	**(8,246)**	**(3,840)**	
Infrastructure - Drainage Total		**0**	**(12,086)**	**(12,086)**	**(14,172)**	**(8,246)**	**(3,840)**	
Infrastructure - Parks & Ovals								
Community Amenities								
Rotary Park- Replace 3x Picnic settings/Seating & Install Water Fountain	J10711	0	0	0	(14,509)	(8,449)	8,449	
Recreation & Culture								
Toddler Playground Equipment - Constellation Park - Shade sails, W D Fountain	E11352	(34,606)	0	(34,606)	(103,000)	(103,000)	68,394	
Infrastructure - Parks & Ovals Total		**(34,606)**	**0**	**(34,606)**	**(117,509)**	**(111,449)**	**76,843**	
Infrastructure - Parks & Ovals Total		**(34,606)**	**0**	**(34,606)**	**(117,509)**	**(111,449)**	**76,843**	
Infrastructure - Other								
Swimming Areas and Beaches								
Swimming Pool - Infrastructure Capital -Contracted works to be completed	E11251	(3,336,408)	0	(3,336,408)	(1,507,506)	(1,507,506)	(1,828,902)	
Swimming Areas and Beaches Total		**(3,336,408)**	**0**	**(3,336,408)**	**(1,507,506)**	**(1,507,506)**	**(1,828,902)**	

SHIRE OF YILGARN
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
For the Period Ended 31 January 2021

Note 13: Capital Acquisitions

Assets	Account	YTD Actual New/Upgrade	YTD Actual Renewal	YTD Actual Total YTD	Amended Budget Annual Budget	Amended Budget YTD Budget	Amended Budget YTD Variance	Strategic Reference / Comment
		$	$	$	$	$	$	
Other Recreation & Sport								
Sx Youth Recreational Works -Infra Capital - LRCI Grant -Construction-Sx Skate Park	E11350	(4,800)	0	(4,800)	(220,000)	(110,001)	105,201	
Other Recreation & Sport Total		**(4,800)**	**0**	**(4,800)**	**(220,000)**	**(110,001)**	**105,201**	
Infrastructure - Other Total		**(3,341,208)**	**0**	**(3,341,208)**	**(1,727,506)**	**(1,617,507)**	**(1,723,701)**	
Capital Expenditure Total		**(8,070,762)**	**(91,251)**	**(8,162,013)**	**(8,109,434)**	**(5,114,818)**	**(3,047,195)**	

Level of Completion Indicators

- 0%
- 20%
- 40%
- 60%
- 80%
- 100%
- Over 100%

Percentage YTD Actual to Annual Budget

Expenditure over budget highlighted in red.

Attachment 9.2.3

Date: 05/02/2021
Time: 12:09:00PM

SHIRE OF YILGARN

USER: Wes Furney
PAGE: 1

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
40978	18/12/2020	AUSTRALIAN COMMUNICATIONS & MEDIA AUTH.	ACMA Broadcasting Licence 2020-2021	A		553.00
40979	18/12/2020	DEPARTMENT OF TRANSPORT	Fleet Licensing 2021	A		13,844.15
40980	18/12/2020	LGRCEU	Payroll deductions	A		41.00
40981	18/12/2020	SHIRE OF YILGARN	Payroll deductions	A		2,910.90
40982	18/12/2020	SHIRE OF YILGARN	CHEMIST LEASE - RETAINED IN TRUST (T13) NOVEMBER 2020	A		550.00
40983	18/12/2020	TELSTRA	PHONE - NOVEMBER 2020 - Mobiles	A		644.02
40984	15/01/2021	LGRCEU	Payroll deductions	A		20.50
40985	15/01/2021	SHIRE OF YILGARN	Payroll deductions	A		1,330.45
40986	15/01/2021	SHIRE OF YILGARN	CHEMIST LEASE - RETAINED IN TRUST (T13) DECEMBER 2020	A		550.00
40987	15/01/2021	TELSTRA	PHONE - DECEMBER 2020	A		1,724.86
40988	15/01/2021	LGRCEU	Payroll deductions	A		20.50
40989	15/01/2021	SHIRE OF YILGARN	Payroll deductions	A		1,330.45
40990	29/01/2021	LGRCEU	Payroll deductions	A		20.50
40991	29/01/2021	SHIRE OF YILGARN	Payroll deductions	A		1,330.45
40992	29/01/2021	TELSTRA	PHONE - JANUARY 2021 - SKELETON WEED MOBILE	A		122.20

SHIRE OF YILGARN

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount

REPORT TOTALS

Bank Code	Bank Name	TOTAL
A	MUNICIPAL FUND	**24,992.98**
TOTAL		**24,992.98**

SHIRE OF YILGARN

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
EFT10836	18/12/2020	ABCO PRODUCTS	Cleaning Consumables	A		2,248.49
EFT10837	18/12/2020	AG IMPLEMENTS MERREDIN PTY LTD	Depot Parts	A		39.23
EFT10838	18/12/2020	WA Distributors Pty Ltd	Cleaning Consumables	A		874.55
EFT10839	18/12/2020	EUROFINS ARL PTY LTD	Sewerage Sampling	A		55.00
EFT10840	18/12/2020	AH & PA OETIKER	Bulk Gravel	A		5,500.00
EFT10841	18/12/2020	ASSET MANAGEMENT ENGINEERS PTY LTD	Travel	A		2,791.25
EFT10842	18/12/2020	AUSTRALIA POST	Postage Charges November 2020	A		519.67
EFT10843	18/12/2020	AVON WASTE	Rubbish Collection November 2020	A		13,159.96
EFT10844	18/12/2020	AV-SEC SECURITY SERVICES	Quarterly Alarm Monitoring	A		360.00
EFT10845	18/12/2020	BANNER EXCAVATIONS & ROCKBREAKING	Earthmoving Services	A		13,365.00
EFT10846	18/12/2020	BETTA ROADS PTY LTD	Earthmoving Services	A		14,256.00
EFT10847	18/12/2020	BITUTEK PTY LTD	Road products and services	A		387,667.17
EFT10848	18/12/2020	R DELLA BOSCA FAMILY TRUST	Grader Hire	A		10,360.35
EFT10849	18/12/2020	STAT ENTERPRISES PTY LTD TRADING AS BP ROADHOUSE SOUTHERN CROSS	Senior's Voucher	A		50.00
EFT10850	18/12/2020	BULLIVANTS PTY LTD	Biannual Equipment Check	A		429.00
EFT10851	18/12/2020	DUNNINGS ROADHOUSE SOUTHERN CROSS	Senior's Voucher	A		200.00
EFT10852	18/12/2020	CAMERON WATSON	Reimbursement	A		90.00

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
EFT10853	18/12/2020	C & F BUILDING APPROVALS	CDC - 90 Spica Street	A		165.00
EFT10854	18/12/2020	AUST. GOVERNMENT CHILD SUPPORT AGENCY	Child Support Payment	A		4,654.65
EFT10855	18/12/2020	AUST. GOVERNMENT CHILD SUPPORT AGENCY	Payroll deductions	A		486.78
EFT10856	18/12/2020	J & S CIABARRI	Painting Services	A		9,830.00
EFT10857	18/12/2020	AUSTRALIAN TAXATION OFFICE	BAS November 2020	A		39,565.00
EFT10858	18/12/2020	COOPER & OXLEY GROUP PTY LTD	Invoice Overpayment	A		433.18
EFT10859	18/12/2020	DAVES TREE SERVICE	Landscaping Services	A		22,352.00
EFT10860	18/12/2020	DEPARTMENT OF ENVIRONMENT REGULATION	Annual Landfill Fees	A		1,218.00
EFT10861	18/12/2020	DONOVAN PAYNE ARCHITECTS	Pool Services	A		6,446.00
EFT10862	18/12/2020	DUN DIRECT PTY LTD	Bulk Diesel	A		21,042.76
EFT10863	18/12/2020	GREAT EASTERN FREIGHTLINES	Roadtrain Hire	A		5,986.65
EFT10864	18/12/2020	IAN DEREK CHRISTIE	Building Services	A		3,254.35
EFT10865	18/12/2020	TOLL IPEC PTY LTD	Freight Charges	A		1,013.61
EFT10866	18/12/2020	JB HIFI SOLUTIONS	UPS Devices	A		7,773.00
EFT10867	18/12/2020	WESFARMERS KLEENHEAT GAS PTY LTD	Bulk Gas	A		1,079.80

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
EFT10868	18/12/2020	LANDGATE	Mining Tenements	A		229.20
EFT10869	18/12/2020	LEONIE COUTIS HAIRDRESSER	Senior's Vouchers	A		400.00
EFT10870	18/12/2020	LGIS RISK MANAGEMENT	Insurance	A		6,107.98
EFT10871	18/12/2020	LOCAL GOVERNMENT PROFESSIONALS AUSTRALIA WA	Annual Membership	A		761.00
EFT10872	18/12/2020	LOCK, STOCK & FARRELL LOCKSMITH PTY LTD	Keys supplied	A		273.20
EFT10873	18/12/2020	MARSH PTY LTD	Leadership Training	A		2,596.00
EFT10874	18/12/2020	METAL ARTWORK CREATIONS	Council Plaque	A		22.88
EFT10875	18/12/2020	MISMATCH WORKSHOP	Landfill Attendant	A		3,475.00
EFT10876	18/12/2020	MOMAR AUSTRALIA PTY LTD	Cleaning Consumables	A		2,527.81
EFT10877	18/12/2020	OFFICE NATIONAL	Office Equipment	A		544.20
EFT10878	18/12/2020	IXOM OPERATIONS PTY LTD	Chlorine Gas	A		2,425.94
EFT10879	18/12/2020	PARK BODY BUILDERS	Vehicle Parts	A		1,844.92
EFT10880	18/12/2020	PERFECT COMPUTER SOLUTIONS PTY LTD	IT Services	A		120.00
EFT10881	18/12/2020	RAILWAY MOTEL KALGOORLIE	Training Accommodation	A		194.50
EFT10882	18/12/2020	ROBERT JAMES BOSENBERG	Reimbursement	A		270.00
EFT10883	18/12/2020	RENDEZVOUS HOTEL PERTH SCARBOROUGH	DOT Licensing Training Accommodation	A		1,050.50

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
EFT10884	18/12/2020	R MUNNS ENGINEERING CONSULTING SERVICES	Consulting Fees	A		750.20
EFT10885	18/12/2020	ROBIN STEVENS	Reimbursement	A		40.50
EFT10886	18/12/2020	ROYAL LIFE SAVING SOCIETY	Pool Management Plan	A		7,984.00
EFT10887	18/12/2020	SHAC ELECTRICAL SERVICES	Mt Hampton Hall Maintenance	A		16,197.00
EFT10888	18/12/2020	Sheqsy PTY LTD	GPS Package	A		197.84
EFT10889	18/12/2020	THE TRUSTEE FOR BELMONT UNIT TRUST T/AS DAIMLER TRUCKS PERTH	Vehicle Parts	A		2,093.75
EFT10890	18/12/2020	YILGARN SHIRE SOCIAL CLUB	Payroll deductions	A		222.00
EFT10891	18/12/2020	FOODWORKS - SRI DEVESH PTY LTD	Admin Refreshments	A		782.90
EFT10892	18/12/2020	SOUTH WEST FIRE	Fire Safety	A		636.90
EFT10893	18/12/2020	SOUTHERN CROSS HARDWARE AND NEWS	Hardware Supplies	A		120.97
EFT10894	18/12/2020	SOUTHERN CROSS MOTOR MART	Vehicle Supplies	A		309.90
EFT10895	18/12/2020	WHEATBELT HOTELS PTY LTD	Museum Volunteer Dinner	A		540.00
EFT10896	18/12/2020	VIBRA INDUSTRIAL FILTRATION AUSTRALIA	Vehicle Supplies	A		159.06
EFT10897	18/12/2020	WATER CORPORATION.	Water Payments	A		89,636.74
EFT10898	18/12/2020	WESTRAC EQUIPMENT PTY LTD	Vehicle Parts	A		624.69
EFT10899	18/12/2020	TELSTRA	Whispir November 2020	A		468.07

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
EFT10900	18/12/2020	THE WORKWEAR GROUP PTY LTD	Staff Uniform Allowance	A		364.00
EFT10901	18/12/2020	YILGARN PLUMBING AND GAS	Standpipe Maintenance	A		13,122.48
EFT10902	15/01/2021	WA Distributors Pty Ltd	Cleaning Consumables	A		175.92
EFT10903	15/01/2021	AMPAC DEBT RECOVERY (WA) PTY LTD	Debt Recovery	A		1,935.00
EFT10904	15/01/2021	AUSTRALIA DAY COUNCIL OF SA INC	Celebration Supplies	A		1,095.00
EFT10905	15/01/2021	AUSTRALIA POST	Postage Charges December 2020	A		438.56
EFT10906	15/01/2021	AVON WASTE	Monthly Rubbish Collection	A		13,196.92
EFT10907	15/01/2021	BANNER EXCAVATIONS & ROCKBREAKING	Earthmoving Services	A		24,304.50
EFT10908	15/01/2021	BERNIE'S MOBILE MECHANICAL SERVICE	Vehicle Parts	A		3,785.35
EFT10909	15/01/2021	BOC GASES	Gas Container Service	A		49.93
EFT10910	15/01/2021	R DELLA BOSCA FAMILY TRUST	Grader Hire	A		3,719.10
EFT10911	15/01/2021	BULLIVANTS PTY LTD	Equipment Testing	A		677.60
EFT10912	15/01/2021	BUNNINGS GROUP LTD	HFA Supplies	A		4,286.19
EFT10913	15/01/2021	CAMERON WATSON	Reimbursement	A		90.00
EFT10914	15/01/2021	AUST. GOVERNMENT CHILD SUPPORT AGENCY	Child Support Payments	A		1,670.90
EFT10915	15/01/2021	AUST. GOVERNMENT CHILD SUPPORT AGENCY	Payroll deductions	A		710.74
EFT10916	15/01/2021	BRYAN CLOSE	2020/2021 Deputy President's Allowance 2nd Payment & Council Sitting Fees	A		2,500.00

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
EFT10917	15/01/2021	AUSTRALIAN TAXATION OFFICE	BAS December 2020	A		20,121.00
EFT10918	15/01/2021	COPIER SUPPORT	Photocopier Usage	A		1,015.39
EFT10919	15/01/2021	COURIER AUSTRALIA	Freight Charges	A		121.06
EFT10920	15/01/2021	DEPARTMENT OF PLANNING, LANDS AND HERITAGE	Lease Payments	A		412.50
EFT10921	15/01/2021	E FIRE AND SAFETY	Fire Safety Audit	A		5,599.00
EFT10922	15/01/2021	GARY MICHAEL GUERINI	Council Sitting Fees December 2020	A		446.53
EFT10923	15/01/2021	MT HAMPTON PROGRESS ASSOCIATION	Council Refreshments	A		1,825.00
EFT10924	15/01/2021	HI-TEC ALARMS	Quarterly Security Charges	A		171.60
EFT10925	15/01/2021	INDUSTRIAL AUTOMATION GROUP P/L	IT Services	A		385.00
EFT10926	15/01/2021	JODIE MAREE COBDEN	Council Sitting Fees December 2020	A		600.00
EFT10927	15/01/2021	WESFARMERS KLEENHEAT GAS PTY LTD	Bulk Gas	A		977.83
EFT10928	15/01/2021	LANDGATE	Mining Tenements	A		287.00
EFT10929	15/01/2021	LIBERTY OIL RURAL PTY LTD	Bulk Diesel	A		21,594.00
EFT10930	15/01/2021	LINDA ROSE	Council Sitting Fees December 2020	A		558.42
EFT10931	15/01/2021	STATE LIBRARY OF WESTERN AUSTRALIA	Freight Charges	A		292.34
EFT10932	15/01/2021	MARKETFORCE	Advertising	A		331.23

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
EFT10933	15/01/2021	MICHELLE ROBINSON	Caravan Park Refund	A		105.00
EFT10934	15/01/2021	MISMATCH WORKSHOP	Landfill Attendant	A		4,250.00
EFT10935	15/01/2021	MOORE AUSTRALIA AUDIT WA	Audit Fees/Services	A		16,555.00
EFT10936	15/01/2021	NALUKUI MWALE	Reimbursement	A		185.00
EFT10937	15/01/2021	OFFICE NATIONAL	Shire Paper supplies	A		2,606.69
EFT10938	15/01/2021	IXOM OPERATIONS PTY LTD	Chlorine Rental	A		422.84
EFT10939	15/01/2021	PERFECT COMPUTER SOLUTIONS PTY LTD	IT Services	A		85.00
EFT10940	15/01/2021	PHILIP SPENCER NOLAN	Council Sitting Fees December 2020	A		697.03
EFT10941	15/01/2021	RAILWAY TAVERN	EOY Refreshments	A		2,014.00
EFT10942	15/01/2021	WA CONTRACT RANGER SERVICES	Ranger Services	A		2,145.82
EFT10943	15/01/2021	SUSAN ELIZABETH SHAW	Council Sitting Fees December 2020	A		600.00
EFT10944	15/01/2021	SHAC ELECTRICAL SERVICES	Quarterly Test & Tag Equipment	A		3,333.00
EFT10945	15/01/2021	Sheqsy PTY LTD	GPS Packages	A		197.84
EFT10946	15/01/2021	YILGARN SHIRE SOCIAL CLUB	Payroll deductions	A		216.00
EFT10947	15/01/2021	FOODWORKS - SRI DEVESH PTY LTD	Admin Refreshments	A		1,164.40

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
EFT10948	15/01/2021	EAGLE PETROLEUM TRADING AS STALLION FUELS	Fuel Card	A		128.08
EFT10949	15/01/2021	PORTACRETE CONCRETE LOGISTICS	HFA Maintenance	A		4,336.20
EFT10950	15/01/2021	SOUTHERN CROSS VOLUNTEER FIRE & RESCUE SERVICES	Fire Safety	A		1,250.00
EFT10951	15/01/2021	SOUTHERN CROSS GENERAL PRACTICE	Medical Exam	A		352.00
EFT10952	15/01/2021	SOUTHERN CROSS HARDWARE AND NEWS	Hardware Supplies December 2020	A		5,238.07
EFT10953	15/01/2021	SOUTHERN CROSS MOTOR MART	Depot Equipment	A		53.60
EFT10954	15/01/2021	B & S CLOSE FAMILY INVESTMENTS PTY LTD T/AS SOUTHERN CROSS TYRE & AUTO SERVICES	Vehicle Parts & Equipment	A		10,785.64
EFT10955	15/01/2021	SYNERGY	Power December 2020	A		18,186.37
EFT10956	15/01/2021	T-QUIP	Grader Parts	A		446.30
EFT10957	15/01/2021	THE ROAD LESS TRAVELLED EXPERIENCE	Council Photos 2020	A		250.00
EFT10958	15/01/2021	URBAN AND RURAL VALUATIONS	Valuation Expenses	A		1,019.37
EFT10959	15/01/2021	VIBRA INDUSTRIAL FILTRATION AUSTRALIA	Vehicle Parts	A		75.35
EFT10960	15/01/2021	WAYNE ALAN DELLA BOSCA	2020/2021 Shire President's Allowance 2nd Payment & Council Sitting Fees	A		6,800.00
EFT10961	15/01/2021	WB CONTRACTING	Machine Hire	A		176.00
EFT10962	15/01/2021	WESTRAC EQUIPMENT PTY LTD	Vehicle Maintenance	A		2,184.05
EFT10963	15/01/2021	WHEATBELT STEEL SUPPLIES	Building Supplies	A		1,206.34
EFT10964	15/01/2021	TELSTRA	Whispir December 2020	A		193.11

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
EFT10965	15/01/2021	THE WORKWEAR GROUP PTY LTD	Staff Uniform Allowance	A		666.41
EFT10966	15/01/2021	YILGARN AGENCIES	Building Supplies & Equipment	A		25,306.16
EFT10967	15/01/2021	YILGARN PLUMBING AND GAS	Plumbing Services	A		22,936.88
EFT10968	19/01/2021	PETER RONALD CLARKE	Reimbursement	A		80.00
EFT10969	19/01/2021	THE TRUSTEE FOR BELMONT UNIT TRUST T/AS DAIMLER TRUCKS PERTH	Vehicle Purchases	A		160,202.34
EFT10970	29/01/2021	EUROFINS ARL PTY LTD	Sewerage Testing	A		297.00
EFT10971	29/01/2021	BLACKMAN FABRICATIONS	Equipment Upgrades	A		1,591.43
EFT10972	29/01/2021	R DELLA BOSCA FAMILY TRUST	Grader Hire	A		10,227.52
EFT10973	29/01/2021	STAT ENTERPRISES PTY LTD TRADING AS BP ROADHOUSE SOUTHERN CROSS	Senior's Voucher	A		200.00
EFT10974	29/01/2021	DUNNINGS ROADHOUSE SOUTHERN CROSS	Senior's Voucher	A		50.00
EFT10975	29/01/2021	AUST. GOVERNMENT CHILD SUPPORT AGENCY	Child Support Payment	A		4,594.98
EFT10976	29/01/2021	AUST. GOVERNMENT CHILD SUPPORT AGENCY	Payroll deductions	A		467.35
EFT10977	29/01/2021	COOPER & OXLEY GROUP PTY LTD	Pool Payments	A		76,488.94
EFT10978	29/01/2021	COPIER SUPPORT	Photocopier Usage	A		1,440.04
EFT10979	29/01/2021	COURIER AUSTRALIA	Freight Charges	A		441.87
EFT10980	29/01/2021	CUTTING EDGES EQUIPMENT PARTS	Grader Parts	A		5,174.66

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
EFT10981	29/01/2021	JCB CONSTRUCTION EQUIPMENT AUSTRALIA	Roller Parts	A		3,621.52
EFT10982	29/01/2021	EXTERIA STREET & PARK OUTFITTERS	Pool Equipment	A		1,657.70
EFT10983	29/01/2021	MEDELECT	Equipment Servicing	A		1,397.00
EFT10984	29/01/2021	MISMATCH WORKSHOP	Landfill Attendant	A		2,300.00
EFT10985	29/01/2021	REYNOLDS GRAPHICS P/L	Business Cards	A		217.80
EFT10986	29/01/2021	SHAC ELECTRICAL SERVICES	Electrical Services	A		2,166.50
EFT10987	29/01/2021	YILGARN SHIRE SOCIAL CLUB	Payroll deductions	A		108.00
EFT10988	29/01/2021	SOUTHERN CROSS SURVEYS PTY LTD	Surveying expense	A		5,280.00
EFT10989	29/01/2021	T-QUIP	Grader Parts	A		223.15
EFT10990	29/01/2021	TUTT BRYANT EQUIPMENT	Vehicle Parts	A		349.24
EFT10991	29/01/2021	BOB WADDELL & ASSOCIATES PTY LTD	Consultation Fees	A		66.00
EFT10992	29/01/2021	WESTERN AUSTRALIAN TREASURY CORPORATION	Government Guarantee Fee	A		2,167.12
EFT10993	29/01/2021	WATER CORPORATION.	Water Payment	A		2,152.97
EFT10994	29/01/2021	WESTRAC EQUIPMENT PTY LTD	Vehicle Parts	A		2,217.89
EFT10995	29/01/2021	WURTH AUSTRALIA PTY LTD	Mechanical Supplies	A		396.81
EFT10996	29/01/2021	THE WORKWEAR GROUP PTY LTD	PPE Gear	A		539.10

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
EFT10997	29/01/2021	YILGARN PLUMBING AND GAS	Plumbing Services	A		21,806.18

REPORT TOTALS

Bank Code	Bank Name	TOTAL
A	MUNICIPAL FUND	**1,291,824.85**
TOTAL		**1,291,824.85**

SHIRE OF YILGARN

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
1680	08/12/2020	CANON FINANCE AUSTRALIA PTY LTD	PHOTOCOPIER LEASE DECEMBER 2020	A		333.96
1681	01/12/2020	SOUTHERN CROSS GENERAL PRACTICE	MONTHLY PAYMENT TO THE DOCTOR - DECEMBER 2020	A		6,600.00
1682	07/12/2020	MOTORCHARGE LIMITED	FUEL CARD - NOVEMBER 2020	A		2,070.13
1683	09/12/2020	WESTPAC BANKING CORPORATION	NET PAYROLL PPE 08/12/2020	A		89,567.79
1684	13/11/2020	WESTPAC BANKING CORPORATION	CEO CREDIT CARD - OCTOBER 2020	A		2,569.20
1685	14/12/2020	TELCO CHOICE - COMMANDER CENTRE NORTH PERTH	COMMANDER TELEPHONE FEES - BONDER HIRE DECEMBER 2020	A		250.00
1686	16/12/2020	TELCO CHOICE - COMMANDER CENTRE NORTH PERTH	COMMANDER TELEPHONE FEES - DATA, EQUIPMENT, VOICE - NOVEMBER 2020	A		1,366.27
1687	15/12/2020	WESTPAC BANKING CORPORATION	EMCS CREDIT CARD NOVEMBER 2020	A		603.84
1688	15/12/2020	WESTPAC BANKING CORPORATION	CEO CREDIT CARD - NOVEMBER 2020	A		1,917.55
1689	23/12/2020	WESTPAC BANKING CORPORATION	NET PAYROLL PPE 22/12/2020	A		86,714.16
1690	06/01/2021	WESTPAC BANKING CORPORATION	NET PAYROLL PPE 05/01/2021	A		78,895.03
1691	04/01/2021	SOUTHERN CROSS GENERAL PRACTICE	MONTHLY PAYMENT TO THE DOCTOR - JANUARY 2021	A		6,600.00
1692	08/01/2021	CANON FINANCE AUSTRALIA PTY LTD	PHOTOCOPIER LEASE JANUARY 2021	A		333.96
1693	12/01/2021	TELCO CHOICE - COMMANDER CENTRE NORTH PERTH	COMMANDER TELEPHONE FEES - BONDER HIRE JANUARY 2021	A		250.00
1694	06/01/2021	MOTORCHARGE LIMITED	FUEL CARD - DECEMBER 2020	A		1,156.17

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
1695	18/01/2021	TELCO CHOICE - COMMANDER CENTRE NORTH PERTH	COMMANDER TELEPHONE FEES - DATA, EQUIPMENT, VOICE - DECEMBER 2020	A		1,360.99
1696	20/01/2021	WESTPAC BANKING CORPORATION	NET PAYROLL PPE - 19.01.2021	A		85,299.48
1697	15/01/2021	WESTPAC BANKING CORPORATION	EMCS CREDT CARD DECEMBER 2020	A		332.50
1698	15/01/2021	WESTPAC BANKING CORPORATION	CEO CREDIT CARD - DECEMBER 2020	A		232.20

03/02/2021

REPORT TOTALS

Bank Code	Bank Name	TOTAL
A	MUNICIPAL FUND	**366,453.23**
TOTAL		**366,453.23**

SHIRE OF YILGARN

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
DD15332.1	24/11/2020	The Trustee for AWARE SUPER	Payroll deductions	A		11,523.94
DD15332.2	24/11/2020	AUSTRALIAN SUPER	Payroll deductions	A		387.77
DD15332.3	24/11/2020	HOSTPLUS EXECUTIVE SUPERANNUATION FUND	Payroll deductions	A		305.11
DD15332.4	24/11/2020	AUSTRALIAN CATHOLIC SUPERANNUATION RETIREMENT FUND	Superannuation contributions	A		22.84
DD15332.5	24/11/2020	PRIME SUPER	Payroll deductions	A		388.86
DD15332.6	24/11/2020	BT SUPER FOR LIFE ACCOUNT	Payroll deductions	A		1,109.77
DD15332.7	24/11/2020	WALGS PLAN	Superannuation contributions	A		840.99
DD15332.8	24/11/2020	THE GARY AND JOSIE KENT SUPERANNUATION FUND	Superannuation contributions	A		424.60
DD15332.9	24/11/2020	REST (RETAIL EMPLOYEES SUPERANNUATION TRUST)	Superannuation contributions	A		511.41
DD15332.10	24/11/2020	BEATON FARMING CO SUPERANNUATION FUND	Superannuation contributions	A		678.59
DD15332.11	24/11/2020	BT SUPERWRAP	Superannuation contributions	A		1,978.90
DD15332.12	24/11/2020	HESTA SUPER FUND	Superannuation contributions	A		889.66
DD15332.13	24/11/2020	VISION SUPER SAVER	Superannuation contributions	A		1,141.62

REPORT TOTALS

Bank Code	Bank Name	TOTAL
A	MUNICIPAL FUND	**20 204.06**
TOTAL		**20 204.06**

SHIRE OF YILGARN

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
DD15333.1	08/12/2020	The Trustee for AWARE SUPER	Payroll deductions	A		11,595.71
DD15333.2	08/12/2020	AUSTRALIAN SUPER	Payroll deductions	A		384.74
DD15333.3	08/12/2020	HOSTPLUS EXECUTIVE SUPERANNUATION FUND	Payroll deductions	A		294.28
DD15333.4	08/12/2020	AUSTRALIAN CATHOLIC SUPERANNUATION RETIREMENT FUND	Superannuation contributions	A		28.54
DD15333.5	08/12/2020	PRIME SUPER	Payroll deductions	A		390.11
DD15333.6	08/12/2020	BT SUPER FOR LIFE ACCOUNT	Payroll deductions	A		1,131.04
DD15333.7	08/12/2020	THE GARY AND JOSIE KENT SUPERANNUATION FUND	Superannuation contributions	A		431.03
DD15333.8	08/12/2020	REST (RETAIL EMPLOYEES SUPERANNUATION TRUST)	Superannuation contributions	A		521.66
DD15333.9	08/12/2020	BEATON FARMING CO SUPERANNUATION FUND	Superannuation contributions	A		593.18
DD15333.10	08/12/2020	BT SUPERWRAP	Superannuation contributions	A		1,978.90
DD15333.11	08/12/2020	HESTA SUPER FUND	Superannuation contributions	A		905.76
DD15333.12	08/12/2020	VISION SUPER SAVER	Superannuation contributions	A		870.44
DD15333.13	08/12/2020	WALGS PLAN	Superannuation contributions	A		438.46

REPORT TOTALS

Bank Code	Bank Name	TOTAL
A	MUNICIPAL FUND	**19 563.85**
TOTAL		**19 563.85**

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
DD15360.1	22/12/2020	The Trustee for AWARE SUPER	Payroll deductions	A		12,015.68
DD15360.2	22/12/2020	AUSTRALIAN CATHOLIC SUPERANNUATION RETIREMENT FUND	Superannuation contributions	A		34.25
DD15360.3	22/12/2020	PRIME SUPER	Payroll deductions	A		390.11
DD15360.4	22/12/2020	BT SUPER FOR LIFE ACCOUNT	Payroll deductions	A		1,113.20
DD15360.5	22/12/2020	THE GARY AND JOSIE KENT SUPERANNUATION FUND	Superannuation contributions	A		424.60
DD15360.6	22/12/2020	REST (RETAIL EMPLOYEES SUPERANNUATION TRUST)	Superannuation contributions	A		511.41
DD15360.7	22/12/2020	BT SUPERWRAP	Superannuation contributions	A		1,984.89
DD15360.8	22/12/2020	HESTA SUPER FUND	Superannuation contributions	A		726.01
DD15360.9	22/12/2020	VISION SUPER SAVER	Superannuation contributions	A		784.27
DD15360.10	22/12/2020	AUSTRALIAN SUPER	Superannuation contributions	A		375.11
DD15360.11	22/12/2020	HOSTPLUS EXECUTIVE SUPERANNUATION FUND	Superannuation contributions	A		296.44

REPORT TOTALS

Bank Code	Bank Name	TOTAL
A	MUNICIPAL FUND	**18 655.97**
TOTAL		**18 655.97**

SHIRE OF YILGARN

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
DD15376.1	05/01/2021	The Trustee for AWARE SUPER	Payroll deductions	A		12,051.91
DD15376.2	05/01/2021	AUSTRALIAN CATHOLIC SUPERANNUATION RETIREMENT FUND	Superannuation contributions	A		5.71
DD15376.3	05/01/2021	PRIME SUPER	Payroll deductions	A		399.37
DD15376.4	05/01/2021	BT SUPER FOR LIFE ACCOUNT	Payroll deductions	A		1,109.79
DD15376.5	05/01/2021	THE GARY AND JOSIE KENT SUPERANNUATION FUND	Superannuation contributions	A		441.72
DD15376.6	05/01/2021	REST (RETAIL EMPLOYEES SUPERANNUATION TRUST)	Superannuation contributions	A		527.64
DD15376.7	05/01/2021	BT SUPERWRAP	Superannuation contributions	A		2,016.41
DD15376.8	05/01/2021	HESTA SUPER FUND	Superannuation contributions	A		710.50
DD15376.9	05/01/2021	VISION SUPER SAVER	Superannuation contributions	A		784.27
DD15376.10	05/01/2021	AUSTRALIAN SUPER	Superannuation contributions	A		360.55
DD15376.11	05/01/2021	HOSTPLUS EXECUTIVE SUPERANNUATION FUND	Superannuation contributions	A		264.33

REPORT TOTALS

Bank Code	Bank Name	TOTAL
A	MUNICIPAL FUND	**18 672.20**
TOTAL		**18 672.20**

SHIRE OF YILGARN

Payments made from the Municipal Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
DD15417.1	19/01/2021	The Trustee for AWARE SUPER	Payroll deductions	A		12,391.09
DD15417.2	19/01/2021	AUSTRALIAN CATHOLIC SUPERANNUATION RETIREMENT FUND	Superannuation contributions	A		17.17
DD15417.3	19/01/2021	PRIME SUPER	Payroll deductions	A		389.48
DD15417.4	19/01/2021	BT SUPER FOR LIFE ACCOUNT	Payroll deductions	A		1,109.77
DD15417.5	19/01/2021	THE GARY AND JOSIE KENT SUPERANNUATION FUND	Superannuation contributions	A		424.60
DD15417.6	19/01/2021	REST (RETAIL EMPLOYEES SUPERANNUATION TRUST)	Superannuation contributions	A		513.97
DD15417.7	19/01/2021	BT SUPERWRAP	Superannuation contributions	A		1,978.92
DD15417.8	19/01/2021	HESTA SUPER FUND	Superannuation contributions	A		698.87
DD15417.9	19/01/2021	VISION SUPER SAVER	Superannuation contributions	A		798.46
DD15417.10	19/01/2021	AUSTRALIAN SUPER	Superannuation contributions	A		360.55
DD15417.11	19/01/2021	HOSTPLUS EXECUTIVE SUPERANNUATION FUND	Superannuation contributions	A		304.03

REPORT TOTALS

Bank Code	Bank Name	TOTAL
A	MUNICIPAL FUND	**18 986.91**
TOTAL		**18 986.91**

SHIRE OF YILGARN

Payments made from the Trust Account for the Period of 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
6263	27/11/2020	DEPARTMENT OF TRANSPORT	LICENSING FROM 23/11/2020 TO 27/11/2020.	E		6,985.10
6264	30/11/2020	DEPARTMENT OF TRANSPORT	LICENSING FROM 30/11/2020 TO 30/11/2020.	E		2,624.05
6265	04/12/2020	DEPARTMENT OF TRANSPORT	LICENSING FROM 01/12/2020 TO 04/12/2020.	E		5,372.30
6266	10/12/2020	DEPARTMENT OF TRANSPORT	LICENSING FROM 07/12/2020 TO 10/12/2020.	E		10,994.15
6267	23/12/2020	DEPARTMENT OF TRANSPORT	LICENSING FROM 14/12/2020 TO 18/12/2020.	E		9,551.40
6268	23/12/2020	DEPARTMENT OF TRANSPORT	LICENSING FROM 21/12/2020 TO 23/12/2020.	E		19,266.65
6269	08/01/2021	DEPARTMENT OF TRANSPORT	LICENSING FROM 04/01/2021 TO 08/01/2021.	E		7,910.55
6270	15/01/2021	DEPARTMENT OF TRANSPORT	LICENSING FROM 11/01/2021 TO 15/01/2021.	E		3,185.30
6271	22/01/2021	DEPARTMENT OF TRANSPORT	LICENSING FROM 18/01/2021 TO 22/01/2021.	E		12,117.40
6272	29/01/2021	DEPARTMENT OF TRANSPORT	LICENSING FROM 25/01/2021 TO 29/01/2021.	E		14,901.55

REPORT TOTALS

Bank Code	Bank Name	TOTAL
E	TRUST FUND	**92,908.45**
TOTAL		**92,908.45**

SHIRE OF YILGARN

Payments made from the Trust Account for the Period 1st December 2020 to 31st January 2021
Presented to Council, 18th February 2021

Cheque /EFT No	Date	Name	Invoice Description	Bank Code	INV Amount	Amount
402551	15/12/2020	SHIRE OF YILGARN	RATES 2020/2021 - A150	E		1,487.15
402552	21/12/2020	PUBLIC TRANSPORT AUTHORITY	TRANSWA TICKET SALES NOVEMBER 2020.	E		474.86
402553	21/12/2020	SHIRE OF YILGARN	TRANSWA COMMISSION NOVEMBER 2020	E		101.14
402554	21/12/2020	ADAM JOHN COUTIS	CEASING PAYROLL DEDUCTION PAYMENTS AND REFUNDING FULL AMOUNT FROM TRUST FUND AS PER SIGNED LETTER	E		1,331.40
402555	12/01/2021	PUBLIC TRANSPORT AUTHORITY	TRANSWA TICKET SALES DECEMBER 2020	E		802.89
402556	12/01/2021	SHIRE OF YILGARN	TRANSWA COMMISSION DECEMBER 2020.	E		119.31
402557	12/01/2021	ST JOSEPH'S CATHOLIC PRIMARY SCHOOL	BOND REFUND - UNIT 4 50 ANTARES STREET	E		1,000.00

REPORT TOTALS

Bank Code	Bank Name	TOTAL
E	TRUST FUND	**5,316.75**
TOTAL		**5,316.75**

SHIRE OF YILGARN
Accounts for Payment - February 2021

Chq Number	Payee	Description	Amount	Date
	Municipal Cheques			
40978	AUSTRALIAN COMMUNICATIONS & MEDIA AUTH.	ACMA BROADCASTING LICENSE 2020-2021	$553.00	18/12/2020
40979	DEPARTMENT OF TRANSPORT	FLEET LICENSING 2021	$13,844.15	18/12/2020
40980	LGRCEU	PAYROLL DEDUCTIONS	$41.00	18/12/2020
40981	SHIRE OF YILGARN	PAYROLL DEDUCTIONS	$2,910.90	18/12/2020
40982	SHIRE OF YILGARN	CHEMIST LEASE - RETAINED IN TRUST (T13) NOVEMBER 2020	$550.00	18/12/2020
40983	TELSTRA	PHONE - NOVEMBER 2020 - MOBILES	$644.02	18/12/2020
40984	LGRCEU	PAYROLL DEDUCTIONS	$20.50	15/01/2021
40985	SHIRE OF YILGARN	PAYROLL DEDUCTIONS	$1,330.45	15/01/2021
40986	SHIRE OF YILGARN	CHEMIST LEASE - RETAINED IN TRUST (T13) DECEMBER 2020	$550.00	15/01/2021
40987	TELSTRA	PHONE - DECEMBER 2020	$1,724.86	15/01/2021
40988	LGRCEU	PAYROLL DEDUCTIONS	$20.50	15/01/2021
40989	SHIRE OF YILGARN	PAYROLL DEDUCTIONS	$1,330.45	15/01/2021
40990	LGRCEU	PAYROLL DEDUCTIONS	$20.50	29/01/2021
40991	SHIRE OF YILGARN	PAYROLL DEDUCTIONS	$1,330.45	29/01/2021
40992	TELSTRA	PHONE - JANUARY 2021	$122.20	29/01/2021
		Total	$24,992.98	

	Trust Cheques			
402551	SHIRE OF YILGARN	RATES 2020/2021 - A150	$1,487.15	15/12/2020
402552	PUBLIC TRANSPORT AUTHORITY	TRANSWA TICKET SALES NOVEMBER 2020	$474.86	21/12/2020
402553	SHIRE OF YILGARN	TRANSWA COMMISSION NOVEMBER 2020	$101.14	21/12/2020
402554	ADAM JOHN COUTIS	CEASING PAYROLL DEDUCTION PAYMENTS REFUNDING TRUST FUND	$1,331.40	21/12/2020
402555	PUBLIC TRANSPORT AUTHORITY	TRANSWA TICKET SALES DECEMBER 2020	$802.89	12/01/2021
402556	SHIRE OF YILGARN	TRANSWA COMMISSION DECEMBER 2020	$119.31	12/01/2021
402557	ST JOSEPH'S CATHOLIC PRIMARY SCHOOL	BOND REFUND - UNIT 4 50 ANTARES STREET	$1,000.00	12/01/2021
		Total:	5,316.75	

SHIRE OF YILGARN
Accounts for Payment - February 2021

Chq Number	Payee	Description	Amount	Date
	DPI Cheques			
6263	DEPARTMENT OF TRANSPORT	LICENSING FROM 23/11/2020 TO 27/11/2020	$6,985.10	27/11/2020
6264	DEPARTMENT OF TRANSPORT	LICENSING FROM 30/11/2020 TO 30/11/2020	$2,624.05	30/11/2020
6265	DEPARTMENT OF TRANSPORT	LICENSING FROM 01/12/2020 TO 04/12/2020	$5,372.30	04/12/2020
6266	DEPARTMENT OF TRANSPORT	LICENSING FROM 07/12/2020 TO 10/12/2020	$10,994.15	10/12/2020
6267	DEPARTMENT OF TRANSPORT	LICENSING FROM 14/12/2020 TO 18/12/2020	$9,551.40	23/12/2020
6268	DEPARTMENT OF TRANSPORT	LICENSING FROM 21/12/2020 TO 23/12/2020	$19,266.65	23/12/2020
6269	DEPARTMENT OF TRANSPORT	LICENSING FROM 04/01/2021 TO 08/01/2021	$7,910.55	08/01/2021
6270	DEPARTMENT OF TRANSPORT	LICENSING FROM 11/01/2021 TO 15/01/2021	$3,185.30	15/01/2021
6271	DEPARTMENT OF TRANSPORT	LICENSING FROM 18/01/2021 TO 22/01/2021	$12,117.40	22/01/2021
6272	DEPARTMENT OF TRANSPORT	LICENSING FROM 25/01/2021 TO 29/01/2021	$14,901.55	29/01/2021
		Total	$92,908.45	

SHIRE OF YILGARN
Accounts for Payment - February 2021

Chq Number	Payee	Description	Amount	Date
		Municipal Cheques		
1680	CANON FINANCE AUSTRALIA PTY LTD	PHOTOCOPIER LEASE DECEMBER 2020	$333.96	08/12/2020
1681	SOUTHERN CROSS GENERAL PRACTICE	MONTHLY PAYMENT TO THE DOCTOR - DECEMBER 2020	$6,600.00	01/12/2020
1682	MOTORCHARGE LIMITED	FUEL CARD - NOVEMBER 2020	$2,070.13	07/12/2020
1683	WESTPAC BANKING CORPORATION	NET PAYROLL PPE 08/12/2020	$89,567.79	09/12/2020
1684	WESTPAC BANKING CORPORATION	CEO CREDIT CARD - OCTOBER 2020	$2,569.20	13/11/2020
1685	TELCO CHOICE - COMMANDER CENTRE NORTH PERTH	COMMANDER TELEPHONE FEES - BONDER HIRE DECEMBER 2020	$250.00	14/12/2020
1686	TELCO CHOICE - COMMANDER CENTRE NORTH PERTH	COMMANDER TELEPHONE FEES - DATA, EQUIPMENT, VOICE - NOVEMBER 2020	$1,366.27	16/12/2020
1687	WESTPAC BANKING CORPORATION	EMCS CREDIT CARD - NOVEMBER 2020	$603.84	15/12/2020
1688	WESTPAC BANKING CORPORATION	CEO CREDIT CARD - NOVEMBER 2020	$1,917.55	15/12/2020
1689	WESTPAC BANKING CORPORATION	NET PAYROLL PPE 22/12/2020	$86,714.16	23/12/2020
1690	WESTPAC BANKING CORPORATION	NET PAYROLL PPE 05/01/2021	$78,895.03	06/01/2021
1691	SOUTHERN CROSS GENERAL PRACTICE	MONTHLY PAYMENT TO THE DOCTOR - JANUARY 2021	$6,600.00	04/01/2021
1692	CANON FINANCE AUSTRALIA PTY LTD	PHOTOCOPIER LEASE JANUARY 2021	$333.96	08/01/2021
1693	TELCO CHOICE - COMMANDER CENTRE NORTH PERTH	COMMANDER TELEPHONE FEES - BONDER HIRE JANUARY 2021	$250.00	12/01/2021
1694	MOTORCHARGE LIMITED	FUEL CARD - DECEMBER 2020	$1,156.17	06/01/2021
1695	TELCO CHOICE - COMMANDER CENTRE NORTH PERTH	COMMANDER TELEPHONE FEES - DATA, EQUIPMENT, VOICE - DECEMBER 2020	$1,360.99	18/01/2021
1696	WESTPAC BANKING CORPORATION	NET PAYROLL PPE - 19.01.2021	$85,299.48	20/01/2021
1697	WESTPAC BANKING CORPORATION	EMCS CREDIT CARD - DECEMBER 2020	$332.50	15/01/2021
1698	WESTPAC BANKING CORPORATION	CEO CREDIT CARD - DECEMBER 2020	$232.20	15/01/2021
		Total	$366,453.23	

Attachment 9.2.4

Shire of YILGARN

"good country for hardy people"

Shire of Yilgarn
BUDGET REVIEW REPORT
For the Period Ended 31st January 2021

LOCAL GOVERNMENT ACT 1995
LOCAL GOVERNMENT (FINANCIAL MANAGEMENT) REGULATIONS 1996

TABLE OF CONTENTS

Shire of Yilgarn
STATEMENT OF BUDGET REVIEW
(Statutory Reporting Program)
For the Period Ended 31st January 2021

	Note	Budget v Actual		Predicted Variance			
		Adopted Annual Budget	YTD Actual	Budget Increase / (Decrease)	Timing / (Carryover)	Estimated Year End	Material Variance
		$	$	$	$	$	
Net current assets at start of financial year surplus/(deficit)		**1,982,012**	2,830,828	848,816		2,830,828	▲
Revenue from operating activities (excluding rates)							
Governance		**0**	0	0		**0**	
General Purpose Funding		**1,745,490**	856,586	(78,000)		**1,670,979**	
Law, Order and Public Safety		**82,799**	38,688	0		**40,885**	▼
Health		**1,500**	770	0		**1,320**	
Education and Welfare		**177,651**	115,658	(5,000)		**160,004**	
Housing		**78,000**	43,628	(13,000)		**67,684**	
Community Amenities		**672,044**	623,819	47,000		**704,530**	
Recreation and Culture		**57,430**	55,869	0		**58,820**	
Transport		**(19,313)**	26,559	0		**(19,470)**	
Economic Services		**1,296,337**	679,204	(180,000)		**1,113,428**	▼
Other Property and Services		**39,464**	157,247	0		**144,168**	▲
		4,131,402	2,598,028	(229,000)	0	**3,942,347**	
Expenditure from operating activities							
Governance		**(497,923)**	(240,267)	0		**(438,565)**	▼
General Purpose Funding		**(286,084)**	(125,842)	0		**(261,849)**	
Law, Order and Public Safety		**(478,194)**	(191,843)	(145,500)		**(332,096)**	▼
Health		**(292,390)**	(129,665)	500		**(279,678)**	
Education and Welfare		**(543,295)**	(194,694)	(70,000)		**(393,643)**	▼
Housing		**(386,691)**	(99,567)	(95,000)		**(257,910)**	▼
Community Amenities		**(1,155,245)**	(479,786)	(45,000)		**(1,029,328)**	▼
Recreation and Culture		**(1,857,002)**	(822,550)	(128,500)		**(1,681,244)**	
Transport		**(6,486,505)**	(2,552,363)	(1,210,000)		**(5,212,754)**	▼
Economic Services		**(1,698,695)**	(635,425)	(270,000)		**(1,360,390)**	▼
Other Property and Services		**(63,327)**	12,424	(42,000)		**(137,732)**	▲
		(13,745,351)	(5,459,578)	(2,005,500)	0	**(11,385,190)**	
Operating activities excluded from budget							
Add Back Depreciation		**6,616,250**	2,256,095	1,805,000		**4,492,981**	
Adjust (Profit)/Loss on Asset Disposal		**114,589**	42,790	0		**102,354**	
Adjust Provisions and Accruals		**0**	0	0		**0**	
Amount attributable to operating activities		**(901,098)**	2,268,163	419,316	0	**(16,680)**	
INVESTING ACTIVITIES							
Non-operating grants, subsidies and contributions		**3,299,122**	1,853,589	0		**3,299,207**	
Purchase of Investments		**0**	0	0		**0**	
Land Held for Resale		**0**	0	0		**0**	
Land and Buildings		**(1,740,932)**	(1,243,022)	(34,000)		**(1,562,440)**	▼
Plant and Equipment		**(1,166,770)**	(344,393)	30,000		**(1,172,693)**	
Furniture and Equipment		**0**	0	0		**0**	
Infrastructure Assets - Roads		**(3,194,421)**	(1,648,975)	0		**(2,836,001)**	▼
Infrastructure Assets - Other		**(2,201,192)**	(1,803,494)	0		**(2,287,647)**	
Proceeds from Disposal of Assets		**308,000**	66,227	0		**309,227**	
Proceeds from Sale of Investments		**0**	0	0		**0**	
Proceeds from Advances		**0**	0	0		**0**	
Amount attributable to investing activities		**(4,696,193)**	(3,120,068)	(4,000)	0	**(4,250,347)**	
FINANCING ACTIVITIES							
Repayment of Debentures		**(92,428)**	(2,167)	42,921		**(49,507)**	▲
Proceeds from New Debentures		**1,000,000**	1,000,000	0		**1,000,000**	
Advances to Community Groups		**0**	0	0		**0**	
Self-Supporting Loan Principal		**0**	0	0		**0**	
Transfer to Reserves		**(552,275)**	(19,832)	650,000		**(1,128,746)**	▲
Transfer from Reserves		**1,141,841**	0	(546,205)		**595,636**	▼
Amount attributable to financing activities		**1,497,138**	978,001	146,716	0	**417,383**	
Budget deficiency before general rates		**(4,040,812)**	43,475			**(3,849,644)**	
Estimated amount to be raised from general rates		**4,051,369**	4,048,249			**4,048,249**	
Closing Funding Surplus(Deficit)		**10,557**	4,091,724			**198,605**	

Shire of Yilgarn
STATEMENT OF BUDGET REVIEW
(Nature or Type)
For the Period Ended 31st January 2021

	Note	Budget v Actual		Predicted Variance			
		Adopted Annual Budget	YTD Actual	Budget Increase / (Decrease)	Timing / (Carryover)	Estimated Year End	Material Variance
		$	$	$	$	$	
Net current assets at start of financial year surplus/(deficit)		**1,982,012**	2,830,828	848,816		**2,830,828**	▲
Revenue from operating activities (excluding rates)							
Grants, Subsidies and Contributions		**2,254,947**	1,319,793	53,300		**2,144,790**	
Profit on Asset Disposal		**5,387**	0	0		**0**	
Fees and Charges		**1,492,898**	775,471	(157,000)		**1,315,208**	▼
Service Charges		**314,310**	324,567	0		**324,567**	
Interest Earnings		**178,160**	54,797	(85,000)		**76,941**	▼
Other Revenue		**193,700**	242,927	7,000		**443,368**	▲
		4,439,402	2,717,555	(181,700)	0	**4,304,874**	
Expenditure from operating activities							
Employee Costs		**(3,042,766)**	(1,471,711)	(26,500)		**(2,698,158)**	▼
Materials and Contracts		**(2,738,971)**	(1,020,557)	500		**(3,214,190)**	▲
Utilities Charges		**(952,782)**	(362,328)	163,500		**(726,577)**	▼
Depreciation (Non-Current Assets)		**(6,616,250)**	(2,256,095)	(1,805,000)		**(4,492,981)**	▼
Interest Expenses		**(16,902)**	0	11,000		**(5,713)**	
Insurance Expenses		**(319,986)**	(312,633)	0		**(357,970)**	▲
Loss on Asset Disposal		**(119,976)**	(42,790)	0		**(102,354)**	
Other Expenditure		**(245,718)**	(143,989)	0		**(185,194)**	▼
		(14,053,351)	(5,610,103)	(1,656,500)	0	**(11,783,136)**	
Funding Balance Adjustment							
Add Back Depreciation		**6,616,250**	2,256,095	1,805,000		**4,492,981**	
Adjust (Profit)/Loss on Asset Disposal		**114,589**	42,790	0		**102,354**	
Adjust Provisions and Accruals		**0**	0	0		**0**	
Amount attributable to operating activities		**(901,098)**	2,237,165	815,616	0	**(52,099)**	
INVESTING ACTIVITIES							
Non-Operating Grants, Subsidies and Contributions		**3,299,122**	1,853,589	0		**3,299,207**	
Land Held for Resale		**0**	0	0		**0**	
Land and Buildings		**(1,740,932)**	(1,243,022)	(34,000)		**(1,562,440)**	▼
Plant and Equipment		**(1,166,770)**	(344,393)	30,000		**(1,172,693)**	
Furniture and Equipment		**0**	0	0		**0**	
Infrastructure Assets - Roads		**(3,194,421)**	(1,648,975)	0		**(2,836,001)**	▼
Infrastructure Assets - Other		**(2,201,192)**	(1,803,494)	0		**(2,287,647)**	
Purchase of Investments		**0**	0	0		**0**	
Proceeds from Disposal of Assets		**308,000**	66,227	0		**309,227**	
Proceeds from Sale of Investments		**0**	0	0		**0**	
Amount attributable to investing activities		**(4,696,193)**	(3,120,068)	(4,000)	0	**(4,250,347)**	
FINANCING ACTIVITIES							
Proceeds from New Debentures		**1,000,000**	1,000,000	0		**1,000,000**	
Proceeds from Advances		**0**	0	0		**0**	
Self-Supporting Loan Principal		**0**	0	0		**0**	
Transfer from Reserves		**1,141,841**	0	(546,205)		**595,636**	▼
Repayment of Debentures		**(92,428)**	(2,167)	42,921		**(49,507)**	▲
Advances to Community Groups		**0**	0	0		**0**	
Transfer to Reserves		**(552,275)**	(19,832)	650,000		**(1,128,746)**	▲
Amount attributable to financing activities		**1,497,138**	978,001	146,716	0	**417,383**	
Budget deficiency before general rates		**(4,040,812)**	95,098			**(3,798,021)**	
Estimated amount to be raised from general rates		**4,051,369**	4,048,249			**4,048,249**	
Closing Funding Surplus(Deficit)		**10,557**	4,091,724			**198,605**	

SHIRE OF YILGARN
NOTES TO AND FORMING PART OF THE BUDGET REVIEW REPORT
FOR THE YEAR ENDED 30 JUNE 2020

1. SIGNIFICANT ACCOUNTING POLICIES

(a) Basis of Preparation

The budget review report has been prepared in accordance with applicable Australian Accounting Standards (as they apply to local government and not-for-profit entities), Australian Accounting Interpretations, other authorative pronouncements of the Australian Accounting Standards Board, the Local Government Act 1995 and accompanying regulations. Material accounting policies which have been adopted in the preparation of this budget review report are presented below and have been consistently applied unless stated otherwise.

The report has been prepared on the accrual basis and is based on historical costs, modified, where applicable, by the measurement at fair value of selected non-current assets, financial assets and liabilities.

Critical accounting estimates
The preparation of a financial report in conformity with Australian Accounting Standards requires management to make judgements, estimates and assumptions that effect the application of policies and reported amounts of assets and liabilities, income and expenses.

The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances; the results of which form the basis of making the judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

The Local Government Reporting Entity
All funds through which the Shire controls resources to carry on its functions have been included in the financial statements forming part of this budget review.

In the process of reporting on the local government as a single unit, all transactions and balances between those Funds (for example, loans and transfers between Funds) have been eliminated.

(b) 2019/20 Actual Balances

Balances shown in this budget review report as 2019/20 Actual are as forecast at the time of budget review preparation and are subject to final adjustments.

(c) Rounding Off Figures

All figures shown in this budget review report, other than a rate in the dollar, are rounded to the nearest dollar.

(d) Rates, Grants, Donations and Other Contributions

Rates, grants, donations and other contributions are recognised as revenues when the Shire obtains control overt he assets comprising the contributions.

Control over assets acquired from rates is obtained at the commencement of the rating period or, where earlier, upon receipt of the rates.

(e) Goods and Services Tax (GST)

Revenues, expenses and assets are recognised net of the amount of GST, except where the amount of GST incurred is not recoverable from the Australian Taxation Office (ATO).

Receivables and payables are stated inclusive of GST receivable or payable. The net amount of GST recoverable from, or payable to, the ATO is included with receivables or payables in Note 4 Net Current Assets

Cash flows are presented on a gross basis. The GST components of cash flows arising from investing or financing activities which are recoverable from, or payable to, the ATO are presented as operating cash flows.

1. SIGNIFICANT ACCOUNTING POLICIES (Continued)

(f) Superannuation

The Shire contributes to a number of superannuation funds on behalf of employees. All funds to which the Shire contributes are defined contribution plans.

(g) Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, cash at bank, deposits available on demand with banks, other short term highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value and bank overdrafts.

Bank overdrafts are shown as short term borrowings in current liabilities in Note 4 Net Current Assets.

(h) Trade and Other Receivables

Trade and other receivables include amounts due from ratepayers for unpaid rates and service charges and other amounts due from third parties for goods sold and services performed in the ordinary course of business.

Receivables expected to be collected within 12 months of the end of the reporting period are classified as current assets. All other receivables are classified as non-current assets.

Collectability of trade and other receivables is reviewed on an ongoing basis. Debts that are known to be uncollectible are written off when identified. An allowance for doubtful debts is raised when there is objective evidence that they will not be collectible.

(i) Inventories

General

Inventories are measured at the lower of cost and net realisable value.

Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

Land Held for Resale

Land held for development and sale is valued at the lower of cost and net realisable value. Cost includes the cost of acquisition, development, borrowing costs and holding costs until completion of development. Finance costs and holding charges incurred after development is completed are expensed.

Gains and losses are recognised in profit or loss at the time of signing an unconditional contract of sale if significant risks and rewards, and effective control over the land, are passed on to the buyer at this point.

Land held for sale is classified as current except where it is held as non-current based on Council's intentions to release for sale.

(j) Fixed Assets

Each class of fixed assets within either property, plant and equipment or infrastructure, is carried at cost or fair value as indicated less, where applicable, any accumulated depreciation and impairment losses.

1. SIGNIFICANT ACCOUNTING POLICIES (Continued)

(j) Fixed Assets (Continued)

Mandatory requirement to revalue non-current assets
Effective from 1 July 2012, the Local Government (Financial Management) Regulations were amended and the measurement of non-current assets at Fair Value became mandatory.

During the year ended 30 June 2013, the Shire commenced the process of adopting Fair Value in accordance with the Regulations.

Whilst the amendments initially allowed for a phasing in of fair value in relation to fixed assets over three years, as at 30 June 2015 all non-current assets were carried at Fair Value in accordance with the the requirements.

Thereafter, each asset class must be revalued in accordance with the regulatory framework established and

the Shire revalues its asset classes in accordance with this mandatory timetable.

Relevant disclosures, in accordance with the requirements of Australian Accounting Standards, have been made in the financial report as necessary.

Initial Recognition and Measurement between Mandatory Revaluation Dates
All assets are initially recognised at cost and subsequently revalued in accordance with the mandatory measurement framework detailed above.

In relation to this initial measurement, cost is determined as the fair value of the assets given as consideration plus costs incidental to the acquisition. For assets acquired at no cost or for nominal consideration, cost is determined as fair value at the date of acquisition. The cost of non-current assets constructed by the Shire includes the cost of all materials used in construction, direct labour on the project and an appropriate proportion of variable and fixed overheads.

Individual assets acquired between initial recognition and the next revaluation of the asset class in accordance with the mandatory measurement framework detailed above, are carried at cost less accumulated depreciation as management believes this approximates fair value. They will be subject to subsequent revaluation of the next anniversary date in accordance with the mandatory measurement framework detailed above.

Revaluation
Increases in the carrying amount arising on revaluation of assets are credited to a revaluation surplus in equity. Decreases that offset previous increases of the same asset are recognised against revaluation surplus directly in equity. All other decreases are recognised in profit or loss.

Land Under Roads
In Western Australia, all land under roads is Crown land, the responsibility for managing which, is vested in the local government.

Effective as at 1 July 2008, Council elected not to recognise any value for land under roads acquired on or before 30 June 2008. This accords with the treatment available in Australian Accounting Standard AASB 1051 Land Under Roads and the fact Local Government (Financial Management) Regulation 16(a)(i) prohibits local governments from recognising such land as an asset.

In respect of land under roads acquired on or after 1 July 2008, as detailed above, Local Government (Financial Management) Regulation 16(a)(i) prohibits local governments from recognising such land as an asset.

Whilst such treatment is inconsistent with the requirements of AASB 1051, Local Government (Financial Management) Regulation 4(2) provides, in the event of such an inconsistency, the Local Government (Financial Management) Regulations prevail.

Consequently, any land under roads acquired on or after 1 July 2008 is not included as an asset of the Shire

1. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Depreciation
The depreciable amount of all fixed assets including buildings but excluding freehold land, are depreciated on a straight-line basis over the individual asset's useful life from the time the asset is held ready for use. Leasehold improvements are depreciated over the shorter of either the unexpired period of the lease or the estimated useful life of the improvements.

Major depreciation periods used for each class of depreciable asset are:

Asset	Years
Buildings	30 to 50 years
Furniture and Equipment	5 to 10 years
Plant and Equipment	5 to 10 years
Sealed roads and streets	
formation	not depreciated
pavement	50 years
bituminous seals	30 years
asphalt surfaces	25 years
Gravel Roads	
formation	not depreciated
pavement	50 years
gravel sheet	15 years
Formed roads	
formation	not depreciated
pavement	50 years
Footpaths - slab	12 years
Sewerage piping	50 years
Water supply piping & drainage systems	50 years
Airfields and runways	30 years
Refuse disposal sites	not depreciated

The assets residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

Gains and losses on disposals are determined by comparing proceeds with the carrying amount. These gains and losses are included in profit or loss in the period which they arise.

(k) Fair Value of Assets and Liabilities

When performing a revaluation, the Shire uses a mix of both independent and management valuations using the following as a guide:

Fair Value is the price that the Shire would receive to sell the asset or would have to pay to transfer a liability, in an orderly (i.e. unforced) transaction between independent, knowledgeable and willing market participants at the measurement date.

As fair value is a market-based measure, the closest equivalent observable market pricing information is used to determine fair value. Adjustments to market values may be made having regard to the characteristics of the specific asset. The fair values of assets that are not traded in an active market are determined using one or more valuation techniques. These valuation techniques maximise, to the extent possible, the use of observable market data.

To the extent possible, market information is extracted from either the principal market for the asset (i.e. the market with the greatest volume and level of activity for the asset or, in the absence of such a market, the most advantageous market available to the entity at the end of the reporting period (ie the market that maximises the receipts from the sale of the asset after taking into account transaction costs and transport costs).

1. SIGNIFICANT ACCOUNTING POLICIES (Continued)

(k) Fair Value of Assets and Liabilities (Continued)

For non-financial assets, the fair value measurement also takes into account a market participant's ability to use the asset in its highest and best use or to sell it to another market participant that would use the asset in its highest and best use.

Fair Value Hierarchy
AASB 13 requires the disclosure of fair value information by level of the fair value hierarchy, which categorises fair value measurement into one of three possible levels based on the lowest level that an input that is significant to the measurement can be categorised into as follows:

Level 1
Measurements based on quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.

Level 2
Measurements based on inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3
Measurements based on unobservable inputs for the asset or liability.

The fair values of assets and liabilities that are not traded in an active market are determined using one or more valuation techniques. These valuation techniques maximise, to the extent possible, the use of observable market data. If all significant inputs required to measure fair value are observable, the asset or liability is included in Level 2. If one or more significant inputs are not based on observable market data, the asset or liability is included in Level 3.

Valuation techniques
The Shire selects a valuation technique that is appropriate in the circumstances and for which sufficient data is available to measure fair value. The availability of sufficient and relevant data primarily depends on the specific characteristics of the asset or liability being measured. The valuation techniques selected by the Shire are consistent with one or more of the following valuation approaches:

Market approach
Valuation techniques that use prices and other relevant information generated by market transactions for identical or similar assets or liabilities.

Income approach
Valuation techniques that convert estimated future cash flows or income and expenses into a single discounted present value.

Cost approach
Valuation techniques that reflect the current replacement cost of an asset at its current service capacity.

Each valuation technique requires inputs that reflect the assumptions that buyers and sellers would use when pricing the asset or liability, including assumptions about risks. When selecting a valuation technique, the Shire gives priority to those techniques that maximise the use of observable inputs and minimise the use of unobservable inputs. Inputs that are developed using market data (such as publicly available information on actual transactions) and reflect the assumptions that buyers and sellers would generally use when pricing the asset or liability and considered observable, whereas inputs for which market data is not available and therefore are developed using the best information available about such assumptions are considered unobservable.

1. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Cost approach (Continued)

The mandatory measurement framework imposed by the *Local Government (Financial Management) Regulations* requires, as a minimum, all assets to be revalued at least every 3 years. Relevant disclosures, in accordance with the requirements of Australian Accounting Standards have been made in the budget review report as necessary.

(I) Financial Instruments

Initial Recognition and Measurement
Financial assets and financial liabilities are recognised when the Shire becomes a party to the contractual provisions to the instrument. For financial assets, this is equivalent to the date that the Shire commits itself to either the purchase or sale of the asset (ie trade date accounting is adopted).

Financial instruments are initially measured at fair value plus transaction costs, except where the instrument is classified 'at fair value through profit or loss', in which case transaction costs are expensed to profit or loss immediately.

Classification and Subsequent Measurement
Financial instruments are subsequently measured at fair value, amortised cost using the effective interest rate method, or cost.

Amortised cost is calculated as:

(a) the amount in which the financial asset or financial liability is measured at initial recognition;
(b) less principal repayments and any reduction for impairment; and
(c) plus or minus the cumulative amortisation of the difference, if any, between the amount initially recognised and the maturity amount calculated using the effective interest rate method.

The effective interest method is used to allocate interest income or interest expense over the relevant period and is equivalent to the rate that discounts estimated future cash payments or receipts (including fees, transaction costs and other premiums or discounts) through the expected life (or when this cannot be reliably predicted, the contractual term) of the financial instrument to the net carrying amount of the financial asset or financial liability. Revisions to expected future net cash flows will necessitate an adjustment to the carrying value with a consequential recognition of an income or expense in profit or loss.

(i) Financial assets at fair value through profit and loss
Financial assets are classified at "fair value through profit or loss" when they are held for trading for the purpose of short term profit taking. Assets in this category are classified as current assets. Such assets are subsequently measured at fair value with changes in carrying amount being included in profit or loss.

(ii) Loans and receivables
Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market and are subsequently measured at amortised cost. Gains or losses are recognised in profit or loss.
Loans and receivables are included in current assets where they are expected to mature within 12 months after the end of the reporting period.

1. SIGNIFICANT ACCOUNTING POLICIES (Continued)

(I) Financial Instruments (Continued)

(iii) Held-to-maturity investments

Held-to-maturity investments are non-derivative financial assets with fixed maturities and fixed or determinable payments that the Shire management has the positive intention and ability to hold to maturity. They are subsequently measured at amortised cost. Gains or losses are recognised in profit or loss.

Held-to-maturity investments are included in current assets where they are expected to mature within 12 months after the end of the reporting period. All other investments are classified as non-current.

(iv) Available-for-sale financial assets

Available-for-sale financial assets are non-derivative financial assets that are either not suitable to be classified into other categories of financial assets due to their nature, or they are designated as such by management. They comprise investments in the equity of other entities where there is neither a fixed maturity nor fixed or determinable payments.

They are subsequently measured at fair value with changes in such fair value (i.e. gains or losses) recognised in other comprehensive income (except for impairment losses). When the financial asset is derecognised, the cumulative gain or loss pertaining to that asset previously recognised in other comprehensive income is reclassified into profit or loss.

Available-for-sale financial assets are included in current assets, where they are expected to be sold within 12 months after the end of the reporting period. All other available for sale financial assets are classified as non-current.

(v) Financial liabilities

Non-derivative financial liabilities (excl. financial guarantees) are subsequently measured at amortised cost. Gains or losses are recognised in the profit or loss.

Impairment

A financial asset is deemed to be impaired if, and only if, there is objective evidence of impairment as a result of one or more events (a "loss event") having occurred, which has an impact on the estimated future cash flows of the financial asset(s).

In the case of available-for-sale financial assets, a significant or prolonged decline in the market value of the instrument is considered a loss event. Impairment losses are recognised in profit or loss immediately. Also, any cumulative decline in fair value previously recognised in other comprehensive income is reclassified to profit or loss at this point.

In the case of financial assets carried at amortised cost, loss events may include: indications that the debtors or a group of debtors are experiencing significant financial difficulty, default or delinquency in interest or principal payments; indications that they will enter bankruptcy or other financial reorganisation; and changes in arrears or economic conditions that correlate with defaults.

For financial assets carried at amortised cost (including loans and receivables), a separate allowance account is used to reduce the carrying amount of financial assets impaired by credit losses. After having taken all possible measures of recovery, if management establishes that the carrying amount cannot be recovered by any means, at that point the written-off amounts are charged to the allowance account or the carrying amount of impaired financial assets is reduced directly if no impairment amount was previously recognised in the allowance account.

Derecognition

Financial assets are derecognised where the contractual rights for receipt of cash flows expire or the asset is transferred to another party, whereby the Shire no longer has any significant continual involvement in the risks and benefits associated with the asset.

1. SIGNIFICANT ACCOUNTING POLICIES (Continued)

(l) Financial Instruments (Continued)

Financial liabilities are derecognised where the related obligations are discharged, cancelled or expired. The difference between the carrying amount of the financial liability extinguished or transferred to another party and the fair value of the consideration paid, including the transfer of non-cash assets or liabilities assumed, is recognised in profit or loss.

(m) Impairment of Assets

In accordance with Australian Accounting Standards the Shire assets, other than inventories, are assessed at each reporting date to determine whether there is any indication they may be impaired.

Where such an indication exists, an impairment test is carried out on the asset by comparing the recoverable amount of the asset, being the higher of the asset's fair value less costs to sell and value in use, to the asset's carrying amount.

Any excess of the asset's carrying amount over its recoverable amount is recognised immediately in profit or loss, unless the asset is carried at a revalued amount in accordance with another standard (e.g. AASB 116) whereby any impairment loss of a revaluation decrease in accordance with that other standard.

(m) Impairment of Assets (Continued)

For non-cash generating assets such as roads, drains, public buildings and the like, value in use is represented by the depreciated replacement cost of the asset.

At the time of adopting this budget review report, it is not possible to estimate the amount of impairment losses (if any) as at 30 June 2019.

In any event, an impairment loss is a non-cash transaction and consequently, has no impact on this budget review report.

(n) Trade and Other Payables

Trade and other payables represent liabilities for goods and services provided to the Shire prior to the end of the financial year that are unpaid and arise when the Shire becomes obliged to make future payments in respect of the purchase of these goods and services. The amounts are unsecured, are recognised as a current liability and are normally paid within 30 days of recognition.

(o) Employee Benefits

Short-Term Employee Benefits
Provision is made for the Shire's obligations for short-term employee benefits. Short-term employee benefits are benefits (other than termination benefits) that are expected to be settled wholly before 12 months after the end of the annual reporting period in which the employees render the related service, including wages, salaries and sick leave. Short-term employee benefits are measured at the (undiscounted) amounts expected to be paid when the obligation is settled.

The Shire's obligations for short-term employee benefits such as wages, salaries and sick leave are recognised as a part of current trade and other payables in the statement of financial position. The Shire's obligations for employees' annual leave and long service leave entitlements are recognised as provisions in the statement of financial position.

1. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Other Long-Term Employee Benefits
Provision is made for employees' long service leave and annual leave entitlements not expected to be settled wholly within 12 months after the end of the annual reporting period in which the employees render the related service. Other long-term employee benefits are measured at the present value of the expected future payments to be made to employees. Expected future payments incorporate anticipated future wage and salary levels, durations or service and employee departures and are discounted at rates determined by reference to market yields at the end of the reporting period on government bonds that have maturity dates that approximate the terms of the obligations. Any remeasurements for changes in assumptions of obligations for other long-term employee benefits are recognised in profit or loss in the periods in which the changes occur.

The Shire's obligations for long-term employee benefits are presented as non-current provisions in its statement of financial position, except where the Shire does not have an unconditional right to defer settlement for at least 12 months after the end of the reporting period, in which case the obligations are presented as current provisions.

(p) Borrowing Costs

Borrowing costs are recognised as an expense when incurred except where they are directly attributable to the acquisition, construction or production of a qualifying asset. Where this is the case, they are capitalised as part of the cost of the particular asset until such time as the asset is substantially ready for its intended use or sale.

(q) Provisions

Provisions are recognised when the Shire has a legal or constructive obligation, as a result of past events, for which it is probable that an outflow of economic benefits will result and that outflow can be reliably measured.

Provisions are measured using the best estimate of the amounts required to settle the obligation at the end of the reporting period.

(r) Leases

Leases of fixed assets where substantially all the risks and benefits incidental to the ownership of the asset, but not legal ownership, are transferred to the Shire, are classified as finance leases.

Finance leases are capitalised recording an asset and a liability at the lower amounts equal to the fair value of the leased property or the present value of the minimum lease payments, including any guaranteed residual values. Lease payments are allocated between the reduction of the lease liability and the lease interest expense for the period.

Leased assets are depreciated on a straight live basis over the shorter of their estimated useful lives or the lease term.

Lease payments for operating leases, where substantially all the risks and benefits remain with the lessor, are charged as expenses in the periods in which they are incurred.

Lease incentives under operating leases are recognised as a liability and amortised on a straight line basis over the life of the lease term.

1. SIGNIFICANT ACCOUNTING POLICIES (Continued)

(s) Investment in Associates

An associate is an entity over which the Shire has significant influence. Significant influence is the power to participate in the financial operating policy decisions of that entity but is not control or joint control of those policies. Investments in associates are accounted for in the financial statements by applying the equity method of accounting, whereby the investment is initially recognised at cost and adjusted thereafter for the post-acquisition change in the Shire's share of net assets of the associate. In addition, the Shire's share of the profit or loss of the associate is included in the Shire's profit or loss.

The carrying amount of the investment includes, where applicable, goodwill relating to the associate. Any discount on acquisition, whereby the Shire's share of the net fair value of the associate exceeds the cost of investment, is recognised in profit or loss in the period in which the investment is acquired.

Profits and losses resulting from transactions between the Shire and the associate are eliminated to the extent of the Shire's interest in the associate.

When the Shire's share of losses in an associate equals or exceeds its interest in the associate, the Shire discontinues recognising its share of further losses unless it has incurred legal or constructive obligations or made payments on behalf of the associate. When the associate subsequently makes profits, the Shire will resume recognising its share of those profits once its share of the profits equals the share of the losses not recognised.

(t) Interests in Joint Arrangements

Joint arrangements represent the contractual sharing of control between parties in a business venture where unanimous decisions about relevant activities are required.

Separate joint venture entities providing joint venturers with an interest to net assets are classified as a joint venture and accounted for using the equity method. Refer to note 1(o) for a description of the equity method of accounting.

Joint venture operations represent arrangements whereby joint operators maintain direct interests in each asset and exposure to each liability of the arrangement. The Shire's interests in the assets, liabilities, revenue and expenses of joint operations are included in the respective line items of the financial statements.

(u) Current and Non-Current Classification

In the determination of whether an asset or liability is current or non-current, consideration is given to the time when each asset or liability is expected to be settled. The asset or liability is classified as current if it is expected to be settled within the next 12 months, being the Shire's operational cycle. In the case of liabilities where the Shire does not have the unconditional right to defer settlement beyond 12 months, such as vested long service leave, the liability is classified as current even if not expected to be settled within the next 12 months. Inventories held for trading are classified as current even if not expected to be realised in the next 12 months except for land held for sale where it is held as non-current based on the Shire's intentions to release for sale.

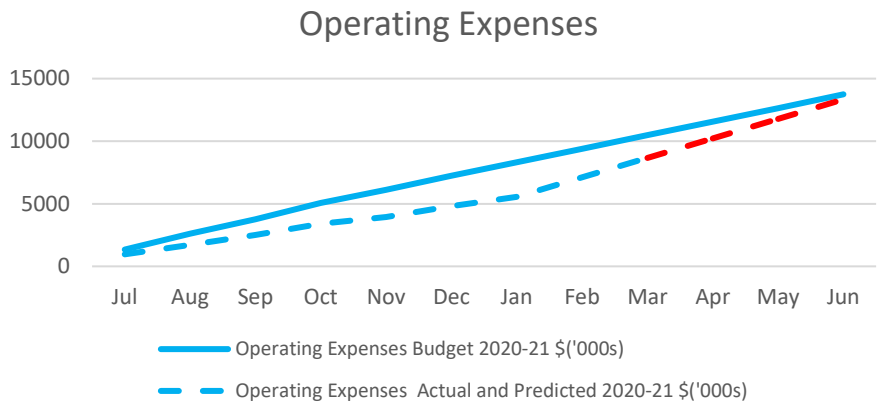
(v) Comparative Figures

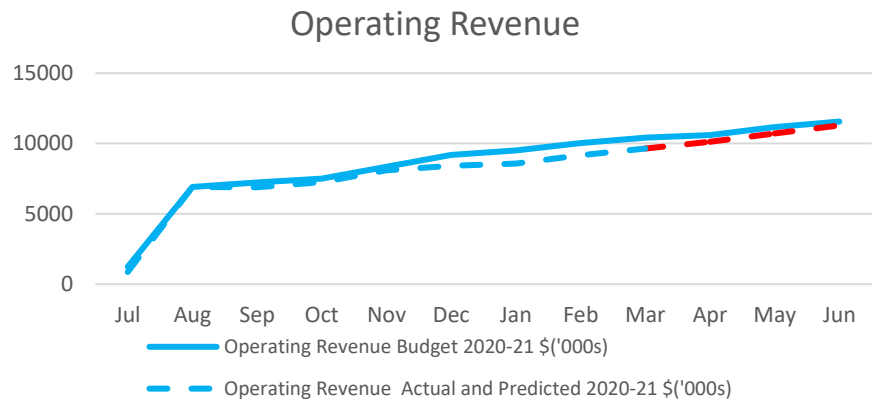
Where required, comparative figures have been adjusted to conform with changes in presentation for the current budget year.

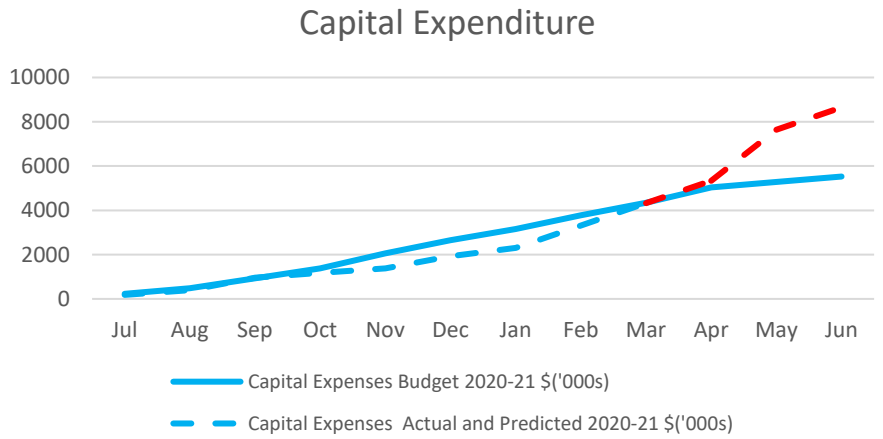
(w) Budget Comparative Figures

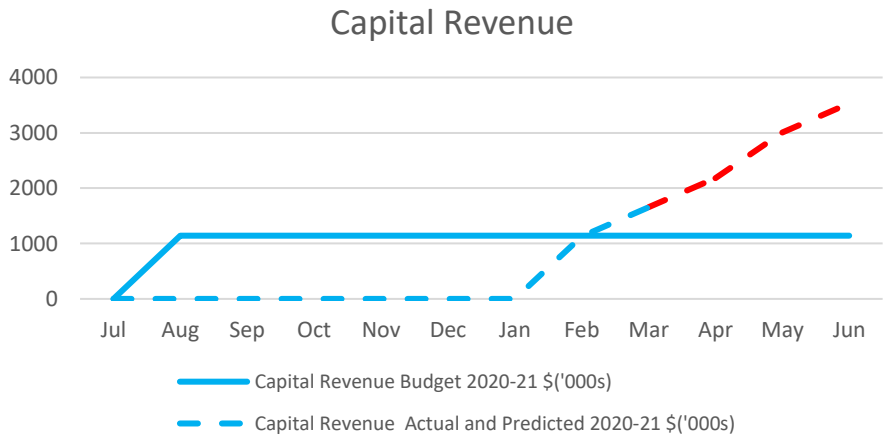
Unless otherwise stated, the budget comparative figures shown in this budget review report relate to the original budget estimate for the relevant item of disclosure.

SHIRE OF YILGARN
SUMMARY GRAPHS - BUDGET REVIEW
For the Period Ended For the Period Ended 31st January 2021









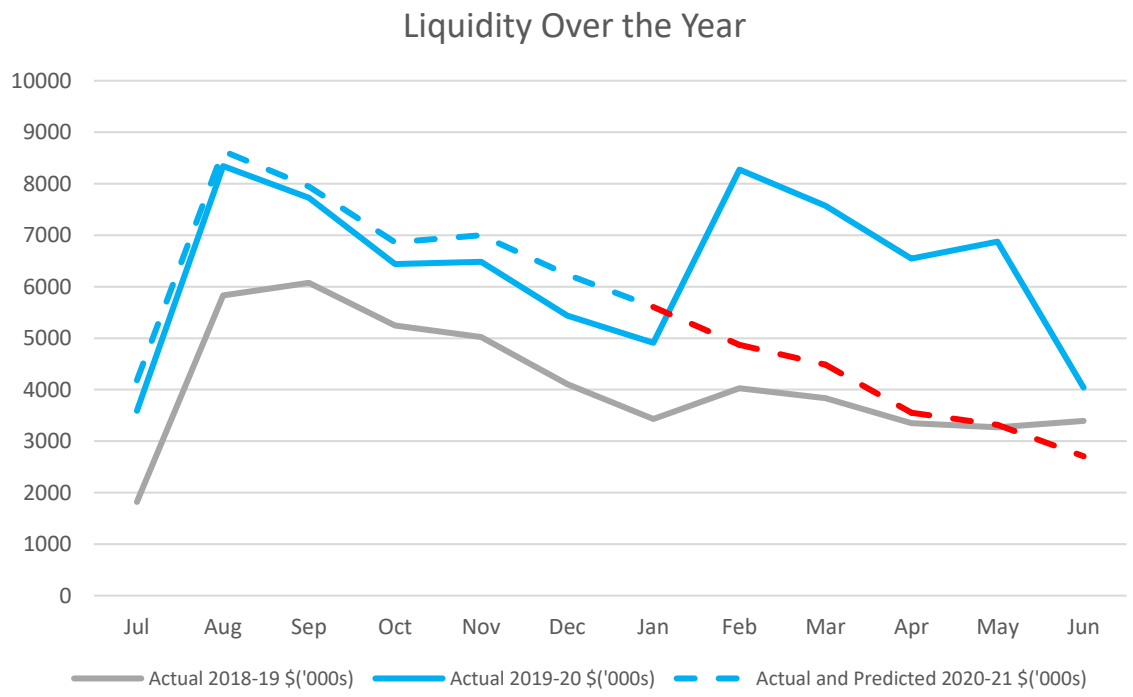
This information is to be read in conjunction with the accompanying financial statements and notes.

Shire of Yilgarn
NOTES TO THE BUDGET REVIEW REPORT
For the Period Ended 31st January 2021

Note 3: NET CURRENT FUNDING POSTION

Positive=Surplus (Negative=Deficit)

	Note	2020-21 This Period	2020-21 Last Period	Same Period Last Year
		$	$	$
Current Assets				
Cash Unrestricted		4,751,981	5,370,145	4,261,133
Cash Restricted		4,557,353	4,555,400	7,429,733
Receivables - Rates and Rubbish		849,522	902,641	853,756
Receivables -Other		322,825	252,421	48,597
Inventories		23,882	16,634	26,792
		10,505,562	**11,097,241**	**12,620,011**
Less: Current Liabilities				
Payables		(87,233)	(49,802)	(48,142)
Provisions		(254,937)	(255,064)	(228,772)
		(342,171)	**(304,866)**	**(276,914)**
Less: Cash Restricted		(4,557,353)	(4,555,400)	(7,429,733)
Net Current Funding Position		**5,606,039**	**6,236,975**	**4,913,364**



Comments/Notes - Net Current Funding Position

Shire of Yilgarn
NOTES TO THE BUDGET REVIEW REPORT
For the Period Ended 31st January 2021

Note 4: BUDGET AMENDMENTS

Amendments to original budget since budget adoption. Surplus/(Deficit)

GL Account Code	Description	Council Resolution	Classification	No Change - (Non Cash Items) Adjust.	Increase in Available Cash	Decrease in Available Cash	Amended Budget Running Balance	Comments
				$	$	$	$	
	Budget Adoption		**Opening Surplus(Deficit)**		**848,816**		**848,816**	
Budget Amendments Previously Approved								
E04119	Support To Community Groups	121/2020	Operating Expenses		40,000		**40,000**	Support for Moorine Rock Tennis Club by taking on
SPRT11	Moorine Rock Tennis Club - Land & Buildings Capital	121/2020	Capital Expenses			82,280	**(82,280)**	Full Payment of Project with Associated
R11311	Contributions, Reimbursements & Donations	121/2020	Operating Revenue		42,280		**42,280**	Reimbursements
Budget Amendments Resulting From Review								
03. General Purpose Funding								
R03124	Reimburse Legal Fees		Operating Revenue		7,000		**7,000**	Increased collection of outstanding legal fees
R03302	Interest Earned - Reserve Funds		Operating Revenue			70,000	**(70,000)**	Lower than expected interest rates received
R03303	Interest Earned - Municipal Funds		Operating Revenue			15,000	**(15,000)**	
05. Law, Order & Public Safety								
E05204	Depreciation - Fire Prevention - Council		Operating Expenses	(150,000)			**0**	Adjustment for Revised Depreciation Rates
E05411	Crime Prevention Strategies		Operating Expenses			4,500	**(4,500)**	Additional Security Camera's
07. Health								
E07404	Depreciation - Medical Services		Operating Expenses	(7,000)			**0**	Adjustment for Revised Depreciation Rates
E07411	Medical Centre Operations		Operating Expenses			7,500	**(7,500)**	Increased Costs
08. Education & Welfare								
R08104	Crosswords Advertising Sales		Operating Revenue			5,000	**(5,000)**	Lower than expected Advertising Sales
E08112	Office Expenses, Stationery And Printing		Operating Expenses			3,000	**(3,000)**	Copier Mantenance Imprint Cost have Increased
E08204	Depreciation - Care Of Families And Children		Operating Expenses	(17,000)			**0**	Adjustment for Revised Depreciation Rates
E08301	Senior Citizen Centre Salaries		Operating Expenses		10,000		**10,000**	Allocation for MCS Position Removed
E08302	Senior Citizen Centre Superannuation		Operating Expenses		6,000		**6,000**	
E08312	Senior Citizens Centre Maintenance		Operating Expenses		12,000		**12,000**	Carryover of Window Treatments

Shire of Yilgarn
NOTES TO THE BUDGET REVIEW REPORT
For the Period Ended 31st January 2021

Note 4: BUDGET AMENDMENTS

Amendments to original budget since budget adoption. Surplus/(Deficit)

GL Account Code	Description	Council Resolution	Classification	No Change - (Non Cash Items) Adjust.	Increase in Available Cash	Decrease in Available Cash	Amended Budget Running Balance	Comments
				$	$	$	$	
E08404	Depreciation - Aged Care - Accommodation		Operating Expenses	(28,000)			**0**	Adjustment for Revised Depreciation Rates
J08403	Homes for the Aged - Units 5 & 6 - Capital Works		Capital Expenses		46,000		**46,000**	Double up with Expenditure at J08404 - Units 7 & 8
J08404	Homes for the Aged - Units 7 & 8 - Capital Works		Capital Expenses			6,000	**(6,000)**	Additional Expenditure Required
09. Housing								
E09104	Depreciation - Housing - Administration		Operating Expenses	(8,000)			**0**	Adjustment for Revised Depreciation Rates
E09112	37 Taurus St Maintenance		Operating Expenses		5,000		**5,000**	Lower than Expected Maintenance Costs
E09120	91C Antares Street - Maintenance		Operating Expenses		13,000		**13,000**	Lower than Expected Maintenance Costs
E09204	Depreciation - Housing - Works		Operating Expenses	(17,000)			**0**	Adjustment for Revised Depreciation Rates
E09404	Depreciation - Housing - Health And Building		Operating Expenses	(9,000)			**0**	Adjustment for Revised Depreciation Rates
E09412	120 Antares St - Maintenance		Operating Expenses		5,000		**5,000**	Lower than Expected Maintenance Costs
R09508	Rent - 2/50 Antares Street		Operating Expenses			13,000	**(13,000)**	Unit isnt Expected to be Rented
E09504	Depreciation - Commercial Hse		Operating Expenses	(14,000)			**0**	Adjustment for Revised Depreciation Rates
J09500	103 Altair Street - Land & Buildings Capital		Capital Expenses		7,000		**7,000**	Cost of Improvements less than Expected
E09604	Depreciation - Housing - Medical Services		Operating Expenses	(12,000)			**0**	Adjustment for Revised Depreciation Rates
E09712	Professional Housing Libra Place - Maintenance		Operating Revenue		12,000		**12,000**	Maintenance Costs to be Less Than Expected
10. Community Amenities								
E10104	Depreciation - Sanitation - Household		Operating Expenses	(5,000)			**0**	Adjustment for Revised Depreciation Rates
J10101	SX Refuse Transfer Site Operations		Operating Expenses		11,500		**11,500**	Rehab Costing less than Expected
J10105	Moorine Rock Refuse Site Operations		Operating Expenses		5,000		**5,000**	Operational Costs less than Expected
J10106	Bodallin Refuse Site Operations		Operating Expenses			3,000	**(3,000)**	Operational Costs more than Expected
R10211	Commercial Collection (Additional)		Operating Revenue		6,000		**6,000**	Additional Revenue
E10220	Waste Projects (Incls Bulk Recycling Bins & Collections)		Operating Expenses			30,000	**(30,000)**	Drummuster Pad & Fence at Southern Cross Tip
E10304	Depreciation - Sewerage - Southern Cross		Operating Expenses	(2,000)			**0**	Adjustment for Revised Depreciation Rates
J10301	Southern Cross Sewerage Maintenance		Operating Expenses			35,000	**(35,000)**	Significant Mainteneance Required at Ponds
R10502	Septic Waste Disposal Fees		Operating Revenue		41,000		**41,000**	Significant SPQ and Other Related Projects
E10610	Town Planning Scheme - Other		Operating Expenses		5,000		**5,000**	Costs Associated with Subdivision of 50 Antares St
J10705	Moorine Rock Toilet - Maintenance		Operating Expenses			3,500	**(3,500)**	Higher than Antisipated Costs
J10714	SX CBD Toilet - Operations		Operating Expenses			3,000	**(3,000)**	Higher than Antisipated Costs
J10710	Cemetery / Crematorium Operations		Operating Expenses		5,000		**5,000**	Lower than Antisipated Costs
E10804	Depreciation - Community Vehicles		Operating Expenses	8,000			**0**	Communty Bus Depn was going to Plant Depn
E10904	Depreciation - Urban Stormwater Drainage		Operating Expenses	(70,000)			**0**	Adjustment for Revised Depreciation Rates
J10604	Xmas decorations. lights and banners		Operating Expenses		24,000		**24,000**	Carryover Christmas Streeting Upgrades

Shire of Yilgarn
NOTES TO THE BUDGET REVIEW REPORT
For the Period Ended 31st January 2021

Note 4: BUDGET AMENDMENTS

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GL Account Code	Description	Council Resolution	Classification	No Change - (Non Cash Items) Adjust.	Increase in Available Cash	Decrease in Available Cash	Amended Budget Running Balance	Comments
				$	$	$	$	
11. Recreation & Culture								
E11104	Depreciation - Public Halls And Civic Centres		Operating Expenses	(95,000)			**0**	Adjustment for Revised Depreciation Rates
J11102	SX Community Centre Operations		Operating Expenses		6,000		**6,000**	General Increase in Operational Expenditure
E11118	Bodallin Hall - Maintenance		Operating Expenses			10,000	**(10,000)**	Upgrade Septic Leach Drains
E11122	Mt Hampton Hall - Maintenance		Operating Expenses			20,000	**(20,000)**	Tennis Court Shed and Associated Expenditure
E11204	Depreciation - Swimming Areas And Beaches		Operating Expenses	23,000			**0**	Increased Depreciation due to New Facility
J11201	Swimming Pool maintenance		Operating Expenses			20,000	**(20,000)**	Minor Maintenance after Facility Completion
E11213	Swimming Pool Electricity		Operating Expenses			6,500	**(6,500)**	Higher than Expected Running Costs
E11218	Loan Interest - Loan 98		Operating Expenses		11,000		**11,000**	Loan interest lower that expected & only 1 payment
R11202	Swimming Pool Grants & Contributions		Capital Revenue		53,300		**53,300**	Contribution from local Mining Company for Pool
E11220	Loan Principal - Loan 98		Capital Expenses		42,921		**42,921**	Only One Repayment to be made in First Year
E11252	Swimming Pool - Plant & Equipment Capital		Capital Expenses			30,000	**(30,000)**	Increased Allocation for Pool Covers and Cricket Nets
E11304	Depreciation - Other Recreation And Sport		Operating Expenses	(85,000)			**0**	Adjustment for Revised Depreciation Rates
J11316	Marvel Loch Townsitel Maintenance		Operating Revenue		5,000		**5,000**	Expected Expenditure Lower than Antisipated
J11320	Southern Cross Golf Club		Operating Expenses			3,000	**(3,000)**	Expected Expenditure Greater than Antisipated
SPRT10	SX Sporting Complex - Land & Buildings Capital		Capital Expenses		25,000		**25,000**	Some Projects Will Be Carried Forward
E11504	Depreciation - Heritage		Operating Expenses	(25,000)			**0**	Adjustment for Revised Depreciation Rates
J11501	Museum Building Maintenance		Operating Expenses			4,000	**(4,000)**	Higher Than Expected Maintenance
J11502	Yilgarn History Museum - Land & Buildings Capital		Capital Expenses		4,000		**4,000**	Lower than Antisipated Fencing Costs
12. Transport								
E12204	Infrastructure Depreciation		Operating Expenses	(1,200,000)			**0**	Adjustment for Revised Depreciation Rates
J12201	Infrastructure Unclassified - Street Signs, Gravel Pushups, Re-Habs		Operating Expenses			10,000	**(10,000)**	Lower Than Expected Expenditre
13. Economic Services								
E13204	Depreciation - Tourism And Area Promotion		Operating Expenses	(80,000)			**0**	Adjustment for Revised Depreciation Rates
J13202	Caravan Park Maintenance - Units / Ablution Blocks		Operating Expenses		20,000		**20,000**	Lower Than Eexpected Expenditure
E13218	Caravan Park Other Expenses		Operating Expenses		10,000		**10,000**	Transfer for Use of Tourism Committee
E13221	Sx Entry Statements		Operating Expenses			10,000	**(10,000)**	Transfer from Caravan Park - Other Expenditure
J13203	Caravan Park Improvements - Land & Buildings Capital		Capital Expenses			25,000	**(25,000)**	Increase Cost of Buildings
R13402	Charges - Sale Of Water		Operating Revenue			80,000	**(80,000)**	
R13407	Standpipe Controller Charges - Prepaid		Operating Revenue			100,000	**(100,000)**	Lower Than Expected Standpie Usaage
E13409	Standpipe Water Costs		Operating Expenses		170,000		**170,000**	

Shire of Yilgarn
NOTES TO THE BUDGET REVIEW REPORT
For the Period Ended 31st January 2021

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				$	$	$	$	
14. Other Property & Services								
E14204	Depreciation - Public Works Overheads		Operating Expenses	(32,000)			**0**	Adjustment for Revised Depreciation Rates
E14212	Training		Operating Expenses		10,000		**10,000**	Lower Than Expected Training Costs
E14645	Consultants		Operating Expenses				**0**	0
J14601	Administration Centre - Land & Buildings Capital		Capital Expenses		17,000		**17,000**	Works to be Carried Forward
R14712	Transfer From Reserve Building		Capital Revenue			400,000	**(400,000)**	Transfer not Required
R14720	Transfer From Sport & Rec Reserve		Capital Revenue			46,205	**(46,205)**	
R14730	Transfer From Youth Development Reserve		Capital Revenue			100,000	**(100,000)**	
E14712	Transfer To Building Reserve		Capital Expenses			250,000	**(250,000)**	Staff & Potential Future Chemist Housing
E14713	Transfer To Airport Reserve		Capital Expenses			50,000	**(50,000)**	Replace Runway Lights
E14715	Transfer To Sewerage Upgrade Reserve		Capital Expenses			100,000	**(100,000)**	Increase Evap Pond Capacity at ML & SX Systems
E14720	Transfer To Sport And Rec Reserve		Capital Expenses			200,000	**(200,000)**	Rebuild Reserve for Future Projects
E14732	Transfer To Tourism Reserve		Capital Expenses			50,000	**(50,000)**	Fund Outcomes from Tourism Strategy
Amended Budget Cash Position as per Council Resolution				**(1,825,000)**	**1,525,817**	**1,795,485**	**(269,668)**	

Attachment 9.2.5

Shire of YILGARN

"good country for hardy people"

Corporate Business Plan

2020/21 to 2024/25

Table of Contents

Introduction

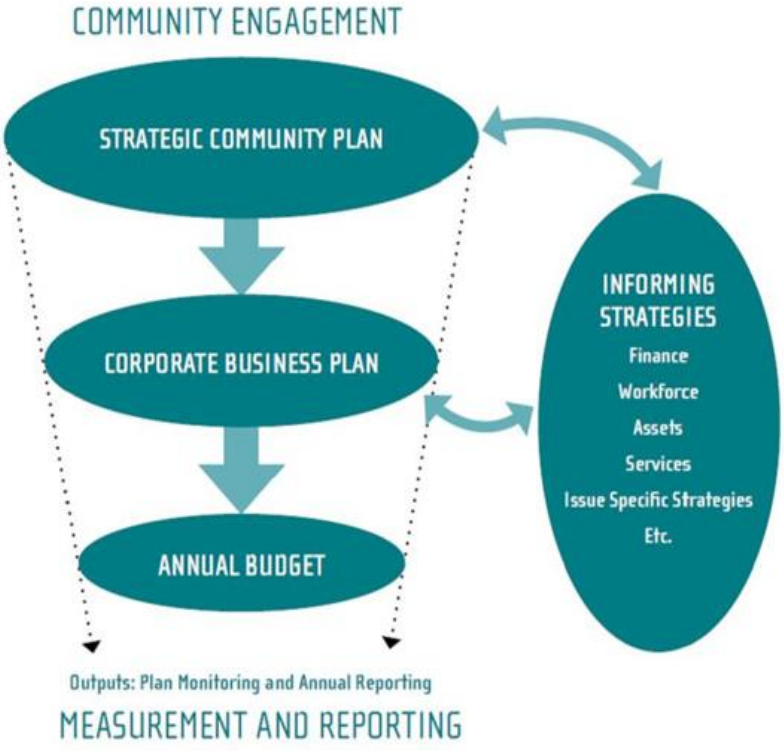
The Corporate Business Plan is the Shire of Yilgarn's five year service and project delivery plan. It is aligned with the Community Strategic Plan. The purpose of this Plan is to demonstrate the operational capacity of the Shire to achieve the aspirations that have been identified in the Community Strategic plan.

The Corporate Business Plan and the Community Strategic Plan are the primary documents that form part of the integrated planning and reporting framework legislated by State Government that give communities the opportunity to shape their own future.

The Community Strategic Plan sits at the top of the framework supported by the Corporate Business Plan, Annual Budget, Asset Management Plan, Long Term Financial Plan and Workforce Plan. The Corporate Business Plan is the first step towards achieving the communities' key priorities.

Planning Framework

The diagram below illustrates the relationship between the Shire's strategic and operational documents, highlighting the position of the Corporate Business Plan within this planning hierarchy.



Strategic Direction

Our Vision

We are a proud agricultural and mining based economy, providing opportunities for our residents that will build an inclusive and prosperous community in the future. We are a resilient community best described by our motto "Good Country for Hardy People".

Our Mission

The Shire of Yilgarn will deliver quality service, facilities and representation in order to achieve our Vision.

Our Values

We will promote and enhance the following values in our relationships with our community:

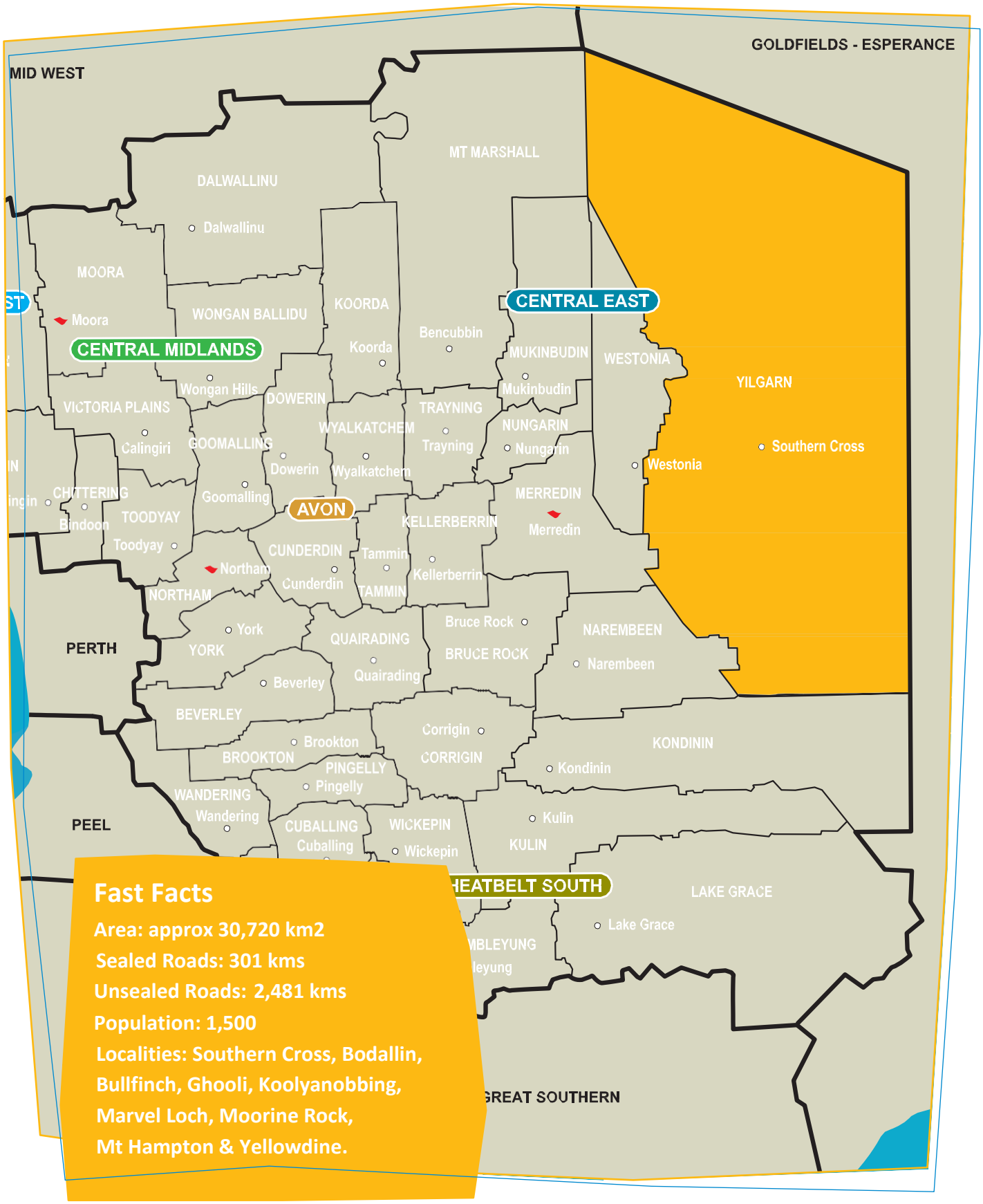
- **Honesty** in our dealings
- **Integrity** in our actions
- **Consistency** in decision making
- **Teamwork** in our operations
- **Respect** to others and their decisions
- **Caring** for people in our community
- **Commitment** to decisions and roles
- **Responsive** to the needs of others
- **Effective Communication** with all

10 Year Strategic Priorities

The Council is proposing that current services will continue to be delivered but there will be a particular focus on the following strategic priorities over the coming years:

- Embracing technology
- Supporting tourism
- Support for business
- Community involvement
- Advocacy for essential services

Our Shire



Fast Facts

Area: approx 30,720 km2
Sealed Roads: 301 kms
Unsealed Roads: 2,481 kms
Population: 1,500
Localities: Southern Cross, Bodallin, Bullfinch, Ghooli, Koolyanobbing, Marvel Loch, Moorine Rock, Mt Hampton & Yellowdine.

Our Shire, continued

The Shire of Yilgarn is located in Western Australia's Eastern Wheatbelt region. The main town in the Yilgarn, Southern Cross, is located on the Great Eastern Highway 370 kms east of Perth and 220 kms west of Kalgoorlie.

Our Shire covers 30,720 square kilometres, which compares to approximately half of the size of the State of Tasmania, and is almost the same land mass area as the whole of The Netherlands. The area of the Shire of Yilgarn is approximately 19% of the total Wheatbelt region.

The Shire has a population of approximately 1,200 people (2016 census), however it serves well over 2,000 people due to the resources industry in the Shire and the fly in fly out / drive in drive out nature of work. The Shire is well known as the Gateway between the Wheatbelt and the Goldfields.

The name 'Yilgarn' is aboriginal for 'white stone' or 'quartz'.

Southern Cross is the main centre, and houses the administration of the Shire, however, there are numerous other smaller townsites throughout the Shire, including, Bodallin, Bullfinch, Ghooli, Koolyanobbing, Marvel Loch, Moorine Rock, Mt Hampton and Yellowdine.

In 1891, the Yilgarn Road Board was gazetted, and in 1918, it merged with the Municipality of Southern Cross. In1961 it became the Shire of Yilgarn following changes to the Local Government Act 1960.

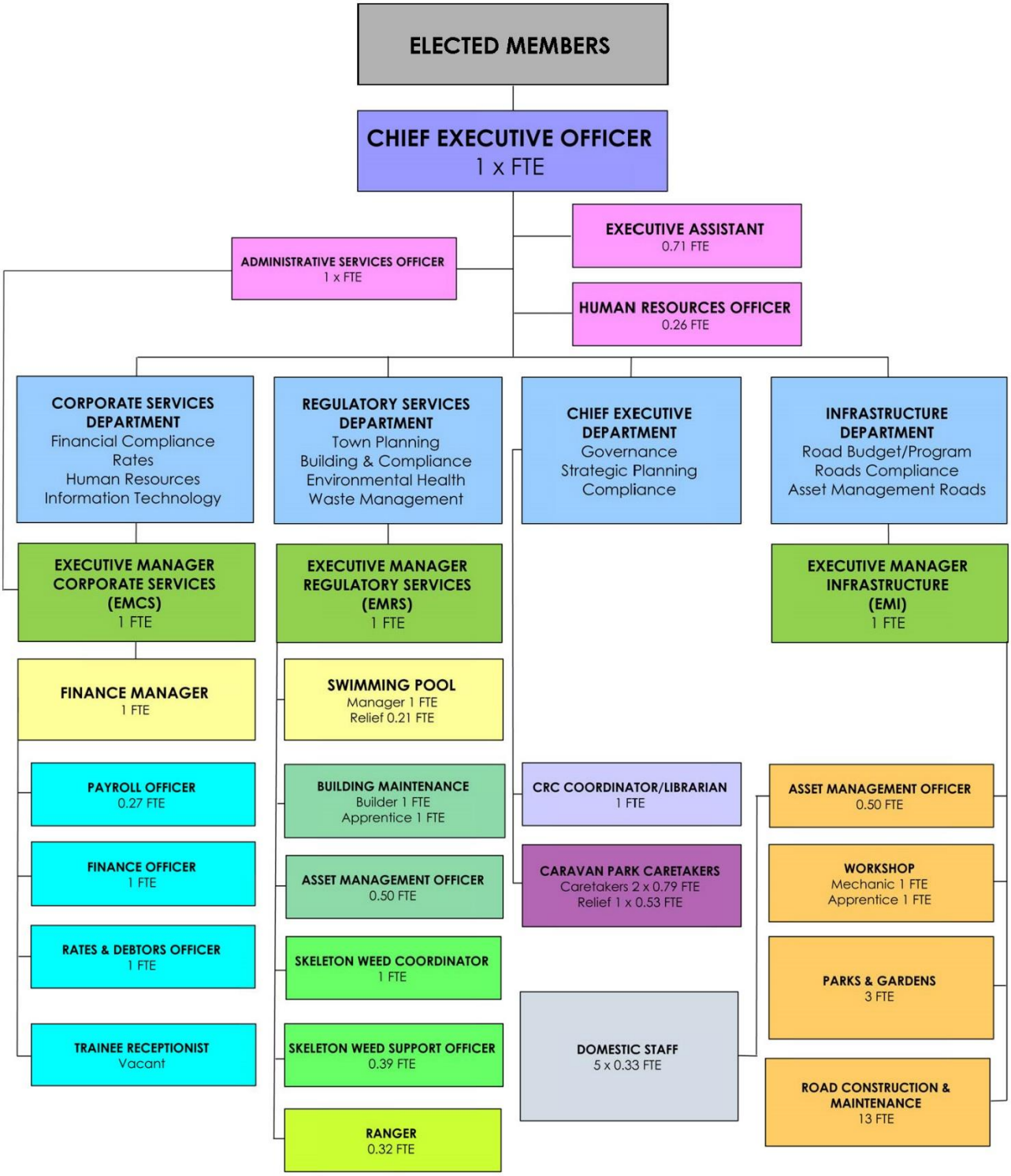
The Shire provides roads, recreational facilities, funding for medical services, parks and gardens, street lighting,and waste collection amongst other community services and infrastructure. Our elected members advocate for theinterests of the community and make decisions about where and how development can occur.

Agricultural production and a continual increase in mining activities are the main primary industries for the Shire.Mining employees make up an increasing percentage of the workforce and the sector generates approximately $80 - $90 million worth of royalties for the state of Western Australia.

Distance to Perth and the regional centres of Kalgoorlie and Merredin is one of our biggest challenges and thischallenge is often at the forefront of decisions our Council makes on behalf of our community to ensure we have access to facilities and services.

Shire of Yilgarn - Workforce

To achieve the strategic goals and community outcomes, the Chief Executive Officer and Executive Management team are responsible for successfully leading and managing the organisation. The current lines of reporting are as follows:



Our Workforce, continued

The Shire of Yilgarn entered into an Enterprise Bargaining Agreement with all staff (excluding Executives on fixed term performance-based contracts) in July 2017 and was assented to by the Fair Work Commission in September 2017 and is due expire in September 2021. This Enterprise Bargaining Agreement sets the pay and conditions for Shire employees until the end of the 2020/21 financial year.

In regards to Workforce Planning for the Shire of Yilgarn, Council agrees with the following:

Our employees are our most valued asset.

- ✓ We are committed to maintaining our own workforce for the provision of services and asset maintenance where appropriate
- ✓ The current Organisational Structure is supported and will be reviewed from time to time and when key personnel leave the organisation
- ✓ Consultants will be used to provide specialised advice where required when current staff do not possess the skills and knowledge required
- ✓ The Shire will continue to work with other local governments in the region and private contractors to provide specialised services where that service cannot reasonably be sourced efficiently and effectively from within the Shire eg contract Ranger Services, IT support
- ✓ The following are the key risks to the current staff structure and consequently to the level of service provision by the Shire:
    - Reduced government funding (eg General Purpose Grants, roadworks funding)
    - Reduced rate revenue from fluctuations in mining activity within the Shire
    - Removal of State funded services (eg Community Resource Centre, Police Licensing)
    - Reduction in population
- ✓ The Shire embraces the opportunities to improve customer service through use of Information Technology. It is recognised that through advances in Information Technology the need for customer service staff will reduce over time

Service Delivery Plan

Council has identified the following Services that are provided by the Shire:

Animal Control	Fire Prevention
Public Safety (Emergency Management)	Health Administration & Inspection
Pest Control	Medical Services
Community Resource Centre	Community Development
Care of Families & Children	Senior Citizens Centre
Aged Accommodation	Housing
Sanitation	Sewerage
Town Planning & Regional Development	Cemetery
Community Vehicles	Public Toilets
Public Halls and Civic Centres	Public Swimming Pool
Sport & Recreation Facilities	Library Services
Other Culture and Heritage	Road Construction
Road Maintenance	Aerodrome
Footpaths, Verges, Townscape	Transport Licensing & TransWA Ticketing
Tourism & Area Promotion	Caravan Park & Motor Lodge
Rural Services	Building Control
Standpipes	General Economic Initiatives
Civic Leadership	

Council has reviewed all services provided by the Shire. In undertaking this review Council has considered the following factors:

- ✓ Why do we provide the Service?
  Is the service a statutory requirement or a service undertaken voluntarily by the Council to fill a need within the community.

- ✓ How is the Service funded?
  Is the service funded by grant funding, user pays, general revenue or a mixture of these revenue sources.

- ✓ What is the level of service being provided?

- ✓ What issues will need to be addressed in providing the services in the future?

- ✓ How we will maintain, improve or reduce the level of service in the future?

- ✓ What actions need to be addressed over the life of the Plan?

The service delivery plan follows:

ANIMAL CONTROL

Schedule 5 - Law, Order and Public Safety

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: Maintain a liveable, safe and secure community.

Strategies:
- Retain a strong focus on community safety and crime prevention.

Background

Local governments have responsibility for the registration and control of Dogs (Dog Act 1976) and Cats (Cat Act 2011). Council has also adopted new local laws relating to Dogs (2017), which are available on the Shire website.

Dog and Cat registrations are administered by the Shire. The Shire receives a modest income from Dog and Cat registrations however the cost of providing Animal Control is funded by general revenue.

Service Level

We will maintain the Service Level by continuing to

- ✓ Employ a part time Ranger.
- ✓ Engage WA Contract Ranger Service to provide a one day a fortnight service.
- ✓ Maintain the pound facilities located at the Shire Depot.
- ✓ Maintain the Dog & Cat registration system.
- ✓ Include educational and awareness material in the local Crosswords.
- ✓ Respond to complaints in a timely manner.

Issues

- Controlling Stray Cats.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	EMRS
2021/2022	Review service level standards of Ranger Services.	CEO/EMRS
2022/2023	Ongoing Service Provision.	EMRS
2023/2024	Ongoing Service Provision.	EMRS
2024/2025	Review of Dogs Local Law due 2025	EMRS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	65,425.69	66,537.93	67,669.07	68,819.44	69,989.37
Operating Income	(4,852.17)	(4,934.66)	(5,018.55)	(5,103.87)	(5,190.63)
Projected Program Cost to Council	***60,573.51***	***61,603.26***	***62,650.52***	***63,715.58***	***64,798.74***

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: Maintain a liveable, safe and secure community.

Strategies:
- Advocate and actively support emergency management and services in the district.

Background

The Bushfires Act 1954 delegates the following responsibilities to Local Government:

- Varying the restrictive and prohibited burning times;
- Issuing permits to burn in restrictive burn periods;
- Enforcing fire break requirements;
- Manage vehicles used by volunteer brigades;
- Keep a register of bush fire brigade members;
- Undertake enforcement action for breaches under the Act;
- Manage Harvest & Movement of Vehicles Bans

The Emergency Services Levy is collected by local governments on behalf of the Department

Service Level

We will maintain the Service Level by continuing to

- ✓ Provide administrative support to our CBFCO, Deputy CBFCO's and volunteer brigades.
- ✓ Liaising with DFES and relevant parties regarding provision of equipment & vehicles to meet the Shires needs.
- ✓ Undertake townsite inspections for fuel loads and issue warnings and notices where required.
- ✓ Review standpipe locations for fire fighting logistics.
- ✓ Maintain Rural Numbering System for whole of Shire.

Issues

- Difficulty in attracting and retaining volunteers.
- Future of CBFCO role, will this become a paid position, should remuneration be paid.
- Operating and capital lost determinations by DFES.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	EMRS
2021/2022	Ongoing Service Provision.	EMRS
2022/2023	Ongoing Service Provision.	EMRS
2023/2024	Ongoing Service Provision.	EMRS
2024/2025	Ongoing Service Provision.	EMRS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	213,312.83	216,939.15	220,627.12	224,377.78	228,192.20
Operating Income	(65,391.42)	(66,503.08)	(67,633.63)	(68,783.40)	(69,952.72)
Projected Program Cost to Council	***147,921.41***	***150,436.07***	***152,993.49***	***155,594.38***	***158,239.48***

PUBLIC SAFETY (EMERGENCY MANAGEMENT)

Schedule 5 - Law, Order and Public Safety

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: Maintain a liveable, safe and secure community.

Strategies:
- Retain a strong focus on community safety.
- Advocate and actively support emergency management and services in the district

Background

The Emergency Management Act 2005 requires local government to have Local Emergency Management Arrangements in place including recovery provisions.

Emergency Management is funded by general revenue; however in the event of a "disaster" relief funding is available from the Lord Mayors Appeal Fund and the Western Australian Natural Disaster Relief Arrangements.

Service Level

We will maintain the Service Level by continuing to

- ✓ Provide administrative support to the Yilgarn – Westonia Local Emergency Management Committee.
- ✓ Participate in emergency management exercises.
- ✓ Plan and implement recovery services as required.

Issues

- Retaining and recruiting volunteers.

Actions

When	What	Who
2020/2021	Emergency management exercise	EMRS
2021/2022	Review Local Emergency Management Arrangements	EMRS
2022/2023	Emergency management exercise	EMRS
2023/2024	Emergency management exercise	EMRS
2024/2025	Emergency management exercise	EMRS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	24,249.30	24,661.54	25,080.79	25,507.16	25,940.78
Operating Income	-	-	-	-	-
Projected Program Cost to Council	***24,249.30***	***24,661.54***	***25,080.79***	***25,507.16***	***25,940.78***

HEALTH ADMINISTRATION AND INSPECTIONS

Schedule 7 - Health

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: Maintain a liveable, safe and secure community.

Strategies:
- Retain a strong focus on community safety and crime prevention.

Background

The state government has introduced a new Public Health Act 2016 to replace the outdated Health Act 1911. The *Public Health Act 2016* will be implemented in a staged manner over the next 3 to 5 years. The old *Health Act 1911* (which will be known as the *Health (Miscellaneous Provisions) Act 1911* , and all regulations made under the *Health Act 1911* , will continue to be the main enforcement tool, until the new provisions of the *Public Health Act 2016* are proclaimed over the coming years.

The provision of Health Services is funded from general revenue for the most part, with a small amount of income derived from fees & charges.

Service Level

We will maintain the Service Level by continuing to

- ✓ Employ a qualified Environmental Health Officer.
- ✓ Enforce and administer the provisions of the Health Act, Health Local Laws and other relevant health legislation.
- ✓ Educate and inform the community through the provision of relevant information.

Issues

- Implementation of new Public Health Act 2016.
- Difficulty in attracting and retaining qualified Environmental Health Officers.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	EMRS
2021/2022	Prepare Local Public Health Plan	EMRS
2022/2023	Review Health Local Laws to comply with the Public Health Act 2016.	EMRS
2023/2024	Ongoing Service Provision.	EMRS
2024/2025	Ongoing Service Provision.	EMRS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	81,313.72	82,696.06	84,101.89	85,531.62	86,985.66
Operating Income	(1,357.79)	(1,380.87)	(1,404.34)	(1,428.22)	(1,452.50)
Projected Program Cost to Council	***79,955.94***	***81,315.19***	***82,697.54***	***84,103.40***	***85,533.16***

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: Maintain a livable, safe and secure community.

Strategies:

Background

There is no statutory requirement to undertake treatment of mosquitoes, however due to the health risks that can be associated through blood-borne viruses and for the comfort of our residents the Shire has undertaken a fogging program within town sites. The Shire is exploring more strategic and cost effective methods of mosquito control, namely baiting of breeding sites.

The Pest Control service is funded from general revenue.

Council supports the Eastern Wheatbelt Biosecurity Group (EWBG) in the control and management of declared pests in the area. The EWBG began in 2000/01 with three Shires each contributing financially to the group and matched dollar for dollar by the State Government.

There are now eleven Shires in the EWBG control area. These Shires border the eastern edge of the Wheatbelt agricultural area and are bounded on the eastern side by the State Barrier Fence. In 2015-16 the EWBG transitioned from a Declared Species Group to a Recognised Biosecurity Group under the Biosecurity and Management Act.

Service Level

We will maintain the Service Level by continuing to

- ✓ Undertake fogging where and when required.
- ✓ Monitor adult mosquito numbers to determine breeding areas.
- ✓ Strategic baiting of known breeding sites.
- ✓ Educate the public on how to minimise mosquito breeding opportunities.

Issues

- Are there better control options available including baiting waterways and potential breeding sites.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	EMRS
2021/2022	Review the effectiveness and alternative to current treatment.	EMRS
2022/2023	Ongoing Service Provision.	EMRS
2023/2024	Ongoing Service Provision.	EMRS
2024/2025	Ongoing Service Provision.	EMRS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	15,111.40	15,368.30	15,629.56	15,895.26	16,165.48
Operating Income	-	-	-	-	-
Projected Program Cost to Council	***15,111.40***	***15,368.30***	***15,629.56***	***15,895.26***	***16,165.48***

MEDICAL SERVICES

Schedule 7 - Health

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: Retain and upgrade of current health and educational services and infrastructure (Shire and State responsibility).

Strategies:

- Maintain quality infrastructure for health providers (medical centre, housing).
- Lobby state and federal government for improved health infrastructure.
- Support continued incentive funding for a GP in the Shire.
- Continue to provide free use of facilities for use by service providers (Chiropractors, Physiotherapist, Veterinarian).

Background

The Shire of Yilgarn has no statutory requirement to subsidise Medical Services as this is a clear State and Commonwealth government responsibility. Notwithstanding this Council has agreed to subsidise the provision of a local GP service and to subsidise the local Chemist due to the strong community demand to have access to these services.

Medical services are funded from general revenue

Service Level

We will maintain the Service Level by continuing to

- ✓ Provide free use of a house and the Doctors surgery located at Achernar St Southern Cross for a GP.
- ✓ Provide subsidised use of a Shire residence and pay the lease on the Chemist building for use by the local Chemist.
- ✓ Maintain and upgrade medical equipment owned by the Shire when necessary.
- ✓ Maintain cash backed health service reserve funds.

Issues

- General shortage of appropriately qualified GP's willing to practice in isolated one Doctor rural towns.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	CEO
2021/2022	Ongoing Service Provision.	CEO
2022/2023	Review Medical Services Agreement	CEO/Council
2023/2024	Ongoing Service Provision.	CEO
2024/2025	Ongoing Service Provision.	CEO

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	147,907.01	150,421.43	152,978.59	155,579.23	158,224.07
Operating Income	-	-	-	-	-
Projected Program Cost to Council	***147,907.01***	***150,421.43***	***152,978.59***	***155,579.23***	***158,224.07***

Strategic Community Plan

Economic Objective: A prosperous future for our community.
Outcome: Business in the Shire remain competitive and viable.
Strategies:
- Continue to support and manage the Community Resource Centre.
- Improve Visitor information services.

Background

The Shire of Yilgarn has entered into a service agreement for community resource network services with the Department of Regional Development. The current agreement ends June 2020.

The Community Resource Centre building was designed and constructed for the specific purpose of providing community resource network services. This was a joint venture project with the Education Department. The building is located on the School grounds and was designed to allow use and access by both the School and general public.
The Shire has renewed the original 21 year lease agreement with the Education Department for a further 10 years with a 10 year option, commencing on the 1st January 2021.

The Community Resource Centre receives ~$100,000 per annum from the Department of Regional Development and generates additional income from user charges with any shortfall funded by the Shire.

Service Level

We will maintain the Service Level by continuing to

- ✓ Provide CRC services as per the service agreement with the Department of Regional Development.
- ✓ Encourage youth, community & business training opportunities.
- ✓ Review community service needs if the state government withdraws recurrent funding for community resource centres.

Issues

- Relevance of some of the services given improvements in access to IT resources.
- Provision of Library Services if CRC funding is to be discontinued.

Actions

When	What	Who
2020/2021	Facility Lease to be Renewed.	CEO
2021/2022	Ongoing Service Provision.	CEO
2022/2023	Ongoing Service Provision.	CEO
2023/2024	Ongoing Service Provision.	CEO
2024/2025	Ongoing Service Provision.	CEO

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	218,801.47	222,521.09	226,303.95	230,151.12	234,063.69
Operating Income	(150,141.47)	(152,693.87)	(155,289.67)	(157,929.59)	(160,614.40)
Projected Program Cost to Council	***68,660.00***	***69,827.22***	***71,014.28***	***72,221.52***	***73,449.29***

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: Maintain / increase percentage of residents engaged in recreation, cultural and leisure activities for all demographics in the Shire.

Strategies:
- Continue to implement and support community programs.
- Provide and maintain high quality community infrastructure (recreation centre, oval, bowls, swimming pool, library community centre and halls).
- Provide support to local sport, recreation and community groups.

Background

As the closest of the three levels of government to the community, the Shire plays a key role in facilitating community development to help meet the needs of our community.

Community development is a process in which community members come together to take collective action and develop solutions to common problems. It involves engaging communities in policy making, planning, program development and evaluation. It is about government providing the opportunity for community initiatives in a 'bottom up' approach.

Community development is funded from general revenue. The Shire owns numerous community facilities that are accessed for community development.

Service Level

We will maintain the Service Level by continuing to

- ✓ Administer and fund the annual community grants program.
- ✓ Provide subsidised use of Shire facilities.
- ✓ Support and provide community events.

Issues

- Decline in residential population due to FIFO mining and amalgamation of farming interests including increased mechanisation.
- Decline in volunteers and participation in community events.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	CEO
2021/2022	Ongoing Service Provision.	CEO
2022/2023	Ongoing Service Provision.	CEO
2023/2024	Ongoing Service Provision.	CEO
2024/2025	Ongoing Service Provision.	CEO

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	49,747.10	50,592.80	51,452.87	52,327.57	53,217.14
Operating Income	(1,861.01)	(1,892.65)	(1,924.82)	(1,957.54)	(1,990.82)
Projected Program Cost to Council	***47,886.09***	***48,700.15***	***49,528.05***	***50,370.03***	***51,226.32***

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: Maintain / increase percentage of residents engaged in recreation, culture and leisure activities for all demographics in the Shire.

Strategies:
- Support the provision of child care facilities within the community.
- Explore opportunities for youth programs.

Background

Regional Early Education & Development Inc. (REED)

Formally "Yilgarn Occasional Child Care Centre".

REED operates and manages the Shire owned Child Care facilities on a commercial basis.

Playgroup

The Playgroup was a volunteer organisation for parents with young / pre-school aged children to meet and interact in a safe environment. The Southern Cross Playgroup was run by a volunteer committee and was held Tuesdays 9.30am-11.30am and may run during school holidays depending on numbers. The Playgroup has been inactive since 2018 with the building demolished. Redevelopment of the site as a youth friendly outdoor facility is currently progressing.

Service Level

We will maintain the Service Level by continuing to

- ✓ Provide subsidised use of Shire owned facilities for use by REED and Playgroup (if reactivated).
- ✓ Continue to support the provision of child care services through funding assistance as approved by Council.

Issues

- Demolition of the Playgroup building due to structural issues will require alternative facilities if the Playgroup was to reform.

Actions

When	What	Who
2020/2021	Completion of youth friendly play park facilities.	EMI / EMRS
2021/2022	Ongoing Service Provision.	CEO
2022/2023	Ongoing Service Provision.	CEO
2023/2024	Ongoing Service Provision.	CEO
2024/2025	Ongoing Service Provision.	CEO

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	50,070.35	50,921.55	51,787.21	52,667.60	53,562.95
Operating Income	(101.70)	(103.43)	(105.19)	(106.98)	(108.79)
Projected Program Cost to Council	***49,968.65***	***50,818.12***	***51,682.03***	***52,560.62***	***53,454.15***

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: High quality and well maintained Aged Care facilities.

Strategies:
- Manage and maintain the Southern Cross Senior Citizens Centre.

Background

The Southern Cross District Health Service Board raised the issue of forward planning for the establishment of a dedicated Senior Citizen Centre in Southern Cross in January 2002 and in 2007 the Southern Cross Senior Citizen Centre was purposely built for the seniors and local CWA to use for recreational and social activities. The centre was built with funds from the Shire of Yilgarn and $300,000 from the Department of Local Government and Regional Development as part of their Regional Infrastructure Funding program.

Service Level

We will maintain the Service Level by continuing to

- ✓ Maintain and provide free access for use of the Seniors Citizens Centre.
- ✓ Assist the Seniors with events.

Issues

- The building is underutilised at the present, especially since HACC has ceased to use the facility on Monday's and Wednesday's.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	CEO
2021/2022	Ongoing Service Provision.	CEO
2022/2023	Ongoing Service Provision.	CEO
2023/2024	Ongoing Service Provision.	CEO
2024/2025	Ongoing Service Provision.	CEO

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	114,791.56	116,743.01	118,727.65	120,746.02	122,798.70
Operating Income	(2,176.78)	(2,213.78)	(2,251.42)	(2,289.69)	(2,328.62)
Projected Program Cost to Council	***112,614.78***	***114,529.23***	***116,476.23***	***118,456.32***	***120,470.08***

AGED CARE ACCOMMODATION

Schedule 8 - Education and Welfare

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: High quality and well maintained Aged Care Facilities.

Strategies:
- Continue to manage, refurbish and maintain the Homes for the Aged.
- Support the Central East Accommodation & Care Alliance Inc. (CEACA) Independent Living Unit's precinct in Southern Cross.

Background

The Shire of Yilgarn owns and manages 12 aged accommodation units, referred to as the Homes for the Aged. The facility is for use by seniors who meet the Department of Housing eligibility criteria.

The first six units were opened in 1973 with the following six units being opened in 1980. They were previously managed by an independent Committee (Yilgarn Homes for the Aged Incorporated). This Committee also managed Carinaville (located at the Southern Cross Hospital).

The Shire assumed control of the ongoing management and maintenance of the Units from 1 July 2005 and the Committee was disbanded at this time.

Service Level

We will maintain the Service Level by continuing to

- ✓ Manage and maintain the Homes for the Aged.
- ✓ Align rents with Department of Housing community housing rent setting policy.
- ✓ Continue to support the Central East Accommodation & Care Alliance Inc. (CEACA).

Issues

- Due to the age of the facility the gardens, common area's and external's all needs to be refurbished. The Shire has been refurbishing the internal space of units in recent years.

Actions

When	What	Who
2020/2021	Upgrade rear common area's.	EMRS
2021/2022	Ongoing Service Provision.	EMRS
2022/2023	Ongoing Service Provision.	EMRS
2023/2024	Ongoing Service Provision.	EMRS
2024/2025	Ongoing Service Provision.	EMRS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	138,718.59	141,076.80	143,475.11	145,914.18	148,394.73
Operating Income	(36,661.02)	(37,284.26)	(37,918.09)	(38,562.70)	(39,218.26)
Projected Program Cost to Council	***102,057.57***	***103,792.55***	***105,557.02***	***107,351.49***	***109,176.46***

Schedule 9 - Housing

Strategic Community Plan

Economic Objective: A prosperous future for our community.
Outcome: Quality and affordable housing is available.
Strategies:
- Continue to invest in housing to attract professionals to the region, to attract and retain professionals and young people in the Shire.

Background

The Shire of Yilgarn owns the following houses:

37 Taurus St	Staff	71 Antares St	Staff
35 Taurus St	Doctor	120 Antares St	Staff
2 Libra Pl	Staff	11 Andromeda Ct	Staff
3 Libra Pl	Staff	103 Altair St	Staff
6 Libra Pl	Dept of Housing	80 Spica St	Chemist
91A Antares St	Staff	11 Antares St	Private
91B Antares St	Staff	13A Libra Pl	Staff
91C Antares St	Staff	13B Libra Pl	Professional
1/50 Antares St	Private	2/50 Antares St	Dept of Health
3/50 Antares St	Vacant	4/50 Antares St	Private

The cost of housing is funded from general revenue and rental income.

Service Level

We will maintain the Service Level by continuing to

✓ Manage and maintain Shire owned housing for use by relevant staff and others.

Issues

- When Executive and senior staff who reside in their own homes leave the employ of the Shire, the Shire will need to acquire additional suitable housing stock.

Actions

When	What	Who
2020/2021	Review housing and residential land stock.	CEO / EMCS
2021/2022	Budget to purchase Executive level house.	CEO / EMCS
2022/2023	Ongoing Service Provision.	EMRS
2023/2024	Ongoing Service Provision.	EMRS
2024/2025	Ongoing Service Provision.	EMRS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	287,137.44	292,018.78	296,983.10	302,031.81	307,166.35
Operating Income	(81,629.13)	(83,016.83)	(84,428.11)	(85,863.39)	(87,323.07)
Projected Program Cost to Council	***205,508.31***	***209,001.95***	***212,554.99***	***216,168.42***	***219,843.28***

Strategic Community Plan

Environmental Objective: Protecting, utilising and enhancing our beautiful natural heritage.
Outcome: Satisfaction with waste management services and recycling processes.
Strategies:
- Establish and maintain environmentally sound regional waste facilities to cater for the Shire's long term waste disposal requirements.
- Continue to provide and promote recycling services, including fortnightly household pick up and e-waste collection.

Background

The Southern Cross Refuse Site are licenced by the Department of Water and Environment Regulation (DWER) and managed by the Shire. The Shire is also responsible for refuse sites located at Bodallin, Moorine Rock, Bullfinch & Marvel Loch.

The DWER licence imposes conditions and the Shire is required to submit an annual report by 30th November each year. The Executive Manager Regulatory Services is tasked with monitoring and submitting the reports.

Rubbish collection charges recovers some of the costs, however there is a current shortfall which is covered by general revenue.

Service Level

We will maintain the Service Level by continuing to

- ✓ Manage the Southern Cross, Bodallin, Moorine Rock, Bullfinch and Marvel Loch Refuse Sites.
- ✓ Provide a weekly 240L Bin collection and twice monthly 240L recycle bin collection service.
- ✓ Continue to participate in and promote Drum Muster.
- ✓ Continue to provide a waste oil collection service.

Issues

- Completion of Refuse Site and closure of Southern Cross Transfer Station.
- Restricting access hours to Refuse Site and having site manned when open.
- Illegal dumping

Actions

When	What	Who
2020/2021	Review management plan for all Yilgarn refuse sites.	EMRS
2021/2022	Review contract for provision of waste collection services	EMRS / EMI
2022/2023	Ongoing Service Provision.	EMRS / EMI
2023/2024	Ongoing Service Provision.	EMRS / EMI
2024/2025	Ongoing Service Provision.	EMRS / EMI

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	388,316.62	394,918.00	401,631.61	408,459.34	415,403.15
Operating Income	(267,954.82)	(272,510.05)	(277,142.72)	(281,854.15)	(286,645.67)
Projected Program Cost to Council	***120,361.80***	***122,407.95***	***124,488.89***	***126,605.20***	***128,757.49***

Strategic Community Plan

Environmental Objective: Protecting, utilising and enhancing our beautiful natural heritage.
Outcome: Satisfaction with sewerage services.
Strategies:
- Continue to maintain current sewerage systems in accordance with licensing requirements and asset management plan.
- Continue to use recycled water for use at the Southern Cross oval and Constellation Park.

Background

The Shire owns and manages a deep sewer system in Southern Cross and a semi deep sewer system in Marvel Loch.

In Southern Cross the sewerage is piped by gravity feed from property connections to pump pits, these pits then pump the sewerage to a series of ponds where the sewerage undergoes primary treatment. Southern Cross has a re-use system installed that reticulates the Sports Complex lawn (oval, park) and Constellation Park and the system is licensed by the DWER and Department of Health

The Southern Cross sewerage system is licensed by Department of Environment Regulation, with the Shire required to submit an Annual Audit Compliance Report and an Annual Environmental Report by 1st September each year. Executive Manager of Regulatory Services is tasked with management of the system and submitting annual reports.

Service Level

We will maintain the Service Level by continuing to

- ✓ Maintain the Southern Cross and Marvel Loch sewerage system in accordance with asset management plan & licence conditions.
- ✓ Manage the sullage pit located at the Southern Cross Refuse Site.
- ✓ Provide recycled water to Southern Cross oval & Constellation Park.

Issues

- Aging sewerage waste water infrastructure.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	EMRS
2021/2022	Commission detailed asset management plan for SX & ML Systems.	EMRS
	Review opportunity to expand use of recycled water.	EMRS
2022/2023	Ongoing Service Provision.	EMRS
2023/2024	Ongoing Service Provision.	EMRS
2024/2025	Ongoing Service Provision.	EMRS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	226,289.75	230,136.67	234,048.99	238,027.83	242,074.30
Operating Income	(316,299.76)	(321,676.85)	(327,145.36)	(332,706.83)	(338,362.85)
Projected Program Cost to Council	***(90,010.01)***	***(91,540.18)***	***(93,096.37)***	***(94,679.00)***	***(96,288.55)***

Strategic Community Plan

Economic Objective: A prosperous future for our community.
Outcome: Business in the Shire to remain competitive and viable.
Strategies:
- Continue to provide an effective and efficient approval process.

Outcome: Improved telecommunications infrastructure.
Strategies:
- Continue to lobby for improved telecommunications infrastructure to eliminate blackspots in the Shire.

Background

Town Planning

Town Planning in WA is governed by the Planning & Development Act 2005. This requires local governments to be involved in planning for local communities by ensuring appropriate planning controls exist for land use and development. Local governments must base their planning decisions on the provisions and controls in their local planning scheme. All local government planning schemes and policies are required to be consistent with State Government planning objectives and requirements.

Regional Development - Telecommunications

Council acknowledges that access to telecommunications infrastructure and embracing the opportunities afforded by the NBN are vitally important in ensuring local businesses can remain competitive.

Service Level

We will maintain the Service Level by continuing to

- ✓ Process planning applications in an efficient and effective manner.
- ✓ Lobby to ensure Shire residents have access to appropriate levels of telecommunications infrastructure.

Issues

- Need to incorporate recent amendements that apply to all Schemes into the Shire's Town Planning Scheme.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	CEO
2021/2022	Review the Town Planning Scheme.	CEO / EMCS / EMRS
2022/2023	Ongoing Service Provision.	CEO
2023/2024	Ongoing Service Provision.	CEO
2024/2025	Ongoing Service Provision.	CEO

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	39,941.17	40,620.17	41,310.71	42,012.99	42,727.21
Operating Income	(5,624.05)	(5,719.66)	(5,816.89)	(5,915.78)	(6,016.35)
Projected Program Cost to Council	***34,317.12***	***34,900.51***	***35,493.82***	***36,097.21***	***36,710.86***

CEMETERY

Schedule 10 - Community Amenities

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: Maintain a liveable, safe and secure community.

Strategies:

Background

The Shire of Yilgarn has one operating cemetery located in Southern Cross.

Costs of burials are funded by fees & charges and the ground & building maintenance is funded from general revenue.

Service Level

We will maintain the Service Level by continuing to

✓ Maintain and operate the Southern Cross Cemetery.

Issues

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	EMI/EA
2021/2022	Ongoing Service Provision.	EMI/EA
2022/2023	Ongoing Service Provision.	EMI/EA
2023/2024	Ongoing Service Provision.	EMI/EA
2024/2025	Ongoing Service Provision.	EMI/EA

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	39,692.58	40,367.36	41,053.60	41,751.51	42,461.29
Operating Income	(2,835.41)	(2,883.61)	(2,932.63)	(2,982.48)	(3,033.19)
Projected Program Cost to Council	***36,857.18***	***37,483.75***	***38,120.97***	***38,769.03***	***39,428.10***

COMMUNITY VEHICLES

Schedule 10 - Community Amenities

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: Maintain / increase percentage of residents engaged in recreation, culture and leisure activities for all demographics in the Shire.

Strategies:
- Provide support to local sport, recreation and community groups.

Background

Community Bus

A Community Bus is provided by the Shire for the use by Community Groups, Sporting Clubs and other Not-for-Profit organisations such as state & private schools at a subsidised hire rates.

For profit organisations can hire the Community Bus but at full hire rates.

Community Car

A Community Car is provided for the use of community members and itinerant Professionals.

Service Level

We will maintain the Service Level by continuing to

- ✓ Provide and maintain a community bus and community car.
- ✓ Ensure vehicles are appropriate for intended use.
- ✓ Maintain the vehicles in a safe, clean and roadworthy condition.

Issues

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	EMI/EMCS
2021/2022	Ongoing Service Provision.	EMI/EMCS
2022/2023	Ongoing Service Provision.	EMI/EMCS
2023/2024	Ongoing Service Provision.	EMI/EMCS
2024/2025	Ongoing Service Provision.	EMI/EMCS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	10,913.81	11,099.35	11,288.04	11,479.93	11,675.09
Operating Income	(5,147.91)	(5,235.42)	(5,324.42)	(5,414.94)	(5,506.99)
Projected Program Cost to Council	***5,765.91***	***5,863.93***	***5,963.61***	***6,064.99***	***6,168.10***

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: Maintain a liveable, safe and secure community

Strategies:

Economic Objective: A prosperous future for our community.

Outcome: Tourism opportunities are maximised.

Strategies:

Background

The Shire provides access to public toilets for the convenience of shoppers in the CBD and at public parks for visitors, travellers and residents within the Shire.

All maintenance, cleaning, utility, supplies and insurance cost are funded by the Shire of Yilgarn from general revenue.

Service Level

We will maintain the Service Level by continuing to

- ✓ Provide clean and accessible public toilets located on Antares Street (CBD), in Rotary Park, Constellation Park (Antares St), at the Southern Cross Bowling / Tennis Club, Bodallin, Marvel Loch and Moorine Rock.

Issues

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	EMRS / EMI
2021/2022	Ongoing Service Provision.	EMRS / EMI
2022/2023	Ongoing Service Provision.	EMRS / EMI
2023/2024	Ongoing Service Provision.	EMRS / EMI
2024/2025	Ongoing Service Provision.	EMRS / EMI

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	62,966.58	64,037.01	65,125.64	66,232.78	67,358.73
Operating Income	-	-	-	-	-
Projected Program Cost to Council	***62,966.58***	***64,037.01***	***65,125.64***	***66,232.78***	***67,358.73***

PUBLIC HALLS AND CIVIC CENTRES

Schedule 11 - Recreation and Culture

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: Maintain / increase percentage of residents engaged in recreation, culture and leisure activities for all demographics in the Shire.

Strategies:
- Continue to provide and maintain high quality community infrastructure (recreation centre, oval, bowls, tennis facilities, swimming pool, library, community centre and halls).

Background

The Shire provides infrastructure for community use such as community meetings, public presentations, shows, plays, concerts and other functions that require a larger space for the community to get together.

All expenses (maintenance, cleaning, insurance, utilities) relating to the building are funded by the Shire from general revenue with the Shire charging a nominal hire fee.

Service Level

We will maintain the Service Level by continuing to

✓ Review need for retention of Bodallin and Marvel Loch halls over time.

Issues

- The halls in Marvel Loch and Bodallin are minimally used by the community.
- Southern Cross Community Centre is under utilised.
- Masonic Lodge not utilised.

Actions

When	What	Who
2020/2021	Assess community usage of Bodallin Hall and its future	CEO/EMRS
2021/2022	Ongoing Service Provision.	EMRS
2022/2023	Ongoing Service Provision.	EMRS
2023/2024	Ongoing Service Provision.	EMRS
2024/2025	Ongoing Service Provision.	EMRS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	321,695.93	327,164.76	332,726.56	338,382.91	344,135.42
Operating Income	(4,749.76)	(4,830.50)	(4,912.62)	(4,996.14)	(5,081.07)
Projected Program Cost to Council	***316,946.17***	***322,334.26***	***327,813.94***	***333,386.77***	***339,054.35***

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: Maintain / increase percentage of residents engaged in recreation, culture and leisure activities for all demographics in the Shire.

Strategies:
- Continue to provide and maintain high quality community infrastructure (recreation centre, oval, bowls, tennis facilities, swimming pool, library, community centre and halls).

Background

Local governments provide public swimming pools for use by their residents for a number of reasons, including; providing a facility for children to learn to swim, provide people with an escape from the pressures and tensions of daily life, lead to improved levels of physical and mental health, and build up strong social networks and relationships. Swimming is a healthy, low-impact activity that has many physical and mental health benefits.

Service Level

We will maintain the Service Level by continuing to

✓ Maintain new buildings, infrastructure and surrounds to a high standard.

Issues

- Maintain free entry or implement entry charge with new facility?

Actions

When	What	Who
2020/2021	Complete construction of new Aquatic Centre.	CEO/EMRS
2021/2022	Ongoing Service Provision.	EMRS
2022/2023	Ongoing Service Provision.	EMRS
2023/2024	Ongoing Service Provision.	EMRS
2024/2025	Ongoing Service Provision.	EMRS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	206,014.35	209,516.59	213,078.37	216,700.71	220,384.62
Operating Income	-	-	-	-	-
Projected Program Cost to Council	***206,014.35***	***209,516.59***	***213,078.37***	***216,700.71***	***220,384.62***

SPORTS & RECREATION FACILITIES

Schedule 11 - Recreation and Culture

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: Maintain / increase percentage of residents engaged in recreation, culture and leisure activities for all demographics in the Shire.

Strategies:
- Provide and maintain high quality community infrastructure (recreation centre, oval, bowls, swimming pool, library, community centre and halls).
- Provide support to local sport, recreation and community groups.

Background

The provision of sport & recreation infrastructure & services is a key responsibility of local government, especially in rural areas where there is no or little private investment. Sport and recreation is vital for our communities as it helps build stronger, healthier, happier, and safer communities. Communities that participate in sport and recreation develop strong social bonds, are safer places and the people who live in them are generally healthier and happier than places where physical activity isn't a priority.

Service Level

We will maintain the Service Level by continuing to

- ✓ Continue to provide and maintain the current infrastructure.
- ✓ Continue to support sporting clubs and volunteers.
- ✓ Consider solar power options to reduce costs.

Issues

- Reduction in people who participate in sport and recreation including volunteers.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	EMRS/EMI
2021/2022	Ongoing Service Provision.	EMRS/EMI
2022/2023	Refurbish Southern Cross Recreation Centre	EMRS/EMI
2023/2024	Ongoing Service Provision.	EMRS/EMI
2024/2025	Ongoing Service Provision.	EMRS/EMI

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	1,069,213.78	1,087,390.41	1,105,876.05	1,124,675.94	1,143,795.43
Operating Income	(16,346.46)	(16,624.35)	(16,906.96)	(17,194.38)	(17,486.69)
Projected Program Cost to Council	***1,052,867.32***	***1,070,766.06***	***1,088,969.09***	***1,107,481.56***	***1,126,308.75***

Strategic Community Plan

Social Objective: An inclusive, secure and welcoming community that encourages family, youth and the aged to remain in and contribute to our Shire in the long term.

Outcome: Maintain / increase percentage of residents engaged in recreation, culture and leisure activities for all demographics in the Shire.

Strategies:
- Provide and maintain high quality community infrastructure (recreation centre, oval, bowls, swimming pool, library, community centre and halls).

Economic Objective: A prosperous future for our community.

Outcome: Business in the Shire remain competitive and viable.

Strategies:
- Continue to support and manage the Community Resource Centre.

Background

The provision of Libraries in Western Australia is through a partnership between local government and the State Library. The Shire manages the Library and is responsible for all costs associated with the staffing and housing. The State Library provides public library collections of catalogued books and other materials.

Service Level

We will maintain the Service Level by continuing to

✓ Manage the public library collection with Southern Cross Community Resource Centre.

✓ Maintain the Shire library if the Community Resource Centre funding is withdrawn.

Issues

- Advances in technology are changing the need for Libraries and the Shire must continue to diversify the services provided to ensure the Library does not become obsolete.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	CEO
2021/2022	Ongoing Service Provision.	CEO
2022/2023	Ongoing Service Provision.	CEO
2023/2024	Ongoing Service Provision.	CEO
2024/2025	Ongoing Service Provision.	CEO

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	44,494.45	45,250.85	46,020.12	46,802.46	47,598.10
Operating Income	(48.25)	(49.07)	(49.90)	(50.75)	(51.61)
Projected Program Cost to Council	***44,446.20***	***45,201.78***	***45,970.21***	***46,751.71***	***47,546.49***

Strategic Community Plan

Economic Objective: A prosperous future for our community.
Outcome: Improved telecommunications infrastructure
Strategies:
- Continue to rebroadcast FM Radio and TV channels for the Southern Cross community.

Outcome: Tourism opportunities are maximised.
Strategies:
- Continue to support the Southern Cross Museum.

Background

Museum

The Yilgarn Historical Society was founded in the early 1970's and the museum was opened in the late 1970's to showcase and preserve local and national history. The Yilgarn History Museum is housed in the former Registrar's Office and Courthouse, the earliest in Western Australia , built in 1892.

TV & Radio Re-Broadcast

The Shire has agreed to re-broadcast FM Radio due to community demand in order to improve the liveability of Southern Cross and Marvel Loch. Shire of Yilgarn holds an apparatus licence for re-broadcasting.

Service Level

We will maintain the Service Level by continuing to

- ✓ Maintain the Museum building and the attractions within it.
- ✓ Support the Museum Committee throught the provision of ongoing operational funding.

Issues

- Lack of volunteers to operate the Museum.
- Hight cost to maintain the Museum building.
- Need to review the apparatus in the rebroadcast shed at Wimmera Hill.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	CEO / EMRS
2021/2022	Ongoing Service Provision.	CEO / EMRS
2022/2023	Ongoing Service Provision.	CEO / EMRS
2023/2024	Ongoing Service Provision.	CEO / EMRS
2024/2025	Ongoing Service Provision.	CEO / EMRS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	99,920.67	101,619.32	103,346.85	105,103.75	106,890.51
Operating Income	(5,068.49)	(5,154.65)	(5,242.28)	(5,331.40)	(5,422.03)
Projected Program Cost to Council	***94,852.18***	***96,464.67***	***98,104.57***	***99,772.35***	***101,468.48***

CONSTRUCTION OF STREETS, ROADS, BRIDGES & DEPOTS

Schedule 12 - Transport

Strategic Community Plan

Economic Objective: A prosperous future for our community.
Outcome: Safety and quality of transport networks are maintained and improved.
Strategies:
- Continue to maintain and upgrade our road network.

Background

Local governments are responsible for the construction and maintenance of Roads under their control.

The Great Eastern Highway, Southern Cross – Marvel Loch Road and Bullfinch Road are State government roads and under the control of MRWA, all other roads within the Shire are the responsibility of the Shire of Yilgarn. The Shires road network comprises of approximately 253km of sealed roads and 2,530km of unsealed roads.

The Shire of Yilgarn employs a construction crew (8 staff) and a maintenance crew (7 staff) who are responsible for construction and maintenance works. Contractors are employed as required to complement the Shires own staff.

The Shire receives funding from the Commonwealth Government (Roads to Recovery Program) and the State Government (State Road Funds to Local Government Agreement, administered through Regional Road Groups) for construction projects. The Shire also receives general purpose (untied) road grants through the Local Government Grants Commission.

Service Level

We will maintain the Service Level by continuing to

- ✓ Implement the road construction program as per the Capital Works Plan (subject to State and Federal funding).
- ✓ Prepare and adopt definitive and quantified 5 year plans for roads and and 10 year plans for plant replacement.

Issues

- Changes to State and Federal Government commitments, Roads to Recovery, Regional Roads, Direct Grants and Blackspots projects.

Actions

When	What	Who
2020/2021	Capital infra works & plant purchases per plan	EMI/EMCS
2021/2022	Capital infra works & plant purchases per plan	EMI/EMCS
2022/2023	Capital infra works & plant purchases per plan	EMI/EMCS
2023/2024	Capital infra works & plant purchases per plan	EMI/EMCS
2024/2025	Capital infra works & plant purchases per plan	EMI/EMCS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	-	-	-	-	-
Operating Income	-	-	-	-	-
Projected Program Cost to Council	**-**	**-**	**-**	**-**	**-**

MAINTENANCE OF STREETS, ROADS, BRIDGES & DEPOTS

Schedule 12 - Transport

Strategic Community Plan

Economic Objective: A prosperous future for our community.
Outcome: Safety and quality of transport networks are maintained and improved.
Strategies:
- Continue to maintain and upgrade our road network.

Background

Local governments are responsible for the construction and maintenance of Roads under their control.

The Shires road network comprises of approximately 253km of sealed roads and 2,530km of unsealed roads.

The Shire of Yilgarn employs a construction crew (8 staff) and a maintenance crew (7 staff) who are responsible for construction and maintenance works. Contractors are employed as required to complement the Shires own staff.

The Shire owns the following Plant for the purposes of road maintenance and construction; 5 x Graders; 3 x Loaders; 1 x Backhoe; 2 x Eight Wheel Tip Trucks/Water Trucks; 1 x Primemover/Roadtrain; 3 x Rollers; 1 x Skidsteere Loader.

The provision of Street Lighting is included within the road maintenance function.

Service Level

We will maintain the Service Level by continuing to

✓ Employ our own road maintenance staff, supplemented by contractors, to maintain the road network in accordance with agreed service levels.

Issues

- Dependant on Roads to Recovery, Regional Road Group and Blackspot funding.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	EMI/EMCS
2021/2022	Ongoing Service Provision.	EMI/EMCS
2022/2023	Ongoing Service Provision.	EMI/EMCS
2023/2024	Ongoing Service Provision.	EMI/EMCS
2024/2025	Ongoing Service Provision.	EMI/EMCS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2/2	2023/2024	2023/2024	2024/2025
Non Cash Operating Expenditure (Depreciation)	3,949,047.63	4,016,181.44		4,084,456.53	4,153,892.29	4,224,508.46
Operating Expenditure	1,448,832.24	1,473,462.38		1,498,511.25	1,523,985.94	1,549,893.70
Operating Income	(9,662.93)	(9,827.20)	##	-	(10,164.17)	(10,336.96)
Projected Program Cost to Council	***1,439,169.30***	***1,463,635.18***		***1,488,516.98***	***1,513,821.77***	***1,539,556.74***

AERODROMES

Strategic Community Plan

Economic Objective: A prosperous future for our community.
Outcome: Safety and quality of transport networks are maintained and improved.
Strategies:
- Continue to maintain the Southern Cross Airstrip and facilities.

Background

The Shire owns and manages the Southern Cross aerodrome in accordance with Civil Aviation Safety Authority requirements.

The aerodrome has previously been used for fly in fly out mining operations. Its current use is predominantly recreation (Southern Cross Aero Club) and for the Royal Flying Doctor Service, however fly in fly out usage is in resurgence.

The aerodrome maintenance is funded from general revenue and the Regional Airports Development Scheme (RADS).

Service Level

We will maintain the Service Level by continuing to

✓ Ensure airstrip access for Royal Flying Doctor Service.
✓ Ensure facilities are maintained to a suitable level for current and antisipated FIFO usage.

Issues

Actions

When	What	Who
2020/2021	Review current and projected use for capital upgrades	EMI
2021/2022	Ongoing Service Provision.	EMI
2022/2023	Ongoing Service Provision.	EMI
2023/2024	Ongoing Service Provision.	EMI
2024/2025	Ongoing Service Provision.	EMI

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2/2	2023/2024	2023/2024	2024/2025
Operating Expenditure	99,635.82	101,329.63		103,052.23	104,804.12	106,585.79
Operating Income	(5,540.60)	(5,634.79)		(5,730.58)	(5,828.00)	(5,927.08)
Projected Program Cost to Council	***94,095.22***	***95,694.84***		***97,321.65***	***98,976.12***	***100,658.72***

FOOTPATHS, VERGES AND TOWNSCAPES

Strategic Community Plan

Economic Objective: A prosperous future for our community.
Outcome: Safety and quality of transport networks are maintained and improved.
Strategies:
- Continue to maintain and upgrade our road network.

Background

The Shire is responsible for the road reserves including provision of footpaths, maintenance of the verges and for the townscapes of our town sites. The functionality and aesthetics of our towns is vitally important in ensuring ease of access for tourists, cars, pedestrians and cyclists.

The Shire is also responsible for street furniture, refuse bins, trees, parks & gardens, signage, street cleaning, parking and public toilets.

Footpaths, verge and town scaping maintenance and improvements are funded from general revenue.

Service Level

We will maintain the Service Level by continuing to

✓ Maintain and enhance the footpaths and verges.
✓ Plant new trees every year,

Issues

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	EMI
2021/2022	Ongoing Service Provision.	EMI
2022/2023	Ongoing Service Provision.	EMI
2023/2024	Ongoing Service Provision.	EMI
2024/2025	Ongoing Service Provision.	EMI

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	37,576.00	38,214.79	38,864.44	39,525.14	40,197.07
Operating Income	(2,575.17)	(2,618.94)	(2,663.47)	(2,708.74)	(2,754.79)
Projected Program Cost to Council	***35,000.83***	***35,595.85***	***36,200.98***	***36,816.39***	***37,442.27***

TRANSPORT LICENSING & TRANSWA TICKETING SERVICES

Schedule 12 - Transport

Strategic Community Plan

Economic Objective: A prosperous future for our community.
Outcome: Business in the Shire remain competitive and viable.
Strategies:
- Support the local business community and promote further investment in the district, including opportunities for industry growth and development.

Background

The Shire of Yilgarn has an agreement with The Department of Transport for the provision of police licensing services and has an agreement with TransWA for the provision of public transport ticketing services (Prospector Train). The Shire is not obliged to provide these services to the community however it is reasonable to suggest there is a strong demand from the community to do so.

The Department of Transport pays a commission for the services provided however this does not meet the full costs, with the shortfall funded from general revenue. TransWA pays a commission calculated as a percentage of the individual ticket price.

Service Level

We will maintain the Service Level by continuing to

✓ Provide a police licensing and public transport ticketing service at the Shire customer service counter.

Issues

- Over time these services will be accessed more on-line and an in-person service may not be required.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	EMCS
2021/2022	Ongoing Service Provision.	EMCS
2022/2023	Ongoing Service Provision.	EMCS
2023/2024	Ongoing Service Provision.	EMCS
2024/2025	Ongoing Service Provision.	EMCS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	74,426.91	75,692.17	76,978.93	78,287.57	79,618.46
Operating Income	(21,056.51)	(21,414.47)	(21,778.52)	(22,148.75)	(22,525.28)
Projected Program Cost to Council	***53,370.40***	***54,277.69***	***55,200.41***	***56,138.82***	***57,093.18***

TOURISM AND AREA PROMOTION

Strategic Community Plan

Economic Objective: A prosperous future for our community.
Outcome: Tourism opportunities are maximised.
Strategies:
- Re-establish a Yilgarn Tourism Committee to advise / recommend to Council on actions to promote tourism in the district.

Background

The provision of tourism and promotion services has been identified by the community as a key focus for the local economy – subsequently Tourism was identified in the Strategic Community Plan as a valuable and important industry for our region.

Service Level

We will maintain the Service Level by continuing to

- ✓ Provide free public Wi-Fi.
- ✓ Improve Signage.
- ✓ Maintain the Shire website and ensure information remains up to date.
- ✓ Develop a tourism specific marketing strategy and associated website.

Issues

- The main issue facing the Shire is how to transition from a bricks and mortar approach to providing services, i.e. a dedicated building structure with staff to an online presence.

Actions

When	What	Who
2020/2021	Develop tourism marketing strategy & implement website	CEO / EMCS
2021/2022	Ongoing Service Provision.	CEO
2022/2023	Ongoing Service Provision.	CEO
2023/2024	Ongoing Service Provision.	CEO
2024/2025	Ongoing Service Provision.	CEO

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	80,764.67	58,137.67	59,126.01	60,131.15	61,153.38
Operating Income	(530.35)	(539.36)	(548.53)	(557.86)	(567.34)
Projected Program Cost to Council	***80,234.33***	***57,598.31***	***58,577.48***	***59,573.30***	***60,586.04***

Strategic Community Plan

Goal: A prosperous future for our community.
Outcome: Tourism opportunities are maximised.
Strategies:
- Continue to manage and promote the Southern Cross Caravan Park.

Background

The Shire owns and manages the Southern Cross Caravan Park and Sandalwood Motor Lodge as these facilities are not profitable enough to attract private ownership and are important to our local economy for the following reasons:

- ✓ Southern Cross is located on the Great Eastern Highway, being the link between WA and the eastern states and accordingly caravanners have little choice but to travel through our town and this facility encourages them to stay overnight.
- ✓ Caravan park visitors inject dollars into the local community by self-catering, eating out and visiting local attractions.
- ✓ Caravan park facilities support the accommodation requirements for local events & functions and for contractors working in the region.

The Southern Cross Caravan Park and Sandalwood Motor Lodge is funded through user charges with any shortfall met from general revenue.

Service Level

We will maintain the Service Level by continuing to

- ✓ Manage and operate the Caravan Park.
- ✓ Consider future management options.

Issues

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	CEO / EMCS
2021/2022	Ongoing Service Provision.	CEO / EMCS
2022/2023	Ongoing Service Provision.	CEO / EMCS
2023/2024	Ongoing Service Provision.	CEO / EMCS
2024/2025	Ongoing Service Provision.	CEO / EMCS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	390,071.08	396,702.29	403,446.23	410,304.81	417,280.00
Operating Income	(257,273.27)	(261,646.92)	(266,094.92)	(270,618.53)	(275,219.05)
Projected Program Cost to Council	***132,797.81***	***135,055.37***	***137,351.31***	***139,686.28***	***142,060.95***

Strategic Community Plan

Environmental Objectives: Protecting, utilising and enhancing our beautiful natural heritage.

Outcome: A valued natural environment where community members in all industries and government invest in land care.

Strategies:
- Lobby for continued investment in landcare and conservation.
- Continue to provide administrative support for the Skeleton Weed Local Action Group.

Background

The Shire provides administrative support to assist the rural sector with landcare initiatives including the control of Skeleton Weed. Skeleton weed is a declared pest under the Biosecurity and Agriculture Management Act 2007.

The Shire receives funding from the Seed and Hay Industry Funding Committee that covers the costs of the Skeleton Weed control program.

Service Level

We will maintain the Service Level by continuing to

✓ Provide administrative support for the Local Action Group.

✓ Engage a part time Natural Resource Officer subject to funding.

Issues

- Service provision conditional on funding from State Government.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	EMRS
2021/2022	Ongoing Service Provision.	EMRS
2022/2023	Ongoing Service Provision.	EMRS
2023/2024	Ongoing Service Provision.	EMRS
2024/2025	Ongoing Service Provision.	EMRS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	235,798.70	239,807.27	243,884.00	248,030.02	252,246.53
Operating Income	(223,561.46)	(227,362.01)	(231,227.16)	(235,158.02)	(239,155.71)
Projected Program Cost to Council	***12,237.23***	***12,445.27***	***12,656.84***	***12,872.00***	***13,090.83***

Strategic Community Plan

Economic Objectives: A prosperous future for our community.
Outcome: Business in the Shire remain competitive and viable.
Strategies:
- Continue to provide an efficient and effective approval process.

Background

The Building Act 2011 provides the framework and outlines the responsibilities of the parties in regards to the building control process. The Act separates the process of certifying that a design complies with building standards from the administrative process of the local government issuing building approval (Building Permit).

A Certificate of Design Compliance is issued by a registered Building Surveyor (in private practice or local government) to confirm certification, and a Building Permit is issued by the local government Permit Authority to confirm approval to build. Building Surveyors offer certification as part of the building service to their customers.

The Shire must deal with applications within a specified time, an uncertified application must be determined within twenty five (25) business days and a certified application must be determined by the local government/ Permit Authority in ten (10) business days. If the Shire does not determine the application in the prescribed time then the application is deemed refused and the Shire is required to return the full fees paid for the application.

The costs to the Shire in processing building permit applications is funded from the fees charged and general revenue.

Service Level

We will maintain the Service Level by continuing to

- ✓ Continue to comply with the Building Act 2011, specifically the timeframes for approvals.
- ✓ Continue to provide building permit data to the Department of Commerce.

Issues

- Impact of recently introduced Bushfire Assessment Levels on new construction.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	EMRS
2021/2022	Ongoing Service Provision.	EMRS
2022/2023	Ongoing Service Provision.	EMRS
2023/2024	Ongoing Service Provision.	EMRS
2024/2025	Ongoing Service Provision.	EMRS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	60,614.36	61,644.80	62,692.77	63,758.54	64,842.44
Operating Income	(3,291.13)	(3,347.08)	(3,403.98)	(3,461.85)	(3,520.70)
Projected Program Cost to Council	***57,323.23***	***58,297.73***	***59,288.79***	***60,296.70***	***61,321.74***

STANDPIPES

Strategic Community Plan

Economic Objectives: A prosperous future for our community.
Outcome: Business in the Shire remain competitive and viable.
Strategies:

Background

The Shire provides Standpipes to ensure water is available throughout the Shire where the Water Corporation reticulated scheme is not available.

Service Level

We will maintain the Service Level by continuing to

- ✓ Ensure access to a potable water supply within a reasonable distance to all properties on a cost recovery basis with subsidies for domestic water use.
- ✓ Applying the swipe card access system to all standpipes, in a staged approach.

Issues

- Some standpipes rely on the honesty system, which in some instances, is being abused. However swipe card access has been applied to the majority of standpipes.
- Cost of installing and serviceing swipe card system.

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	EMRS
2021/2022	Ongoing Service Provision.	EMRS
2022/2023	Ongoing Service Provision.	EMRS
2023/2024	Ongoing Service Provision.	EMRS
2024/2025	Ongoing Service Provision.	EMRS

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	378,647.97	385,084.98	391,631.43	398,289.16	405,060.08
Operating Income	(348,409.70)	(354,332.66)	(360,356.32)	(366,482.37)	(372,712.57)
Projected Program Cost to Council	***30,238.27***	***30,752.32***	***31,275.11***	***31,806.79***	***32,347.50***

GENERAL ECONOMIC INITIATIVES

Schedule 13 - Economic Services

Strategic Community Plan

Objectives:	All
Outcome:	All
Strategies:	All

Background

The Shire of Yilgarn currently supports the local economy by:

- Ensuring the CBD is maintained to a high standard, being a pleasant place to shop and do business.
- Providing clean & modern public conveniences.
- Ensuring adequate public car parking is available throughout the CBD.
- Promoting the District as a viable place to prospective new businesses.
- Providing an efficient & effective approvals process.
- Providing relevant information through signage, website, app, Crosswords & other means.
- Supporting local tradespersons & businesses where viable and possible.
- Providing training opportunities through the CRC.
- Providing security cameras at strategic locations.
- Maintaining population by providing local employment opportunities including traineeships & apprentices.

Service Level

We will maintain the Service Level by continuing to

- ✓ Maintain the CBD to a high standard.
- ✓ Providing clean & modern public conveniences & ensuring adequate public car parking is available.
- ✓ Promoting the District as a viable place to prospective new businesses.
- ✓ Supporting local tradespersons & businesses where viable and possible.

Issues

- Impact of IT on business and service provision (negative and positive).

Actions

When	What	Who
2020/2021	Ongoing Service Provision.	All Senior Managers
2021/2022	Ongoing Service Provision.	All Senior Managers
2022/2023	Ongoing Service Provision.	All Senior Managers
2023/2024	Ongoing Service Provision.	All Senior Managers
2024/2025	Ongoing Service Provision.	All Senior Managers

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	-	-	-	-	-
Operating Income	-	-	-	-	-
Projected Program Cost to Council	**-**	**-**	**-**	**-**	**-**

Schedule 4 - Members of Council

Strategic Community Plan

Civic Leadership Objectives:	Dynamic and visionary leadership guiding our community into the future.
Outcome:	A trustworthy and cohesive Council that functions efficiently and effectively.
Strategies:	• Ensure compliance whilst embracing innovation and best practice principles. • Maintain a high level of corporate governance, responsibility and accountability.
Outcome:	A community that respects and values Council staff and elected members.
Strategies:	• Ensure adequate training programs for elected members and staff. • Provide leadership to the community, staff and wider region.
Outcome:	Positive and productive regional partnerships.
Strategies:	• Actively participate in regional forums including Great Eastern Country Zone WALGA, Wheatbelt East Regional Organisation of Councils, Wheatbelt Communities and CEACA.

Background

The Yilgarn Shire Council comprises seven Councillors, with the Shire President and Deputy Shire President being elected by the Council. Council elections are held in October every second year, with half of the seven Council positions being vacant.

Service Level

Issues

Actions

When		Who
2020/2021	Major Review Strategic Community Plan	CEO
2021/2022	Review Corporate Business Plan	EMCS
2022/2023	Desktop Review Strategic Community Plan	CEO
2023/2024	Review Corporate Business Plan	EMCS
2024/2025	Major Review Strategic Community Plan	CEO

Projected Program Operational Income & Expenditure

	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025
Operating Expenditure	435,367.11	442,768.35	450,295.41	457,950.44	465,735.59
Operating Income	-	-	-	-	-
Antisipated Program Cost to Council	***435,367.11***	***442,768.35***	***450,295.41***	***457,950.44***	***465,735.59***

Shire of Yilgarn
CORPORATE BUSINESS PLAN
Forward Capital Works - Land & Buildings 2020/2021 to 2024/2025

Project	Forecast Budget					Comments
	2020-21	2021-22	2022-23	2023-24	2024-25	
BUILDINGS - SPECIALISED						
07. Health						
074. Medical Services						
Medical Centre - Land & Buildings Capital	**$ 40,000**	**$ -**	**$ -**	**$ -**	**$ -**	
Medical Centre upgrades Roof Works & Cabinetary	$ 40,000					
	$ 40,000	**$ -**	**$ -**	**$ -**	**$ -**	
08. Education & Welfare						
082. Care of Families & Children						
Child Care Centre - Land & Buildings Capital	**$ 5,500**	**$ -**	**$ -**	**$ -**	**$ -**	
Yilgarn Occasional Child Care Centre Install Second Gate Enclosure	$ 5,500					
083. Aged Care - Senior Citizens Centre						
Senior Citizens Centre - Land & Buildings Capital	**$ 15,000**	**$ -**	**$ -**	**$ -**	**$ -**	
Blinds Install Sun Blinds	$ 15,000					
	$ 20,500	**$ -**	**$ -**	**$ -**	**$ -**	

Shire of Yilgarn
CORPORATE BUSINESS PLAN
Forward Capital Works - Land & Buildings 2020/2021 to 2024/2025

Project	Forecast Budget					Comments
	2020-21	2021-22	2022-23	2023-24	2024-25	
10. Community Amenities						
Public Toilets - Land & Buildings Capital	**$ 10,000**	**$ -**	**$ 5,000**	**$ -**	**$ -**	
CBD toilet Cistern Upgrades			$ 5,000			
CBD toilet New cabinetry in Mothers room as damaged	$ 10,000					
Cemetery - Land & Buildings Capital	**$ 10,000**	**$ -**	**$ -**	**$ -**	**$ -**	
Map and Marker Upgrades	$ 10,000					
11. Recreation & Culture						
111. Public Halls & Civic centres						
Public Halls & Civic Centres - Land & Buildings Capital	$ 58,000	$ 60,000	$ 60,000	$ -	$ -	
Southern Cross Community Centre - Land & Buildings Capital	**$ 15,000**	**$ 60,000**	**$ 60,000**	**$ -**	**$ -**	
Air Conditioner Upgrades		$ 60,000				
Carpet near Bar, Hallway	$ 15,000					
Wood Flooring upgrade			$ 60,000			
Bullfinch Hall - Land & Buildings Capital	**$ 8,000**	**$ -**	**$ -**	**$ -**	**$ -**	
Hall upgrades Repair Internal Ceiling (50% with BF Progress Association)	$ 8,000					
Bodallin Hall - Land & Buildings Capital	**$ 20,000**	**$ -**	**$ -**	**$ -**	**$ -**	
Demolition	$ 20,000					

Shire of Yilgarn
CORPORATE BUSINESS PLAN
Forward Capital Works - Land & Buildings 2020/2021 to 2024/2025

Project	Forecast Budget					Comments
	2020-21	2021-22	2022-23	2023-24	2024-25	
Mt Hampton Hall - Land & Buildings Capital	**$ 15,000**	**$ -**	**$ -**	**$ -**	**$ -**	
Tennis Shed Demolition of Old Shed and Construction of a New Shed	$ 10,000					
Industrial Fans	$ 5,000					

112. Swimming Areas & Beaches

Swimming Pool - Land & Buildings Capital	**$ 1,039,633**	**$ -**	**$ -**	**$ -**	**$ -**	
Swimming Pool Upgrade Facility Design & Project Management	$ 117,936					
Swimming Pool Upgrade Land & Building Component 2020/2021 Completion	$ 921,697					

Sports Complex - Land & Buildings Capital	$ 123,000	$ 20,000	$ 20,000	$ 20,000	$ -	
SX Sproting Complex - Land & Buildings Capital	**$ 123,000**	**$ 20,000**	**$ 20,000**	**$ 20,000**	**$ -**	
Southern Cross Sports Complex - Main Building Various Internal Repairs / Upgrades	$ 20,000	$ 20,000	$ 20,000	$ 20,000		
SX Sports Complex - Court New flooring at indoor court	$ 60,000					
SX Sport Complex Window replacements	$ 13,000					
SX Complex Industral fans in court area	$ 30,000					

Golf Club House - Land & Buildings Capital	**$ 10,000**	**$ -**	**$ -**	**$ -**	**$ -**	
Club House Repaint exterior and remove asbestos	$ 10,000					

Shire of Yilgarn
CORPORATE BUSINESS PLAN
Forward Capital Works - Land & Buildings 2020/2021 to 2024/2025

Project	Forecast Budget					Comments
	2020-21	2021-22	2022-23	2023-24	2024-25	
115. Heritage						
Museum - Land & Buildings Capital	$ 20,000	$ -	$ -	$ -	$ -	
Yilgarn History Museum - Land & Buildings Capital	**$ 20,000**	**$ -**	**$ -**	**$ -**	**$ -**	
Upgrade Public Toilets Replace Current Toilet with New Ambulant Toilet						
Fencing Replace existing Asbestos fence with colourbond	$ 20,000					
12. Transport						
121. Infrastructure - Maintenance						
Depot - Land & Building Capital	$ 15,500	$ -	$ -	$ -	$ -	
Depot - Land & Buildings Capital	**$ 15,500**	**$ -**	**$ -**	**$ -**	**$ -**	
Plant Nursery Upgrade Shed						
Old Depot Office External Paint & Internal Archive Racking	$ 10,000					
Water Tanks	$ 5,500					

Shire of Yilgarn
CORPORATE BUSINESS PLAN
Forward Capital Works - Land & Buildings 2020/2021 to 2024/2025

Project	Forecast Budget					Comments
	2020-21	2021-22	2022-23	2023-24	2024-25	
13. Economic Services						
132. Tourism and Area Promotion						
Caravan Park Improvements - Land & Building Capital	$ 170,000	$ 87,500	$ 130,500	$ 5,600	$ -	
Caravan Park Improvements - Land & Building Capital	**$ 170,000**	**$ 87,500**	**$ 130,500**	**$ 5,600**	**$ -**	
Sandlewood Lodge Renovations to 2 x "B" Rooms	$ 82,000	$ 82,000	$ 85,000			
Laundry Stacked Washer/Dryers		$ 5,500	$ 5,500	$ 5,600		
Fencing Front of Caravan Park for Noise Control			$ 40,000			
Removal of Old Ablution Block	$ 50,000					
Solar Lights	$ 8,000					
New Storage and Laundry Building with Carport	$ 30,000					
14. Other Property & Services						
146. Public Administration						
Administration Centre - Land & Buildings Capital	$ 41,000	$ -	$ -	$ -	$ -	
Administration Centre - Land & Buildings Capital	**$ 41,000**	**$ -**	**$ -**	**$ -**	**$ -**	
Administration Centre Replace HR / Payroll Officer Office Window	$ 25,000					
Administration Centre New carpeting Tea Room, President's Office, EMRS Office	$ 6,000					
Administration Centre External Works	$ 10,000					

Shire of Yilgarn
CORPORATE BUSINESS PLAN
Forward Capital Works - Land & Buildings 2020/2021 to 2024/2025

Project	Forecast Budget					Comments
	2020-21	2021-22	2022-23	2023-24	2024-25	
11 Antaries Street - Land & Buildings Capital	$ 20,000	$ 20,000	$ -	$ -	$ -	
11 Antaries Street - Land & Buildings Capital	**$ 20,000**	**$ 20,000**	**$ -**	**$ -**	**$ -**	
House Bathroom and Toilet. Water Damage	$ 20,000					
New Kitchen in Residence		$ 20,000				
Various Buildings	$ 543,522	$ -	$ -	$ -	$ -	
Various Upgrades & Improvements Funded through the Local Roads & Infra Program	$ 543,522					
TOTAL FOR BUILDINGS - SPECIALISED	**$ 2,121,155**	**$ 187,500**	**$ 215,500**	**$ 25,600**	**$ -**	

BUILDINGS - NON SPECIALISED

08. Education & Welfare

084. Aged Care - Accommodation

Homes for the Aged - Land & Buildings Capital	$ 71,250	$ 6,000	$ 6,000	$ -	$ -	
Units 1 & 2	**$ 6,000**	**$ 6,000**	**$ 6,000**	**$ -**	**$ -**	
Unit 2 patch, paint, Kitchen upgrade, new flooring, new screen doors and front doors	$ 6,000	$ 6,000	$ 6,000			
Units 3 & 4	**$ 10,000**	**$ -**	**$ -**	**$ -**	**$ -**	
Unit 3 New Shed	$ 5,000					
Unit 4 New Shed	$ 5,000					

Project	Forecast Budget					Comments
	2020-21	2021-22	2022-23	2023-24	2024-25	
Units 5 & 6	**$ 27,500**	**$ -**	**$ -**	**$ -**	**$ -**	
Unit 6 Patch & Paint, Replace Doors	$ 27,500					
Units 7 & 8	**$ 27,750**	**$ -**	**$ -**	**$ -**	**$ -**	
Unit 7 Patch & Paint, New Windows & Doors	$ 16,250					
Unit 8 New windows and doors	$ 11,500					

09. Housing

091. Housing - Administration

Administration Housing - Land & Buildings Capital	$ 45,000	$ 457,000	$ 25,806	$ 16,000	$ -	
37 Taurus Street - Land & Buildings Capital	**$ -**	**$ 30,000**	**$ -**	**$ -**	**$ -**	
Upgrades & Renewals Front Entrance Reglazing, Security Doors Front & Back, external paint, Laundry Tiling & Paint		$ 30,000				
3 Libra Place - Land & Buildings Capital	**$ 5,000**	**$ -**	**$ -**	**$ 6,000**	**$ -**	
Upgrades and Renewals	$ 5,000					
Upgrades and Renewals				$ 6,000		
11 Andromeda Court - Land & Buildings Capital	**$ -**	**$ 400,000**	**$ -**	**$ -**	**$ -**	
Replace Staff Housing		$ 400,000				
120 Antares Street - Land & Buildings Capital	**$ 25,000**	**$ 20,000**	**$ 20,806**	**$ 10,000**	**$ -**	
Upgrades & Renewals Replace North Side of Boundary Fence			$ 20,806	$ 10,000		
Bathroom Upgrade		$ 20,000				
Roof Replacement	$ 25,000					

Shire of Yilgarn
CORPORATE BUSINESS PLAN
Forward Capital Works - Land & Buildings 2020/2021 to 2024/2025

Project	Forecast Budget					Comments
	2020-21	2021-22	2022-23	2023-24	2024-25	
91c Antares Street - Land & Buildings Capital	**$ 15,000**	**$ 7,000**	**$ 5,000**	**$ -**	**$ -**	
Upgrades & Renewals	$ 15,000	$ 7,000	$ 5,000			
Kitchen upgrade, flooring, repaint						

092. Housing - Works

Works Housing - Land & Buildings Capital	$ 11,000	$ 20,000	$ 15,000	$ -	$ -	
2 Libra Place - Land & Buildings Capital	**$ -**	**$ -**	**$ 10,000**	**$ -**	**$ -**	
Upgrades & Renewals			$ 10,000			
Electrical Rewire Premises						
71 Antares Street - Land & Buildings Capital	**$ 6,000**	**$ 5,000**	**$ -**	**$ -**	**$ -**	
Upgrades and renewals	$ 6,000	$ 5,000				
91b Antares Street - Land & Buildings Capital	**$ 5,000**	**$ 15,000**	**$ 5,000**	**$ -**	**$ -**	
Replace Evaporative Aircontitioner	$ 5,000					
Internal Upgrades		$ 15,000	$ 5,000			

095. Housing - Commercially Rented

Commercially Rented Housing - Land & Buildings Capital	$ 62,000	$ 24,000	$ -	$ -	$ -	
103 Altair Street - Capital	**$ 20,000**	**$ 13,000**	**$ -**	**$ -**	**$ -**	
Removal of old fence replace with colourbond fence	$ 20,000					
Kitchen upgrade		$ 13,000				
91a Antares Street - Capital	**$ 5,000**	**$ 11,000**	**$ -**	**$ -**	**$ -**	
Upgrades & Renewals		$ 11,000				
Replace Floor Coverings & Repaint						
Exterior	$ 5,000					
Repaint						

Shire of Yilgarn
CORPORATE BUSINESS PLAN
Forward Capital Works - Land & Buildings 2020/2021 to 2024/2025

Project	Forecast Budget					Comments
	2020-21	2021-22	2022-23	2023-24	2024-25	
6 Libra Place - Capital	**$ 37,000**	**$ -**	**$ -**	**$ -**	**$ -**	
Remove Evap replace with reverse cycle air cons ready for new Works Manager	$ 15,000					
Interior Paint and Flooring	$ 22,000					

096. Housing - Medical Services

Medical Services Housing - Land & Buildings Capital	$ 3,500	$ -	$ 10,000	$ 10,000	$ -	
35 Taurus Street - Capital	**$ -**	**$ -**	**$ -**	**$ 10,000**	**$ -**	
Internal Upgrades				$ 10,000		
80 Spica Street - Capital	**$ 3,500**	**$ -**	**$ 10,000**	**$ -**	**$ -**	
Internal Upgrades			$ 10,000			
New Airconditioner	$ 3,500					
TOTAL FOR BUILDINGS - NON SPECIALISED	**$ 192,750**	**$ 507,000**	**$ 56,806**	**$ 26,000**	**$ -**	

Shire of Yilgarn
CORPORATE BUSINESS PLAN
Forward Capital Works - Furniture, Plant & Equipment 2020/2021 to 2024/2025

Project	Forecast					Comments
	2020-21	2021-22	2022-23	2023-24	2024-25	
FURNITURE & EQUIPMENT						
Nil						
MINOR PLANT & EQUIPMENT						
123. Plant Acquisition						
Purchase of Plant & Equipment	$ 40,000	$ -	$ -	$ -	$ -	
Electronic Roadside Colour Display	$ 40,000					
TOTAL FOR MINOR PLANT & EQUIPMENT	**$ 40,000**	**$ -**	**$ -**	**$ -**	**$ -**	
MAJOR PLANT & EQUIPMENT						
123. Plant Acquisition						
Purchase of Plant & Equipment	$ 710,000	$ 767,600	$ 806,400	$ 609,500	$ 901,300	
Replace 2011 John Deere Tractor - YL122	$ 71,500					
Trade	-$ 25,000					
Replace 2010 Durra Quip Side Tipper Semi Trailer - YL7059	$ 120,000					
Trade	-$ 35,000					
Replace 2010 Durra Quip Side Tipper Semi Trailer - YL7016	$ 120,000					
Trade	-$ 35,000					
New Street Sweeper	$ 190,000					
	$ -					
Replace 2015 Isuzu 4x2 Dual Cab Truck - YL311	$ 92,500			$ 95,000		
Trade	-$ 25,000			-$ 25,000		

Shire of Yilgarn
CORPORATE BUSINESS PLAN
Forward Capital Works - Furniture, Plant & Equipment 2020/2021 to 2024/2025

Project	Forecast					Comments
	2020-21	2021-22	2022-23	2023-24	2024-25	
Replace 2015 Mitsubishi 4x2 Dual Cab Truck - YL4949	$ 92,500			$ 95,000		
Trade	-$ 25,000			-$ 25,000		
Replace 2015 Mitsubishi Tip Truck - YL046	$ 87,500					
Trade	-$ 25,000					
Replace 2017 Toyota LC70 Single Cab Ute (Mechanic) - YL645	$ 65,500			$ 67,600		
Trade	-$ 38,000			-$ 38,000		
Replace 2019 Toyota Kluger AWD GXL - YL50	$ 55,200		$ 56,400		$ 57,500	
Trade	-$ 30,000		-$ 30,000		-$ 30,000	
Replace 2019 Toyota Prado VX - YL1	$ 66,300		$ 67,600		$ 69,000	
Trade	-$ 40,000		-$ 40,000		-$ 40,000	
Replace 2019 Holden Colorado LTZ - YL252	$ 57,000		$ 58,200		$ 59,300	
Trade	-$ 30,000		-$ 30,000		-$ 30,000	
Replace 2013 John Deere 670 Grader - YL296		$ 386,300				
Trade		-$ 70,000				
Replace 2014 Caterpillar 950H Loader - YL324		$ 335,000				
Trade		-$ 80,000				
Replace 2017 Mitsubishi Tip Truck (Parks & Gardens) - YL5410		$ 88,200				
Trade		-$ 25,500				
Replace 2019 Toyota Hilux Ute (Parks & Gardens) - YL13		$ 49,800			$ 51,400	
Trade		-$ 30,000			-$ 30,000	
Replace 2019 Toyota LC70 Single Cab Ute (Works) - YL5067		$ 66,300			$ 68,300	
Trade		-$ 35,000			-$ 35,000	
Replace 2019 Toyota LC70 Single Cab Ute (Works) - YL38		$ 66,300			$ 68,300	
Trade		-$ 35,000			-$ 35,000	
Replace 2020 Toyota Hilux SR5 Dual Cab Ute - YL150		$ 58,700		$ 59,900		
Trade		-$ 35,000		-$ 35,000		
Replace 2017 Toyota RAV4 (Community Car) - YL285		$ 39,500				
Trade		-$ 12,000				
Replace 2014 Bomag Multi Tyred Roller - YL129			$ 188,000			
Trade			-$ 35,000			

Shire of Yilgarn
CORPORATE BUSINESS PLAN
Forward Capital Works - Furniture, Plant & Equipment 2020/2021 to 2024/2025

Project	Forecast					Comments
	2020-21	2021-22	2022-23	2023-24	2024-25	
Replace 2009 Caterpillar 924H IT Loader (Landfill) - YL5304			$ 268,000			
Trade			-$ 45,000			
Replace 2013 John Deere Backhoe - YL330			$ 185,000			
Trade			-$ 30,000			
Replace 2013 Bruce Rock Engineering Float Trailer - YL7432			$ 120,000			
Trade			-$ 10,000			
Replace 2012 Toro SP Slasher / Mower - YL345			$ 35,000			
Trade			-$ 3,500			
Replace 2020 Toyota Hilux 4x4 Ute (Asset Management) - YL121			$ 49,800			
Trade			-$ 30,000			
Replace 2020 Toyota LC70 Single Cab Ute (Works) - YL333			$ 66,900			
Trade			-$ 35,000			
Replace 2014 John Deere 670 Grader - YL5199				$ 394,000		
Trade				-$ 70,000		
Replace 2018 Mitsubishi Flatdeck Truck (Maintenance) - YL329				$ 102,000		
Trade				-$ 35,500		
Replace 2019 Mazda BT50 4x2 Ute (Handyman) - YL363				$ 39,500		
Trade				-$ 15,000		
Replace 2017 John Deere 670 Grader - YL087					$ 398,000	
Trade					-$ 70,000	
Replace 2016 Dynapac Multi Tyred Roller - YL5248					$ 192,000	
Trade					-$ 35,000	
Replace 2017 Freightliner Prime Mover - YL117					$ 292,500	
Trade					-$ 50,000	
TOTAL FOR MAJOR PLANT & EQUIPMENT	**$ 710,000**	**$ 767,600**	**$ 806,400**	**$ 609,500**	**$ 901,300**	

Shire of Yilgarn
CORPORATE BUSINESS PLAN
Forward Capital Works - Infrastructure 2020/2021 to 2024/2025

GL / Job	Project	Forecast Budget															Comments
		2020-21			2021-22			2022-23			2023-24			2024-25			
		LGA	Grant / Other	Total	LGA	Grant / Other	Total	LGA	Grant / Other	Total	LGA	Grant / Other	Total	LGA	Grant / Other	Total	
INFRASTRUCTURE - ROADS																	
Regional Road Group (RRG)																	
Project Grant Roads 2025		$ 390,154	$ 780,308	$ 1,170,462	$ 395,377	$ 790,753	$ 1,186,130	$ 401,700	$ 803,400	$ 1,205,100	$ 404,250	$ 808,500	$ 1,212,750	$ 407,350	$ 814,700	$ 1,222,050	
Koolyanobbing Rd Construct to 7m Seal - SLK 11.0 - 14.0		$ 201,187	$ 402,375	$ 603,562			$ -			$ -			$ -			$ -	
Koolyanobbing Rd 10mm Bitumen Reseal - SLK 8.0 - 11.0		$ 34,059	$ 68,117	$ 102,176			$ -			$ -			$ -			$ -	
Moorine South Rd 10mm Bitumen Reseal - SLK 16.5 - 24.5		$ 90,133	$ 180,265	$ 270,398			$ -			$ -			$ -			$ -	
Koorda - Bullfinch Road 10mm Bitumen Reseal - SLK 3.0 - 9.0		$ 64,775	$ 129,551	$ 194,326			$ -			$ -			$ -			$ -	
Koolyanobbing Rd Construct to 7m Seal - SLK 14.0 - 17.0				$ -	$ 209,217	$ 418,434	$ 627,651			$ -			$ -			$ -	
Koolyanobbing Rd 10mm Bitumen Reseal - SLK 11.0 - 14.0				$ -	$ 34,910	$ 69,819	$ 104,729			$ -			$ -			$ -	
Moorine South Rd 10mm Bitumen Reseal - SLK 24.5 - 38.0				$ -	$ 151,250	$ 302,500	$ 453,750			$ -			$ -			$ -	
Koolyanobbing Rd Construct to 7m Seal - SLK 0.0 - 2.5				$ -			$ -	$ 176,225	$ 352,450	$ 528,675			$ -			$ -	
Koolyanobbing Rd 10mm Bitumen Reseal - SLK 14.0 - 17.0				$ -			$ -	$ 35,600	$ 71,200	$ 106,800			$ -			$ -	
Moorine South Rd 10mm Bitumen Reseal - SLK 38.0 - 51.0				$ -			$ -	$ 154,275	$ 308,550	$ 462,825			$ -			$ -	
Koorda - Bullfinch Road 10mm Bitumen Reseal - SLK 0.0 - 3.0				$ -			$ -	$ 35,600	$ 71,200	$ 106,800			$ -			$ -	
Koolyanobbing Rd 10mm Bitumen Reseal - SLK 0.0 - 2.5				$ -			$ -			$ -	$ 30,250	$ 60,500	$ 90,750			$ -	
Moorine South Rd 10mm Bitumen Reseal - SLK 51.0 - 64.0				$ -			$ -			$ -	$ 157,300	$ 314,600	$ 471,900			$ -	
Moorine South Rd Construct to 7m Seal - SLK 64.5 - 67.5				$ -			$ -			$ -	$ 216,700	$ 433,400	$ 650,100			$ -	
Marvel Lock / Forrestania Rd Construct to 7m Seal - SLK 0.0 - 3.0				$ -			$ -			$ -			$ -	$ 222,100	$ 444,200	$ 666,300	
Moorine South Rd 10mm Bitumen Reseal - SLK 64.0 - 67.5				$ -			$ -			$ -			$ -	$ 43,225	$ 86,450	$ 129,675	
Parker Range Rd 10mm Bitumen Reseal - SLK 0.0 - 11.5				$ -			$ -			$ -			$ -	$ 142,025	$ 284,050	$ 426,075	

Shire of Yilgarn
CORPORATE BUSINESS PLAN
Forward Capital Works - Infrastructure 2020/2021 to 2024/2025

GL / Job	Project	Forecast Budget															Comments
		2020-21			2021-22			2022-23			2023-24			2024-25			
		LGA	Grant / Other	Total	LGA	Grant / Other	Total	LGA	Grant / Other	Total	LGA	Grant / Other	Total	LGA	Grant / Other	Total	
Roads to Recoveries (R2R)																	
Roads to Recoveries Grant Roads		$ -	$ 906,704	$ 906,704	$ -	$ 906,704	$ 906,704	$ -	$ 906,704	$ 906,704	$ -	$ 906,704	$ 906,704	$ -	$ 906,704	$ 906,704	
Crampthorne Rd	Construct to 7m Seal - SLK 8.5 - 10.0	$ -	$ 328,017	$ 328,017			$ -			$ -			$ -			$ -	
Bodallin South Rd	Construct to 7m Seal - SLK 6.5 - 7.7	$ -	$ 293,252	$ 293,252			$ -			$ -			$ -			$ -	
Bodallin South Rd	10mm Bitumen Reseal - SLK 6.4 - 7.4	$ -	$ 41,009	$ 41,009			$ -			$ -			$ -			$ -	
Southern Cross South Rd	Formation and Gravel Overlay - SLK 47.8 - 51.3	$ -	$ 145,698	$ 145,698			$ -			$ -			$ -			$ -	
Gatley Rd	Formation and Gravel Overlay - SLK 2.5 - 4.5	$ -	$ 98,728	$ 98,728			$ -			$ -			$ -			$ -	
Crampthorne Rd	Construct to 7m Seal - Ongoing Works			$ -	$ -	$ 328,017	$ 328,017			$ -			$ -			$ -	
Bodallin South Rd	Construct to 7m Seal - Ongoing Works			$ -	$ -	$ 293,252	$ 293,252			$ -			$ -			$ -	
Bodallin South Rd	10mm Bitumen Reseal - Ongoing Works			$ -	$ -	$ 41,009	$ 41,009			$ -			$ -			$ -	
Southern Cross South Rd	Formation and Gravel Overlay - Ongoing Works			$ -	$ -	$ 145,698	$ 145,698			$ -			$ -			$ -	
Gatley Rd	Formation and Gravel Overlay - Ongoing Works			$ -	$ -	$ 98,728	$ 98,728			$ -			$ -			$ -	
Crampthorne Rd	Construct to 7m Seal - Ongoing Works			$ -			$ -	$ -	$ 328,017	$ 328,017			$ -			$ -	
Bodallin South Rd	Construct to 7m Seal - Ongoing Works			$ -			$ -	$ -	$ 293,252	$ 293,252			$ -			$ -	
Bodallin South Rd	10mm Bitumen Reseal - Ongoing Works			$ -			$ -	$ -	$ 41,009	$ 41,009			$ -			$ -	
Southern Cross South Rd	Formation and Gravel Overlay - Ongoing Works			$ -			$ -	$ -	$ 145,698	$ 145,698			$ -			$ -	
Gatley Rd	Formation and Gravel Overlay - Ongoing Works			$ -			$ -	$ -	$ 98,728	$ 98,728			$ -			$ -	
Crampthorne Rd	Construct to 7m Seal - Ongoing Works			$ -			$ -			$ -	$ -	$ 328,017	$ 328,017			$ -	
Bodallin South Rd	Construct to 7m Seal - Ongoing Works			$ -			$ -			$ -	$ -	$ 293,252	$ 293,252			$ -	
Bodallin South Rd	10mm Bitumen Reseal - Ongoing Works			$ -			$ -			$ -	$ -	$ 41,009	$ 41,009			$ -	
Southern Cross South Rd	Formation and Gravel Overlay - Ongoing Works			$ -			$ -			$ -	$ -	$ 145,698	$ 145,698			$ -	
Gatley Rd	Formation and Gravel Overlay - Ongoing Works			$ -			$ -			$ -	$ -	$ 98,728	$ 98,728			$ -	
Crampthorne Rd	Construct to 7m Seal - Ongoing Works			$ -			$ -			$ -			$ -	$ -	$ 328,017	$ 328,017	
Bodallin South Rd	Construct to 7m Seal - Ongoing Works			$ -			$ -			$ -			$ -	$ -	$ 293,252	$ 293,252	
Bodallin South Rd	10mm Bitumen Reseal - Ongoing Works			$ -			$ -			$ -			$ -	$ -	$ 41,009	$ 41,009	
Southern Cross South Rd	Formation and Gravel Overlay - Ongoing Works			$ -			$ -			$ -			$ -	$ -	$ 145,698	$ 145,698	
Gatley Rd	Formation and Gravel Overlay - Ongoing Works			$ -			$ -			$ -			$ -	$ -	$ 98,728	$ 98,728	

Shire of Yilgarn
CORPORATE BUSINESS PLAN
Forward Capital Works - Infrastructure 2020/2021 to 2024/2025

GL / Job	Project	Forecast Budget															Comments
		2020-21			2021-22			2022-23			2023-24			2024-25			
		LGA	Grant / Other	Total	LGA	Grant / Other	Total	LGA	Grant / Other	Total	LGA	Grant / Other	Total	LGA	Grant / Other	Total	
Council Funded Road Projects - Rural Roads																	
Rural Roads Upgrade - Municipal		$ 567,730	$ -	$ 567,730	$ 577,381	$ -	$ 577,381	$ 587,196	$ -	$ 587,196	$ 597,178	$ -	$ 597,178	$ 607,330	$ -	$ 607,330	
Emu Fence Rd	Formation & Gravel Overlay - SLK 137.5 - 139.5	$ 102,030	$ -	$ 102,030			$ -			$ -			$ -			$ -	
Brennand Road	Formation & Gravel Overlay - SLK 13.5 - 15.5	$ 99,382	$ -	$ 99,382			$ -			$ -			$ -			$ -	
Nulla Nulla South Rd	Formation & Gravel Overlay - SLK 30.5 - 32.5	$ 102,245	$ -	$ 102,245			$ -			$ -			$ -			$ -	
Kent Rd	Formation & Gravel Overlay - SLK 15.5 - 17.5	$ 97,836	$ -	$ 97,836			$ -			$ -			$ -			$ -	
Cockatoo Tank Rd	Formation & Gravel Overlay - SLK 7.0 - 9.0	$ 108,086	$ -	$ 108,086			$ -			$ -			$ -			$ -	
Koolyanobbing Rd	10mm Bitumen Seal - SLK 29.0 - 33.00	$ 58,151	$ -	$ 58,151			$ -			$ -			$ -			$ -	
Various Roads	Various Ongoing Works			$ -	$ 577,381	$ -	$ 577,381			$ -			$ -			$ -	
Various Roads	Various Ongoing Works			$ -			$ -	$ 587,196	$ -	$ 587,196			$ -			$ -	
Various Roads	Various Ongoing Works			$ -			$ -			$ -	$ 597,178	$ -	$ 597,178			$ -	
Various Roads	Various Ongoing Works			$ -			$ -			$ -			$ -	$ 607,330	$ -	$ 607,330	
Council Funded Road Projects - Town Roads																	
Town Roads Upgrade - Municipal		$ 59,758	$ -	$ 59,758	$ 60,774	$ -	$ 60,774	$ 61,807	$ -	$ 61,807	$ 62,858	$ -	$ 62,858	$ 63,927	$ -	$ 63,927	
Achenear St	Bitumen Reaseal	$ 59,758		$ 59,758			$ -			$ -			$ -			$ -	
Various Roads	Various Ongoing Works			$ -	$ 60,774	$ -	$ 60,774			$ -			$ -			$ -	
Various Roads	Various Ongoing Works			$ -			$ -	$ 61,807	$ -	$ 61,807			$ -			$ -	
Various Roads	Various Ongoing Works			$ -			$ -			$ -	$ 62,858	$ -	$ 62,858			$ -	
Various Roads	Various Ongoing Works			$ -			$ -			$ -			$ -	$ 63,927	$ -	$ 63,927	
HVRIC Funded Projects																	
HVRIC - Heavy Vehicle Road Improvements Works		$ 285,473	$ -	$ 285,473	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Three Boys Rd	Construct to 7m Seal - SLK 1.8 - 3.3	$ 285,473	$ -	$ 285,473			$ -			$ -			$ -			$ -	
Commodity Route Funded Projects																	
Commodity Route Funded Project		$ -	$ 81,482	$ 81,482	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Bodallin South Rd	Construct to 7m Seal - SLK 2.7 - 4.9	$ -	$ 81,482	$ 81,482			$ -			$ -			$ -			$ -	

Shire of Yilgarn
CORPORATE BUSINESS PLAN
Forward Capital Works - Infrastructure 2020/2021 to 2024/2025

GL / Job	Project	Forecast Budget															Comments
		2020-21			2021-22			2022-23			2023-24			2024-25			
		LGA	Grant / Other	Total	LGA	Grant / Other	Total	LGA	Grant / Other	Total	LGA	Grant / Other	Total	LGA	Grant / Other	Total	
Footpath Construction / Upgrades																	
Footpath Construction / Upgrades		$ 90,946	$ -	$ 90,946	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Spica St - Southern Cross	185m Length	$ 45,296	$ -	$ 45,296			$ -			$ -			$ -			$ -	
Altair St - Southern Cross	175m Length	$ 45,650	$ -	$ 45,650			$ -			$ -			$ -			$ -	
Various Locations & Lengths	Funded through the Local Roads & Infra Program	$ -	$ 200,000	$ 200,000			$ -			$ -			$ -			$ -	
TOTAL FOR INFRASTRUCTURE - ROADS		**$ 1,394,061**	**$ 1,768,494**	**$ 3,162,555**	**$ 1,033,532**	**$ 1,697,457**	**$ 2,730,989**	**$ 1,050,703**	**$ 1,710,104**	**$ 2,760,807**	**$ 1,064,286**	**$ 1,715,204**	**$ 2,779,490**	**$ 1,078,607**	**$ 1,721,404**	**$ 2,800,011**	
INFRASTRUCTURE - SEWERAGE																	
Nil																	
INFRASTRUCTURE - REFUSE																	
Nil																	
INFRASTRUCTURE - PARKS & OVALS																	
Playground Equipment - Infrastructure Capital		$ 50,000	$ -	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Playground Equipment - Constellation Park - Infra Capital		**$ 50,000**	**$ -**	**$ 50,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Toddler Friendly Play Equipment	Play Equipment in Replacement of Playgroup Facility	$ 50,000		$ 50,000			$ -			$ -			$ -			$ -	
Various Playgrounds & Parks		$ -	$ 200,000	$ 200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Parks & Play Equipment	Funded through the Local Roads & Infra Program	$ -	$ 200,000	$ 200,000			$ -			$ -			$ -			$ -	
TOTAL FOR INFRASTRUCTURE - PARKS & OVALS		**$ 50,000**	**$ 200,000**	**$ 250,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
INFRASTRUCTURE - OTHER																	
10. Community Amenities																	
110. Community Development																	
Community Development - Infrastructure Capital		**$ 25,000**	**$ -**	**$ 25,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Community Development - Infra - Townscape - Capital		**$ 25,000**	**$ -**	**$ 25,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Main Street Townscape	Replace Main Street Christmas Lights	$ 20,000		$ 20,000			$ -			$ -			$ -			$ -	
Main Street Townscape	New Planter pots	$ 5,000		$ 5,000			$ -			$ -			$ -			$ -	

Shire of Yilgarn
CORPORATE BUSINESS PLAN
Forward Capital Works - Infrastructure 2020/2021 to 2024/2025

GL / Job	Project	Forecast Budget															Comments
		2020-21			2021-22			2022-23			2023-24			2024-25			
		LGA	Grant / Other	Total	LGA	Grant / Other	Total	LGA	Grant / Other	Total	LGA	Grant / Other	Total	LGA	Grant / Other	Total	
11. Recreation & Culture																	
112. Swimming Areas & Beaches																	
Swimming Pool - Infrastructure Capital		**$ 1,603,576**	**$ -**	**$ 1,603,576**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Swimming Pool Upgrade Bowl & Filtration		$ 1,603,576	$ -	$ 1,603,576			$ -			$ -			$ -			$ -	
13. Economic Services																	
132. Tourism and Area Promotion																	
Townscape Projects - Infrastructure Capital		**$ 20,000**	**$ -**	**$ 20,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Christmas lighting		$ 20,000		$ 20,000			$ -			$ -			$ -			$ -	
TOTAL FOR INFRASTRUCTURE - OTHER		**$ 1,648,576**	**$ -**	**$ 1,648,576**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
INFRASTRUCTURE TOTAL		**$ 3,092,637**	**$ 1,968,494**	**$ 5,061,131**	**$ 1,033,532**	**$ 1,697,457**	**$ 2,730,989**	**$ 1,050,703**	**$ 1,710,104**	**$ 2,760,807**	**$ 1,064,286**	**$ 1,715,204**	**$ 2,779,490**	**$ 1,078,607**	**$ 1,721,404**	**$ 2,800,011**	

Application form: Works Approval / Licence / Renewal / Amendment / Registration

Part V, Division 3, *Environmental Protection Act 1986*
Environmental Protection Regulations 1987

Attachment 9.4.3

Part 1: Application type

INSTRUCTIONS:

- **Completion of this form is a statutory requirement under section 54(1)(a) of the *Environmental Protection Act 1986* (WA) (EP Act) for works approval applications; section 57(1)(a) for licence applications; section 59B(1)(a) for applications for an amendment; and under regulation 5B(2)(a) of the *Environmental Protection Regulations 1987* (WA) (EP Regulations) for applications for registration of premises.**
- **The instructions set out in this application form are general in nature.**
- **A reference to 'you' in these instructions is a reference to the applicant.**
- **The information provided to you by the Department of Water and Environmental Regulation (DWER) in relation to making applications does not constitute legal advice. DWER recommends that you obtain independent legal advice.**
- **Applicants seeking further information relating to requirements under the EP Act and/or EP Regulations are directed to the Parliamentary Counsel's Office website (www.legislation.wa.gov.au). Schedule 1 of the EP Regulations contains the categories of prescribed premises.**
- **For prescribed premises where activities fall within more than one category, ALL applicable categories must be identified. This applies for existing prescribed premises seeking renewal or amendment, as well as new prescribed premises.**
- **The application form must be completed with all relevant information attached. Attachments can be combined and submitted as one or more consolidated documents if desired, provided it is clear which section of the application form the information / attachments relate to. Where attachments are submitted separately, avoid duplicating information. Ensure that any cross-references between the application form and the supporting document(s) are accurate.**
- **If an application form has been submitted which is incomplete or materially incorrect, the Chief Executive Officer of DWER (CEO) will decline to deal with the application and advise the applicant accordingly.**
- **On completing this application form, please submit it to DWER in line with the instructions in Part 14 of the form.**

1.1	**This is an application for:** *[Select one option only. Your application may be returned if multiple options are selected.]* under Part V, Division 3 of the EP Act. Please see the: • *Guideline: Industry Regulation Guide to Licensing*; and • *Procedure: Prescribed premises works approvals and licences* for more information to assist in understanding DWER's regulatory regime for prescribed premises.	☐ Works approval ☐ Licence Existing registration number(s): [ ] Existing works approval number(s): [ ] ☐ Renewal Existing licence number: [ ] ☒ Amendment Number of the existing licence or works approval to be amended: [L4597/1988/14] ☐ Registration (works approval already obtained) Existing works approval number(s): [ ]

1.2	**For a works approval amendment or licence amendment, are there less than 90 business days until the expiry of the existing works approval or licence?** Only active instruments can be amended. Applications to amend a works approval or licence must be made 90 business days or more prior to the existing works approval or licence expiring to ensure there is adequate time to assess the amendment.	**Yes** ☐

Part 1: Application type		
1.3	**This application is for the following categories of prescribed premises:**	5 Processing or beneficiation of metallic or nonmetallic ore 2,600,000 tonnes per annual period 6 Mine dewatering 6,000,000 tonnes per annual period 64 Class II or III putrescible landfill 2,000 tonnes per annual period 57 Used tyre storage 200 tyres (specify all prescribed premises category numbers) ☒ All activities that meet the definition of a prescribed premises as set out in Schedule 1 of the EP Regulations have been specified above (tick, if yes).

Completion Matrix
The matrix below explains what sections are required to be completed for different types of applications.

Application form section	New application / registration	Renewal	Amendment
Part 1: Application type	•	•	•
Part 2: Applicant details	•	•	•
Part 3: Premises details	•	•	Δ
Part 4: Proposed activities	•	•	•
Part 5: Index of Biodiversity Surveys for Assessment and Index of Marine Surveys for Assessment	If required.	If required.	If required.
Part 6: Other DWER approvals	•	•	•
Part 7: Other approvals and consultation	•	•	•
Part 8: Applicant history	•	•	Δ
Part 9: Emissions, discharges, and waste	•	•	Δ
Part 10: Siting and location	•	•	Δ
Part 11: Submission of any other relevant information	•	•	If required.
Part 12: Proposed fee calculation	•	•	•
Part 13: Commercially sensitive or confidential information	•	•	•
Part 14: Submission of application	•	•	•
Part 15: Declaration and signature	•	•	•
Attachment 1A: Proof of occupier status	•	•	N/A
Attachment 1B: ASIC company extract	•	•	N/A
Attachment 1C: Authorisation to act as a representative of the occupier	If required.	If required.	If required.
Attachment 2: Premises map/s	•	•	Δ
Attachment 3A: Environmental commissioning plan	If required.	N/A	If required
Attachment 3B: Proposed activities	•	•	Δ
Attachment 3C: Map of area proposed to be cleared (only applicable if clearing is proposed)	•	•	•
Attachment 3D: Additional information for clearing assessment	If required.	If required.	If required.
Attachment 4: Marine surveys (only applicable if marine surveys included in application)	•	•	•
Attachment 5: Other approvals and consultation documentation	•	•	Δ
Attachment 6A: Emissions and discharges	If required.	If required.	If required.
Attachment 6B: Waste acceptance	If required.	If required.	If required.
Attachment 7: Siting and location	•	•	Δ
Attachment 8: Additional information submitted	If required.	If required.	If required.
Attachment 9: Proposed fee calculation	•	•	•
Attachment 10: Request for exemption from publication	If required.	If required.	If required.

Key:

•	Must be submitted.
Δ	To the extent changed / required in relation to the amendment.
N/A	Not required with application, but may be requested subsequently depending on DWER records.
"If required"	Sections for applicants to determine.

Part 2: Applicant details

INSTRUCTIONS:

- **The applicant (the occupier of the premises) must be an individual(s), a company, body corporate, or public authority, but not a partnership, trust, or joint-venture name. Applications made by or on behalf of business names or unincorporated associations will not be accepted.**
- **If applying as an individual, your full legal name must be inserted.**
- **If applying as a company, body corporate, or public authority, the full legal entity name must be inserted.**
- **Australian Company Number's (ACN) must be provided for all companies or body corporates.**
- **DWER prefers to send all correspondence electronically via email. We request that you consent to receiving all correspondence relating to instruments and notices under Part V of the EP Act (Part V documents) electronically via email, by indicating your consent in Section 2.3.**
- **Companies or body corporates making an application must nominate an authorised representative from within their organisation. Proof of authorisation will be required.**
- **Details of a contact person must be provided for DWER enquiries in relation to your application. This contact person can be a consultant if authorised to represent the applicant. Written evidence of this authorisation must be provided.**
- **Details of the occupier of the premises must be provided. One of the options must be selected and if you have been asked to specify, please provide details. For example, if 'lease holder' has been selected, please specify the type of lease (for example, pastoral lease, mining lease, or general lease) and provide a copy of the lease document(s). Note that contracts for sale of land will not be sufficient evidence of occupancy status.**

2.1	**Applicant name/s (full legal name/s):** The proposed holder of the works approval, licence or registration.	[redacted]
	ACN (if applicable):	[redacted]
2.2	**Trading as (if applicable):**	N/A
2.3	**Authorised representative details:** The person authorised to receive correspondence and Part V documents on behalf of the applicant under the EP Act. Where 'yes' is selected, all correspondence will be sent to you via email, to the email address provided in this section. Where 'no' has been selected, Part V documents will be posted to you in hard copy to the postal / business address specified in section 2.4, below. Other general correspondence may still be sent to you via email.	Name: [redacted] Position: [redacted] Telephone: [redacted] Email: [redacted]
		I consent to all written correspondence between myself (the applicant) and DWER, regarding the subject of this application, being exclusively via email, using the email address I have provided above. — Yes: ☒ No: ☐
2.4	**Registered office address, as registered with the Australian Securities and Investments Commission (ASIC):** This must be a physical address to which a Part V document may be delivered.	[redacted]
2.5	**Postal address for all other correspondence:** If different from section 2.4.	N/A

Part 2: Applicant details				
2.6	**Contact person details for DWER enquiries relating to the application (if different from the authorised representative):** For example, could be a consultant or a site based employee	Name	[redacted]	
		Position	[redacted]	
		Organisation	[redacted]	
		Address	[redacted]	
		Telephone	[redacted]	
		Email	[redacted]	
2.7	**Occupier status:** Occupier is defined in section 3 of the EP Act and includes a person in occupation or control of the premises, or occupying a different part of the premises whether or not that person is the owner. Note: if a lease holder, the applicant must be the holder of an executed lease, not just an agreement to lease.	Registered proprietor on certificate of title.		☐
		Lease holder (please specify, including date of expiry of lease).	Mining tenements: M77/239, M77/638; and M77/1036	☒
		Public authority that has care, control, or management of the land.		☐
		Other evidence of legal occupation or control (please specify – for example, joint venture operating entity, contract, letter of operational control, or other legal document or evidence of legal occupation).		☐

Attachments			N/A	Yes
2.8	**Attachment 1A: Proof of occupier status**	Copies of certificate of title, lease or other instruments evidencing proof of occupier status, including the expiry date or confirmation that there is no expiry date, have been provided and labelled as Attachment 1A.	☐	☒
2.9	**Attachment 1B: ASIC company extract**	A current company information extract (not the company information summary) purchased from the ASIC website(s) for all new applications / registrations has been provided and labelled as Attachment 1B.	☐	☒
2.10	**Attachment 1C: Authorisation to act as representative of the occupier**	A copy of the documentation authorising the applicant to act on the occupier's behalf as their authorised agent/representative has been provided and labelled as Attachment 1C.	☒	☐

Part 3: Premises details		
3.1	**Premises description (whole or part to be specified):** Include the land description (volume and folio number, lot, or location number/s); Crown lease or reserve number; pastoral lease number; or mining tenement number (as appropriate), of all properties, as shown on title details registered with Landgate.	No changes required to existing details
	Premises street address Include the suburb.	[redacted]
	Premises name (if applicable):	[redacted]
3.2	**Local Government Authority area:** City, Town, or Shire.	No changes required to existing details
3.3	**GPS (latitude and longitude) coordinates:** GPS coordinates determined using the GDA 1994 (Geographic latitude / longitude) coordinate system and datum must be provided for all points around the proposed premises boundary, where the entirety of the cadastre (land parcel) or mining tenements are not used as the premises boundary.	No changes required to existing details

Attachments			N/A	Yes
3.4	**Attachment 2: Premises map(s)**	You must provide as an attachment to this application form, labelled Attachment 2, either: 1. an aerial photograph, map, and site plan of sufficient scale showing the proposed prescribed premises boundary *or* 2. where available, a suitable portable digital storage device of the proposed prescribed premises boundary, map, and site plan as an ESRI shapefile with the following properties: • Geometry type: Polygon Shape • Coordinate system: GDA 1994 (Geographic latitude / longitude) • Datum: GDA 1994 (Geocentric Datum of Australia 1994). You must also provide a map or maps of the prescribed premises, clearly identifying and labelling: • layout of key infrastructure and buildings, clearly labelled; • the premises boundary (where the premises boundary does not align with the entirety of the cadastral boundary, identify the Lot Number for which the premises is part of); • emission and discharge points (with precise GPS coordinates where available); • monitoring points (with precise GPS coordinates where available); • sensitive receptors and land uses; and • all areas proposed to be cleared (if applicable). Maps must contain a north arrow, clearly marking the area in which the activities are carried out. The map or maps must be of reasonable clarity and have a visible scale.	☐	☒

Part 4: Proposed activities

INSTRUCTIONS:

- **You must provide a description and the scope, size and scale of all prescribed activities of Schedule 1 to the EP Regulations including the maximum production or design capacity of each prescribed activity.**
- **If applying for a works approval or licence amendment involving the construction of new infrastructure, you must provide information on infrastructure to be constructed and how long construction is expected to take. You must confirm if commissioning is to occur and how long it will take.**
- **If applying for a works approval or licence amendment *not* involving the construction of new infrastructure, provide details of the proposed amendment.**
- **You must identify all emission sources on the premises map/s.**
- **You must also provide information on activities which directly relate to the prescribed premises category which have, or are likely to result in, an emission or discharge.**
- **If clearing activities are proposed provide a description and details. If a relevant exemption under Schedule 6 of the EP Act or regulation 5 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (WA) (Clearing Regulations) may apply, provide details.**
- **Note that in some cases, DWER may require that the clearing components of a works approval or licence (or amendment) application be submitted separately through the clearing permit application process. Refer to the *Procedure: Prescribed premises works approvals and licences* for further guidance.**
- **Please note that the requested information is critical to DWER's understanding of the proposed activities. The more accurate, specific, and complete the information provided in the application, the less uncertainty that DWER may identify in the application, therefore facilitating completion of the assessment in a more efficient and timely manner.**

4.1 Prescribed premises infrastructure and equipment

In Table 4.1 (below), provide a list of all items of infrastructure and equipment within the boundary of the prescribed premises relevant to this application, and include the following details for each:

- **relevant categories (if known)** – the categories of prescribed premises (as listed under Schedule 1 of the EP Regulations) that relate to that infrastructure or equipment;
- **site plan reference** – the location of that infrastructure or equipment (with reference to the site plan map or maps provided above in section 3.4 and labelled as Attachment 2 – e.g. use GPS coordinates or a clear description such as *"labelled as [label on premises map] on Map A"*);
- **is it critical containment infrastructure (CCI)?** – indicate if the identified infrastructure or equipment would be categorised as CCI. Refer to the *Guideline: Industry Regulation Guide to Licensing* for further information on CCI; and
- **is environmental commissioning required?** – indicate if environmental commissioning is intended to be undertaken for that item of infrastructure or equipment. Refer to the *Guideline: Industry Regulation Guide to Licensing* for further information on environmental commissioning.

Add additional rows to Table 4.1 (below) as required.

Table 4.1: Infrastructure and equipment

	Infrastructure and equipment	Relevant categories (if known)	Site plan reference	CCI? (mark if yes)	Environmental commissioning? (mark if yes)
1.	**Replacement crushing circuit and associated controls**	**5**	**As attached**	☐	☐
2.				☐	☐
3.				☐	☐
4.				☐	☐
5.				☐	☐
6.				☐	☐
7.				☐	☐
8.				☐	☐
9.				☐	☐
10.				☐	☐

Part 4: Proposed activities		
4.2	**Detailed description of proposed activities:** You must provide details of proposed activities relevant to this application within the boundary of the prescribed premises, identifying: • scope, size, and scale of the project, including details as to production or design capacity (and/or frequency, if applicable); • key infrastructure and equipment; • description of processes or operations (a process flow chart may be included as an attachment); • emission / discharge points; • locations of waste storage or disposal; and • activities occurring during construction, environmental commissioning, and operation (if applicable). If assessment and imposition of conditions to allow environmental commissioning to be undertaken are requested, please provide an environmental commissioning plan as Attachment 3A (see 4.11 below). Additional information relating to the proposed activities may be included in Attachment 3B (see 4.12 below).	
	Construction activities (if applicable):	
	See supporting information	
	Environmental commissioning activities (if applicable): Refer to the *Guideline: Industry Regulation Guide to Licensing* for further guidance.	
	Not Applicable – given that the infrastructure replaces existing onsite equipment, once a compliance report has been provided and signed off by the DWER, operations will commence	
	Time limited operations activities (if applicable): Different elements of the premises may require time limited operations to commence at different times. In these circumstances, please specify the infrastructure and/or equipment for which time limited operations authorisation is being applied for. If time limited operations are expected to differ from future licensed operations, specify how and why this would be the case. Refer to the *Guideline: Industry Regulation Guide to Licensing* for further guidance.	
	Not Applicable – given that the infrastructure replaces existing onsite equipment, once a compliance report has been provided and signed off by the DWER, operations will commence	
	Operations activities (for a licence):	
	No changes to existing prescribed activities, throughput or the type of emissions	
4.3	**Estimated operating period of the project / premises (e.g. based on estimated infrastructure life):**	No changes to existing prescribed activities
4.4	**Proposed date(s) for commencement of works (if applicable):**	February 2021
4.5	**Proposed date(s) for conclusion of works construction (if applicable):** This date should coincide with the submission to DWER of an Environmental Compliance Report(s) and/or a Critical Containment Infrastructure Report(s) as required. Refer to the *Guideline: Industry Regulation Guide to Licensing*.	June 2021
4.6	**Proposed date(s) for environmental commissioning of works (if applicable):** Refer to the *Guideline: Industry Regulation Guide to Licensing*.	N/A
4.7	**Proposed date/s for commencement of time limited operations under works approval (if applicable):**	N/A (no Works Approval required)

Part 4: Proposed activities				
	Refer to the *Guideline: Industry Regulation Guide to Licensing*.			
4.8	**Maximum production or design capacity for each category applied for (based on infrastructure operating 24 hours a day, 7 days a week):** Provide figures for all categories listed in section 1.2. Units of measurement must be the same as the units of measurement associated with the relevant category as identified in Schedule 1 of the EP Regulations.	No changes to existing prescribed activities		
4.9	**Estimated / actual throughput for each category applied for:** Provide figures for all categories listed in section 1.2. Units of measurement must be the same as the units of measurement associated with the relevant category as identified in Schedule 1 of the EP Regulations.	No changes to existing prescribed activities		
Attachments			**N/A**	**Yes**
4.10	**Attachment 2: Premises map**	Emission/discharge points are clearly labelled on the map/s required for Part 3.4 (Attachment 2).	☒	☐
4.11	**Attachment 3A: Environmental commissioning plan**	If applying to construct works or install equipment, and environmental commissioning of the works or equipment is planned, an environmental commissioning plan has been included in Attachment 3A. The environmental commissioning plan is expected to include, at minimum, identification of: • the sequence of commissioning activities to be undertaken, including details on whether they will be done in stages; • a summary of the timeframes associated with the identified sequence of commissioning activities; • the inputs and outputs that will be used in the commissioning process; • the emissions and/or discharges expected to occur during commissioning; • the emissions and/or discharges that will be monitored and/or confirmed to establish or test a steady-state operation (e.g. identifying emissions surrogates, etc.), including a detailed emissions monitoring program for the measurement of those emissions and/or discharges; • the controls (including management actions) that will be put in place to address the expected emissions and/or discharges; • any contingency plans for if emissions exceedances or unplanned emissions and/or discharges occur; and • how any of the above would differ from standard operations once commissioning is complete. Note that DWER will not include conditions on a granted instrument that authorise environmental commissioning activities where it is not satisfied that the risks associated with environmental commissioning can be adequately addressed.	☒	☐
4.12	**Attachment 3B: Proposed activities**	Additional information relating to the proposed activities has been included in Attachment 3B (if required).	☒	☐
Clearing activities 4.13 to 4.19 are only required if the application includes clearing of native vegetation.				
4.13	**Proposed clearing area (hectares and/or number of individual trees to be removed):**	N/A		
4.14	**Details of any relevant exemptions:** Refer to DWER's *A guide to the exemptions and regulations for clearing native vegetation*.			

Part 4: Proposed activities				
4.15	**Proposed method of clearing:**			
4.16	**Period within which clearing is proposed to be undertaken:** For example, May 2020 – June 2020.			
4.17	**Purpose of clearing:**			
Clearing activities – Attachments			**N/A**	**Yes**
4.18	**Attachment 3C: Map of area proposed to be cleared**	You must provide: an aerial photograph or map of sufficient scale showing the proposed clearing area and prescribed premises boundary *OR* if you have the facilities, a suitable portable digital storage device of the area proposed to be cleared as an ESRI shapefile with the following properties: • Geometry type: Polygon Shape • Coordinate system: GDA 1994 (Geographic latitude/longitude) • Datum: GDA 1994 (Geocentric Datum of Australia 1994).	☐	☐
4.19	**Attachment 3D: Additional information for clearing assessment**	Additional information to assist in the assessment of the clearing proposal may be attached to this application (for example, reports on salinity, fauna or flora studies or other environmental reports conducted for the site).	☐	☐

Part 5: Index of Biodiversity and Marine Surveys for Assessments (IBSA and IMSA)				
INSTRUCTIONS: • **Biodiversity SURVEYS should be submitted through the IBSA Submissions Portal at ibsasubmissions.dwer.wa.gov.au** • **Biodiversity surveys submitted to support this application must meet the requirements of the EPA's *Instructions for the preparation of data packages for the Index of Biodiversity Surveys for Assessments (IBSA)*.** • **Marine surveys submitted to support this application must meet the requirements of the EPA's Instructions for the preparation of data packages for the Index of Marine Surveys for Assessments (IMSA).** • **If these requirements are not met, DWER will decline to deal with the application.**				
Attachments			**N/A**	**Yes**
5.1	**Biodiversity surveys** Please provide the IBSA number(s) (or submission number(s) if IBSA number has not yet been issued) in the space provided. Note that a submission number is not confirmation of acceptance of a biodiversity survey and is not the same as an IBSA number. IBSA numbers are only issued once a survey has been accepted. Once an IBSA number is issued, please notify the department.	All biodiversity surveys submitted with this application meet the requirements of the EPA's *Instructions for the preparation of data packages for the Index of Biodiversity Surveys for Assessments (IBSA)*.	☒	☐
		Submission number		
		IBSA number		
5.2	**Attachment 4: Marine surveys**	All marine surveys submitted with this application meet the requirements of the EPA's Instructions for the preparation of data packages for the Index of Marine Surveys for Assessments (IMSA).	☐	☐

Part 6: Other DWER approvals

INSTRUCTIONS:

- **If you have applied, or intend to apply, for other approvals within DWER that may be relevant to this application, you must provide relevant details.**
- **If you have referred, or intend to refer, your proposal to the Environmental Protection Authority (EPA), you must provide the requested details.**

Pre-application scoping

6.1	**Have you had any pre-application / pre-referral / scoping meetings with DWER regarding any planned applications?**	☐ No ☒ Yes – provide details: [See supporting documentation]

Environmental impact assessment (Part IV of the EP Act)

6.2	**Have you referred or do you intend to refer the proposal to the EPA?** Section 37B(1) of the EP Act defines a 'significant proposal' as *"a proposal likely, if implemented, to have a significant effect on the environment"*. If DWER considers that the proposal in this application is likely to constitute a 'significant proposal', DWER is required under section 38(5) of the EP Act to refer the proposal to the EPA for assessment under Part IV, if such a referral has not already been made. If a relevant Ministerial Statement already exists, please provide the MS number in the space provided.	☐ Yes (referred) – reference (if known): [ ] ☐ Yes – intend to refer (proposal is a 'significant proposal') ☐ Yes – intend to refer (proposal will require a section 45C amendment to the current Ministerial Statement): MS [ ] ☐ No – a valid Ministerial Statement applies: MS [ ] ☒ No – not a 'significant proposal'

Clearing of native vegetation (Part V Division 2 of the EP Act and *Country Area Water Supply Act 1947*)

6.3	**Have you applied or do you intend to apply for a native vegetation clearing permit?** In accordance with the *Guideline: Industry Regulation Guide to Licensing* and *Procedure: Native vegetation clearing permits*, where clearing of native vegetation is of an exempt kind under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (WA), or is being assessed by a relevant authority which would lead to an exemption under Schedule 6 of the EP Act, the clearing will not be assessed by DWER or be subject to any additional controls by DWER. If the proposed clearing action is to be assessed in accordance with, or under, an *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) accredited process, such as the assessment bilateral agreement, *Form Annex C7 – Assessment bilateral agreement* must be completed and attached to your clearing permit application.	☐ Yes – clearing application reference (if known): [ ] ☐ No – this application includes clearing (please complete questions 4.13 to 4.19) ☐ No – a valid permit applies: CPS [ ] ☐ No – exemption applies (explain why): [ ] ☒ No – permit not required
6.4	**Have you applied or do you intend to apply for a *Country Area Water Supply Act 1947* licence?** If a clearing exemption applies in a *Country Area Water Supply Act 1947* (CAWS Act) controlled catchment, or if compensation has previously been paid to retain the subject vegetation, a CAWS Act clearing licence is required. If yes, contact the relevant DWER regional office for a Form 1 *Application for licence*. Map of CAWS Act controlled catchments	☐ Yes – application reference (if known): [ ] ☐ No – a valid licence applies: [ ] ☒ No – licence not required

Part 6: Other DWER approvals

Water licences and permits (*Rights in Water and Irrigation Act 1914*)

6.5	**Have you applied, or do you intend to apply for:** **1. a licence or amendment to a licence to take water (surface water or groundwater); or** **2. a licence to construct wells (including bores and soaks); or** **3. a permit or amendment to a permit to interfere with the bed and banks of a watercourse?** For further guidance on water licences and permits under the *Rights in Water and Irrigation Act 1914*, refer to the *Procedure: Water licences and permits*.	☐ Yes –application reference (if known): [ ] ☐ No – a valid licence / permit applies: [ ] ☒ No – licence / permit not required

Part 7: Other approvals and consultation

INSTRUCTIONS:

- **Please provide copies of all relevant documentation indicated below, including any conditions, exclusions, or expiry dates.**
- **"Major Project" means:**
  - **A State Development Project, where the lead agency is the Department of Jobs, Tourism, Science and Innovation (including projects to which a State Agreement applies); or**
  - **A Level 2 or 3 proposal, as defined in the Department of Premier and Cabinet's *Lead Agency Framework*.**

		N/A	No	Yes
7.1	**Is the proposal a Major Project?**		☒	☐
7.2	**Is the proposal subject to a State Agreement Act?**		☒	☐
	If yes, specify which Act:			
7.3	**Has the proposal been allocated to a "Lead Agency" (as defined in the *Lead Agency Framework*)?**		☒	☐
	If yes, specify Lead Agency contact details:			
7.4	**Has the proposal been referred and/or assessed under the EPBC Act (Commonwealth)?**	☒	☐	☐
	If yes, please specify referral, assessment and/or approval number:			
7.5	**Has the proposal obtained all relevant planning approvals?**	☒	☐	☐
	If planning approval is necessary but has not been obtained, please provide details indicating why:			
	If planning approval is not necessary, please provide details indicating why:			
7.6	**For renewals or amendment applications, are the relevant planning approvals still valid (that is, not expired)?**	☐	☐	☒
7.7	**Has the proposal obtained all other necessary statutory approvals (not including any other DWER approvals identified in Part 6 of this application)?**	☐	☐	☒
	If no, please provide details of approvals already obtained, outstanding approvals, and expected dates for obtaining these outstanding approvals:			

Part 7: Other approvals and consultation				
			N/A	No	Yes
7.8	**Has consultation been undertaken with parties considered to have a direct interest in the proposal (that is, interested parties or persons who are considered to be directly affected by the proposal)?** DWER will give consideration to submissions from interested parties or persons in accordance with the *Guideline: Industry Regulation Guide to Licensing*.		☐	☐	☒
Attachments				**N/A**	**Yes**
7.9	**Attachment 5: Other approvals and consultation documentation**	Details of other approvals specified in Part 7 of this application, including copies of relevant decisions and any consultation undertaken with direct interest stakeholders have been provided and labelled Attachment 5.		☐	☒

Part 8: Applicant history				
Note: • **Under this section, DWER will undertake an internal due diligence of the applicant's fitness and competency based on DWER's compliance records.** • **If you wish to provide additional information for DWER to consider in making this assessment, you may provide that information as a separate attachment (see Part 11).**				
		N/A	No	Yes
8.1	If the applicant is an individual, has the applicant previously held, or do they currently hold, a licence or works approval under Part V of the EP Act?	☒	☐	☐
8.2	If the applicant is a corporation, has any director of that corporation previously held, or do they currently hold, a licence or works approval under Part V of the EP Act?	☐	☐	☒
8.3	If yes to 8.1 or 8.2 above, specify the name of company and/or licence or works approval number: Tianye SXO Gold Mining Pty Ltd: L4597/1988/14			
8.4	If the applicant is an individual, has the applicant ever been convicted, or paid a penalty, for an offence under a provision of the EP Act, its subsidiary legislation, or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	☒	☐	☐
8.5	If the applicant is a corporation, has any director of that corporation ever been convicted, or paid a penalty, for an offence under a provision of the EP Act, its subsidiary legislation, or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	☐	☒	☐
8.6	If the applicant is a corporation, has any person concerned in the management of the corporation, as referred to in section 118 of the EP Act, ever been convicted of, or paid a penalty, for an offence under a provision of the EP Act, its subsidiary legislation, or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	☐	☒	☐
8.7	If the applicant is a corporation, has any director of that corporation ever been a director of another corporation that has been convicted, or paid a penalty, for an offence under a provision of the EP Act, its subsidiary legislation, or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	☐	☒	☐
8.8	With regards to the questions posed in 8.4 to 8.7 above, have any legal proceedings been commenced, whether convicted or not, against the applicant for an offence under a provision of the EP Act, its subsidiary legislation, or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	☐	☒	☐
8.9	Has the applicant had a licence or other authority suspended or revoked due to a breach of conditions or an offence under the EP Act or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	☐	☒	☐

Part 8: Applicant history				
8.10	If the applicant is a corporation, has any director of that corporation ever had a licence or other authority suspended or revoked due to a breach of conditions or an offence under the EP Act or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	☐	☒	☐
8.11	If the applicant is a corporation, has any director of that corporation ever been a director of another corporation that has ever had a licence or other authorisation suspended or revoked due to a breach of conditions or an offence under the EP Act or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	☐	☒	☐
8.12	If yes to any of 8.4 to 8.11 above, you must provide details of any charges, convictions, penalties paid for an offence, and/or licences or other authorisations suspended or revoked:			

Part 9: Emissions, discharges, and waste

INSTRUCTIONS:

- **Please see *Guidance Statement: Risk Assessments* and provide all information relating to emission sources, pathways and receptors relevant to the application.**
- **You must provide details on sources of emissions (for example, kiln stack, baghouses or discharge pipelines) including fugitive emissions (for example, noise, dust or odour), types of emissions (physical, chemical, or biological), and volumes, concentrations and durations of emissions.**
- **The potential for emissions should be considered for all stages of the proposal (where relevant), including during construction, commissioning and operation of the premises.**

		No	Yes
9.1	**Are there potential emissions or discharges arising from the proposed activities?**	☐	☒

If yes, identify all potential emissions and discharges arising from the proposed activities and complete Table 9.1: Emissions and discharges (below).

☐ Gaseous and particulate emissions (e.g. emissions from stacks, chimneys or baghouses)

☒ Dust (e.g. from equipment, unsealed roads and/or stockpiles, etc.)

☐ Wastewater discharges (e.g. treated sewage, wash water, or process water discharged to lands or waters)

☐ Waste and leachate (e.g. emissions through seepage, leaks and spills of waste from storage, process and handling areas, etc.)

☒ Noise (e.g. from machinery operations and/or vehicle operations)

☐ Odour (e.g. from wastes accepted at putrescible landfills, storage or processing of waste or other odorous materials, etc.)

☐ Contaminated or potentially contaminated stormwater (e.g. stormwater with the potential to come into contact with chemicals or waste materials, etc.)

☐ Electromagnetic radiation [1]

☐ Other (please specify): [ ]

[1] Note that for electromagnetic radiation, copies/details of other relevant approvals (such as from the Department of Mines, Industry Regulation and Safety or the Radiological Council) must be provided where applicable.

Details of any pollution control equipment or waste treatment system, including any control mechanisms used to ensure proper operation of this equipment, must be included in the proposed controls column of the 'Emissions and discharges table' below. Details of management measures employed to control emissions should also be included. Please provide / attach any relevant documents (e.g. management plans, etc.).

Additional rows may be added as required and/or further information may be included as an attachment (see section 9.3).

Table 9.1: Emissions and discharges

See supporting information

	Source of emission or discharge	Emission or discharge type	Volume and frequency	Proposed controls	Location (on site layout plan – see 3.4)
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

Part 9: Emissions, discharges, and waste

			No	Yes
9.2	**Waste-related activities at the premises** [2] **No changes to existing prescribed activities** Answer "yes" or "no" for the following questions and complete Table 9.2 (below).		☒	☒
	(a)	Is waste accepted at the premises?	☐	☐
	(b)	Is waste produced on the premises?	☐	☐
	(c)	Is waste processed on the premises?	☐	☐
	(d)	Is waste stored on the premises?	☐	☐
	(e)	Is waste buried on the premises?	☐	☐
	(f)	Is waste recycled on the premises?	☐	☐
	(g)	Is any of the waste listed in Table 9.2 (below) also considered a 'dangerous good' for the purposes of the *Dangerous Goods Safety (Storage and Handling of Non-Explosives) Regulations 2007*? [3]	☐	☐
		Specify, if yes:		

Solid waste types must be described with reference to *Landfill Waste Classification and Waste Definitions 1996* (as amended from time to time) and the *Environmental Protection (Controlled Waste) Regulations 2004* (Controlled Waste Regulations).

Liquid waste types must be described with reference to the Controlled Waste Regulations.

For further guidance on the definition of waste, refer to *Fact Sheet: Assessing whether material is waste*.

Detail must be provided on storage type (for example, hardstand and containment infrastructure), capacity, likely storage volumes, and containment features (for example, lining and bunding).

[2] Please provide copies / details of any other relevant approvals (e.g. from the Department of Health) must be provided where applicable.

[3] Wastes derived from the storage, handling, and use of dangerous goods may be considered hazardous and may need to be handled with the same precautions. Please refer to the following link for more information: https://www.dmp.wa.gov.au/Documents/Dangerous-Goods/DGS_IS_OverviewOfStorageAndHandlingRegulations.pdf

Additional rows may be added as required and/or further information may be included as an attachment (see section 9.4).

Table 9.2 Waste types

	Waste type	Quantity (e.g. tonnes, litres, cubic metres)	Waste activity infrastructure (including specifications)	Monitoring (if applicable)	Location (on site layout plan – see 3.4)
1.					
2.					
3.					

Attachments			N/A	Yes
9.3	**Attachment 6A: Emissions and discharges** (if required)	If required, further information for Part 9.1 has been included as an attachment labelled Attachment 6A.	☒	☐
9.4	**Attachment 6B: Waste acceptance** (if required)	If required, further information for Part 9.2 has been included as an attachment labelled Attachment 6B.	☒	☐

Part 10: Siting and location

10.1	**Sensitive land uses** What is/are the distance(s) to the nearest sensitive land use(s)? A sensitive land use is a residence or other land use which may be affected by an emission or discharge associated with the proposed activities.	No changes to existing prescribed activities

10.2 **Nearby environmentally sensitive receptors and aspects**

Identify in Table 10.2 (below):

- all instances of environmentally sensitive receptors that are known or suspected to be present within, or within close proximity to, the proposed prescribed premises boundary;
- the nature of the sensitive receptors (e.g. type of Threatened Ecological Community, species for threatened flora or fauna, etc.);
- their actual or approximate known distance and direction from the premises boundary (at the closest point/s); and
- if applicable, what measures have been or will be taken to ensure that sensitive receptors are not adversely impacted by any emissions or discharges from the premises.

Refer to the *Guidance Statement: Environmental Siting* for further guidance.

Table 10.2: Nearby environmentally sensitive receptors and aspects

Type / classification	Description	Distance + direction to premises boundary	Proposed controls to prevent or mitigate adverse impacts (if applicable)
Environmentally Sensitive Areas [1]			
Threatened Ecological Communities			
Threatened and/or priority fauna			
Threatened and/or priority flora			
Aboriginal and other heritage sites [2]			
Public drinking water source areas [3]			
Rivers, lakes, oceans, and other bodies of surface water, etc.			
Acid sulfate soils			
Other			

[1] Environmentally Sensitive Areas are as declared under the *Environmental Protection (Environmentally Sensitive) Notice 2005*. Refer to DWER's website ("Environmentally Sensitive Areas") for further information.

[2] Refer to the Department of Planning, Lands and Heritage website for further information about Aboriginal heritage and other heritage sites.

[3] Refer to *Water Quality Protection Note No.25: Land use compatibility tables for public drinking water source areas* for further information.

10.3 **Environmental siting context details**

Provide further information including details on topography, climate, geology, soil type, hydrology, and hydrogeology at the premises.

Part 10: Siting and location				
Attachments			**N/A**	**Yes**
10.4	**Attachment 7: Siting and location**	You must provide details and a map describing the siting and location of the premises, including identification of distances to sensitive land uses and/or any specified ecosystems.	☒	☐

Part 11: Submission of any other relevant information				
Attachments			**No**	**Yes**
11.1	**Attachment 8: Additional information submitted**	Applicants seeking to submit further information may include information labelled Attachment 8. If submitting multiple additional attachments, label them 8A, 8B, etc. Where supplementary documentation is submitted, please specify the name of documents below.	☐	☒
	List title of supplementary document/s attached:	See supporting information		

Part 12: Proposed fee calculation

INSTRUCTIONS:

Please calculate the relevant prescribed fee using the relevant online fee calculator linked below when completing this section.

- **Licence: www.der.wa.gov.au/LicenceFeeCalculator**
- **Works approval: www.der.wa.gov.au/WorksApprovalFeeCalculator**
- **Amendment: www.der.wa.gov.au/AmendmentFeeCalculator**

Different fee units apply for different fee components. Fee units may also have different amounts depending on the period in which the calculation is made.

Once DWER has confirmed that the application submitted meets the relevant requirements of the EP Act, you will be issued an invoice with instructions for paying your application fee.

Further information on fees can be found in the *Fact Sheet: Industry Regulation fees*, available from DWER's website.

12.1	Only the relevant fee calculations are to be completed as follows: [mark the box to indicate sections completed]	☐ Section 12.3 for works approval applications ☐ Section 12.4 for licence or renewal applications ☐ Section 12.5 for registration applications ☒ Section 12.6 for amendment applications ☐ Section 12.7 for applications requiring clearing of native vegetation
12.2	All information and data used for the calculation of proposed fees has been provided in accordance with section 12.8.	☐

12.3 Proposed works approval fee

Proposed works approval fee (see Schedule 3 of the EP Regulations)

Fees relate to the cost of the works, including all capital costs (inclusive of GST) associated with the construction and establishment of the works proposed under the works approval application. This includes, for example, costs associated with earth works, hard stands, drainage, plant hire, equipment, processing plant, relocation of equipment and labour hire.

Costs exclude:

- the cost of land;
- the cost of buildings to be used for purposes unrelated to the purposes in respect of which the premises are, or will become, prescribed premises; costs for buildings unrelated to the prescribed premises activity or activities; and
- consultancy fees relating to the works.

Fee component	Proposed fee
Cost of works: $	$

12.4 **Proposed licence fee (new licences and licence renewals)**

Detailed licence fee calculations

Part 1 Premises component (see regulation 5D and Part 1 of Schedule 4 of the EP Regulations)

The production or design capacity should be the maximum capacity of the premises. For most categories the production or design capacity refers to an annual rate. The figure should be based on 24 hour operation for 365 days, unless there is another regulatory approval or technical reason that restricts operation.

The premises component fee applies to the category in Part 1, Schedule 4 incurring the higher or highest amount of fee units in accordance with regulation 5D(2) of the EP Regulations.

List all categories (insert additional rows as required). Use only the higher or highest amount of fee units to determine the Part 1 fee component.

Category	Production or design capacity	Fee units
Using the higher or highest amount of fee units, Part 1 component subtotal		$

Part 2 Waste (see regulation 5D(1a)(b) and Part 2 of Schedule 4 of the EP Regulations)

If your premises includes one or more of the following categories specify any applicable Part 2 waste amounts. Do not include Part 3 waste components of these discharges in the below sections.

Categories: 5, 6, 7, 8, 9, 12, 14, 44, 46, 53, 54A, 70, 80, or 85B

Part 2 waste means waste consisting of –

(a) tailings; or
(b) bitterns; or
(c) water to allow mining of ore; or
(d) flyash; or
(e) waste water from a desalination plant.

If the premises does not fall into one of the categories listed above, or there are no applicable Part 2 waste amounts, the sub total for this section will be $0.

Insert additional rows as required. Sum all Part 2 waste fees to determine the sub total.

Discharge quantity (tonnes/year)	Fee units
Part 2 component subtotal	$

Part 3 Waste – Discharges to air, onto land, into waters (see Part 3 of Schedule 4 of the EP Regulations)

Choose the appropriate location of the discharge and enter the discharge amount(s) in the units specified in the EP Regulations. This should be the amount of waste expected to be discharged over the next 12 months, expressed in the units and averaging period applicable for that waste kind (for example, g/minute or kg/day). Amounts can be measured, calculated, or estimated and can be based on data acquired over the previous 12 months, but should be based on the maximum premises capacity and not the forecast operating hours.

Where there are discharges, all prescribed waste types must be considered in the fee calculation. If a specified waste type is not present in the discharge, this must be justified using an appropriate emission estimation technique (for example, sampling data, industry sector guidance notes, National Pollution Inventory guides and emission factors).

Discharges to air			
Discharges to air	Discharge rate (g/min)	Discharges to air	Discharge rate (g/min)
Carbon monoxide		Nickel	
Oxides of nitrogen		Vanadium	
Sulphur oxides		Zinc	
Particulates (Total PM)		Vinyl chloride	
Volatile organic compounds		Hydrogen sulphide	
Inorganic fluoride		Benzene	
Pesticides		Carbon oxysulphide	
Aluminium		Carbon disulphide	
Arsenic		Acrylates	
Chromium		Beryllium	
Cobalt		Cadmium	
Copper		Mercury	
Lead		TDI (toluene-2, 4-di-iso-cyanate)	
Manganese		MDI (diphenyl-methane di-iso-cyanate)	
Molybdenum		Other waste	
Part 3 component subtotal		$	

Discharges onto land or into waters		Discharge rate
1. Liquid waste that can potentially deprive receiving waters of oxygen (for each kilogram discharged per day) —	(a) biochemical oxygen demand (in the absence of chemical oxygen demand limit)	
	(b) chemical oxygen demand (in the absence of total organic carbon limit)	
	(c) total organic carbon	
2. Bio-stimulants (for each kilogram discharged per day) —	(a) phosphorus	
	(b) total nitrogen	
3. Liquid waste that physically alters the characteristics of naturally occurring waters —	(a) total suspended solids (for each kilogram discharged per day)	
	(b) surfactants (for each kilogram discharged per day)	
	(c) colour alteration (for each platinum cobalt unit of colour above the ambient colour of the waters in each megalitre discharged per day)	
	(d) temperature alteration (for each 1°C above the ambient temperature of the waters in each megalitre discharged per day) — (i) in the sea south of the Tropic of Capricorn (ii) in other waters	

4. Waste that can potentially accumulate in the environment or living tissue (for each kilogram discharged per day) —	(a) aluminium	
	(b) arsenic	
	(c) cadmium	
	(d) chromium	
	(e) cobalt	
	(f) copper	
	(g) lead	
	(h) mercury	
	(i) molybdenum	
	(j) nickel	
	(k) vanadium	
	(l) zinc	
	(m)pesticides	
	(n) fish tainting wastes	
	(o) manganese	
5. *E. coli* bacteria as indicator species (in each megalitre discharged per day) —	(a) 1,000 to 5,000 organisms per 100 ml	
	(b) 5,000 to 20,000 organisms per 100 ml	
	(c) more than 20,000 organisms per 100 ml	
6. Other waste (per kilogram discharged per day) —	(a) oil and grease	
	(b) total dissolved solids	
	(c) fluoride	
	(d) iron	
	(e) total residual chlorine	
	(f) other	
Part 3 component subtotal		$
Summary – Proposed licence fee		
Part 1 Component		
Part 2 Component		
Part 3 Component		
Total proposed licence fees:		$

12.5 **Prescribed fee for registration**	
A fee of 24 units applies for an application for registration of premises, unless the occupier of the premises holds a licence in respect of the premises, in accordance with regulation 5B(2)(c) of the EP Regulations.	☐ (Tick to acknowledge)

12.6 Works approval amendment or licence amendment fee

Proposed works approval amendment or licence amendment fee (see Schedule 4 Part 1 of the EP Regulations).

The fee prescribed for an application for an amendment to a works approval or licence is calculated in accordance with regulation 5BB(1)(a) of the EP Regulations:

- for a single category of prescribed premises to which the works approval or licence relates, by using the fee unit number corresponding to the prescribed premises category and relevant production or design capacity threshold in Schedule 4 Part 1 of the EP Regulations.
- for multiple categories of prescribed premises to which the works approval or licence relates, by using the highest fee unit number corresponding to the prescribed premises categories and production design or capacity threshold in Schedule 4 Part 1 of the EP Regulations.

The relevant fee unit under Schedule 4 Part 1 of the EP Regulations for calculating the application form amendment fee is to be determined by reference to the actual production or design capacity reported for the preceding year's annual licence fee. If an annual licence fee has not previously been paid or is not applicable as is the case for works approvals, the fee unit for an application for amendment is to be determined by reference to the production or design capacity currently prescribed in the licence or works approval.

Fee Units	Proposed fee
[redacted]	[redacted]

12.7 **Prescribed fee for clearing permit**	
In accordance with the *Guideline: Industry Regulation Guide to Licensing* and *Procedure: Native vegetation clearing permits*, where an application for clearing of native vegetation is made as part of an application for a works approval or licence, DWER may elect to either jointly or separately determine the clearing component of the application. Where DWER separately determines the clearing component of an application, the application will be deemed to be an application for a clearing permit under section 51E of the EP Act. Note: If a clearing permit application has been separately submitted and accepted by DWER, a refund for the clearing permit application will not be provided where DWER determines to address clearing requirements as part of a related works approval application.	☐ (Tick to acknowledge)

12.8 Information and data used to calculate proposed fees

The detailed calculations of fee components, including all information and data used for the calculations are to be provided as attachments to this application, labelled as **Attachment 9**, with an appropriate suffix (for example 9A, 9B etc.). Please specify the relevant attachment number in the space/s provided below.

Proposed fee for works approval	Attachment No.
Details for cost of works	
Proposed fee for licence	**Attachment No.**
Part 1: Premises	
Part 2: Waste types	
Part 3: Discharges to air, onto land, into waters	

Part 13: Commercially sensitive or confidential information		
NOTE: **Information submitted as part of this application will be made publicly available. If you wish to submit commercially sensitive or confidential information, please identify the information in Attachment 10, and include a written statement of reasons why you request each item of information be kept confidential.** **Information submitted later in the application process may also be made publicly available at DWER's discretion. For any commercially sensitive or confidential information, please follow the same process as described above.** **DWER will take reasonable steps to protect genuinely confidential or commercially sensitive information. Please note in particular that all submitted information may be the subject of an application for release under the *Freedom of Information Act 1992*.**		
All information which you would propose to be exempt from public disclosure has been separately placed in a redacted version of the application form and its supporting documentation. Note that this is in addition to the unredacted version(s) provided to DWER for its assessment. Grounds for claiming exemption in accordance with Schedule 1 to the *Freedom of Information Act 1992* must be specified in **Attachment 10** (located at the end of this form).	**Attached** ☐	**N/A** ☒

Part 14: Submission of application	
Check one of the boxes below to nominate how you will submit your application. **Files larger than 50MB cannot be received via email by DWER. Files larger than 50MB can be sent via File Transfer. Alternatively, email DWER to make other arrangements.**	
A full, signed, electronic copy of the application form including all attachments has been submitted via email to info@dwer.wa.gov.au; **OR**	☒
A signed, electronic copy of the application form has been submitted via email to info@dwer.wa.gov.au and attachments have been submitted via File Transfer, or electronically by other means as arranged with DWER; **OR**	☐
A full, signed hard copy has been sent to: APPLICATION SUBMISSIONS Department of Water and Environmental Regulation Locked Bag 10 Joondalup DC WA 6919	☐

Part 15: Declaration and signature

General

I/We confirm and acknowledge that:

- the information contained in this application is true and correct and I/we acknowledge that knowingly providing information which is false or misleading in a material particular constitutes an offence under section 112 of the *Environmental Protection Act 1986* (WA) and may incur a penalty of up to $50,000;
- I/We have legal authority to sign on behalf of the applicant (where authorisation provided);
- I/We have not altered the requirements and instructions set out in this application form;
- I/We have provided a valid email address in Part 2.3 for receipt of correspondence electronically via email from DWER in relation to this application;
- I/We acknowledge that successful delivery to my/our server constitutes receipt of correspondence sent electronically via email from DWER in relation to this application; and
- I/We have provided a valid postal and/or business address in Part 2.4 for the service of all Part V documents.

Publication

I/We confirm and acknowledge:

- this application (including all attachments apart from the sections identified in Attachment 10) is a public document and may be published;
- marine surveys provided in accordance with Part 5 will be published and used, for the purposes of the IMSA project, in accordance with your declaration made in the *Metadata and Licensing Statement*;
- all necessary consents for the publication of information have been obtained from third parties;
- information considered exempt from public disclosure has been noted by redaction of a separately provided copy of the completed application form and its supporting documentation (in accordance with Part 13), with reasons as to why the information should be exempt in accordance with the grounds specified in Schedule 1 to the *Freedom of Information Act 1992* (WA) being provided in Attachment 10;
- subsequent information provided in relation to this application will be a public document and may be published unless written notice has been given to DWER by the applicant, at the time the information is provided, claiming that the information is considered exempt from public disclosure; and
- the decision to not publish information will be at the discretion of the CEO of DWER and will be made ...mation Act 1992* (WA).

[redacted]

20/10/2020

Date

Date

NOTE: This form may be signed:

- **If the applicant is an individual, by the individual;**
- **If the applicant is a corporation, by:**
  - **the common seal being affixed in accordance with the *Corporations Act 2001* (Cth); or**
  - **two directors; or**
  - **a director and a company secretary; or**
  - **if a proprietary company has a sole director who is also the sole company secretary, by that director; and**
- **by a person with legal authority to sign on behalf of the applicant.**

ATTACHMENT 10 – Confidential or commercially sensitive information

Request for exemption from publication			
Information which you consider should not be published, on the grounds of a relevant exemption found in Schedule 1 to the *Freedom of Information Act 1992* (WA), must be specified in this Attachment. Add additional rows as required.			
NOT FOR PUBLICATION IF GROUNDS FOR EXEMPTION ARE DETERMINED TO BE ACCEPTABLE			
Section of this form:		Grounds for claiming exemption:	
Section of this form:		Grounds for claiming exemption:	
Section of this form:		Grounds for claiming exemption:	

Full Name

Signature

Date

ASIC
Australian Securities & Investments Commission

Forms Manager
Company Officeholders

Company: BARTO GOLD MINING PTY LTD ACN 161 566 490

Company details

Date company registered	07-12-2012
Company next review date	07-12-2020
Company type	Australian Proprietary Company
Company status	Registered
Home unit company	No
Superannuation trustee company	No
Non profit company	No

Registered office

LEVEL 3 , 66 KINGS PARK ROAD , WEST PERTH WA 6005

Principal place of business

LEVEL 3 , 66 KINGS PARK ROAD , WEST PERTH WA 6005

Ultimate holding company

SHANDONG TIANYE REAL ESTATE DEVELOPMENT GROUP CO., LTD
164486159
Incorporated in CHINA

Officeholders

JI, XINGMIN
Born 03-04-1963 at JINAN SHANDONG CHINA
36 GWELUP STREET , KARRINYUP WA 6018
Office(s) held: Director, appointed 20-04-2017

JI, GUANGHUI
Born 30-10-1972 at ZHAOYUAN SHANDONG CHINA
9 BALSAM LINK , STIRLING WA 6021
Office(s) held: Director, appointed 20-04-2017

ZENG, ZHAOQIN
Born 27-05-1969 at LIAOCHENG SHANDONG CHINA
2A CUNNINGHAM STREET , APPLECROSS WA 6153
Office(s) held: Director, appointed 20-04-2017

ZHANG, SHUANG
Born 14-05-1984 at JINAN SHANDONG PROVINCE, CHINA CHINA
152A WILDING STREET , DOUBLEVIEW WA 6018
Office(s) held:
Secretary, appointed 20-04-2017

Company share structure

Share	Share description	Number issued	Total amount paid	Total amount unpaid

class				
ORD	ORDINARY	100	100.00	0.00

Members

BARTO AUSTRALIA PTY LTD LEVEL 3 , 66 KINGS PARK ROAD , WEST PERTH WA 6005

Share class	Total number held	Fully paid	Beneficially held
ORD	100	Yes	Yes

Document history

These are the documents most recently received by ASIC from this organisation.

Received	Number	Form	Description	Status
31-08-2020	7EAZ98797	484	CHANGE TO COMPANY DETAILS	Processed and imaged
13-08-2020	7EAZ44696	205	NOTIFICATION OF RESOLUTION	Processed and imaged
09-01-2019	029056721	389	ANNUAL NOTICE BY WHOLLY-OWNED ENTITY	Processed and imaged

Certificate of Registration on Change of Name

This is to certify that

TIANYE SXO GOLD MINING PTY LTD

Australian Company Number 161 566 490

did on the thirteenth day of August 2020 change its name to

BARTO GOLD MINING PTY LTD

Australian Company Number 161 566 490

The company is a proprietary company.

The company is limited by shares.

The company is registered under the Corporations Act 2001 and is taken to be registered in Western Australia and the date of commencement of registration is the seventh day of December, 2012.

Issued by the
Australian Securities and Investments Commission
on this thirteenth day of August 2020.

James Shipton
Chair

CERTIFICATE

Marvel Loch Mine – Application for Licence Amendment L4597/1988/14

Supporting Information

Prepared for Barto Gold Mining Pty Ltd

30 October 2020

Project Number: TE20091

DOCUMENT CONTROL

Version	Description	Date	Author	Reviewer	Approver
0a	First Draft	24/10/2020	AJM		
0b	Update	26/10/2020	AJM		
0c	Internal Draft for Review	27/10/2020	AJM	GB	AJM
0d	Revised Draft for Client	29/10/2020	AJM	GB	AJM
1	Final for issue	30/10/2020	AJM	GB	AJM

Approval for Release

Name	Position	File Reference
Andrew Mack	Associate Director	TE20091-MarvelLochLicAmend.1
Signature		

Executive Summary

Barto Gold Mining Pty Ltd (Barto) operates a gold mine at Marvel Loch in the Shire of Yilgarn. Mining in the area dates back to the 1890s and Marvel Loch Gold Mine first started in 1905 and reopened in 1979.

The operations are a Prescribed Premises pursuant to the *Environmental Protection Regulations 1987* (EP Regulations) and hold Licence L4597/1988/14 through Part V of the *Environmental Protection Act 1986* (EP Act). This Licence shows Tianye SXO Gold Mining Pty Ltd as the Licence Holder, but this company changed its name to Barto Gold Mining Pty Ltd on 13 August 2020.

The current processing plant was approved in 1988 and the crushing circuit utilised onsite has been operating since this time. Barto is requesting an Amendment to L4597/1988/14 relating to the replacement of the historic crushing circuit with new, best-practice infrastructure.

This application was discussed at a scoping meeting held between representatives of Barto and the Department of Water and Environmental Regulation (DWER) on 6th October 2020.

Further to the above, Barto is also using this Amendment as an opportunity to amend the Licence Holder in the current instrument from Tianye to Barto, reflective of the name-change referred to above.

In working through the procurement process and identifying the equipment to be constructed onsite, the following points are made with respect to the implications of the Licence:

1. There is no change to the method of ore processing and the remaining infrastructure will not change;
2. The nature of the emissions associated with the operations will not change. Dust and noise will still be the primary considerations and the site is used to managing these given the site's location and proximity to Marvel Loch;
3. There will be no changes to the emissions profile other than that dust and noise emissions are likely to reduce given that the equipment proposed to be used is newer and will have specific mitigation/management measures incorporated as part of the construction process; and
4. There will be no change to the materials type or volume that are processed through this equipment.

The location of the replacement crushing circuit will be consistent with the existing historic infrastructure and there will be other management measures included to further mitigate any risks to ensure that there are no unacceptable impacts to the environment or local receptors.

The assessment completed by Barto demonstrates that surface water and air quality impacts align with expected requirements and the management measures proposed represent improvements from what is currently approved. Whilst noise levels from the existing operations do not comply with the assigned levels within the *Environmental Protection (Noise Regulations) 1997*, the current operations pre-date that statute. The assessment and ALARP process employed for the replacement infrastructure, coupled with the management/mitigation works for the equipment, result in an improved noise profile for the operations and lower noise levels at the closest receptors in Marvel Loch.

Talis is of the view that the proposed replacement equipment and the controls in place will ensure that there is no unacceptable risk to the environment or human health and will result in an improved emissions profile from the premises. Management plans for dust, surface water and noise are being developed to further address these potential risks and explore further opportunities for improvement at site where practicable and appropriate.

Table of Contents

Tables

Plates

Figures

Appendices

1 Introduction

1.1 Overview

Barto Gold Mining Pty Ltd (Barto) operates a gold mine at Marvel Loch in the Shire of Yilgarn. The location of the site is shown in **Figure 1** and an aerial photograph of the current operations is provided as **Figure 2**. Mining in the area dates back to the 1890s and Marvel Loch Gold Mine first started in 1905 and reopened in 1979.

The operations are a Prescribed Premises pursuant to the *Environmental Protection Regulations 1987* (EP Regulations) and hold Licence L4597/1988/14 through Part V of the *Environmental Protection Act 1986* (EP Act).L4597/1988/14 is provided as APPENDIX A**.** This Licence shows Tianye SXO Gold Mining Pty Ltd as the Licence Holder, but it should be noted that this company changed its name to Barto Gold Mining Pty Ltd on 13 August 2020, with no resultant changes to the ABN, ACN or TFN.

The current processing plant was approved in 1988 and the crushing circuit utilised onsite has been operating since this time.

1.2 Application Scope

This report contains supporting information relating to an Application to Amend Licence L4597/1988/14. The completed Amendment Application Form is provided as APPENDIX B.

The Amendment relates to the replacement of the historic crushing circuit with new, best-practice infrastructure and this document provides a description of the process, estimated throughput, environmental assessment work and resultant controls that will be implemented to ensure that there are no unacceptable impacts to the environment or surrounding receptors from the construction and operation of the equipment.

This application was discussed at a scoping meeting held between representatives of Barto and the Department of Water and Environmental Regulation (DWER) on 6th October 2020.

It is anticipated that, following construction and submission of a compliance report to DWER, the infrastructure will immediately move into the commissioning and operational phases of activity under the amended Licence.

Further to the above, Barto Gold is also using this Amendment as an opportunity to amend the Licence Holder in the current instrument from Tianye to Barto, reflective of the name-change referred to above. A company extract attesting to this name-change is provided as part of the Amendment Application Form (APPENDIX B).

2 Background

The Prescribed Activities authorised through Licence L4597/1988/14 are detailed in the following table:

Table 2-1: Prescribed Activity Details

Category number	Category Description	Approved Premises production or design capacity
5	Processing or beneficiation of metallic or non-metallic ore	2,600,000 tonnes per annual period
6	Mine dewatering	6,000,000 tonnes per annual period
64	Class II or III putrescible landfill	2,000 tonnes per annual period
57	Used tyre storage	200 tyres

The mine is a relatively standard operation, incorporating open cut and underground mining, processing plant, tailings storage facility (TSF), landfill and associated infrastructure. Water abstracted from the operations is licensed to be discharged to a number of pits across the operations.

The permanent crushing infrastructure located onsite and associated with Category 5 in the table has been utilised for over 30 years. Whilst Barto had been working towards replacing this infrastructure and had expected its duration to be much longer, due to its age the crushing circuit has recently proved unreliable and no longer performs as required. This meant that the permanent infrastructure could not be used efficiently and as a result, a temporary mobile circuit was approved for use by the DWER whilst other options were considered. The use of the mobile facility was intended to allow for an 'immediate' response to the problem, provide ongoing certainty to the company and enable continuity of operations.

Mobile infrastructure is a temporary solution that is less than satisfactory in terms of throughput, it is uneconomical, and agreement has been made for capital investment into a permanent replacement for the previous infrastructure. This Licence Amendment application and supporting documentation covers this replacement.

In working through the procurement process and identifying the equipment to be constructed onsite, the following points are made with respect to the implications of the Licence:

1. There is no change to the method of processing and the remaining infrastructure onsite will not change;
2. The nature of the emissions associated with the operations will not change. Dust and noise will still be the primary considerations and the site is used to managing these given the site's location and proximity to Marvel Loch;
3. There will be no changes to the emissions profile other than that dust and noise emissions are likely to reduce given that the equipment proposed to be used is newer and will have specific mitigation/management measures incorporated as part of the construction process; and
4. There will be no change to the materials type or volume that are processed through this equipment.

The location of the replacement crushing circuit will be consistent with the existing historic infrastructure and there will be other management measures included to further mitigate any risks to ensure that there are no unacceptable impacts to the environment or local receptors.

Furthermore, the work completed by Barto as part of this process demonstrates that the noise impacts from the replacement crushing circuit will be as low as reasonably practicable (ALARP). The proposal and the associated equipment and controls have also been discussed with the local Marvel Loch community as part of an updated Stakeholder Engagement Programme developed by Barto.

3 Statutory Considerations

3.1 EP Act – Part V

Part V of the EP Act is clear in relation to its expectations for the installation of new equipment. Section 53 details those activities that require an approval and states that where alterations to the method of operation, construction or altering of any equipment that deals with waste or controls emissions or alters the type of materials or products used or produced or changes the fuel-burning equipment associated with a Prescribed Premises and that change causes an emission or alters the nature or volume of waste or emissions from the premises, then such change is considered to be an offence unless it is done in accordance with:

- a works approval; or
- a licence; or
- a requirement contained in a closure notice or an environmental protection notice, as the case requires.

Furthermore, Section 51 states that:

> The occupier of any premises who does not –
>
> a) Comply with any prescribed standard for an emission;
>
> and
>
> b) take all reasonable and practicable measures to prevent or minimise emissions from those premises commits an offence.

There are also offences for causing pollution and unreasonable emissions (s49) with unreasonable emissions being defined as “an emission or transmission of noise, odour or electromagnetic radiation which unreasonably interferes with the health, welfare, convenience, comfort or amenity of any person”.

3.2 Noise Regulations

Noise emissions in WA are regulated through the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations). These Regulations stipulate assigned levels which are determined to represent the acceptable noise levels when experienced by a receptor.

Monitoring work conducted by Barto has identified exceedances of these assigned levels at the nearest receptors in Marvel Loch for the existing operations. These are discussed in Section 5.3 together with the predicted noise levels from the proposed new infrastructure. These are also predicted to exceed the assigned levels without any mitigation (although will be below those currently experienced through the existing equipment onsite due to noise mitigation being installed, thereby resulting in an improved environmental outcome for the receptors in Marvel Loch).

We note however that the operations at the mine predate the introduction of the Noise Regulations and have continued to operate for over 30 years with levels that exceed the assigned levels described within the Regulations. There has been no incidence of community complaint/concern that has been raised by the residents through either the Shire or DWER, which suggests that the current noise levels are considered acceptable.

3.3 Approach to Approval

Given the above, Barto has developed a strategy in order to secure the approvals that seeks to have a Licence Amendment granted for the replacement crushing circuit (replacing existing and approved infrastructure under the EP Act). The supporting studies associated with the replacement crushing circuit and mitigation/management responses that have been developed ensure that all reasonable and practicable measures are taken to prevent or minimise the emissions from the new equipment. They will ensure that any emissions will not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person.

With respect to noise particularly, an ALARP assessment process has been utilised to achieve these outcomes and the details of this are provided in Section 5.3.

Other than the above process under Part V of the EP Act, there are no other approvals or statutory considerations that are required for the construction/operation of the new crushing circuit.

4 Project Description

4.1 Overview

The replacement crushing circuit is to be constructed in place of the existing infrastructure, located just under 1km from the nearest receptor in the Marvel Loch townsite. Operations occur on a 24/7 basis. A range of management measures are in place that address key environmental risks such as discharge of hypersaline water, tailings management, noise and dust (as identified within the 'Premises Description and Licence Summary' of the Licence).

With respect to the replacement crushing circuit (the location of which is shown in **Figure 3**), this is located on the following tenements:

- M77/239;
- M77/638; and
- M77/1036.

As this infrastructure is replacing an existing crushing circuit, the potential environmental impacts are well-understood and will not change (other than to improve given the age of the current equipment). The key environmental impacts associated with the infrastructure are likely to be associated with dust and noise emissions, particularly noting the proximity of the nearest receptors at Marvel Loch. Studies have been undertaken to support the amendment process. Whilst not an issue for the Marvel Loch townsite, a surface water assessment has also been conducted to ensure any impacts to the local environment are minimised as far as practicable.

A 3D representation of the proposed infrastructure is provided below and together with **Figure 3**, shows that there are no significant process changes to what is currently installed onsite:

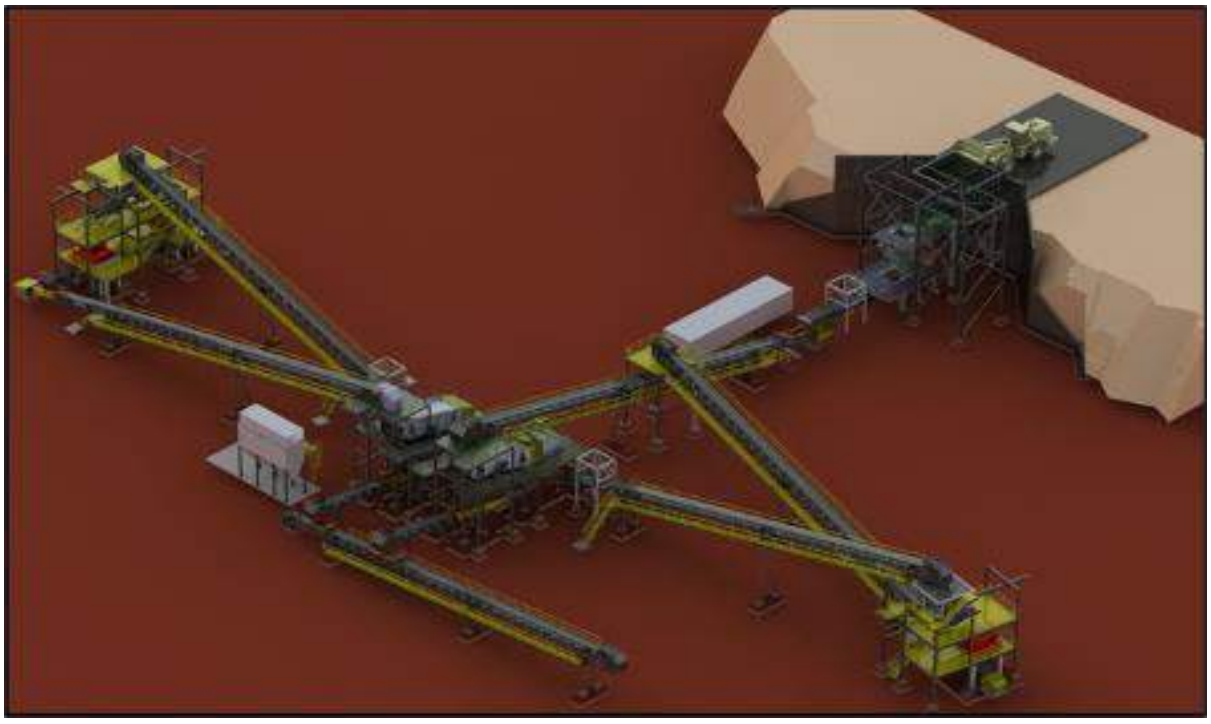


Plate 1: 3D Representation of Proposed Infrastructure

4.2 Activities

4.2.1 Proposed Equipment

Barto engaged Como Engineers to complete the process design, preliminary layout and engineering, equipment selection, capital cost and delivery program for the replacement of the existing crushing circuit. At the time of writing, the following equipment was to be supplied and installed in the location shown in **Figure 3**.

- Two Metso CVB500 vibrating screens;
- One Metso VF561 grizzly feeder;
- Three Metso TKP10-20 pan feeders;
- One Metso C120 jaw crusher;
- Two Metso HP4 Fine cone crushers; and
- One Metso HP4 Coarse cone crusher.

This equipment (which replaces the current crushing circuit) will comprise the Primary Crusher, Secondary Crusher and Screen and Tertiary Crusher and screen and will be capable of processing up to 370 tonnes per hour (tph) of fresh rock, 380 tph of oxide rock and 400 tph of a blended feed (70% fresh and 30% oxide). Given these specifications, the proposed throughput of the operations will not change.

Further to this, as part of the installation, feeder infrastructure, conveyor belts, screens and other associated equipment will also be installed as well as the removal of the fine ore bins and replacement of these with a fine ore stockpile area (and stacker). The existing gyratory crusher will be changed to a jaw crusher. The equipment to be installed will also include dust extractors and the overall works will also see shielding installed to further reduce noise emissions from the crushers, screens and Hydraulic Power Unit (HPU) fans.

4.2.2 Proposed Works (Como Engineers 2020)

4.2.2.1 *Decommissioning and Demolition Works*

The works that are required prior to construction are as follows:

- Electricity feed isolation;
- Fine ore bins to be removed (under Department of Mines, Industry Regulation and Safety (DMIRS) notice);
- Clearing work areas of all materials;
- Removal of all waste and concrete from the site;
- Removal of below ground level services;
- Removal of power lines, cables and power lines;
- Salvageable equipment removed and stored in a designated laydown area;
- Non-salvageable equipment to be drained of oils, degreased and disposed of to site landfill or transported off site;
- All structures to be removed to ground level; and
- Unnecessary concrete structures to be broken up and removed.

At the meeting of 6th October 2020 between Barto and the DWER, it was agreed that the decommissioning works do not form part of the Prescribed Activity and can proceed without further regulatory approvals from the DWER.

4.2.2.2 *Construction*

Ahead of works covered by the Licence Amendment, some minor earthworks will be required from a safety perspective. These include works at the foot of the ROM, remedial works to some remaining infrastructure, and construction of new retaining wall.

The aspects of construction that will be covered via the Licence Amendment are as follows:

- Electrical and cabling works;
- Crusher foundations; and
- Installation of the modularised crusher units.

A summary of the work is provided below:

- Civil Works
  - Concrete supply and detailed earthworks (excavations beneath slab areas only);
  - Construction of all concrete slabs and foundations; and
  - Detailed earthworks necessary for foundation construction only.
- Primary Crusher Assembly
  - Design, supply, fabrication and installation of the ROM bin, jaw crusher and associated infrastructure, vibrating grizzly feeder, primary crusher discharge conveyor, belt magnet support structure, ROM bin dust suppression sprays and the secondary screen feed conveyor;
- Secondary Screen Assembly
  - Design, supply, fabrication and installation of the structure for the secondary sizing screen, undersize conveyor, feed conveyor, belt magnet and dust extraction
- Secondary Crusher Assembly
  - Design, supply, fabrication and installation of the secondary crusher feed bin, support structure, secondary crusher, crusher ancillary equipment and vibrating feeder and secondary screen undersize conveyor;
- Tertiary Crusher Assembly
  - Supply, fabrication and installation of the tertiary crusher feed conveyor, belt magnet and support structure, crusher feed bin and splitter chute, tertiary crusher structures and ancillary equipment;
- Tertiary Screening Assembly
  - Supply, fabrication and installation of the secondary screen oversize transfer conveyor and tertiary screen structure, sizing screen and ancillary equipment, tertiary product screen feed conveyor, tertiary product screen feed conveyor and tertiary screen dust extraction.
- Electrical and Instrumentation
  - The electrical scope for the replacement crushing circuit includes all power transmission, switching, power distribution, lighting, instrumentation and programming.

It should be noted that all construction activities will occur between 6am-6pm during the week. Whilst that shift does assist in minimising any potential risk of unreasonable noise during the quieter night-time period, the Noise Regulations make it clear that a Construction Noise Management Plan will need to be developed and approved by the DWER CEO for the works in question. This will be prepared and provided to the CEO for approval at least 7 days before the decommissioning/demolition and construction works commence onsite.

4.2.2.3 *Commissioning and Operation*

Following the completion of all construction works, pre-commissioning will occur, followed by the commissioning itself as well as the implementation of the noise and dust management measures outlined in this report.

It is expected that the commissioning will occur based on a full production throughput to reflect actual operating conditions and allow for emissions to be monitored in this regard.

5 Assessment of Impacts

5.1 Air Quality

An assessment of potential air quality impacts and specifically dust from the proposed equipment was conducted by Environmental Technologies and Analytics (ETA 2020). A copy of the report produced by ETA is provided as APPENDIX C.

The study was commissioned to determine the potential risk of particulate emission from the project and covered the following aspects:

- Wheel-generated dust from ore transport;
- Unloading of ore onto Run of Mine (ROM) pad;
- Front-end loaders (push ore delivered and load to crusher);
- Crushing and screening operations;
- Stacking;
- Ore handling; and
- Wind erosion from stockpiles and open areas.

A plate showing the emission sources within the crushing circuit is provided below:

Plate 2: Location of emissions sources within Marvel Loch Crushing Circuit (ETA 2020)

The proposed equipment includes dust suppression and extraction throughout, reflective of best-practice management of dust from infrastructure of this type. The assessment considered both human health and amenity criteria consistent with the WA Environmental Protection Authority's (EPA) guideline for air quality (EPA 2016).

A dispersion model was used to assess the impacts and incorporated site-specific parameters such as meteorological data, emissions information, source characteristics, and the location of model receptors. Emission rates were estimated using recognised and accepted methods and a site-specific meteorological dataset was generated and was utilised to predict ground-level concentrations of particulates (TSP, PM10 and PM2.5) using the AERMOD software tool.

This approach was used to determine the potential for impacts at sensitive receptors and the local environment and were compared to relevant criteria. The assessment also considered the existing controls in place to manage/reduce dust emissions from the operations, which will also be employed for the new infrastructure.

To assess the potential air quality impact, ground-level concentrations of TSP, PM10, and PM2.5 were compared to the following criteria:

- Kwinana EPP for TSP of 90 µg/m³
- NEPM 24-hour average of 50 µg/m³ for PM10
- NEPM annual average of 25 µg/m³ for PM10
- NEPM 24-hour average of 25 µg/m³ for PM2.5
- NEPM annual average of 8 µg/m³ for PM2.5
- NSW Environmental Protection Authority amenity guideline of 2 g/m²/month for dust deposition rate

The findings of the work determined that (ETA 2020):

- The predicted ground-level TSP concentrations due to the proposed operations, with and without background concentrations, comply with the air quality assessment criteria at all sensitive receptors;
- The predicted ground-level PM10 concentrations predicted due to the proposed operations also comply with the air quality assessment criteria at all sensitive receptors as do the predicted ground-level PM2.5 concentrations; and
- Dust deposition rates predicted at all sensitive receptors are well within the guideline values employed for this assessment.

Whilst the full details of this report are provided as an Appendix, it is Talis' view that the findings demonstrate that there are no unacceptable or unreasonable particulate emissions associated with the proposed infrastructure and its location onsite.

5.2 Surface Water

Whilst not considered to be a major risk for the operations and certainly not in relation to potential impacts to the Marvel Loch townsite itself, Barto commissioned a surface water assessment to be conducted to ensure that localised surface water impacts from the new infrastructure were understood and, where appropriate, mitigated appropriately.

In this regard, EMM Consulting (EMM) was commissioned by Barto to complete this work (EMM 2020) and a copy of their report is provided as APPENDIX D.

The EMM work confirms that runoff/drainage results from rainfall rather than upstream sources and management/drainage onsite has already been integrated into the overall site development. "There are no natural links or connections between surface water runoff generated locally within the Project site and the downstream environment. Surface water and stormwater generated within the Project footprint is captured, managed, and retained within the mine area" (EMM 2020).

Given that the location and nature of the replacement equipment is not fundamentally changing, the approach to stormwater/drainage management will also not fundamentally change. EMM has also stated that the replacement infrastructure will not result in significant increases in surface water risks in terms of rate, volume or frequency of stormwater runoff and process water discharge. Having said this, the EMM work has identified some areas for improvement with respect to surface water management and these are discussed within their report and summarised in a broad stormwater management strategy for the site based on the following objectives and outcomes:

- to effectively intercept and convey stormwater and process water discharge within the internal surface water drainage system to the pump sump storage;
- to size stormwater management infrastructure to minimise the risk of discharge offsite or contamination of other 'clean' stormwater systems;
- to provide sufficient capacity in the pump sump storage to capture and retain potentially impacted stormwater runoff;
- to allow retained stormwater to be pumped (as required) back into the process water dam for reuse; and
- to size and design stormwater management measures for adjacent areas to effectively capture, convey and store 'clean' stormwater and provide effective separation from the process area stormwater systems.

The following table summarises the areas identified to require further attention.

Table 5-1: Surface Water Management Measures and Controls

Control Measure/Structure	Commentary
Perimeter drains to culvert	Stormwater runoff will be captured and conveyed via crusher and process plant area perimeter drains to the Access road culvert. Runoff and discharge from the process plant will be discharged to the culvert via internal drains. Interception drain to be added (or cleared) along toe of embankment to ROM pad. Preliminary sizing recommendations for stormwater drains are provided in Section 6.4.1 I of the EMM report.
Access Road Culvert	Access road culverts to convey potentially impacted discharge and stormwater runoff across the road. Culverts to be refurbished, repaired, and maintained where possible. Replacement of culverts recommended where pipes are blocked and/or damaged and cannot be opened to provide sufficient conveyance capacity. Rock stabilisation may be required at inlet to manage potential localised ponding during extreme storm events. Preliminary sizing recommendations for stormwater drains are provided in Section 6.4.1 of the EMM report.
Diversion Drain to pump sump	Diversion drain from Access road culvert to convey potentially impacted discharge and stormwater runoff to pump sump adjacent to process water dam. Locally generated stormwater will be accommodated in the drainage channel.
Pump sump stormwater storage	Options and required civil and geotechnical works to be assessed in detail to enable the pump sump stormwater storage capacity to be increased to effectively retain contributing stormwater runoff volumes from significant storm events based on appropriate design criteria. The 1% AEP 24 hr duration design event is estimated to be up to 7,000 m^3 and a 2% AEP 24h duration design event is estimated to be approximately 5,300 m^3. Preliminary sizing recommendations for stormwater drains are provided in Section 6.4.1 iii of the EMM report. Pump sump storage to be separated with an embankment from stormwater contributions from adjacent areas. These are proposed to be managed and retained in a separate stormwater management system.
Process water dam	Review maximum operational level and freeboard requirements, including measures to maintain freeboard and remove risk of dam overtopping. Undertake maintenance, clearing and de-silting of process water dam to maintain operating capacity. Review options to provide additional stormwater storage capacity, i.e. by reducing the operational level, if the storage capacity increase requirements of the pump sump are not feasible.
Grading of ROM pad U/S of site	ROM pad to be graded away from southern boundary (edge) in order minimise the risk of stormwater discharge from the replacement crushing circuit and processing plant catchment. Edge bund/windrow to be maintained. Locally generated stormwater to be directed (through grading) to Blue Pit acting as stormwater basin.
Road drainage	Grade roads to direct stormwater to defined stormwater drains and/or perimeter drains. Stormwater runoff from western end of the Access road (from Catchments C7 and C8) to be managed away from crusher and processing plant stormwater system.

Control Measure/Structure	Commentary
Divert 'clean' stormwater away from crusher and process plant catchments	Surface water management and drainage upgrades and improvements to be implemented to minimise the risk of stormwater contributions to the crusher and processing plant stormwater system from adjacent catchments. Stormwater runoff to be captured in adjacent sub-catchment C3 (to the east) to be conveyed in perimeter drains away from eastern boundary with crusher and process plant catchment (C5). Sub-catchment C3 stormwater to report (ultimately) to a separate stormwater storage dam/basin. Stormwater runoff to be retained locally in adjacent sub-catchment C4 (west of processing plant catchment). Ensure no drainage links to (i.e. buried or old pipes) from adjacent sub-catchments to the crusher and processing plant stormwater system.
Monitoring and maintenance	A monitoring and maintenance plan should be implemented to provide regular review and inspections of the site surface water drainage system. Objectives of the monitoring and maintenance plan will be to identify requirements to maintain the capacity of the surface water system, adapt the strategy where deficiencies are identified and minimise the risk of impacts and contamination. A summary of monitoring and maintenance plan recommendations are provided in Section 6.4.3 of the EMM report.

The following plate shows the area in question together with the catchments referred to in the EMM report and table above:

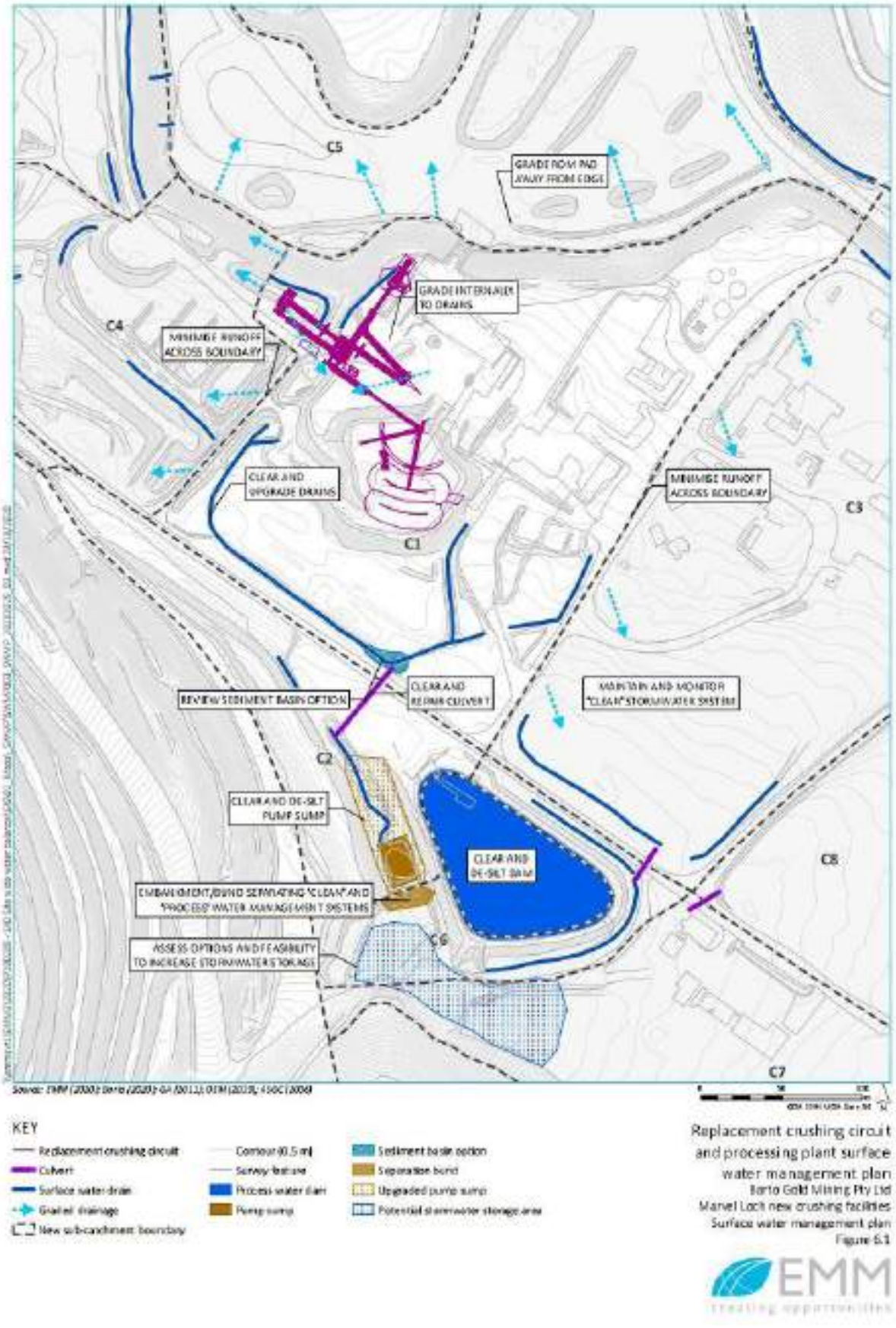


Plate 3: Replacement crushing circuit and process plant surface water management plan (EMM 2020)

5.3 Noise

As noted earlier in this document, the operations at Marvel Loch mine predate the introduction of the Noise Regulations and have continued to operate for over 30 years with levels that exceed the assigned levels described within the Noise Regulations. Despite this, there has been no incidence of community complaint/concern that has been raised by the receptors through either the Shire or DWER which suggests that the noise is acceptable.

In order to ensure that there continues to be no unacceptable impacts to the environment or receptors from noise emissions, a detailed and prescriptive noise assessment has been undertaken by Talis. This assessment has been based on historical and current noise monitoring, predictive modelling and an ALARP assessment process to identify the most appropriate noise controls to implement.

The intention is to develop a Noise Management Plan for the operations which will also explore opportunities to further reduce noise levels over time with the application of various noise reduction strategies.

5.3.1 ALARP

The ALARP process is a well-defined and industry-accepted methodology utilised to assess various control options proposed for a project against various factors (e.g. safety, maintenance, operations, effectiveness) to determine the feasibility and practicality of each option.

Within the ALARP process, it is important to demonstrate that the costs associated with further reducing the identified risks would be significantly disproportionate to the benefit gained. In other words, an assessment of what could possibly be done against what is reasonable and practicable to implement.

In relation to the process employed by Barto, the ALARP process is an objective and evidence-based means of evaluating noise control options so that they can be used to demonstrate that an ALARP outcome has been achieved. It is also used for management decisions in the process of selecting noise control solutions.

There are several factors that might influence the assessment including:

- The likelihood of an event occurring and the associated risks;
- The level of impact that results from the event;
- Barto's knowledge of the risks/impacts and how these might be reduced/eliminated;
- The availability and appropriateness of methods to reduce/eliminate the risks/impacts; and
- The costs associated with the methods identified to reduce/eliminate the risks/impacts and an assessment of these against the final outcome.

The practicality of noise controls has been determined using the ALARP process, which uses a rating system to weigh various factors (i.e. operations, maintenance, safety, cost) against the noise reduction achieved. Each noise control option has been scored, evaluated and ranked from most practicable to least practicable.

The ALARP process includes:

- Preliminary noise control analysis;

- ALARP Workshop and Noise Control Selection; and
- Barto's noise control selection approval.

5.3.2 Noise Assessment

5.3.2.1 *Overview*

The aim of the noise assessment was to assess noise impacts of Barto's Marvel Loch operations and their proposed replacement crushing circuit on the town of Marvel Loch and to determine appropriate noise controls to reduce the predicted noise impacts.

In order to undertake this work, a model was developed and run to generate predicted noise levels for the proposed infrastructure. These were considered against the assigned levels described in the Noise Regulations at receptors in Marvel Loch. As mining is a continuous operation, the noise modelling results have been assessed against the most stringent LA_{10} night-time level of 36 dB(A).

Both noise monitoring and modelling were used to determine the existing noise impacts from Barto's operations on the town of Marvel Loch. Two noise loggers were placed in town for a period of 10 days in July 2019 and the data from these was used to develop a model based on plant layout diagrams and information obtained from site. The outcome of the monitoring and modelling found that Barto's impacts on the town exceed the assigned level within Regulations.

Table 5-2: Predicted and Measured Receiver Noise levels

Receiver	L_{A10} Noise Level in dB(A)		
	Assigned Noise Level	Predicted Level	Measured Levels
R5	36	50.6	45.9 to 54.5
R6		50.2	

As a result of this outcome and to support an application to the DWER to replace the crushing infrastructure, Barto developed a noise reduction strategy with the goal of ensuring that there is no net increase in cumulative environmental noise levels in the community and that the noise levels will progressively reduce over time with the application of various noise reduction strategies.

A key part of this strategy involved the implementation of an ALARP process. This assesses how the company will determine potential noise control opportunities and how noise control options will be selected and implemented. The ALARP assessment, which forms part of the noise control process, is used to finalise the selection of an appropriate noise control option to ensure that noise experienced at the receptors is not unreasonable and is minimised as far as practicable.

Barto's ALARP process uses an evidence-based approach that follows industry recognised principles. The ALARP process adopted by Barto is summarised as follows:

i) Preliminary noise control analysis (prior to ALARP); and

ii) ALARP Workshop and Noise Control Selection.

As part of the ALARP process, an assessment of each two scenarios was conducted to compare the noise levels resulting from each. These scenarios were as follows:

- Base Case (discussed earlier); and
- Replacement Crushing Circuit (No Noise Controls).

The Base Case model was updated with the removal of the existing crushing circuit and addition of the replacement crushing circuit. The Crushing Circuit Replacement model including the existing

Processing Plant consists of 70 noise sources and was set up with the same activities as the Base Case model. New equipment source levels were based on manufacturer information provided by Barto.

It should also be noted that part of the initial noise control process, the layout of the replacement crushing circuit was considered. It was found that the original layout did not take advantage of the shielding that could be afforded by the shape of the ROM for several of the receivers in town. As a result, the design layout was changed having a positive benefit of 2 dB reduction at these locations.

Despite this, the assessment determined that the noise levels from both scenarios exceeded the assigned levels at most of the receivers in Marvel Loch. This resulted in an analysis of which noise sources were contributing significantly to the noise level at the receivers in the town of Marvel Loch. The most significant contributors were then targeted for noise controls.

As a result, the top contributing noise source at each of the receivers was investigated and a number of potential noise control options were considered during an ALARP work session. The options considered included relocating the crushing circuit, low noise equipment, visco elastic paint and HPU fan cowling, bunding and screens.

5.3.2.2 *ALARP Workshop*

As noted above, the noise assessment involved the development of the ALARP model and assessment process, culminating in the ALARP workshop held on 16 September 2020.

The ALARP workshop was held with stakeholders from various disciplines (Environment, Processing, Maintenance, Safety and Design/Engineering), providing them an overview of the noise modelling findings and noise control options. The purpose of their participation in this workshop was to review, discuss and score various possible noise controls and measures that potentially could be utilised and assess these against a range of weighted factors including:

- Reduction in Noise Exposure Levels (dB);
- Noise reduction achieved (%);
- Equipment Operability;
- Maintenance of Treatment;
- Process Impact;
- Benchmarking;
- Cost of Treatment;
- Safety;
- Social; and
- Project.

Each factor was scored between 0 and 100 (except for the cost factor). Each score was determined during the workshop. Comments are also provided and recorded during workshop to justify the score given.

The noise control measures that were identified to be possible for the site are provided in the following table:

Table 5-3: ALARP Noise Control Scenarios

Option	Description	Comment
1	No Noise Control	As is, no noise control implementation
2	Crusher Infrastructure Relocation	Relocate the crusher infrastructure to an alternative location that provides maximum shielding to the town.
3	Low Noise OEM Spec Crusher Equipment	Obtain a low noise crusher from an Original Equipment Manufacturer (OEM)
4	Crushers Visco Elastic Paint and HPU Fan cowling	Coat the crusher and screens with Visco Elastic and install Fan cowling on all hydraulic power unit fans.
5	Crushers and HPU Fan Shielding (Screens)	Use of shielding materials for high noise equipment. This noise control includes screening of the crusher, HPU units and vibrating screens. The noise screens are to be designed to attenuate low frequency noise.
6	Crusher Infrastructure Bunding (20-30m high)	Create a bund around the infrastructure

The workshop worked through each of the options and discussed the feasibility of each together with assessing them against the factors previously discussed. The following plate is sourced from the workshop report:

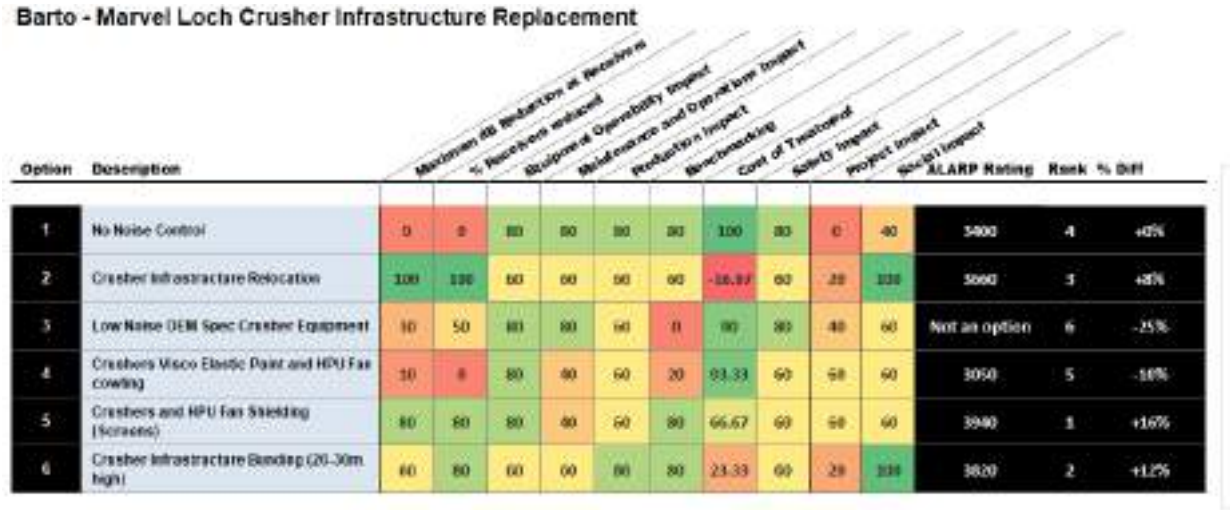


Plate 4: ALARP Workshop Outcomes

The plate shows the outcomes based on the weighting of the factors and the scoring of the various options and shows that the most reasonably practicable noise control to implement is the screening/shielding for the crushers and HPU fans (use of shielding materials for high noise equipment. This noise control includes screening of the crusher, HPU units and vibrating screens. The noise screens are to be designed to attenuate low frequency noise. Based on the findings of this workshop and a thorough review of this approach, Barto agreed to progress with these findings and design the shielding/screens into the replacement infrastructure to achieve the noise reduction requirements through the ALARP process.

5.3.2.3 *Further Assessment*

Following the identification of the screening/shielding for the crushers/HPU fans as the most reasonably practicable noise control to implement, the selected noise controls (i.e. shielding) were added to the replacement crushing circuit noise model and the model was run using the same meteorological conditions as previous model runs.

The model was run with a conceptual noise control design which involved a shielding arrangement placed on the town-facing sides of vibrating screens, primary, secondary and tertiary crushers.

The shielding will cover sufficient area to block the direct and indirect acoustic paths between the town of Marvel Loch and the noise emitting equipment, the shielding will be placed on the north-western and south-western sides of the vibrating screens, tertiary and secondary crushers. The primary crusher shielding will be placed on the south-western side of the crusher to block the direct and indirect acoustic paths towards the town

The shielding will be constructed using materials that the necessary attenuating properties to achieve the modelled reduction in the town of Marvel Loch. The predicted cumulative noise levels for this scenario are provided in the following table and a noise contour map is provided in the Plate that follows. The predicted levels in this table include a tonality adjustment of 5 dB. With the noise controls in place all receiver noise levels are less than the base case with receivers R1 to R4 and R11 and R12 predicted to be 3 dB less than the base case.

Table 5-4: Predicted Received Noise Levels with noise controls

Receiver	Assigned Level	LA_{10} Received Levels [dB(A)] [1]			
		1. Base Case	2. Replacement Crushing Circuit	3. Replacement Crushing Circuit with Noise Control	Difference (3 minus 1)
R1	36	37	37	34	-3
R2		34	34	31	-3
R3		48	48	45	-3
R4		45	45	42	-3
R5		51	53	49	-2
R6		50	52	48	-2
R7		49	51	47	-2
R8		50	52	48	-2
R9		49	51	47	-2
R10		48	50	46	-2
R11		49	51	46	-3
R12		48	50	45	-3
R13		48	50	46	-2

[1] 5 dB adjustment added for tonality.

Plate 5: Crusher Circuit Replacement Predicted Noise Contour Map with Noise Controls

A full summary of the assessment work and modelled results is provided in APPENDIX E.

6 Management of Impacts

In terms of the impacts that have been identified through the Air Quality, Surface Water and Noise assessments, it was only the noise requirements that warranted additional intervention. Despite this, Barto has noted the outcomes from all studies and will implement the following measures to further address the potential impacts that have been identified:

6.1 Air Quality

The following controls will be implemented (and are consistent with current operations):

Table 6-1: Dust Sources and Controls

Location	Dust Abatement Description	Activity
Haul Roads	Level 1 watering using saline water	Wheel-generated dust
ROM Pad	Water Spray	Wind erosion from stockpile
		Unloading ore from truck
		FEL – push ore delivered/feed crusher
Crushers	Water Spray	Primary Crusher
		Secondary Crusher
		Tertiary Crusher (1 and 2)
Screens	Dust-collectors	Screening operations
Stacker	Water Spray (50%) Luffing Stacker (25%)	Stacker
Transfer Station	Water Spray	Material Transfer
Ore stockpile	Water Spray	FEL – back up stockpile
Open Areas	Water Spray	Wind erosion from exposed area
Haul Roads	Level 1 watering using saline water	Wheel-generated dust

In addition to the above, a Dust Management Plan (DMP) is also being prepared by Barto which will address both construction and operational dust. This will be implemented ahead of these activities and will further ensure that there continue to be no unacceptable or unreasonable particulate emissions associated with the operations. The DMP will also include monitoring of dust levels in the town of Marvel Loch.

6.2 Surface Water

The approach to management of potential surface water impacts resulting from the replacement crushing infrastructure is consistent with Barto's existing strategy onsite and utilises existing infrastructure. The works maximise the capacity of this infrastructure to address stormwater risks.

The recommended remedial works and actions that will be implemented by Barto in this regard include:

- clearing (and ultimately upgrading) existing stormwater drains;
- clearing (and ultimately upgrading) culverts;
- clearing of sediment from pump sump to increase effective storage capacity;
- review existing controls to mitigate the risk of stormwater ingress to the system from outside areas;
- grading back of ROM above the crusher location;
- reviewing stormwater drainage paths and contributions along access and haul roads; and
- checking and monitoring for evidence of uncontrolled stormwater runoff into or out of the site.

To address these actions, Barto will develop a stormwater monitoring and maintenance plan over the coming months to ensure that there are no unacceptable risks to the environment resulting from stormwater.

As noted above, the work completed identifies issues that require general attention and are not necessarily related to the proposed to replace the crushing circuit onsite. As a result, Talis does not see these requirements as critical to the proposal but as measures that will be implemented over a period of time.

6.3 Noise

As noted previously, the replacement crushing circuit requires additional management to reduce the noise levels to below those associated with the current infrastructure. A full assessment (incorporating ALARP workshop) was completed by Barto and this identified that the use of shielding materials for high-level noise equipment should be employed.

This noise control includes screening of the crusher, HPU units and vibrating screens. The noise screens are to be designed to attenuate low frequency noise and are procured and installed with the replacement crushing circuit.

Furthermore, as part of the initial noise control process, the layout of the replacement crushing circuit was considered. It was found that the original layout did not take advantage of the shielding that could be afforded by the shape of the ROM for several of the receivers in town. As a result, the design layout was changed having a positive benefit on noise experienced at these locations.

As the construction activities for the replacement crushing circuit will occur from 6am-6pm each day of the week, a Construction Noise Management Plan will be required to be developed and approved by the CEO of the DWER prior to works commencing. This Plan will be provided to the CEO for approval at least 7 days prior to works and will provide additional measures to reduce the potential for noise impacts experienced at receptors in Marvel Loch.

Further to this, an operational Noise Management Plan will also be prepared to ensure that noise levels remain acceptable at the nearest receptors and that ongoing measures to reduce noise associated with the operations continue to be explored and implemented where practicable. This will involve a noise monitoring campaign undertaken during the commissioning stage when the replacement crushing circuit is fully operational.

7 Stakeholder Consultation

Barto takes its obligations to stakeholder engagement and consultation seriously. Whilst the company has regularly engaged with members of the local community at Marvel Loch and other relevant stakeholders (including statutory authorities such as DWER and DMIRS) in the past, Barto has recently engaged the services of Platform Communications to provide a more formalised and structured approach to engagement.

Platform Communications developed an engagement strategy and review process for the planned replacement of the crushing circuit. The principles of the engagement were as follows (Platform 2020):

- Identify relevant and interested stakeholders;
- Engage stakeholders early in the planning process;
- Develop a tailored approach to engagement that is transparent and two-way;
- Develop communications that are relevant to specific stakeholder needs;
- Provide adequate time for stakeholders to provide feedback;
- Incorporate feedback into planning and decision making; and
- Provide feedback to stakeholders on how their feedback has been considered.

The following key stakeholders were identified:

- DWER;
- DMIRS;
- Shire of Yilgarn;
- Marvel Loch community;
- Landowners/leaseholders; and
- Barto employees.

A report detailing the outcomes of the engagement is provided as APPENDIX F and notes that, at the time of writing, there have been no objections or specific issues raised by stakeholders regarding the proposed activities and the approach taken to manage/mitigate the impacts associated with the replacement crushing infrastructure.

As noted in the report, the intention is to ensure that ongoing communication occurs, and will include further meetings with DWER to progress the approvals, discussions with the community at regular meetings (including updates regarding the approvals process), engagement with site staff regarding the approach to community engagement post-approval. This will also ensure that all potentially affected parties are advised on the final approvals granted and the management measures employed.

Given the above and the fact that there has been no objection to the project articulated by the community or complaints raised in relation to the current operations, Talis is confident that the emissions profile associated with the current plant and that proposed is not considered to be unreasonable.

Further meetings with the Shire and Marvel Loch community are also scheduled for the middle of November.

8 Discussion

It is important to recognise that the context of the assessment work completed by Barto is in relation to replacement of equipment onsite at Marvel Loch. The proposed crushing circuit is essentially a new for old replacement of existing infrastructure and does not change the nature or quantum of the emissions associated with the operations.

The work completed by Barto in relation to the proposed infrastructure shows that the risks associated with air quality and surface water are limited in terms of their extent and are unlikely to present any unacceptable concerns for the receptors associated with the site. With respect to air quality in particular, it is noted that the standards that have been adopted for the purpose of assessment will be complied with and that the proposed management measures are appropriate for the nature of the operations. Notwithstanding this, and consistent with some of the discussions recently held with relevant stakeholders, Barto is developing a Dust Management Plan (incorporating monitoring of dust emissions) to ensure that there are no unacceptable/unreasonable impacts resulting from the operations or replacement crushing infrastructure.

In terms of surface water, it was recognised early on that it was unlikely that there would be any unacceptable risks associated with surface water impacts resulting from the new infrastructure. However, the assessment work completed for the project identified some broad changes that could be made across the site to maximise the opportunity for surface water management and improve efficiencies of existing infrastructure to do this. The work has noted that the proposed approach to management is consistent with Barto's existing strategy and utilises existing infrastructure. The recommended remedial works and actions include clearing out sediment/sludge from existing infrastructure, reviewing options to minimise stormwater flowing in to the system, grading back the ROM above the crusher and reviewing the stormwater drainage paths and contributions along access and haul roads.

Noise impacts associated with the project were identified to be the key consideration for this Licence Amendment. Whilst it is accepted that there are exceedances of the assigned levels prescribed within the Noise Regulations at the nearest receptors in Marvel Loch for the existing operations and those associated with the new infrastructure, there will be improvements to the overall noise profile as a result of the new equipment and associated noise controls to be put in place. Furthermore, the ALARP process employed by Barto has ensured that the equipment that has been sourced and the mitigation/management that is intended to be employed to reduce the potential impacts show that Barto has committed to all that is reasonably possible to be done given the situation, locality and its associated constraints.

The work completed in relation to noise shows that screening/shielding for the crushers/HPU fans is the most reasonably practicable noise control to implement. When modelled against the base case scenario (i.e. current operations), the predicted noise levels at all receivers in Marvel Loch are less than the base case with receivers predicted to be up to 3 dB less.

In terms of the overall assessment approach and response, this has been discussed with relevant stakeholders and, in particular, the Marvel Loch community. To date, there have been no objections or specific issues raised by stakeholders regarding the proposed activities.

As noted in the report, the intention is to ensure that ongoing communication occurs, and will include (as required) further meetings with DWER to progress the approvals, discussions with the Shire and community at regular meetings (including updates regarding the approvals process), engagement with site staff regarding the approach to community engagement post-approval. The intention is to ensure

that all potentially affected parties are advised on the final approvals granted and the management measures employed.

The work undertaken thus far suggests that the potential environmental impacts/risks associated with the replacement infrastructure can be managed appropriately to ensure that there are no unacceptable impacts to the environment or the receptors in Marvel Loch. Management plans for dust, surface water and noise will also be developed to further address these potential risks and explore further opportunities for improvement at site where practicable and appropriate.

9 Conclusion

As noted above, this report contains supporting information relating to an Application to Amend Licence L4597/1988/14 to replace the historic crushing circuit onsite with new, best-practice infrastructure. The report incorporates assessment and details to demonstrate that there are no unacceptable impacts to the environment or surrounding receptors from the operation of the equipment.

Further to the above, Barto is also using this Amendment as an opportunity to amend the Licence Holder in the current instrument from Tianye to Barto, reflective of the name-change referred to above.

The proposed crushing circuit is a *new for old* replacement of existing infrastructure and does not change the nature or quantum of the emissions associated with the operations. The assessment demonstrates that surface water and air quality impacts align with expected requirements and the management measures proposed represent improvements from what is currently approved onsite. Whilst noise levels from the existing operations do not comply with the assigned levels within the *Environmental Protection (Noise Regulations) 1997*, the current operations pre-date that statute. The assessment and ALARP process employed for the replacement infrastructure, coupled with the management/mitigation works for the equipment result in an improved noise profile for the operations and lower noise levels at the closest receptors in Marvel Loch.

Talis is of the view that the proposed replacement equipment, the controls in place and the management measures and plans proposed will ensure that there is no unacceptable risk to the environment or human health and will result in an improved emissions profile from the premises.

10 References

Como Engineers, “Marvel Loch Crushing Circuit Replacement – Scope of Works”, 27 August 2020

EMM Consulting, “Marvel Loch new crushing facilities - surface water management plan”, 21 October 2020

Environmental Technologies and Analytics, “Marvel Loch Crushing Circuit Air Quality Assessment”, October 2020

Government of Western Australia, Environmental Protection Act 1986

Government of Western Australia, Environmental Protection (Noise) Regulations 1997

Platform Communications, “Stakeholder Engagement Report”, October 2020

Talis Consultants Pty Ltd, “SXO Marvel Loch – Environmental Noise Control Selection and ALARP Process”, August 2020

Talis Consultants Pty Ltd, “Environmental Noise Impact Assessment”, October 2020a

Talis Consultants Pty Ltd, “Marvel Loch Crushing Circuit Upgrade – ALARP Workshop Outcomes”, October 2020b

11 Figures

P: PO Box 454, Leederville WA 6903 | A: 604 Newcastle St, Leederville WA 6007 | T: 1300 251 070 | W: www.talisconsultants.com.au

119°10'0"E
119°20'0"E
119°30'0"E
119°40'0"E
31°10'0"S
31°20'0"S
31°30'0"S
31°40'0"S

Corinthia
Moorine Rock
Southern Cross
Yellowdine
Mount Palmer
Great Eastern Hwy
Marvel Loch
Emu Fence Rd
Southern Cross South Rd
Parker Range Rd

Frasers
Polaris South
Aquarius
Cornishman
Transvaal
Axehandle
Triad
Marvel Loch Processing Plant
3 Mile Dam
Jaccoletti
Nevoria
Edward's Find
GVG
Yilgarn Star
Southern Star

Data source: Roads - MRWA, 2020. Tenements - DMIRS, 2020.

LEGEND

- Project Tenements
- Premises Area
- Marvel Loch Processing Plant
- Barto Gold Project
- Other Barto Gold Tenements

LOCALITY

0 250 500 750 1,000 km

LOCALITY PLAN
Marvel Loch Mine
L4597/1988/14 Licence Amendment
Barto Gold Mining Pty Ltd

N

0 2.5 5 7.5 10 km

Scale @ A3: 1:250,000
Coordinate System: GDA 1994 MGA Zone 50, Projection: Transverse Mercator, Datum: GDA 1994

Prepared:	F Walker
Reviewed:	A Mack
Project:	TE20091
Revision:	A
Date:	20/10/2020

Figure 01

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Document Path: \\server\Talis\SECTIONS\Environment\Projects\TE2020\TE20091 - Minjar Licence Amendment\GIS\Maps\TE20091_01_Locality_RevA.mxd

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737500
738000
6516500
6516000
6515500
M 77/26
M 77/113
M 77/1036
M 77/7
M 77/638
M 77/239
M 77/10
M 77/525
Data source: Imagery - Landgate, 2015. Tenements - DMIRS, 2020.

LEGEND

- Project Tenements
- Premises Area

LOCALITY

km
0 10 20 30 40

AERIAL
Marvel Loch Mine
L4597/1988/14 Licence Amendment
Barto Gold Mining Pty Ltd

N

metres
0 40 80 120 160

Scale @ A3: 1:4,000
Coordinate System: GDA 1994 MGA Zone 50, Projection: Transverse Mercator, Datum: GDA 1994

Prepared:	F Walker
Reviewed:	A Mack
Project:	TE20091
Revision:	A
Date:	20/10/2020

Figure 02

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M 77/1036
M 77/113
M 77/638
M 77/239
M 77/10
M 77/525
651 6000
651 6000
Data source: Imagery - Landgate, 2015. Tenements - DMIRS, 2020.

LEGEND

- Project Tenements
- Premises Area
- Proposed Crusher Circuit

LOCALITY

0 10 20 30 40 km

EQUIPMENT LOCATION

Marvel Loch Mine
L4597/1988/14 Licence Amendment
Barto Gold Mining Pty Ltd

N

0 10 20 30 40 metres

Scale @ A3: 1:1,000
Coordinate System: GDA 1994 MGA Zone 50, Projection: Transverse Mercator, Datum: GDA 1994

Prepared:	F Walker
Reviewed:	A Mack
Project:	TE20091
Revision:	A
Date:	26/10/2020

Figure 03

talis consultants

Document Path: \\server\talis\SECTIONS\Environment\Projects\TE2020\TE20091 - Minjar Licence Amendment\GIS\Maps\TE20091_03_EquipmentLocation_RevA.mxd

APPENDIX A

DWER Licence L4597/1988/14

Licence

Licence Number	L4597/1988/14
Licence Holder	Tianye SXO Gold Mining Pty Ltd
ACN	161 566 490
Registered business address	Level 3, 66 Kings Park Road WEST PERTH WA 6005
DWER File Number	DER2014/000887-1
Duration	20/09/2013 to 25/09/2022
Date of amendment	21/11/2019
Premises details	Minjar-SXO – Marvel Loch Mine MARVEL LOCH WA 6426 Legal description - Mining Leases M77/7, M77/8, M77/10, M77/26, M77/31, M77/86, M77/109, M77/112, M77/113, M77/114, M77/137, M77/138, M77/175, M77/193, M77/225, M77/239, M77/251, M77/347, M77/352, M77/380, M77/424, M77/431, M77/525, M77/554, M77/555, M77/593, M77/631, M77/638, M77/640, M77/660, M77/668, M77/702, M77/745, M77/721, M77/746, M77/747, M77/790, M77/811, M77/969, M77/977, and M77/1036, Miscellaneous Licences L77/87, L77/91, L77/112, L77/113, L77/114, L77/126, L77/128, L77/145, L77/162, L77/167, L77/173, L77/281, P77/3792, P77/3793 and General Purpose Leases G77/1-3 As defined in Schedule 1

Prescribed premises categories

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	Assessed production capacity
Category 5: Processing or beneficiation of metallic or non-metallic ore.	2,600,000 tonnes per annual period.
Category 6: Mine dewatering.	6,000,000 tonnes per annual period.
Category 64: Class II or III putrescible landfill.	2 000 tonnes per annual period.
Category 57: Used tyre storage.	200 tyres.

This Licence is granted to the Licence Holder, subject to the following conditions, as amended on 21 November 2019, by:

Tim Gentle

Manager – Resource Industries

Regulatory Services

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Contents

Introduction

This Introduction is not part of the Licence conditions.

DWER's industry licensing role

The Department of Water and Environmental Regulation (DWER) is a government department for the state of Western Australia in the portfolio of the Minister for Environment. DWER's purpose is to advise on and implement strategies for a healthy environment for the benefit of all current and future Western Australians.

DWER has responsibilities under Part V of the *Environmental Protection Act 1986* (the Act) for the licensing of prescribed premises. Through this process DWER works with the business owners, community, consultants, industry and other representatives to prevent, control and abate pollution and environmental harm to conserve and protect the environment. DWER also monitors and audits compliance with works approvals and licence conditions, takes enforcement action as appropriate and develops and implements licensing and industry regulation policy.

Licence requirements

This Licence is issued under Part V of the Act. Conditions contained within the Licence relate to the prevention, reduction or control of emissions and discharges to the environment and to the monitoring and reporting of them.

Where other statutory instruments impose obligations on the Premises/Licensee the intention is not to replicate them in the licence conditions. You should therefore ensure that you are aware of all your statutory obligations under the Act and any other statutory instrument. Legislation can be accessed through the State Law Publisher website using the following link:
http://www.slp.wa.gov.au/legislation/statutes.nsf/default.html

For your Premises relevant statutory instruments include but are not limited to obligations under the:

- *Environmental Protection (Unauthorised Discharges) Regulations 2004* – these Regulations make it an offence to discharge certain materials such as contaminated stormwater into the environment other than in the circumstances set out in the Regulations

- *Environmental Protection (Controlled Waste) Regulations 2004* - these Regulations place obligations on you if you produce, accept, transport or dispose of controlled waste.
- *Environmental Protection (Noise) Regulations 1997* – these Regulations require noise emissions from the Premises to comply with the assigned noise levels set out in the Regulations.

You must comply with your licence. Non-compliance with your licence is an offence and strict penalties exist for those who do not comply.

Licence holders are also reminded of the requirements of section 53 of the Act which places restrictions on making certain changes to prescribed premises unless the changes are in accordance with a works approval, licence, closure notice or environmental protection notice.

Licence fees

If you have a licence that is issued for more than one year, you are required to pay an annual licence fee prior to the anniversary date of issue of your licence. Non payment of annual licence fees will result in your licence ceasing to have effect meaning that it will no longer be valid and you will need to apply for a new licence for your Premises.

Ministerial conditions

If your Premises has been assessed under Part IV of the Act you may have had conditions imposed by the Minister for Environment. You are required to comply with any conditions imposed by the Minister.

Premises description and Licence summary

On 8 December 2017 the Licence was transferred from Hanking Gold Mining Pty Ltd to Tianye SXO Gold Mining Pty Ltd for the Southern Cross Operations which include the Marvel Loch Mine, Yilgarn Star, Great Victoria Gold, Hercules and Southern Star, which are all linked to the Marvel Loch site through haul roads and pipeline infrastructure. Mining in the Marvel Loch area dates back to the early 1900s. The surrounding land uses including wheat and other cereal crops.

The mine site is 30 kilometres (km) south of the town of Southern Cross and 360 km east of Perth. Southern Cross has an annual average rainfall of 280 mm. Annual evaporation is estimated to be 2 635 mm per year. A 1 in 100-year storm event will generate approximately 166 mm of rainfall. The groundwater is hypersaline - TDS in the range of 40 000 mg/L to 160 000 mg/L with a depth greater than 10 m below the surface.

The mine is an open cut and underground mine, a processing plant, a tailings storage facility (TSF), landfill, and associated workshops and offices. The mine is dewatered to either the Jaccoletti pit or the Nevoria pit which itself can be dewatered to the Yilgarn Star pit.

Gold mineralisation at Marvel Loch extends across a 1.3 km strike length and has been identified to depths of more than 700 metres below surface level. The ore body comprises multiple lodes. The plant has been in operation for more than 15 years and has a production capacity of 2.4 million tonnes per annum based on a conventional carbon-in-leach circuit. Infrastructure is aging and has occasionally failed.

Emissions mainly relate to dewatering hypersaline water to mine pits and the risk from spills from the processing plant and pipelines. Discharge of tailings from the processing plant to the TSF, freeboard in the TSF and TSF integrity require management to minimise environmental risk. All have the potential to impact vegetation via direct contact, or rising groundwater levels, mounding of the water table and death of vegetation. A network of monitoring bores has been established to monitor impacts. Groundwater monitoring has indicated mounding around the TSF and seepage recovery is critical to ensure protection of native vegetation. Noise and dust may be an issue as the mine is adjacent to the town of Marvel Loch. The Premises abuts residential areas of the town site.

A maintenance and improvement schedule for the processing plant was developed in 2014 with planned crushing and milling commencing in late November 2014.

The licences and works approvals issued for the Premises since 24/06/2010.

Instrument log		
Instrument	**Issued**	**Description**
W4732/2010/1	24/6/2010	Works Approval for TSF lift
L4597/1988/13	16/05/2013	Transfer of licence to Hanking Gold Mining Pty Ltd
W4732/2010/2	05/09/2013	Works Approval amendment to extend period of instrument relating to TSF lift.
L4597/1988/14	19/09/2013	Licence reissue in REFIRE format
L4597/1988/14	26/03/2015	Licence amendment to remove requirement for settling ponds from the Licence, to include the construction of the Nevoria landfill and to remove monitoring related to the zone of influence.
W5818/2015/1	21/05/2015	Works Approval to construct dewatering infrastructure and 3 km pipeline from Axehandle deposit to Glendower pit.
L4597/1988/14	07/01/2016	Licence amendment to include the Axehandle dewatering operations, monitoring and reporting requirements plus discharge points within the premises boundary plus remove the improvement condition and Nevoria landfill compliance condition as these have been satisfactorily completed.
L4597/1988/14	28/04/2016	Licence amendment to include 5km pipeline from Glendower to Triad.
L4597/1988/14	29/04/2016	Department initiated amendment in accordance with section 59(1)(k) of the *Environmental Protection Act 1986* to amend the duration of the licence date month year.
L4597/1988/14	8/02/2017	Amendment Notice 1: the licensee applied for an amendment to licence to include the Axehandle Pit as an approved location to undertake disposal under Category 64 - Class II or III putrescible landfill.
L4597/1988/14	8/12/2017	Amendment Notice 2 – an amendment to; • Change Licence Holder's legal entity from 'Hanking Gold Mining Pty Ltd' to 'Tianye SXO Gold Mining Pty Ltd'; • Increasing the Category 6 Mine dewatering design capacity from 4.8 million tonnes to 6 million tonnes per annual period; • Inclusion of Category 57: Used tyre storage; • Inclusion of an additional location under Category 64: Class II or II putrescible landfill site at the Transvaal (Aquarius) pit; and • Inclusion of conditions for the construction of the Tailings Storage Facility 3 (TSF3).

L4597/1988/14	18/04/2018	Amendment Notice 3: - an amendment to; ▪ Relocate the Aquarius dewatering pipeline route that was previously approved under Amendment Notice 2; and ▪ Addition of mining tenements M77/251, M77/593 and L77/87. To premises boundary description.
L4597/1988/14	DRAFT	Amendment to allow the discharge of mine dewater to Marvel Loch pit. Also to amalgamate Amendment Notices 1 – 3 into the Licence document to produce a single instrument.

Severance

It is the intent of these Licence conditions that they shall operate so that, if a condition or a part of a condition is beyond the power of this Licence to impose, or is otherwise *ultra vires* or invalid, that condition or part of a condition shall be severed and the remainder of these conditions shall nevertheless be valid to the extent that they are within the power of this Licence to impose and are not otherwise *ultra vires* or invalid.

END OF INTRODUCTION

Licence conditions

1 General

1.1 Interpretation

1.1.1 In the Licence, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 For the purposes of this Licence, unless the contrary intention appears:

'AACR' means Annual Audit Compliance Report, a report in a format approved by the CEO as presented by the Licensee or as specified by the CEO from time to time and published on the Department's website and a copy of the AACR form is accessible from the DWER website.

'Act' means the *Environmental Protection Act 1986;*

'AER' means Annual Environmental Report;

'AHD' means the Australian height datum;

'Annual Period' means the inclusive period from 1 October until 30 September in the following year;

'AS/NZS 5667.1' means the Australian Standard AS/NZS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples;*

'AS/NZS 5667.4' means the Australian Standard AS/NZS 5667.4 *Water Quality – Sampling – Guidance on sampling from lakes, natural and man-made;*

'AS/NZS 5667.10' means the Australian Standard AS/NZS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters;*

'AS/NZS 5667.11' means the Australian Standard AS/NZS 5667.11 *Water Quality – Sampling – Guidance on sampling of groundwaters;*

'averaging period' means the time over which a limit is measured or a monitoring result is obtained;

'CEO' means Chief Executive Officer of the Department of Water and Environmental Regulation;

'CEO' for the purpose of correspondence means;
Director General
Department Administering the *Environmental Protection Act 1986*
Locked Bag 10
JOONDALUP DC WA 6027
Telephone: (08) 6367 7000
Facsimile: (08) 6367 7001
Email: info@dwer.wa.gov.au

'controlled waste' has the definition in *Environmental Protection (Controlled Waste) Regulations 2004*;

'Department' means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Division 3 Part V of the EP Act,

'DWER' means Department of Water and Environmental Regulation.

'freeboard' means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point;

'hardstand' means a surface with a permeability of 10^{-9} metres/second or less;

'**HDPE**' means High-density Polyethylene;

'Licence' means this Licence numbered L4597/1988/14 and issued under the Act;

'License Holder' means the person or organisation named as Licence Holder on page 1 of the Licence;

'm^3' means cubic metres;

'NATA' means the National Association of Testing Authorities, Australia;

'NATA accredited' means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;

'normal operating conditions' means any operation of a particular process (including abatement equipment) excluding start-up, shut-down and upset conditions, in relation to stack sampling or monitoring;

'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Licence;

'quarterly' means the 4 inclusive periods from 1 October to 31 December and in the following year, 1 January to 31 March, 1 April to 30 June and from 1 July to 30 September;

'rehabilitation' means the completion of the engineering of a landfill cell and includes capping and/or final cover;

'Schedule 1' means Schedule 1 of this Licence unless otherwise stated;

'Schedule 2' means Schedule 2 of this Licence unless otherwise stated;

'six monthly' means the 2 inclusive periods from 1 October to 31 March in the following year and then from 1 April to 30 September;

'spot sample' means a discrete sample representative at the time and place at which the sample is taken;

'structural integrity assessment' means conducting an inspection of the TSF, evaporation ponds and similar impoundments to ensure their structural integrity meets the requirements of the Western Australian Department of Mines and Petroleum and the ANCOLD 2003 Dam Safety Management Guidelines;

'SWL' means standing water level;

'**TSF'** means Tailing Storage Facility - engineered containment pond or dam used to store tailings; and

'usual working day' means 0800 – 1700 hours, Monday to Friday excluding public holidays in Western Australia;

1.1.3 Any reference to an Australian or other standard in the Licence means the relevant parts of the standard in force from time to time during the term of this Licence.

1.1.4 Any reference to a guideline or code of practice in the Licence means the version of that guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guideline or code of practice made during the term of this Licence.

1.2 Premises operation

1.2.1 The Licence Holder shall ensure that all pipelines containing saline water, tails, or process water are either:
(a) equipped with telemetry systems and pressure sensors along pipeline routes to allow the detection of leaks and failures;
(b) equipped with automatic cut-outs in the event of a pipe failure; or
(c) provided with secondary containment sufficient to contain any spill for a period equal to the time between routine inspections.

1.2.2 The Licence Holder shall ensure that tailings, decant water and effluent are only discharged into containment cells, dams or ponds, which are provided with the infrastructure detailed in Table 1.2.1.

Table 1.2.1 Containment infrastructure

Containment cell or dam number(s)	Material	Infrastructure requirements
TSF 1, 2 and 3	Tailings	Lined with in-situ clay to limit seepage to groundwater
Decant Water Ponds 3 and 4	Decant Water	Lined with 1mm HDPE to achieve a permeability of at least $<10^{-9}$ m/s or equivalent
Dewater discharge pits (Marvel Loch Pit, Glendower Pit, Jaccoletti Pit, Nevoria Pit, Fraser's Pit, Triad Pit, Polaris South Pit and Yilgarn Star pit).	Mine dewater	Bedrock
Bioremediation pad	Hydrocarbon contaminated waste	Ensure soil is bioremediated by: • maintaining a suitable soil thickness; • maintaining an appropriate moisture content and nutrient level within the soil which sustains biological activity; and • at least quarterly soil aeration.
Turkeys nest dewater transfer dams (at Nevoria, Yilgarn Star and Cornishman)	Mine Dewater	Lined with HDPE to achieve a permeability of at least $<10^{-9}$ m/s or equivalent

1.2.3 The Licence Holder shall:
(a) undertake inspections as detailed in Table 1.2.2;

(b) where any inspection identifies that an appropriate level of environmental protection is not being maintained, take corrective action to mitigate adverse environmental consequences as soon as practicable; and
(c) maintain a record of all inspections undertaken.

Table 1.2.2: Inspection of infrastructure		
Scope of inspection	**Type of inspection**	**Frequency of inspection***
Tailings pipelines	Visual condition and leak assessment	Daily
Return water lines		
Fuel storage areas, ore treatment plant and workshop	Visual condition, leak assessment and spills	Daily
Borefields and pump stations	Visual integrity	Daily
Mine De-water pipelines	Visual condition and leak assessment	Daily
Dewater discharge pits (Marvel Loch Pit, Glendower Pit, Jaccoletti Pit, Nevoria Pit, Fraser's Pit, Triad Pit, Polaris South Pit and Yilgarn Star Pit)	Visual to confirm required freeboard is available.	Daily
TSF Embankment freeboard	Visual to confirm required freeboard is available	Daily and after a rain event
Native vegetation health around infrastructure	Visual health assessment	Weekly
TSF Embankment	Structural integrity assessment	Annual
Dewater transfer turkeys nests at Nevoria, Yilgarn Star and Cornishman.	Visual to confirm required freeboard is available.	Daily

*when in care and maintenance inspections can be monthly.

1.2.4 The Licence Holder shall maintain a minimum 300mm embankment freeboard on the settling ponds or storage facilities or ensure that the facility is designed to hold any inflow received as a result of a 1:100 year, 72-hour duration storm event, for at least 72 hours.

1.2.5 The Licence Holder shall install and maintain protective bunding, skimmers, silt traps, neutralisation pits, fuel and oil traps, drains and /or sealed collection sumps around the process plant, maintenance workshops and laboratory to enable recovery of spillages and protection of surrounding soils and groundwater.

1.2.6 The Licence Holder shall ensure that collected material from the sumps detailed in condition 1.2.5 are disposed off site in accordance with *the Environmental Protection (Controlled Waste) Regulations 2004*.

1.2.7 The Licence Holder shall manage TSF's such that:
(a) a minimum top of embankment freeboard of 300 mm is maintained across the full surface of the TSF;
(b) a seepage collection and recovery system is provided and used to capture seepage from the TSF; and
(c) seepage is returned to the TSF or the process.

1.2.8 The Licence Holder shall, upon becoming aware that depth to groundwater levels in monitoring bores around the TSF are less than 6.0mbgl, within six months, design and implement a Groundwater Recovery Plan.

1.2.9 The Licence Holder shall ensure that the Groundwater Recovery Plan required by condition 1.2.8 includes but is not limited to:
(i) Notification to the CEO of when and in how many bores the groundwater level could not be met;
(ii) Any environmental impacts observed;
(iii) Strategies to achieve the groundwater level, including:
(iv) Any additional recovery bores or trenches required;
(v) Maximising performance of existing recovery bores;
(vi) Frequency of groundwater level monitoring;
(vii) Minimising the normal operating supernatant pool area on the TSF;
(viii) Frequency and scope of groundwater quality monitoring;
(ix) Predicted increases in groundwater recovery;
(x) Predicted timeframes to achieve the groundwater level;
(xi) Strategies to ensure the level will be met in the future; and
(xii) Establishing and implementing appropriate vegetation monitoring.

1.2.10 The Licence Holder shall undertake an annual water balance for the TSF. The water balance shall as a minimum consider the following:
(a) site rainfall;
(b) evaporation;
(c) decant water recovery volumes;
(d) seepage recovery volumes; and
(e) volumes of tailings deposited.

1.2.11 The Licence Holder shall collect waste lubricants, hydraulic fluids and spent radiator coolant/inhibitors in holding tanks in bunded areas for subsequent disposal off-site or recycling.

1.2.12 The Licence Holder shall ensure that vehicle wash down areas are equipped with fuel/oil traps and provisions to ensure detergent, fuel and solvent containing waters are contained and disposed of via an oil separator and a licensed Controlled Waste Carrier.

1.2.13 The Licence Holder shall only accept waste on to the Landfill for burial if:
(a) it is of a type listed in Table 1.2.4;
(b) the quantity accepted is below any quantity limit listed in Table 1.2.4; and
(c) it meets any specification listed in Table 1.2.4.

Table 1.2.4. Waste acceptance

Waste type	Quantity limit tonnes/ annual period	Specification[1]
Clean fill	2 000 tonnes for all waste types	None Specified
Putrescible Waste		None Specified
Inert Waste Type 1		None Specified
Inert Waste Type 2		Tyres and plastic only

Note 1: Additional requirements for the acceptance of controlled waste (including asbestos and tyres) are set out in the *Environmental Protection (Controlled Waste) Regulations 2004*.

1.2.14 The Licence Holder shall ensure waste that does not comply with condition 1.2.13 is removed from the Premises to an appropriately authorised facility as soon as practicable.

1.2.15 The Licence Holder shall ensure that wastes accepted onto the Premises are only subjected to the processes set out in Table 1.2.5 and in accordance with any process limits described in that Table.

Table 1.2.5: Waste processing		
Waste type	**Process(es)**	**Process limits[1]**
All Waste	Handling and disposal of waste by land filling	(i) Disposal of waste by land filling shall only take place within the Marvel Loch or Axehandle mine landfill shown on the Premises Map in Schedule 1; (ii) The separation distance between the base of the landfill and the highest groundwater level shall not be less than 2m; (iii) waste is disposed of in a defined trench or within an area enclosed by earthen bunds; (iv) the tipping area is restricted to a maximum linear length of 30 metres; (v) the tipping area is no greater than 2 metres in height; and (vi) there is a fire break of at least 3 metres around the boundary of the site.
Inert Waste Type 1	Handling and disposal of waste by land filling	None specified
Inert Waste Type 2	Handling and disposal of waste by land filling	To be stored in piles of up to 100 units with a 6m separation distance between piles. Tyres shall only be landfilled: (i) in a designated disposal area in the landfill; (ii) in batches separated from each other by at least 100mm of soil and each consisting of not more than 40 cubic metres of tyres reduced to pieces; or (iii) in batches separated from each other by at least 100mm of soil and each consisting of not more than 1000 whole tyres.
Putrescible Waste		None specified
Clean Fill		None specified
Depth to ground water	Construction of new cell	Depth to groundwater must be at least two metres from the base of the landfill

Note 1: Requirements for land filling tyres are set out in Part 6 of the *Environmental Protection Regulations1987*.

1.2.16 The Licence Holder shall manage the land filling activities to ensure:
- (a) waste is levelled and compacted as soon as practicable after it is discharged;
- (b) waste is placed and compacted to ensure all faces are stable and capable of retaining restoration material;
- (c) rehabilitation of a cell or phase takes place within 6 months after disposal in that cell or phase has been completed.

1.2.17 The Licence Holder shall ensure that cover is applied and maintained on landfilled wastes in accordance with Table 1.2.6 and that sufficient stockpiles of cover are maintained on site at all times.

Table 1.2.6: Cover requirements			
Waste Type	**Material**	**Depth**	**Timescales**
Inert Waste Type 1	No cover required		

Inert Waste Type 2	Type 1 Inert waste, clean fill or soil Clean fill, subsoil	100mm Final cover must be > 500 mm	By the end of the working week in which the waste was deposited. Plastic waste with the potential to become windblown shall be covered as soon as practicable after deposit.
All other wastes		150mm	Continuous cover techniques, or a minimum of weekly

Note 1: Additional requirements for the covering of tyres are set out in Part 6 of the *Environmental Protection Regulations 1987*.

1.2.18 The Licence Holder shall:
(a) Implement security measures at the landfill sites to prevent unauthorised access to the site;
(b) Undertake regular inspections of all security measures and repair damage; and
(c) Ensure the gates are closed and locked when the site is closed.

1.2.19 The Licence Holder shall ensure that windblown waste is collected at least on a weekly basis and returned to the active tipping area.

1.2.20 The Licence Holder shall not burn or allow the burning of any waste on the landfill.

1.2.21 The Licence Holder shall ensure that any unauthorised fire on site is extinguished as soon as possible.

1.2.22 The Licence Holder shall ensure that there are adequate water supplies and procedures in place at the premises so than any unauthorised fire is promptly extinguished.

1.2.23 The Licence Holder shall submit a water balance for the Marvel Loch pit by 29 February 2020. The water balance shall as a minimum include the following:
(a) Expected dewatering rates of Jaccoletti pit;
(b) Current and projected Nevoria pit dewatering rates;
(c) Expected mill supply requirements; and
(d) An analysis to determine whether Marvel Loch Pit has the capacity to store dewater from Jaccoletti pit and Nevoria underground on a long term basis.

1.2.24 The licence holder must construct and/or install the infrastructure listed in Table 1.2.7, in accordance with;
(a) the corresponding design and construction requirement; and
(b) at the corresponding infrastructure location.

as set out in Table 1.2.7.

Table 1.2.7: Design and construction requirements

Infrastructure	Design and construction requirement / installation requirement	Infrastructure location
Dewatering pipeline and pump infrastructure from Jaccoletti pit to Marvel Loch pit.	Installation of pump shut-off communications system to ensure dewatering pumps are shut down in the event of a leak being detected along the pipeline route. Refurbishment of spill containment	See Schedule 1: Map of dewatering pipelines.

	sumps and bunding along the pipeline route to ensure they are adequately sized to contain the maximum potential leak volume generated within the dewatering pumps shut-off period.	

1.2.25 The licence holder must within 30 days of each item of infrastructure required by condition 1.2.24 being constructed:

(a) undertake an audit of their compliance with the requirements of condition 1.2.12; and

(b) prepare and submit to the CEO an audit report on that compliance.

1.2.26 The report required by condition 1.2.25, must:

(a) be certified by a qualified professional engineer that each item of infrastructure listed in Table 1.2.7 meets the corresponding specifications and at the locations set out in Table 1.2.7 and has been constructed with no material defects; and

(b) be signed by a person authorised to represent the licence holder and contain the printed name and position of that person within the company.

2 Monitoring

2.1 General monitoring

2.1.1 The Licence Holder shall ensure that:

(a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;

(b) all groundwater sampling is conducted in accordance with AS/NZS 5667.11;

(c) all samples are submitted to a laboratory with current NATA accreditation for the parameters to be measured unless indicated otherwise in relevant table.

2.1.2 The Licence Holder shall ensure that :

(a) monthly monitoring is undertaken at least 15 days apart;

(b) quarterly monitoring is undertaken at least 45 days apart;

(c) six monthly monitoring is undertaken at least 5 months apart; and

(d) annual monitoring is undertaken at least 9 months apart.

2.1.3 The Licence Holder shall ensure that all monitoring equipment used on the Premises to comply with the conditions of this Licence is calibrated in accordance with the manufacturer's specifications.

2.1.4 The Licence Holder shall, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

2.2 Monitoring of point source emissions to land

2.2.1 The Licence Holder shall undertake the monitoring in Table 2.2.1 according to the specifications in that table.

Table 2.2.1: Monitoring of point source emissions to land			
Emission point reference	**Parameter**	**Units**	**Frequency**
Mine dewatering discharge points ML, F, G, J, N, T, P & Y.	Volumetric flow rate	L/s	monthly
	S; As; Cr; Co; Zn; Cu; Na; Cl; Al; Fe; Mg; Ca; K; Mn; Ni; Se; SO_4^{2-} and HCO_3^-.	mg/L	Annually
	TSS (Total suspended solids) and TDS (Total dissolved solids)	mg/L	Six monthly
	pH	N/A	Six monthly

2.3 Process monitoring

2.3.1 The Licence Holder shall undertake the monitoring specified in Table 2.3.1 according to the specifications of the table.

Table 2.3.1: Process monitoring					
Monitoring point reference	**Process description**	**Parameter**	**Units**	**Frequency**	**Method**
-	-	Volumes of tailings deposited into the TSF	m^3	Continuous	None specified
-	-	Volumes of water recovered from the TSF	m^3	Continuous	None specified
-	-	Phreatic surface levels within TSF embankments	mAHD	Monthly	None specified
-	-	Volumes of seepage recovered	m^3	Continuous	None specified
-	-	Volumes of ore processed	m^3	Annual period	None specified
Mine dewatering discharge points ML, F, G, J, N, T, P & Y	Mine dewatering	Cumulative volumes of mine dewater discharged to each pit.	m^3	Monthly	None specified
Landfill	Putrescible landfill site	Volumes of waste disposed	tonnes	Monthly	None specified

2.4 Ambient environmental quality monitoring

2.4.1 The Licence Holder shall undertake the monitoring in Table 2.4.1 according to the specifications in that table.

Table 2.4.1: Monitoring of ambient water quality					
Monitoring point reference	**Parameter**	**Limit**	**Units**	**Averaging period**	**Frequency**
MB 94 D1 MB 94 G1	Standing water level	Greater than 4m	mbgl	Spot sample	Quarterly
MB 94 F1 MB 94 E1	Standing water level	-			
MB 94 D1 MB 94 F1 MB 94 G1 MB 94 E1	pH*		N/A	Spot sample	Quarterly
	Total Dissolved Solids (TDS); and Weak Acid Dissociable Cyanide		mg/L		Quarterly

Table 2.4.1: Monitoring of ambient water quality					
Monitoring point reference	**Parameter**	**Limit**	**Units**	**Averaging period**	**Frequency**
	TSS; Cu; Na; Cl; Al; Cd; Fe; Mg; Ca; K; Mn; Ni; Se; As; Zn; Cr; Co; SO_4^{2-} and HCO_3^-		mg/L		Six monthly
MB 94 B1	Standing water level[1]	Greater than 4m	mbgl	Spot sample	Quarterly
	pH*	Greater than 6 but less than 9		Spot sample	Quarterly
	Weak Acid Dissociable Cyanide	Less than 0.5	mg/L	Spot sample	Quarterly
PZ 99 B1; PZ 99 D1; PZ 99 E1; PZ 99 F1; PZ 99 G1; TSF 1; TSF 2; TSF 3; TSF 4; TSF 5; TSF 6; TSF 7; TSF 8; TSF 9.	Standing water level	Greater than 4m	mbgl	Spot sample	Monthly

* These parameters should be measured and recorded in the field to ensure representativeness. Field samples are to be reported as per condition 3.2.1. An exemption from NATA laboratory analysis is allowed given geographical remoteness of the sample site and short holding time of the parameter.
Note1:SWL shall be determined prior to collection of all other water samples.

3 Information

3.1 Records

3.1.1 All information and records required by the Licence shall:
- (a) be legible;
- (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
- (c) except for records listed in 3.1.1(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
- (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
  - (i) off-site environmental effects; or
  - (ii) matters which affect the condition of the land or waters.

3.1.2 The Licence Holder shall ensure that:
- (a) any person left in charge of the Premises is aware of the conditions of the Licence and has access at all times to the Licence or copies thereof; and

(b) any person who performs tasks on the Premises is informed of all of the conditions of the Licence that relate to the tasks which that person is performing.

3.1.3 The Licence Holder shall complete an Annual Audit Compliance Report indicating the extent to which the Licensee has complied with the conditions of the Licence, and any previous licence issued under Part V of the Act for the Premises for the previous annual period.

3.1.4 The Licence Holder shall implement a complaints management system that as a minimum records the number and details of complaints received concerning the environmental impact of the activities undertaken at the Premises and any action taken in response to the complaint.

3.2 Reporting

3.1.3 The Licence Holder shall submit to the CEO an Annual Environmental Report within 28 calendar days after the end of the annual period. The report shall contain the information listed in Table 3.2.1 in the format or form specified in that table.

Table 3.2.1: Annual Environmental Report

Condition or table (if relevant)	Parameter	Format or form[1]
-	Summary of any failure or malfunction of any pollution control equipment or any incidents that have occurred during the year and any action taken	None specified
3.1.3	Compliance	Annual Audit Compliance Report (AACR)
3.1.4	Complaints summary	None specified
Table 1.2.2	Embankment structural integrity assessment	None specified
1.2.11	TSF water balance	None specified
Table 2.2.1	Monitoring of point source emissions to land	None specified
-	Monitoring of inputs and outputs	None specified
Table 2.3.1	Process Monitoring	None specified
Table 2.4.1	Monitoring of ambient water quality	None specified

Note 1: Forms are in Schedule 2

3.1.3 The Licence Holder shall ensure that the Annual Environmental Report also contains an assessment of the information contained within the report against previous monitoring results and Licence limits.

3.3 Notification

3.3.1 The Licence Holder shall ensure that the parameters listed in Table 3.3.1 are notified to the CEO in accordance with the notification requirements of the table.

Table 3.3.1: Notification requirements

Condition or table	Parameter	Notification requirement[1]	Format or form[2]
2.1.4	Calibration report	As soon as practicable.	None specified
1.2.9	Groundwater Recovery Plan	Within 30 calendar days of completion.	None specified

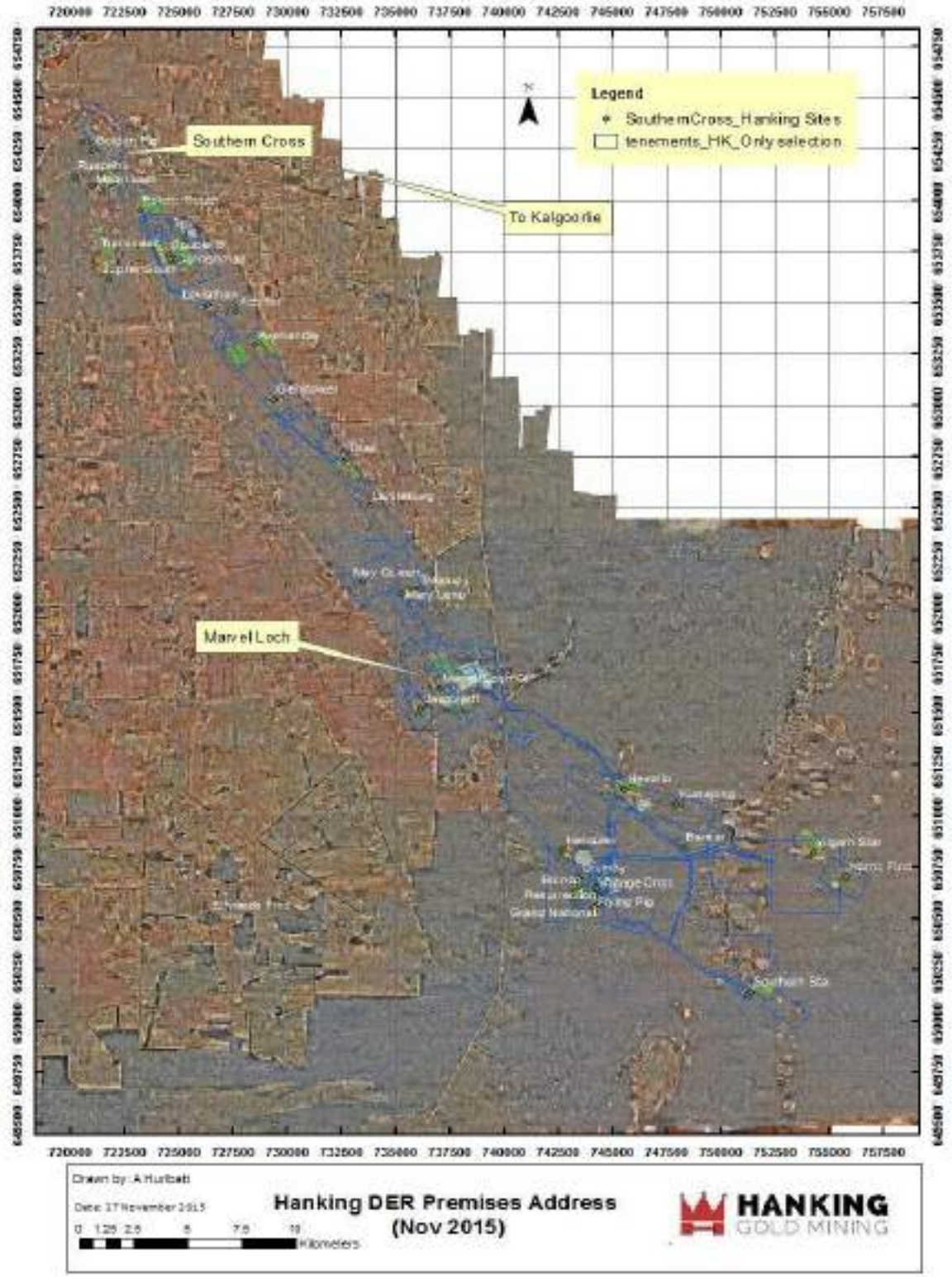
1.2.22	Unauthorised fire at landfill	Within 14 calendar days	None specified
Tables1.2.3, 1.2.4 & 2.4.1 Condition 1.2.4	Breach of any limit specified in the Licence	Part A: As soon as practicable but no later than 5pm of the next usual working day. Part B: As soon as practicable.	N1
-	Any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution		

Note 1: Notification requirements in the Licence shall not negate the requirement to comply with s72 of the Act
Note 2: Forms are in Schedule 2

Schedule 1: Maps

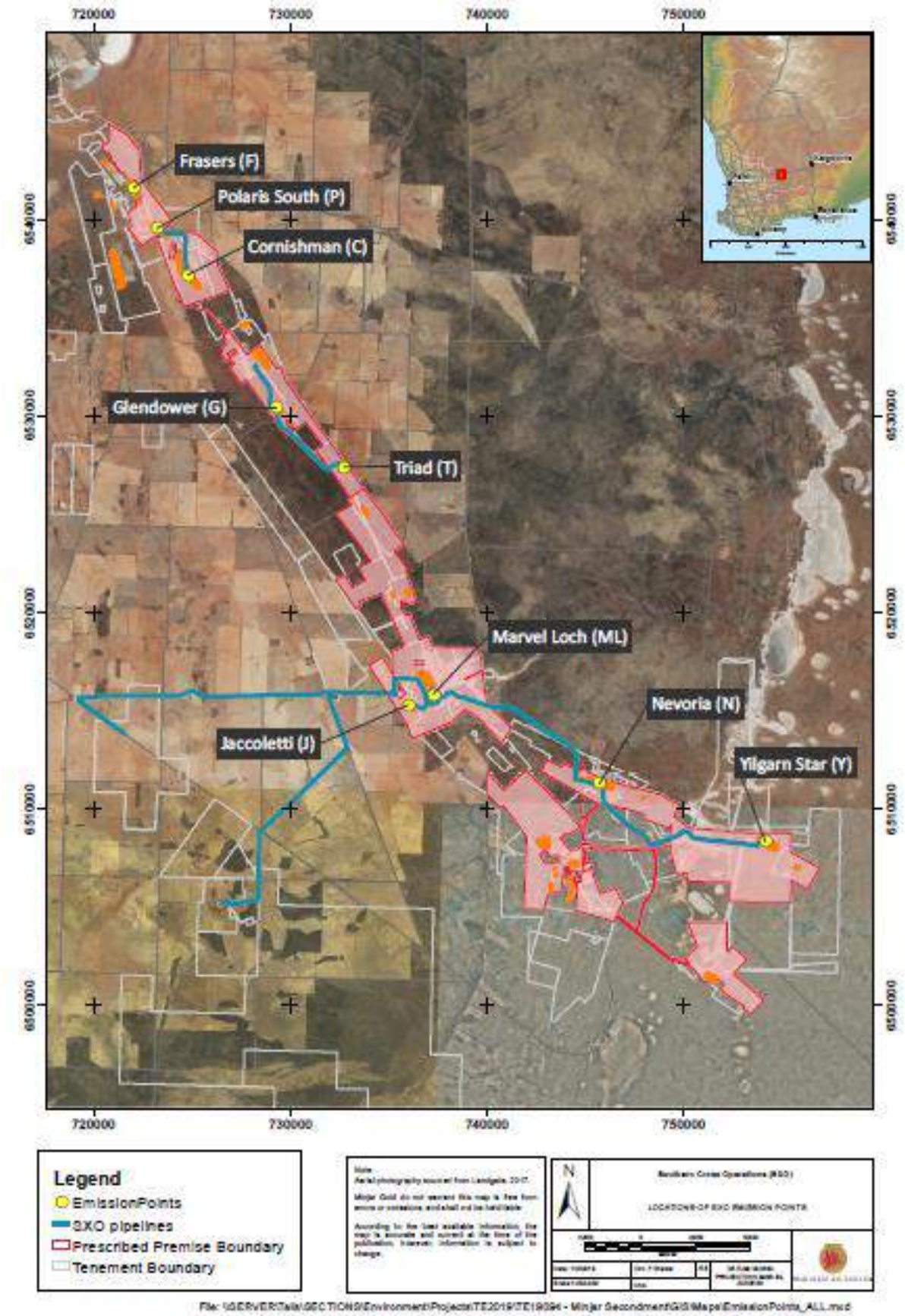
Premises map

The Premises is shown in the maps below. The blue line depicts the Premises boundary



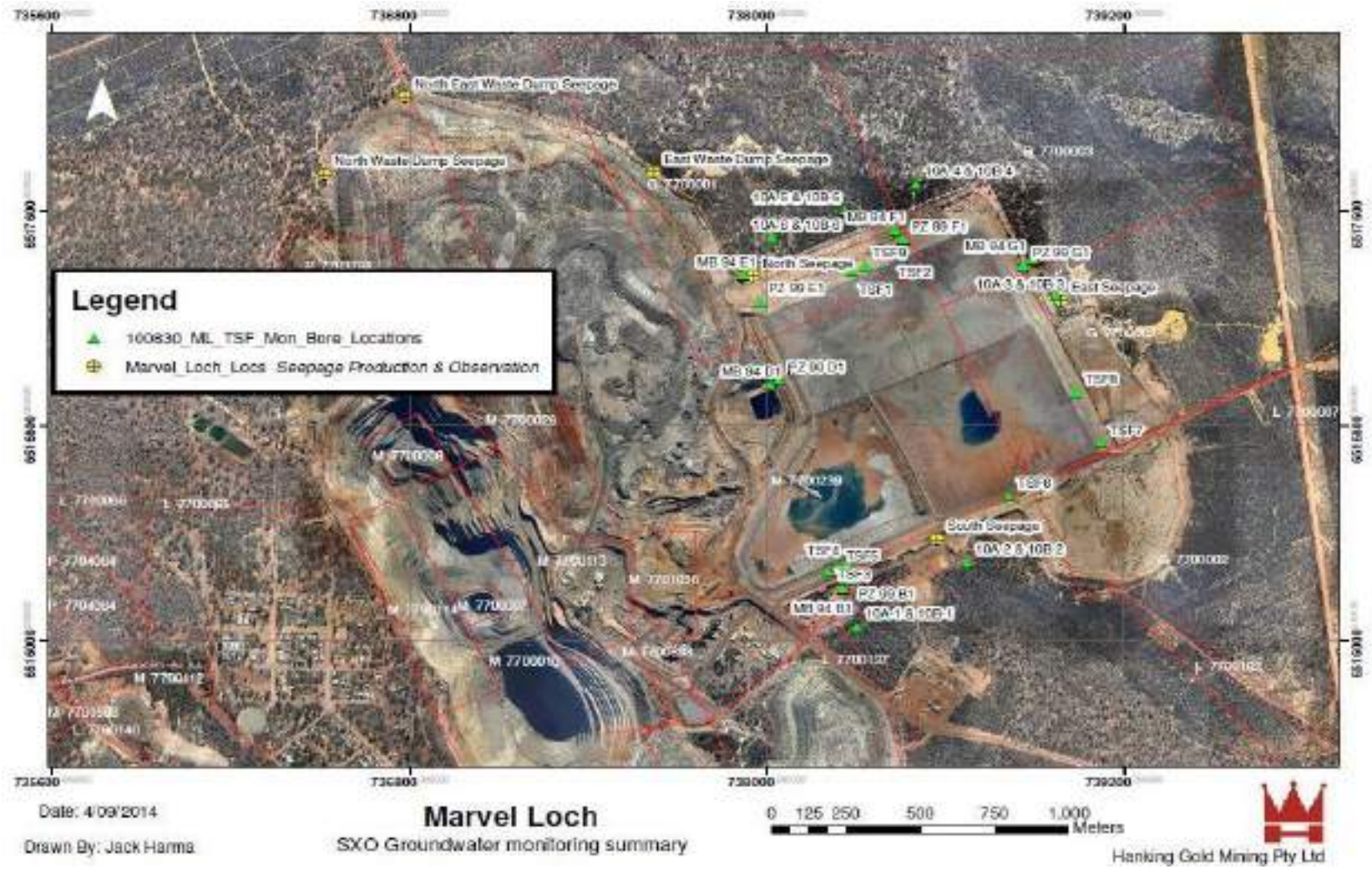
Map of emission points

The location of the emission points defined in Table 2.2.1 are shown below.



Map of monitoring location

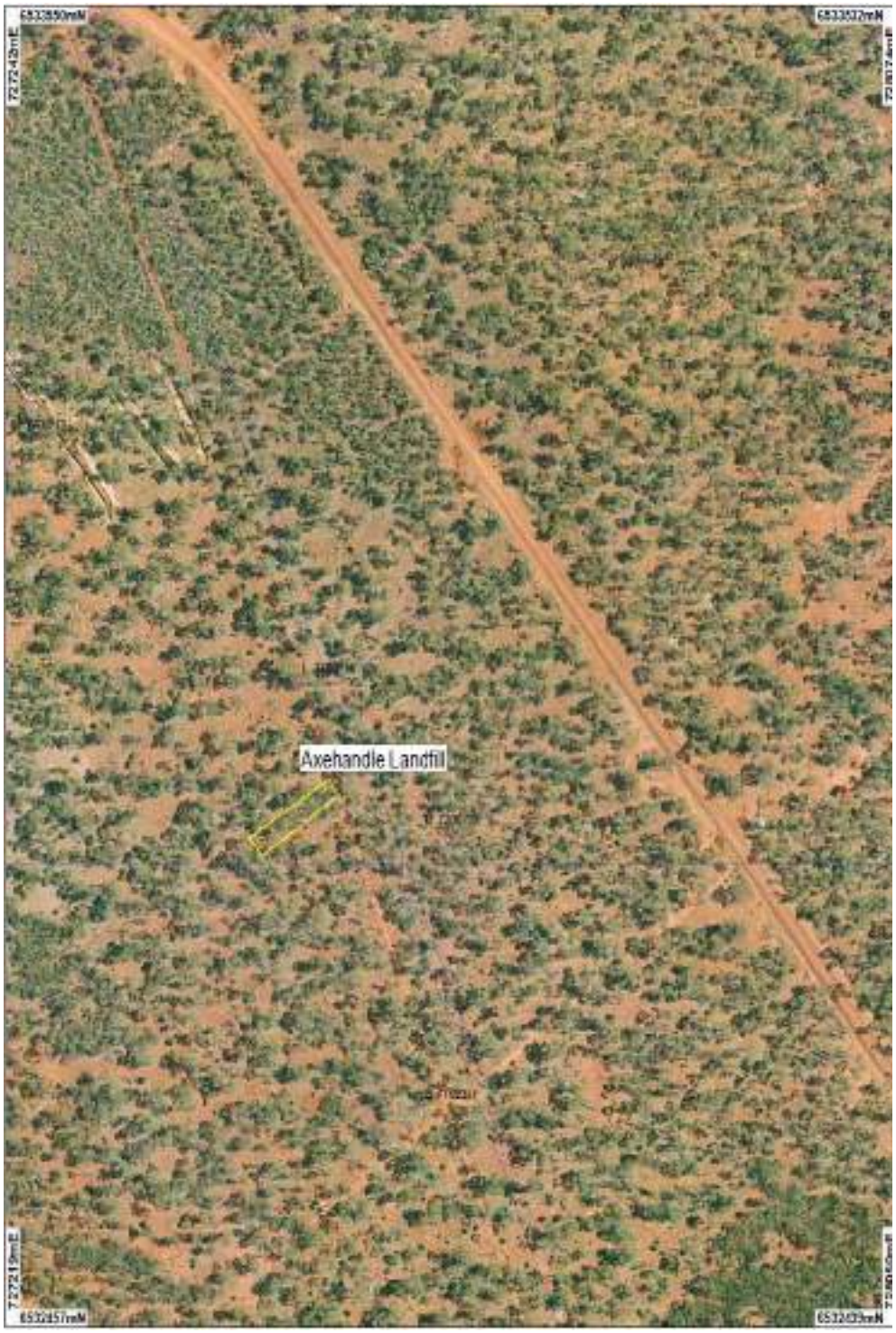
The locations of the monitoring points defined in Tables 2.4.1 are shown below.



Map of landfill locations

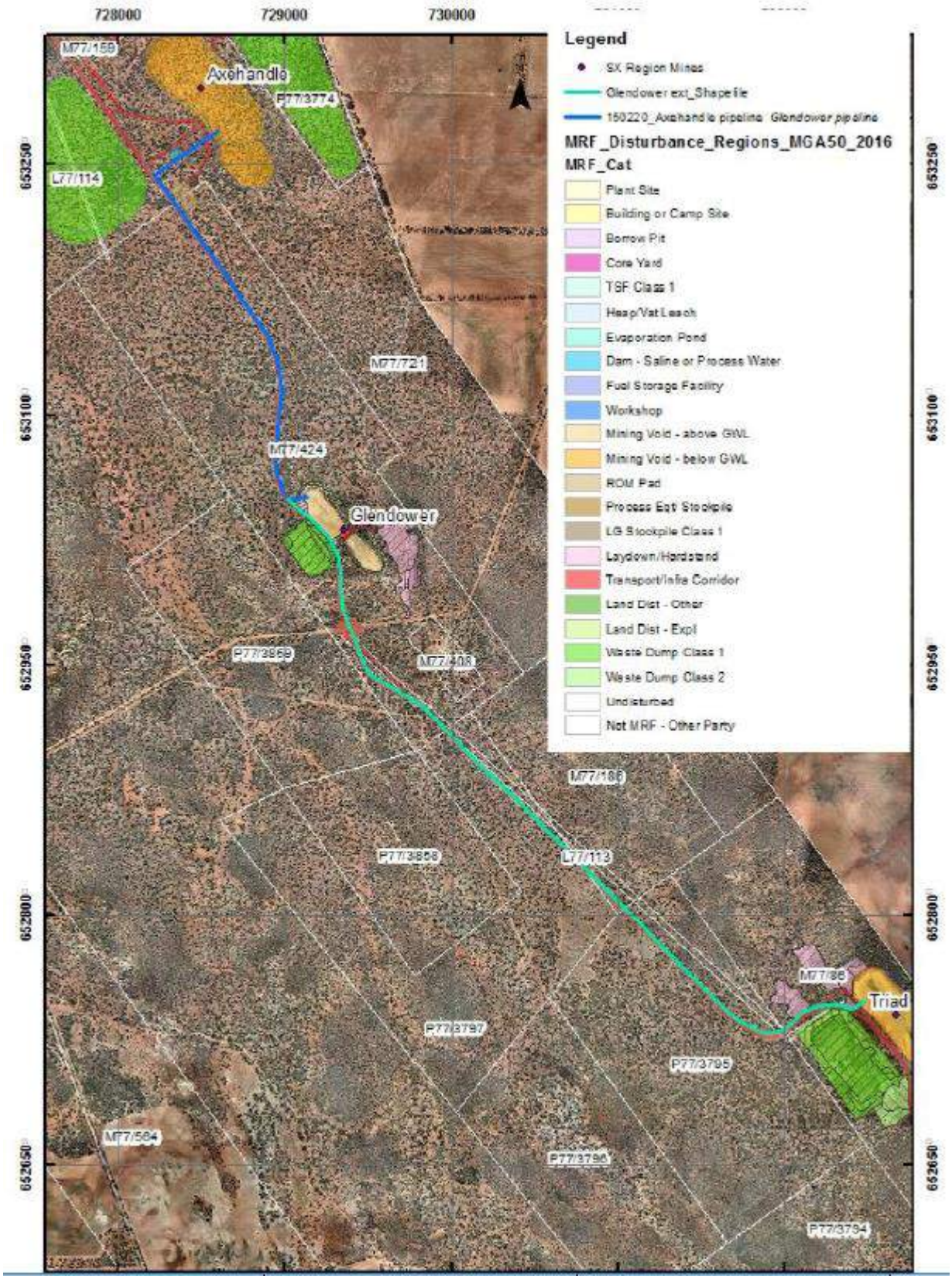
The location of the Nevoria landfill is shown below.

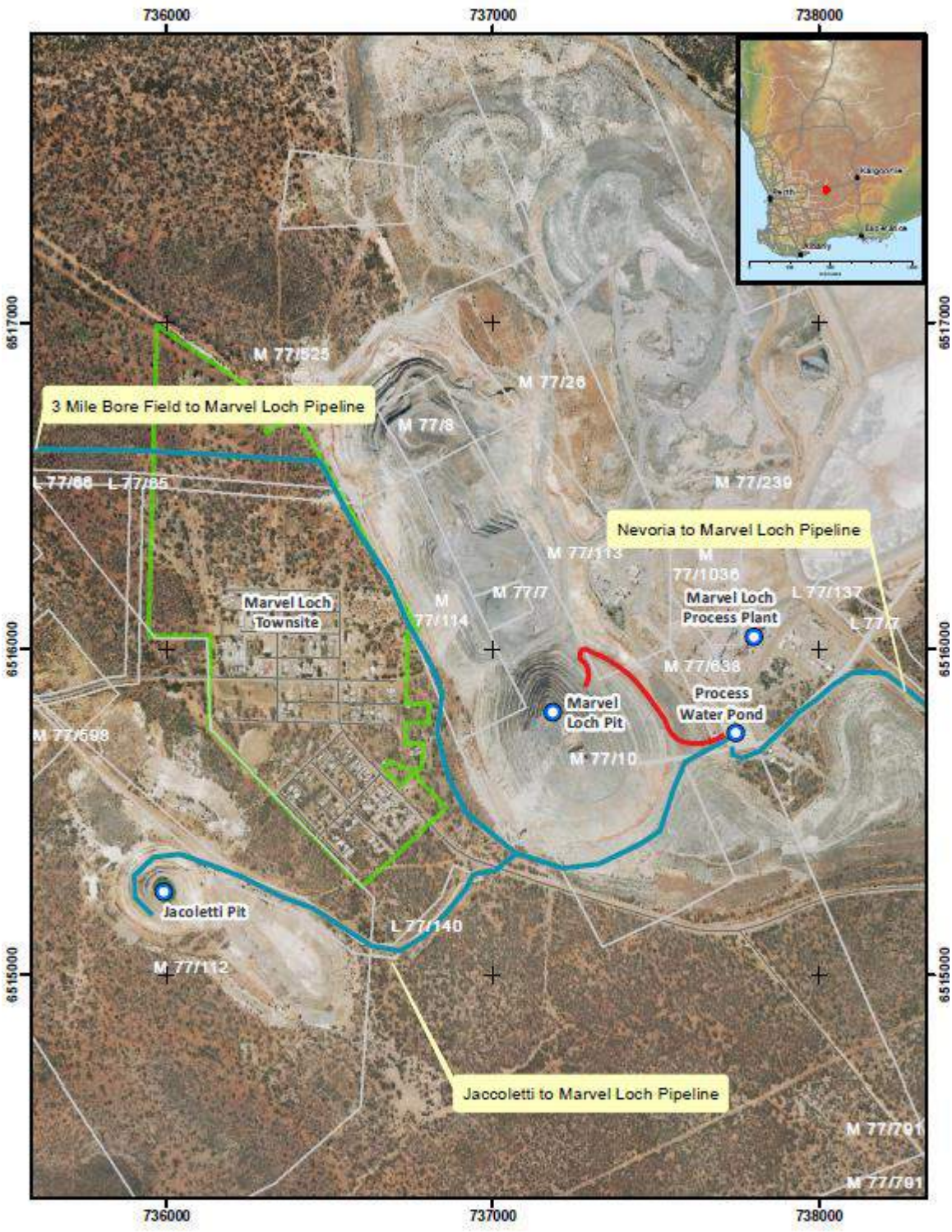
The location of the Axehandle landfill is shown below



Map of Dewatering Piepline

Detailed maps of some of the dewater pipeline locations required to be inspected by condition 1.2.2 is shown below. An overview of pipeline locations are also shown on the Map of Emission points in Schedule 1.


728000
729000
730000
653250
653100
652950
652800
652650
Legend
SX Region Mines
Glendower ext_Shapefile
150220_Axehandle pipeline_Glendower pipeline
MRF_Disturbance_Regions_MGA50_2016
MRF_Cat
Plant Site
Building or Camp Site
Borrow Pit
Core Yard
TSF Class 1
Heap/Vat Leach
Evaporation Pond
Dam - Saline or Process Water
Fuel Storage Facility
Workshop
Mining Void - above GWL
Mining Void - below GWL
ROM Pad
Process Sat Stockpile
LG Stockpile Class 1
Laydown/Hardstand
Transport/Infra Corridor
Land Dist - Other
Land Dist - Expl
Waste Dump Class 1
Waste Dump Class 2
Undisturbed
Not MRF - Other Party
M77/159
Axehandle
P77/3774
L77/114
M77/721
M77/424
Glendower
P77/3959
M77/408
M77/186
P77/3958
L77/113
M77/38
Triad
P77/3797
P77/3795
M77/584
P77/3796
P77/3794


736000
737000
738000
6517000
6516000
6515000
3 Mile Bore Field to Marvel Loch Pipeline
Nevoria to Marvel Loch Pipeline
Jaccoletti to Marvel Loch Pipeline
Marvel Loch Townsite
Marvel Loch Process Plant
Marvel Loch Pit
Process Water Pond
Jacoletti Pit
M 77/525
M 77/26
M 77/8
M 77/239
M 77/113
M 77/1036
M 77/7
M 77/114
L 77/137
L 77/7
M 77/638
M 77/598
M 77/10
L 77/140
M 77/112
M 77/701
M 77/701
Legend
SXO pipelines
Pipeline to Pit Connection
Tenement Boundary
Note:
Aerial photography sourced from Landgate, 2017.
Minjar Gold do not warrant this map is free from errors or omissions, and shall not be held liable
According to the best available information, the map is accurate and current at the time of the publication, however, information is subject to change.
N
Southern Cross Operations (SXO)
MARVEL LOCH PIT DEWATERING DISCHARGE
Metres
DATUM: GDA94
PROJECTION: MGA 94, ZONE 50
File: \\server\Tails\SECTIONS\Environment\Projects\TE2019\TE19094 - Minjar Secondment\GIS\Maps\Jaccoletti ML Discharge_01.mxd

Schedule 2: Reporting & notification forms

Form: N1

Licence: L4597/1988/14 Licence Holder: Tianye SXO Gold Mining Pty Ltd
Form: N1 Date of breach:

Notification of detection of the breach of a limit or any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution.

These pages outline the information that the operator must provide.
Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

Part A

Licence Number	
Name of operator	
Location of Premises	
Time and date of the detection	

Notification requirements for the breach of a limit	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Notification requirements for any failure or malfunction of any pollution control equipment or any incident which has caused, is causing or may cause pollution	
Date and time of event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken , or intended to be taken, to stop any emission	
Description of the failure or accident	

Part B

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident.	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission.	
The dates of any previous N1 notifications for the Premises in the preceding 24 months.	

Name	
Post	
Signature on behalf of Tianye SXO Gold Mining Pty Ltd	
Date	

APPENDIX B

Licence Amendment Application Form

Application form: Works Approval / Licence / Renewal / Amendment / Registration

Part V, Division 3, *Environmental Protection Act 1986*
Environmental Protection Regulations 1987

Part 1: Application type

INSTRUCTIONS:

- **Completion of this form is a statutory requirement under section 54(1)(a) of the *Environmental Protection Act 1986* (WA) (EP Act) for works approval applications; section 57(1)(a) for licence applications; section 59B(1)(a) for applications for an amendment; and under regulation 5B(2)(a) of the *Environmental Protection Regulations 1987* (WA) (EP Regulations) for applications for registration of premises.**
- **The instructions set out in this application form are general in nature.**
- **A reference to 'you' in these instructions is a reference to the applicant.**
- **The information provided to you by the Department of Water and Environmental Regulation (DWER) in relation to making applications does not constitute legal advice. DWER recommends that you obtain independent legal advice.**
- **Applicants seeking further information relating to requirements under the EP Act and/or EP Regulations are directed to the Parliamentary Counsel's Office website (www.legislation.wa.gov.au). Schedule 1 of the EP Regulations contains the categories of prescribed premises.**
- **For prescribed premises where activities fall within more than one category, ALL applicable categories must be identified. This applies for existing prescribed premises seeking renewal or amendment, as well as new prescribed premises.**
- **The application form must be completed with all relevant information attached. Attachments can be combined and submitted as one or more consolidated documents if desired, provided it is clear which section of the application form the information / attachments relate to. Where attachments are submitted separately, avoid duplicating information. Ensure that any cross-references between the application form and the supporting document(s) are accurate.**
- **If an application form has been submitted which is incomplete or materially incorrect, the Chief Executive Officer of DWER (CEO) will decline to deal with the application and advise the applicant accordingly.**
- **On completing this application form, please submit it to DWER in line with the instructions in Part 14 of the form.**

1.1	**This is an application for:** *[Select one option only. Your application may be returned if multiple options are selected.]* under Part V, Division 3 of the EP Act. Please see the: • *Guideline: Industry Regulation Guide to Licensing*; and • *Procedure: Prescribed premises works approvals and licences* for more information to assist in understanding DWER's regulatory regime for prescribed premises.	☐ Works approval ☐ Licence Existing registration number(s): [ ] Existing works approval number(s): [ ] ☐ Renewal Existing licence number: [ ] ☒ Amendment Number of the existing licence or works approval to be amended: [L4597/1988/14] ☐ Registration (works approval already obtained) Existing works approval number(s): [ ]

1.2	**For a works approval amendment or licence amendment, are there less than 90 business days until the expiry of the existing works approval or licence?** Only active instruments can be amended. Applications to amend a works approval or licence must be made 90 business days or more prior to the existing works approval or licence expiring to ensure there is adequate time to assess the amendment.	**Yes** ☐

Part 1: Application type		
1.3	**This application is for the following categories of prescribed premises:**	5 Processing or beneficiation of metallic or nonmetallic ore 2,600,000 tonnes per annual period 6 Mine dewatering 6,000,000 tonnes per annual period 64 Class II or III putrescible landfill 2,000 tonnes per annual period 57 Used tyre storage 200 tyres (specify all prescribed premises category numbers)
		☒ All activities that meet the definition of a prescribed premises as set out in Schedule 1 of the EP Regulations have been specified above (tick, if yes).

Completion Matrix
The matrix below explains what sections are required to be completed for different types of applications.

Application form section	New application / registration	Renewal	Amendment
Part 1: Application type	●	●	●
Part 2: Applicant details	●	●	●
Part 3: Premises details	●	●	Δ
Part 4: Proposed activities	●	●	●
Part 5: Index of Biodiversity Surveys for Assessment and Index of Marine Surveys for Assessment	If required.	If required.	If required.
Part 6: Other DWER approvals	●	●	●
Part 7: Other approvals and consultation	●	●	●
Part 8: Applicant history	●	●	Δ
Part 9: Emissions, discharges, and waste	●	●	Δ
Part 10: Siting and location	●	●	Δ
Part 11: Submission of any other relevant information	●	●	If required.
Part 12: Proposed fee calculation	●	●	●
Part 13: Commercially sensitive or confidential information	●	●	●
Part 14: Submission of application	●	●	●
Part 15: Declaration and signature	●	●	●
Attachment 1A: Proof of occupier status	●	●	N/A
Attachment 1B: ASIC company extract	●	●	N/A
Attachment 1C: Authorisation to act as a representative of the occupier	If required.	If required.	If required.
Attachment 2: Premises map/s	●	●	Δ
Attachment 3A: Environmental commissioning plan	If required.	N/A	If required
Attachment 3B: Proposed activities	●	●	Δ
Attachment 3C: Map of area proposed to be cleared (only applicable if clearing is proposed)	●	●	●
Attachment 3D: Additional information for clearing assessment	If required.	If required.	If required.
Attachment 4: Marine surveys (only applicable if marine surveys included in application)	●	●	●
Attachment 5: Other approvals and consultation documentation	●	●	Δ
Attachment 6A: Emissions and discharges	If required.	If required.	If required.
Attachment 6B: Waste acceptance	If required.	If required.	If required.
Attachment 7: Siting and location	●	●	Δ
Attachment 8: Additional information submitted	If required.	If required.	If required.
Attachment 9: Proposed fee calculation	●	●	●
Attachment 10: Request for exemption from publication	If required.	If required.	If required.

Key:

●	**Must be submitted.**
Δ	**To the extent changed / required in relation to the amendment.**
N/A	**Not required with application, but may be requested subsequently depending on DWER records.**
"If required"	**Sections for applicants to determine.**

Part 2: Applicant details

INSTRUCTIONS:

- **The applicant (the occupier of the premises) must be an individual(s), a company, body corporate, or public authority, but not a partnership, trust, or joint-venture name. Applications made by or on behalf of business names or unincorporated associations will not be accepted.**
- **If applying as an individual, your full legal name must be inserted.**
- **If applying as a company, body corporate, or public authority, the full legal entity name must be inserted.**
- **Australian Company Number's (ACN) must be provided for all companies or body corporates.**
- **DWER prefers to send all correspondence electronically via email. We request that you consent to receiving all correspondence relating to instruments and notices under Part V of the EP Act (Part V documents) electronically via email, by indicating your consent in Section 2.3.**
- **Companies or body corporates making an application must nominate an authorised representative from within their organisation. Proof of authorisation will be required.**
- **Details of a contact person must be provided for DWER enquiries in relation to your application. This contact person can be a consultant if authorised to represent the applicant. Written evidence of this authorisation must be provided.**
- **Details of the occupier of the premises must be provided. One of the options must be selected and if you have been asked to specify, please provide details. For example, if 'lease holder' has been selected, please specify the type of lease (for example, pastoral lease, mining lease, or general lease) and provide a copy of the lease document(s). Note that contracts for sale of land will not be sufficient evidence of occupancy status.**

2.1	**Applicant name/s (full legal name/s):** The proposed holder of the works approval, licence or registration.	Barto Gold Mining Pty Ltd (please note name change from Tianye SXO Gold Mining Pty Ltd)			
	ACN (if applicable):	161 566 490			
2.2	**Trading as (if applicable):**	N/A			
2.3	**Authorised representative details:** The person authorised to receive correspondence and Part V documents on behalf of the applicant under the EP Act. Where 'yes' is selected, all correspondence will be sent to you via email, to the email address provided in this section. Where 'no' has been selected, Part V documents will be posted to you in hard copy to the postal / business address specified in section 2.4, below. Other general correspondence may still be sent to you via email.	Name	Luke Sibon		
		Position	Environmental Manager		
		Telephone	0427 246 472		
		Email	luke.sibon@minjargold.com.au		
		I consent to all written correspondence between myself (the applicant) and DWER, regarding the subject of this application, being exclusively via email, using the email address I have provided above.		**Yes** ☒	**No** ☐
2.4	**Registered office address, as registered with the Australian Securities and Investments Commission (ASIC):** This must be a physical address to which a Part V document may be delivered.	Level 3, 66 Kings Park Road WEST PERTH WA 6005			
2.5	**Postal address for all other correspondence:** If different from section 2.4.	N/A			

Part 2: Applicant details			
2.6	**Contact person details for DWER enquiries relating to the application (if different from the authorised representative):** For example, could be a consultant or a site based employee	Name	Elina Vuorenmaa
		Position	Senior Approvals Advisor
		Organisation	Barto Gold Mining Pty Ltd
		Address	Level 3, 66 Kings Park Road WEST PERTH WA 6005
		Telephone	08 9212 8936
		Email	Elina.vuorenmaa@minjargold.com.au

2.7	**Occupier status:** Occupier is defined in section 3 of the EP Act and includes a person in occupation or control of the premises, or occupying a different part of the premises whether or not that person is the owner. Note: if a lease holder, the applicant must be the holder of an executed lease, not just an agreement to lease.	Registered proprietor on certificate of title.	☐
		Lease holder (please specify, including date of expiry of lease). Mining tenements: M77/239, M77/638; and M77/1036	☒
		Public authority that has care, control, or management of the land.	☐
		Other evidence of legal occupation or control (please specify – for example, joint venture operating entity, contract, letter of operational control, or other legal document or evidence of legal occupation).	☐

Attachments			N/A	Yes
2.8	**Attachment 1A: Proof of occupier status**	Copies of certificate of title, lease or other instruments evidencing proof of occupier status, including the expiry date or confirmation that there is no expiry date, have been provided and labelled as Attachment 1A.	☐	☒
2.9	**Attachment 1B: ASIC company extract**	A current company information extract (not the company information summary) purchased from the ASIC website(s) for all new applications / registrations has been provided and labelled as Attachment 1B.	☐	☒
2.10	**Attachment 1C: Authorisation to act as representative of the occupier**	A copy of the documentation authorising the applicant to act on the occupier's behalf as their authorised agent/representative has been provided and labelled as Attachment 1C.	☒	☐

Part 3: Premises details		
3.1	**Premises description (whole or part to be specified):** Include the land description (volume and folio number, lot, or location number/s); Crown lease or reserve number; pastoral lease number; or mining tenement number (as appropriate), of all properties, as shown on title details registered with Landgate.	No changes required to existing details
	Premises street address Include the suburb.	No changes required to existing details
	Premises name (if applicable):	No changes required to existing details
3.2	**Local Government Authority area:** City, Town, or Shire.	No changes required to existing details
3.3	**GPS (latitude and longitude) coordinates:** GPS coordinates determined using the GDA 1994 (Geographic latitude / longitude) coordinate system and datum must be provided for all points around the proposed premises boundary, where the entirety of the cadastre (land parcel) or mining tenements are not used as the premises boundary.	No changes required to existing details

Attachments			N/A	Yes
3.4	**Attachment 2: Premises map(s)**	You must provide as an attachment to this application form, labelled Attachment 2, either: 1. an aerial photograph, map, and site plan of sufficient scale showing the proposed prescribed premises boundary *or* 2. where available, a suitable portable digital storage device of the proposed prescribed premises boundary, map, and site plan as an ESRI shapefile with the following properties: • Geometry type: Polygon Shape • Coordinate system: GDA 1994 (Geographic latitude / longitude) • Datum: GDA 1994 (Geocentric Datum of Australia 1994). You must also provide a map or maps of the prescribed premises, clearly identifying and labelling: • layout of key infrastructure and buildings, clearly labelled; • the premises boundary (where the premises boundary does not align with the entirety of the cadastral boundary, identify the Lot Number for which the premises is part of); • emission and discharge points (with precise GPS coordinates where available); • monitoring points (with precise GPS coordinates where available); • sensitive receptors and land uses; and • all areas proposed to be cleared (if applicable). Maps must contain a north arrow, clearly marking the area in which the activities are carried out. The map or maps must be of reasonable clarity and have a visible scale.	☐	☒

Part 4: Proposed activities

INSTRUCTIONS:

- **You must provide a description and the scope, size and scale of all prescribed activities of Schedule 1 to the EP Regulations including the maximum production or design capacity of each prescribed activity.**
- **If applying for a works approval or licence amendment involving the construction of new infrastructure, you must provide information on infrastructure to be constructed and how long construction is expected to take. You must confirm if commissioning is to occur and how long it will take.**
- **If applying for a works approval or licence amendment *not* involving the construction of new infrastructure, provide details of the proposed amendment.**
- **You must identify all emission sources on the premises map/s.**
- **You must also provide information on activities which directly relate to the prescribed premises category which have, or are likely to result in, an emission or discharge.**
- **If clearing activities are proposed provide a description and details. If a relevant exemption under Schedule 6 of the EP Act or regulation 5 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (WA) (Clearing Regulations) may apply, provide details.**
- **Note that in some cases, DWER may require that the clearing components of a works approval or licence (or amendment) application be submitted separately through the clearing permit application process. Refer to the *Procedure: Prescribed premises works approvals and licences* for further guidance.**
- **Please note that the requested information is critical to DWER's understanding of the proposed activities. The more accurate, specific, and complete the information provided in the application, the less uncertainty that DWER may identify in the application, therefore facilitating completion of the assessment in a more efficient and timely manner.**

4.1 Prescribed premises infrastructure and equipment

In Table 4.1 (below), provide a list of all items of infrastructure and equipment within the boundary of the prescribed premises relevant to this application, and include the following details for each:

- **relevant categories (if known) –** the categories of prescribed premises (as listed under Schedule 1 of the EP Regulations) that relate to that infrastructure or equipment;
- **site plan reference –** the location of that infrastructure or equipment (with reference to the site plan map or maps provided above in section 3.4 and labelled as Attachment 2 – e.g. use GPS coordinates or a clear description such as *"labelled as [label on premises map] on Map A"*);
- **is it critical containment infrastructure (CCI)? –** indicate if the identified infrastructure or equipment would be categorised as CCI. Refer to the *Guideline: Industry Regulation Guide to Licensing* for further information on CCI; and
- **is environmental commissioning required? –** indicate if environmental commissioning is intended to be undertaken for that item of infrastructure or equipment. Refer to the *Guideline: Industry Regulation Guide to Licensing* for further information on environmental commissioning.

Add additional rows to Table 4.1 (below) as required.

Table 4.1: Infrastructure and equipment

	Infrastructure and equipment	Relevant categories (if known)	Site plan reference	CCI? (mark if yes)	Environmental commissioning? (mark if yes)
1.	**Replacement crushing circuit and associated controls**	**5**	**As attached**	☐	☐
2.				☐	☐
3.				☐	☐
4.				☐	☐
5.				☐	☐
6.				☐	☐
7.				☐	☐
8.				☐	☐
9.				☐	☐
10.				☐	☐

Part 4: Proposed activities		
4.2	**Detailed description of proposed activities:** You must provide details of proposed activities relevant to this application within the boundary of the prescribed premises, identifying: • scope, size, and scale of the project, including details as to production or design capacity (and/or frequency, if applicable); • key infrastructure and equipment; • description of processes or operations (a process flow chart may be included as an attachment); • emission / discharge points; • locations of waste storage or disposal; and • activities occurring during construction, environmental commissioning, and operation (if applicable). If assessment and imposition of conditions to allow environmental commissioning to be undertaken are requested, please provide an environmental commissioning plan as Attachment 3A (see 4.11 below). Additional information relating to the proposed activities may be included in Attachment 3B (see 4.12 below).	
	Construction activities (if applicable):	
	See supporting information	
	Environmental commissioning activities (if applicable): Refer to the *Guideline: Industry Regulation Guide to Licensing* for further guidance.	
	Not Applicable – given that the infrastructure replaces existing onsite equipment, once a compliance report has been provided and signed off by the DWER, operations will commence	
	Time limited operations activities (if applicable): Different elements of the premises may require time limited operations to commence at different times. In these circumstances, please specify the infrastructure and/or equipment for which time limited operations authorisation is being applied for. If time limited operations are expected to differ from future licensed operations, specify how and why this would be the case. Refer to the *Guideline: Industry Regulation Guide to Licensing* for further guidance.	
	Not Applicable – given that the infrastructure replaces existing onsite equipment, once a compliance report has been provided and signed off by the DWER, operations will commence	
	Operations activities (for a licence):	
	No changes to existing prescribed activities, throughput or the type of emissions	
4.3	**Estimated operating period of the project / premises (e.g. based on estimated infrastructure life):**	No changes to existing prescribed activities
4.4	**Proposed date(s) for commencement of works (if applicable):**	February 2021
4.5	**Proposed date(s) for conclusion of works construction (if applicable):** This date should coincide with the submission to DWER of an Environmental Compliance Report(s) and/or a Critical Containment Infrastructure Report(s) as required. Refer to the *Guideline: Industry Regulation Guide to Licensing*.	June 2021
4.6	**Proposed date(s) for environmental commissioning of works (if applicable):** Refer to the *Guideline: Industry Regulation Guide to Licensing*.	N/A
4.7	**Proposed date/s for commencement of time limited operations under works approval (if applicable):**	N/A (no Works Approval required)

Part 4: Proposed activities				
	Refer to the *Guideline: Industry Regulation Guide to Licensing*.			
4.8	**Maximum production or design capacity for each category applied for (based on infrastructure operating 24 hours a day, 7 days a week):** Provide figures for all categories listed in section 1.2. Units of measurement must be the same as the units of measurement associated with the relevant category as identified in Schedule 1 of the EP Regulations.		No changes to existing prescribed activities	
4.9	**Estimated / actual throughput for each category applied for:** Provide figures for all categories listed in section 1.2. Units of measurement must be the same as the units of measurement associated with the relevant category as identified in Schedule 1 of the EP Regulations.		No changes to existing prescribed activities	
Attachments			**N/A**	**Yes**
4.10	**Attachment 2: Premises map**	Emission/discharge points are clearly labelled on the map/s required for Part 3.4 (Attachment 2).	☒	☐
4.11	**Attachment 3A: Environmental commissioning plan**	If applying to construct works or install equipment, and environmental commissioning of the works or equipment is planned, an environmental commissioning plan has been included in Attachment 3A. The environmental commissioning plan is expected to include, at minimum, identification of: • the sequence of commissioning activities to be undertaken, including details on whether they will be done in stages; • a summary of the timeframes associated with the identified sequence of commissioning activities; • the inputs and outputs that will be used in the commissioning process; • the emissions and/or discharges expected to occur during commissioning; • the emissions and/or discharges that will be monitored and/or confirmed to establish or test a steady-state operation (e.g. identifying emissions surrogates, etc.), including a detailed emissions monitoring program for the measurement of those emissions and/or discharges; • the controls (including management actions) that will be put in place to address the expected emissions and/or discharges; • any contingency plans for if emissions exceedances or unplanned emissions and/or discharges occur; and • how any of the above would differ from standard operations once commissioning is complete. Note that DWER will not include conditions on a granted instrument that authorise environmental commissioning activities where it is not satisfied that the risks associated with environmental commissioning can be adequately addressed.	☒	☐
4.12	**Attachment 3B: Proposed activities**	Additional information relating to the proposed activities has been included in Attachment 3B (if required).	☒	☐
Clearing activities 4.13 to 4.19 are only required if the application includes clearing of native vegetation.				
4.13	**Proposed clearing area (hectares and/or number of individual trees to be removed):**		N/A	
4.14	**Details of any relevant exemptions:** Refer to DWER's *A guide to the exemptions and regulations for clearing native vegetation*.			

Part 4: Proposed activities				
4.15	**Proposed method of clearing:**			
4.16	**Period within which clearing is proposed to be undertaken:** For example, May 2020 – June 2020.			
4.17	**Purpose of clearing:**			
Clearing activities – Attachments			**N/A**	**Yes**
4.18	**Attachment 3C: Map of area proposed to be cleared**	You must provide: an aerial photograph or map of sufficient scale showing the proposed clearing area and prescribed premises boundary *OR* if you have the facilities, a suitable portable digital storage device of the area proposed to be cleared as an ESRI shapefile with the following properties: • Geometry type: Polygon Shape • Coordinate system: GDA 1994 (Geographic latitude/longitude) • Datum: GDA 1994 (Geocentric Datum of Australia 1994).	☐	☐
4.19	**Attachment 3D: Additional information for clearing assessment**	Additional information to assist in the assessment of the clearing proposal may be attached to this application (for example, reports on salinity, fauna or flora studies or other environmental reports conducted for the site).	☐	☐

Part 5: Index of Biodiversity and Marine Surveys for Assessments (IBSA and IMSA)				
INSTRUCTIONS: • **Biodiversity SURVEYS should be submitted through the IBSA Submissions Portal at ibsasubmissions.dwer.wa.gov.au** • **Biodiversity surveys submitted to support this application must meet the requirements of the EPA's *Instructions for the preparation of data packages for the Index of Biodiversity Surveys for Assessments (IBSA)*.** • **Marine surveys submitted to support this application must meet the requirements of the EPA's Instructions for the preparation of data packages for the Index of Marine Surveys for Assessments (IMSA).** • **If these requirements are not met, DWER will decline to deal with the application.**				
Attachments			**N/A**	**Yes**
5.1	**Biodiversity surveys** Please provide the IBSA number(s) (or submission number(s) if IBSA number has not yet been issued) in the space provided. Note that a submission number is not confirmation of acceptance of a biodiversity survey and is not the same as an IBSA number. IBSA numbers are only issued once a survey has been accepted. Once an IBSA number is issued, please notify the department.	All biodiversity surveys submitted with this application meet the requirements of the EPA's *Instructions for the preparation of data packages for the Index of Biodiversity Surveys for Assessments (IBSA)*.	☒	☐
		Submission number		
		IBSA number		
5.2	**Attachment 4:** **Marine surveys**	All marine surveys submitted with this application meet the requirements of the EPA's Instructions for the preparation of data packages for the Index of Marine Surveys for Assessments (IMSA).	☐	☐

Part 6: Other DWER approvals

INSTRUCTIONS:

- **If you have applied, or intend to apply, for other approvals within DWER that may be relevant to this application, you must provide relevant details.**
- **If you have referred, or intend to refer, your proposal to the Environmental Protection Authority (EPA), you must provide the requested details.**

Pre-application scoping

6.1	**Have you had any pre-application / pre-referral / scoping meetings with DWER regarding any planned applications?**	☐ No ☒ Yes – provide details: [See supporting documentation]

Environmental impact assessment (Part IV of the EP Act)

6.2	**Have you referred or do you intend to refer the proposal to the EPA?** Section 37B(1) of the EP Act defines a 'significant proposal' as *"a proposal likely, if implemented, to have a significant effect on the environment"*. If DWER considers that the proposal in this application is likely to constitute a 'significant proposal', DWER is required under section 38(5) of the EP Act to refer the proposal to the EPA for assessment under Part IV, if such a referral has not already been made. If a relevant Ministerial Statement already exists, please provide the MS number in the space provided.	☐ Yes (referred) – reference (if known): [ ] ☐ Yes – intend to refer (proposal is a 'significant proposal') ☐ Yes – intend to refer (proposal will require a section 45C amendment to the current Ministerial Statement): MS [ ] ☐ No – a valid Ministerial Statement applies: MS [ ] ☒ No – not a 'significant proposal'

Clearing of native vegetation (Part V Division 2 of the EP Act and *Country Area Water Supply Act 1947*)

6.3	**Have you applied or do you intend to apply for a native vegetation clearing permit?** In accordance with the *Guideline: Industry Regulation Guide to Licensing* and *Procedure: Native vegetation clearing permits*, where clearing of native vegetation is of an exempt kind under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (WA), or is being assessed by a relevant authority which would lead to an exemption under Schedule 6 of the EP Act, the clearing will not be assessed by DWER or be subject to any additional controls by DWER. If the proposed clearing action is to be assessed in accordance with, or under, an *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) accredited process, such as the assessment bilateral agreement, *Form Annex C7 – Assessment bilateral agreement* must be completed and attached to your clearing permit application.	☐ Yes – clearing application reference (if known): [ ] ☐ No – this application includes clearing (please complete questions 4.13 to 4.19) ☐ No – a valid permit applies: CPS [ ] ☐ No – exemption applies (explain why): [ ] ☒ No – permit not required
6.4	**Have you applied or do you intend to apply for a *Country Area Water Supply Act 1947* licence?** If a clearing exemption applies in a *Country Area Water Supply Act 1947* (CAWS Act) controlled catchment, or if compensation has previously been paid to retain the subject vegetation, a CAWS Act clearing licence is required. If yes, contact the relevant DWER regional office for a Form 1 *Application for licence*. Map of CAWS Act controlled catchments	☐ Yes – application reference (if known): [ ] ☐ No – a valid licence applies: [ ] ☒ No – licence not required

Part 6: Other DWER approvals

Water licences and permits (*Rights in Water and Irrigation Act 1914*)

6.5	**Have you applied, or do you intend to apply for:** **1. a licence or amendment to a licence to take water (surface water or groundwater); or** **2. a licence to construct wells (including bores and soaks); or** **3. a permit or amendment to a permit to interfere with the bed and banks of a watercourse?** For further guidance on water licences and permits under the *Rights in Water and Irrigation Act 1914*, refer to the *Procedure: Water licences and permits*.	☐ Yes –application reference (if known): [ ] ☐ No – a valid licence / permit applies: [ ] ☒ No – licence / permit not required

Part 7: Other approvals and consultation

INSTRUCTIONS:

- **Please provide copies of all relevant documentation indicated below, including any conditions, exclusions, or expiry dates.**
- **"Major Project" means:**
  - **A State Development Project, where the lead agency is the Department of Jobs, Tourism, Science and Innovation (including projects to which a State Agreement applies); or**
  - **A Level 2 or 3 proposal, as defined in the Department of Premier and Cabinet's *Lead Agency Framework*.**

		N/A	No	Yes
7.1	**Is the proposal a Major Project?**		☒	☐
7.2	**Is the proposal subject to a State Agreement Act?**		☒	☐
	If yes, specify which Act:			
7.3	**Has the proposal been allocated to a "Lead Agency" (as defined in the *Lead Agency Framework*)?**		☒	☐
	If yes, specify Lead Agency contact details:			
7.4	**Has the proposal been referred and/or assessed under the EPBC Act (Commonwealth)?**	☒	☐	☐
	If yes, please specify referral, assessment and/or approval number:			
7.5	**Has the proposal obtained all relevant planning approvals?**	☒	☐	☐
	If planning approval is necessary but has not been obtained, please provide details indicating why:			
	If planning approval is not necessary, please provide details indicating why:			
7.6	**For renewals or amendment applications, are the relevant planning approvals still valid (that is, not expired)?**	☐	☐	☒
7.7	**Has the proposal obtained all other necessary statutory approvals (not including any other DWER approvals identified in Part 6 of this application)?**	☐	☐	☒
	If no, please provide details of approvals already obtained, outstanding approvals, and expected dates for obtaining these outstanding approvals:			

Part 7: Other approvals and consultation				
			N/A	No	Yes
7.8	**Has consultation been undertaken with parties considered to have a direct interest in the proposal (that is, interested parties or persons who are considered to be directly affected by the proposal)?** DWER will give consideration to submissions from interested parties or persons in accordance with the *Guideline: Industry Regulation Guide to Licensing*.		☐	☐	☒
Attachments				**N/A**	**Yes**
7.9	**Attachment 5: Other approvals and consultation documentation**	Details of other approvals specified in Part 7 of this application, including copies of relevant decisions and any consultation undertaken with direct interest stakeholders have been provided and labelled Attachment 5.		☐	☒

Part 8: Applicant history				
Note: • **Under this section, DWER will undertake an internal due diligence of the applicant's fitness and competency based on DWER's compliance records.** • **If you wish to provide additional information for DWER to consider in making this assessment, you may provide that information as a separate attachment (see Part 11).**				
		N/A	No	Yes
8.1	If the applicant is an individual, has the applicant previously held, or do they currently hold, a licence or works approval under Part V of the EP Act?	☒	☐	☐
8.2	If the applicant is a corporation, has any director of that corporation previously held, or do they currently hold, a licence or works approval under Part V of the EP Act?	☐	☐	☒
8.3	If yes to 8.1 or 8.2 above, specify the name of company and/or licence or works approval number: Tianye SXO Gold Mining Pty Ltd: L4597/1988/14			
8.4	If the applicant is an individual, has the applicant ever been convicted, or paid a penalty, for an offence under a provision of the EP Act, its subsidiary legislation, or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	☒	☐	☐
8.5	If the applicant is a corporation, has any director of that corporation ever been convicted, or paid a penalty, for an offence under a provision of the EP Act, its subsidiary legislation, or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	☐	☒	☐
8.6	If the applicant is a corporation, has any person concerned in the management of the corporation, as referred to in section 118 of the EP Act, ever been convicted of, or paid a penalty, for an offence under a provision of the EP Act, its subsidiary legislation, or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	☐	☒	☐
8.7	If the applicant is a corporation, has any director of that corporation ever been a director of another corporation that has been convicted, or paid a penalty, for an offence under a provision of the EP Act, its subsidiary legislation, or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	☐	☒	☐
8.8	With regards to the questions posed in 8.4 to 8.7 above, have any legal proceedings been commenced, whether convicted or not, against the applicant for an offence under a provision of the EP Act, its subsidiary legislation, or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	☐	☒	☐
8.9	Has the applicant had a licence or other authority suspended or revoked due to a breach of conditions or an offence under the EP Act or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	☐	☒	☐

Part 8: Applicant history				
8.10	If the applicant is a corporation, has any director of that corporation ever had a licence or other authority suspended or revoked due to a breach of conditions or an offence under the EP Act or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	☐	☒	☐
8.11	If the applicant is a corporation, has any director of that corporation ever been a director of another corporation that has ever had a licence or other authorisation suspended or revoked due to a breach of conditions or an offence under the EP Act or similar environmental protection or health-related legislation in Western Australia or elsewhere in Australia?	☐	☒	☐
8.12	If yes to any of 8.4 to 8.11 above, you must provide details of any charges, convictions, penalties paid for an offence, and/or licences or other authorisations suspended or revoked:			

Part 9: Emissions, discharges, and waste

INSTRUCTIONS:

- **Please see *Guidance Statement: Risk Assessments* and provide all information relating to emission sources, pathways and receptors relevant to the application.**
- **You must provide details on sources of emissions (for example, kiln stack, baghouses or discharge pipelines) including fugitive emissions (for example, noise, dust or odour), types of emissions (physical, chemical, or biological), and volumes, concentrations and durations of emissions.**
- **The potential for emissions should be considered for all stages of the proposal (where relevant), including during construction, commissioning and operation of the premises.**

		No	Yes
9.1	**Are there potential emissions or discharges arising from the proposed activities?**	☐	☒

If yes, identify all potential emissions and discharges arising from the proposed activities and complete Table 9.1: Emissions and discharges (below).

☐ Gaseous and particulate emissions (e.g. emissions from stacks, chimneys or baghouses)

☒ Dust (e.g. from equipment, unsealed roads and/or stockpiles, etc.)

☐ Wastewater discharges (e.g. treated sewage, wash water, or process water discharged to lands or waters)

☐ Waste and leachate (e.g. emissions through seepage, leaks and spills of waste from storage, process and handling areas, etc.)

☒ Noise (e.g. from machinery operations and/or vehicle operations)

☐ Odour (e.g. from wastes accepted at putrescible landfills, storage or processing of waste or other odorous materials, etc.)

☐ Contaminated or potentially contaminated stormwater (e.g. stormwater with the potential to come into contact with chemicals or waste materials, etc.)

☐ Electromagnetic radiation [1]

☐ Other (please specify): [ ]

[1] Note that for electromagnetic radiation, copies/details of other relevant approvals (such as from the Department of Mines, Industry Regulation and Safety or the Radiological Council) must be provided where applicable.

Details of any pollution control equipment or waste treatment system, including any control mechanisms used to ensure proper operation of this equipment, must be included in the proposed controls column of the 'Emissions and discharges table' below. Details of management measures employed to control emissions should also be included. Please provide / attach any relevant documents (e.g. management plans, etc.).

Additional rows may be added as required and/or further information may be included as an attachment (see section 9.3).

Table 9.1: Emissions and discharges

See supporting information

	Source of emission or discharge	Emission or discharge type	Volume and frequency	Proposed controls	Location (on site layout plan – see 3.4)
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

Part 9: Emissions, discharges, and waste

			No	Yes
9.2	**Waste-related activities at the premises** [2] **No changes to existing prescribed activities** Answer "yes" or "no" for the following questions and complete Table 9.2 (below).		☒	☒
	(a)	Is waste accepted at the premises?	☐	☐
	(b)	Is waste produced on the premises?	☐	☐
	(c)	Is waste processed on the premises?	☐	☐
	(d)	Is waste stored on the premises?	☐	☐
	(e)	Is waste buried on the premises?	☐	☐
	(f)	Is waste recycled on the premises?	☐	☐
	(g)	Is any of the waste listed in Table 9.2 (below) also considered a 'dangerous good' for the purposes of the *Dangerous Goods Safety (Storage and Handling of Non-Explosives) Regulations 2007*? [3]	☐	☐
		Specify, if yes:		

Solid waste types must be described with reference to *Landfill Waste Classification and Waste Definitions 1996* (as amended from time to time) and the *Environmental Protection (Controlled Waste) Regulations 2004* (Controlled Waste Regulations).

Liquid waste types must be described with reference to the Controlled Waste Regulations.

For further guidance on the definition of waste, refer to *Fact Sheet: Assessing whether material is waste*.

Detail must be provided on storage type (for example, hardstand and containment infrastructure), capacity, likely storage volumes, and containment features (for example, lining and bunding).

[2] Please provide copies / details of any other relevant approvals (e.g. from the Department of Health) must be provided where applicable.

[3] Wastes derived from the storage, handling, and use of dangerous goods may be considered hazardous and may need to be handled with the same precautions. Please refer to the following link for more information: https://www.dmp.wa.gov.au/Documents/Dangerous-Goods/DGS_IS_OverviewOfStorageAndHandlingRegulations.pdf

Additional rows may be added as required and/or further information may be included as an attachment (see section 9.4).

Table 9.2 Waste types

	Waste type	Quantity (e.g. tonnes, litres, cubic metres)	Waste activity infrastructure (including specifications)	Monitoring (if applicable)	Location (on site layout plan – see 3.4)
1.					
2.					
3.					

Attachments			N/A	Yes
9.3	**Attachment 6A: Emissions and discharges** (if required)	If required, further information for Part 9.1 has been included as an attachment labelled Attachment 6A.	☒	☐
9.4	**Attachment 6B: Waste acceptance** (if required)	If required, further information for Part 9.2 has been included as an attachment labelled Attachment 6B.	☒	☐

Part 10: Siting and location

10.1 **Sensitive land uses**

What is/are the distance(s) to the nearest sensitive land use(s)?

A sensitive land use is a residence or other land use which may be affected by an emission or discharge associated with the proposed activities.

No changes to existing prescribed activities

10.2 **Nearby environmentally sensitive receptors and aspects**

Identify in Table 10.2 (below):

- all instances of environmentally sensitive receptors that are known or suspected to be present within, or within close proximity to, the proposed prescribed premises boundary;
- the nature of the sensitive receptors (e.g. type of Threatened Ecological Community, species for threatened flora or fauna, etc.);
- their actual or approximate known distance and direction from the premises boundary (at the closest point/s); and
- if applicable, what measures have been or will be taken to ensure that sensitive receptors are not adversely impacted by any emissions or discharges from the premises.

Refer to the *Guidance Statement: Environmental Siting* for further guidance.

Table 10.2: Nearby environmentally sensitive receptors and aspects

Type / classification	Description	Distance + direction to premises boundary	Proposed controls to prevent or mitigate adverse impacts (if applicable)
Environmentally Sensitive Areas [1]			
Threatened Ecological Communities			
Threatened and/or priority fauna			
Threatened and/or priority flora			
Aboriginal and other heritage sites [2]			
Public drinking water source areas [3]			
Rivers, lakes, oceans, and other bodies of surface water, etc.			
Acid sulfate soils			
Other			

[1] Environmentally Sensitive Areas are as declared under the *Environmental Protection (Environmentally Sensitive) Notice 2005*. Refer to DWER's website ("Environmentally Sensitive Areas") for further information.

[2] Refer to the Department of Planning, Lands and Heritage website for further information about Aboriginal heritage and other heritage sites.

[3] Refer to *Water Quality Protection Note No.25: Land use compatibility tables for public drinking water source areas* for further information.

10.3 **Environmental siting context details**

Provide further information including details on topography, climate, geology, soil type, hydrology, and hydrogeology at the premises.

Part 10: Siting and location				
Attachments			**N/A**	**Yes**
10.4	**Attachment 7: Siting and location**	You must provide details and a map describing the siting and location of the premises, including identification of distances to sensitive land uses and/or any specified ecosystems.	☒	☐

Part 11: Submission of any other relevant information				
Attachments			**No**	**Yes**
11.1	**Attachment 8: Additional information submitted**	Applicants seeking to submit further information may include information labelled Attachment 8. If submitting multiple additional attachments, label them 8A, 8B, etc. Where supplementary documentation is submitted, please specify the name of documents below.	☐	☒
	List title of supplementary document/s attached:	See supporting information		

Part 12: Proposed fee calculation

INSTRUCTIONS:

Please calculate the relevant prescribed fee using the relevant online fee calculator linked below when completing this section.

- **Licence: www.der.wa.gov.au/LicenceFeeCalculator**
- **Works approval: www.der.wa.gov.au/WorksApprovalFeeCalculator**
- **Amendment: www.der.wa.gov.au/AmendmentFeeCalculator**

Different fee units apply for different fee components. Fee units may also have different amounts depending on the period in which the calculation is made.

Once DWER has confirmed that the application submitted meets the relevant requirements of the EP Act, you will be issued an invoice with instructions for paying your application fee.

Further information on fees can be found in the *Fact Sheet: Industry Regulation fees*, available from DWER's website.

12.1	Only the relevant fee calculations are to be completed as follows: [mark the box to indicate sections completed]	☐ Section 12.3 for works approval applications ☐ Section 12.4 for licence or renewal applications ☐ Section 12.5 for registration applications ☒ Section 12.6 for amendment applications ☐ Section 12.7 for applications requiring clearing of native vegetation
12.2	All information and data used for the calculation of proposed fees has been provided in accordance with section 12.8.	☐

12.3 **Proposed works approval fee**

Proposed works approval fee (see Schedule 3 of the EP Regulations)

Fees relate to the cost of the works, including all capital costs (inclusive of GST) associated with the construction and establishment of the works proposed under the works approval application. This includes, for example, costs associated with earth works, hard stands, drainage, plant hire, equipment, processing plant, relocation of equipment and labour hire.

Costs exclude:

- the cost of land;
- the cost of buildings to be used for purposes unrelated to the purposes in respect of which the premises are, or will become, prescribed premises; costs for buildings unrelated to the prescribed premises activity or activities; and
- consultancy fees relating to the works.

Fee component	**Proposed fee**
Cost of works: $	$

12.4 **Proposed licence fee (new licences and licence renewals)**

Detailed licence fee calculations

Part 1 Premises component (see regulation 5D and Part 1 of Schedule 4 of the EP Regulations)

The production or design capacity should be the maximum capacity of the premises. For most categories the production or design capacity refers to an annual rate. The figure should be based on 24 hour operation for 365 days, unless there is another regulatory approval or technical reason that restricts operation.

The premises component fee applies to the category in Part 1, Schedule 4 incurring the higher or highest amount of fee units in accordance with regulation 5D(2) of the EP Regulations.

List all categories (insert additional rows as required). Use only the higher or highest amount of fee units to determine the Part 1 fee component.

Category	Production or design capacity	Fee units
Using the higher or highest amount of fee units, Part 1 component subtotal		$

Part 2 Waste (see regulation 5D(1a)(b) and Part 2 of Schedule 4 of the EP Regulations)

If your premises includes one or more of the following categories specify any applicable Part 2 waste amounts. Do not include Part 3 waste components of these discharges in the below sections.

Categories: 5, 6, 7, 8, 9, 12, 14, 44, 46, 53, 54A, 70, 80, or 85B

Part 2 waste means waste consisting of –

(a) tailings; or
(b) bitterns; or
(c) water to allow mining of ore; or
(d) flyash; or
(e) waste water from a desalination plant.

If the premises does not fall into one of the categories listed above, or there are no applicable Part 2 waste amounts, the sub total for this section will be $0.

Insert additional rows as required. Sum all Part 2 waste fees to determine the sub total.

Discharge quantity (tonnes/year)	Fee units
Part 2 component subtotal	$

Part 3 Waste – Discharges to air, onto land, into waters (see Part 3 of Schedule 4 of the EP Regulations)

Choose the appropriate location of the discharge and enter the discharge amount(s) in the units specified in the EP Regulations. This should be the amount of waste expected to be discharged over the next 12 months, expressed in the units and averaging period applicable for that waste kind (for example, g/minute or kg/day). Amounts can be measured, calculated, or estimated and can be based on data acquired over the previous 12 months, but should be based on the maximum premises capacity and not the forecast operating hours.

Where there are discharges, all prescribed waste types must be considered in the fee calculation. If a specified waste type is not present in the discharge, this must be justified using an appropriate emission estimation technique (for example, sampling data, industry sector guidance notes, National Pollution Inventory guides and emission factors).

Discharges to air			
Discharges to air	Discharge rate (g/min)	Discharges to air	Discharge rate (g/min)
Carbon monoxide		Nickel	
Oxides of nitrogen		Vanadium	
Sulphur oxides		Zinc	
Particulates (Total PM)		Vinyl chloride	
Volatile organic compounds		Hydrogen sulphide	
Inorganic fluoride		Benzene	
Pesticides		Carbon oxysulphide	
Aluminium		Carbon disulphide	
Arsenic		Acrylates	
Chromium		Beryllium	
Cobalt		Cadmium	
Copper		Mercury	
Lead		TDI (toluene-2, 4-di-iso-cyanate)	
Manganese		MDI (diphenyl-methane di-iso-cyanate)	
Molybdenum		Other waste	
Part 3 component subtotal		$	

Discharges onto land or into waters		Discharge rate
1. Liquid waste that can potentially deprive receiving waters of oxygen (for each kilogram discharged per day) —	(a) biochemical oxygen demand (in the absence of chemical oxygen demand limit)	
	(b) chemical oxygen demand (in the absence of total organic carbon limit)	
	(c) total organic carbon	
2. Bio-stimulants (for each kilogram discharged per day) —	(a) phosphorus	
	(b) total nitrogen	
3. Liquid waste that physically alters the characteristics of naturally occurring waters —	(a) total suspended solids (for each kilogram discharged per day)	
	(b) surfactants (for each kilogram discharged per day)	
	(c) colour alteration (for each platinum cobalt unit of colour above the ambient colour of the waters in each megalitre discharged per day)	
	(d) temperature alteration (for each 1°C above the ambient temperature of the waters in each megalitre discharged per day) — (i) in the sea south of the Tropic of Capricorn (ii) in other waters	

4. Waste that can potentially accumulate in the environment or living tissue (for each kilogram discharged per day) —	(a) aluminium	
	(b) arsenic	
	(c) cadmium	
	(d) chromium	
	(e) cobalt	
	(f) copper	
	(g) lead	
	(h) mercury	
	(i) molybdenum	
	(j) nickel	
	(k) vanadium	
	(l) zinc	
	(m) pesticides	
	(n) fish tainting wastes	
	(o) manganese	
5. *E. coli* bacteria as indicator species (in each megalitre discharged per day) —	(a) 1,000 to 5,000 organisms per 100 ml	
	(b) 5,000 to 20,000 organisms per 100 ml	
	(c) more than 20,000 organisms per 100 ml	
6. Other waste (per kilogram discharged per day) —	(a) oil and grease	
	(b) total dissolved solids	
	(c) fluoride	
	(d) iron	
	(e) total residual chlorine	
	(f) other	
Part 3 component subtotal		$
Summary – Proposed licence fee		
Part 1 Component		
Part 2 Component		
Part 3 Component		
Total proposed licence fees:		$

12.5 **Prescribed fee for registration**	
A fee of 24 units applies for an application for registration of premises, unless the occupier of the premises holds a licence in respect of the premises, in accordance with regulation 5B(2)(c) of the EP Regulations.	☐ (Tick to acknowledge)

12.6 Works approval amendment or licence amendment fee

Proposed works approval amendment or licence amendment fee (see Schedule 4 Part 1 of the EP Regulations).

The fee prescribed for an application for an amendment to a works approval or licence is calculated in accordance with regulation 5BB(1)(a) of the EP Regulations:

- for a single category of prescribed premises to which the works approval or licence relates, by using the fee unit number corresponding to the prescribed premises category and relevant production or design capacity threshold in Schedule 4 Part 1 of the EP Regulations.
- for multiple categories of prescribed premises to which the works approval or licence relates, by using the highest fee unit number corresponding to the prescribed premises categories and production design or capacity threshold in Schedule 4 Part 1 of the EP Regulations.

The relevant fee unit under Schedule 4 Part 1 of the EP Regulations for calculating the application form amendment fee is to be determined by reference to the actual production or design capacity reported for the preceding year's annual licence fee. If an annual licence fee has not previously been paid or is not applicable as is the case for works approvals, the fee unit for an application for amendment is to be determined by reference to the production or design capacity currently prescribed in the licence or works approval.

Fee Units	Proposed fee
300	$ 2,040

12.7 **Prescribed fee for clearing permit**	
In accordance with the *Guideline: Industry Regulation Guide to Licensing* and *Procedure: Native vegetation clearing permits*, where an application for clearing of native vegetation is made as part of an application for a works approval or licence, DWER may elect to either jointly or separately determine the clearing component of the application. Where DWER separately determines the clearing component of an application, the application will be deemed to be an application for a clearing permit under section 51E of the EP Act. Note: If a clearing permit application has been separately submitted and accepted by DWER, a refund for the clearing permit application will not be provided where DWER determines to address clearing requirements as part of a related works approval application.	☐ (Tick to acknowledge)

12.8 Information and data used to calculate proposed fees

The detailed calculations of fee components, including all information and data used for the calculations are to be provided as attachments to this application, labelled as **Attachment 9**, with an appropriate suffix (for example 9A, 9B etc.). Please specify the relevant attachment number in the space/s provided below.

Proposed fee for works approval	Attachment No.
Details for cost of works	
Proposed fee for licence	**Attachment No.**
Part 1: Premises	
Part 2: Waste types	
Part 3: Discharges to air, onto land, into waters	

Part 13: Commercially sensitive or confidential information

NOTE:

Information submitted as part of this application will be made publicly available. If you wish to submit commercially sensitive or confidential information, please identify the information in Attachment 10, and include a written statement of reasons why you request each item of information be kept confidential.

Information submitted later in the application process may also be made publicly available at DWER's discretion. For any commercially sensitive or confidential information, please follow the same process as described above.

DWER will take reasonable steps to protect genuinely confidential or commercially sensitive information. Please note in particular that all submitted information may be the subject of an application for release under the *Freedom of Information Act 1992*.

	Attached	N/A
All information which you would propose to be exempt from public disclosure has been separately placed in a redacted version of the application form and its supporting documentation. Note that this is in addition to the unredacted version(s) provided to DWER for its assessment. Grounds for claiming exemption in accordance with Schedule 1 to the *Freedom of Information Act 1992* must be specified in **Attachment 10** (located at the end of this form).	☐	☒

Part 14: Submission of application

Check one of the boxes below to nominate how you will submit your application.

Files larger than 50MB cannot be received via email by DWER. Files larger than 50MB can be sent via File Transfer. Alternatively, email DWER to make other arrangements.

A full, signed, electronic copy of the application form including all attachments has been submitted via email to info@dwer.wa.gov.au; **OR**	☒
A signed, electronic copy of the application form has been submitted via email to info@dwer.wa.gov.au and attachments have been submitted via File Transfer, or electronically by other means as arranged with DWER; **OR**	☐
A full, signed hard copy has been sent to: APPLICATION SUBMISSIONS Department of Water and Environmental Regulation Locked Bag 10 Joondalup DC WA 6919	☐

Part 15: Declaration and signature

General

I/We confirm and acknowledge that:

- the information contained in this application is true and correct and I/we acknowledge that knowingly providing information which is false or misleading in a material particular constitutes an offence under section 112 of the *Environmental Protection Act 1986* (WA) and may incur a penalty of up to $50,000;
- I/We have legal authority to sign on behalf of the applicant (where authorisation provided);
- I/We have not altered the requirements and instructions set out in this application form;
- I/We have provided a valid email address in Part 2.3 for receipt of correspondence electronically via email from DWER in relation to this application;
- I/We acknowledge that successful delivery to my/our server constitutes receipt of correspondence sent electronically via email from DWER in relation to this application; and
- I/We have provided a valid postal and/or business address in Part 2.4 for the service of all Part V documents.

Publication

I/We confirm and acknowledge:

- this application (including all attachments apart from the sections identified in Attachment 10) is a public document and may be published;
- marine surveys provided in accordance with Part 5 will be published and used, for the purposes of the IMSA project, in accordance with your declaration made in the *Metadata and Licensing Statement*;
- all necessary consents for the publication of information have been obtained from third parties;
- information considered exempt from public disclosure has been noted by redaction of a separately provided copy of the completed application form and its supporting documentation (in accordance with Part 13), with reasons as to why the information should be exempt in accordance with the grounds specified in Schedule 1 to the *Freedom of Information Act 1992* (WA) being provided in Attachment 10;
- subsequent information provided in relation to this application will be a public document and may be published unless written notice has been given to DWER by the applicant, at the time the information is provided, claiming that the information is considered exempt from public disclosure; and
- the decision to not publish information will be at the discretion of the CEO of DWER and will be made consistently with the provisions of the *Freedom of Information Act 1992* (WA).

Signature

20/10/2020

Date

Name Max Ji

Position: Chief Executive Officer

Date

NOTE: This form may be signed:

- If the applicant is an individual, by the individual;
- If the applicant is a corporation, by:
  - the common seal being affixed in accordance with the *Corporations Act 2001* (Cth); or
  - two directors; or
  - a director and a company secretary; or
  - if a proprietary company has a sole director who is also the sole company secretary, by that director; and
- by a person with legal authority to sign on behalf of the applicant.

ATTACHMENT 10 – Confidential or commercially sensitive information

Request for exemption from publication			
Information which you consider should not be published, on the grounds of a relevant exemption found in Schedule 1 to the *Freedom of Information Act 1992* (WA), must be specified in this Attachment. Add additional rows as required.			
NOT FOR PUBLICATION IF GROUNDS FOR EXEMPTION ARE DETERMINED TO BE ACCEPTABLE			
Section of this form:		Grounds for claiming exemption:	
Section of this form:		Grounds for claiming exemption:	
Section of this form:		Grounds for claiming exemption:	

_____

Full Name

_____ _____

Signature Date

ASIC
Australian Securities & Investments Commission

Forms Manager
Company Officeholders

Company: BARTO GOLD MINING PTY LTD ACN 161 566 490

Company details

Date company registered	07-12-2012
Company next review date	07-12-2020
Company type	Australian Proprietary Company
Company status	Registered
Home unit company	No
Superannuation trustee company	No
Non profit company	No

Registered office

LEVEL 3 , 66 KINGS PARK ROAD , WEST PERTH WA 6005

Principal place of business

LEVEL 3 , 66 KINGS PARK ROAD , WEST PERTH WA 6005

Ultimate holding company

SHANDONG TIANYE REAL ESTATE DEVELOPMENT GROUP CO., LTD
164486159
Incorporated in CHINA

Officeholders

JI, XINGMIN
Born 03-04-1963 at JINAN SHANDONG CHINA
36 GWELUP STREET , KARRINYUP WA 6018
Office(s) held: Director, appointed 20-04-2017

JI, GUANGHUI
Born 30-10-1972 at ZHAOYUAN SHANDONG CHINA
9 BALSAM LINK , STIRLING WA 6021
Office(s) held: Director, appointed 20-04-2017

ZENG, ZHAOQIN
Born 27-05-1969 at LIAOCHENG SHANDONG CHINA
2A CUNNINGHAM STREET , APPLECROSS WA 6153
Office(s) held: Director, appointed 20-04-2017

ZHANG, SHUANG
Born 14-05-1984 at JINAN SHANDONG PROVINCE, CHINA CHINA
152A WILDING STREET , DOUBLEVIEW WA 6018
Office(s) held:
Secretary, appointed 20-04-2017

Company share structure

Share	Share description	Number issued	Total amount paid	Total amount unpaid

class				
ORD	ORDINARY	100	100.00	0.00

Members

BARTO AUSTRALIA PTY LTD LEVEL 3 , 66 KINGS PARK ROAD , WEST PERTH WA 6005

Share class	Total number held	Fully paid	Beneficially held
ORD	100	Yes	Yes

Document history

These are the documents most recently received by ASIC from this organisation.

Received	Number	Form	Description	Status
31-08-2020	7EAZ98797	484	CHANGE TO COMPANY DETAILS	Processed and imaged
13-08-2020	7EAZ44696	205	NOTIFICATION OF RESOLUTION	Processed and imaged
09-01-2019	029056721	389	ANNUAL NOTICE BY WHOLLY-OWNED ENTITY	Processed and imaged

Certificate of Registration on Change of Name

This is to certify that

TIANYE SXO GOLD MINING PTY LTD

Australian Company Number 161 566 490

did on the thirteenth day of August 2020 change its name to

BARTO GOLD MINING PTY LTD

Australian Company Number 161 566 490

The company is a proprietary company.

The company is limited by shares.

The company is registered under the Corporations Act 2001 and is taken to be registered in Western Australia and the date of commencement of registration is the seventh day of December, 2012.

Issued by the
Australian Securities and Investments Commission
on this thirteenth day of August 2020.

James Shipton
Chair

CERTIFICATE

Proposed Amendment application fee calculator 2018/19

Instrument No.	L4597/1988/14
Fee multiplier	6.80

Categories	Units	Fee
5 - Processing or beneficiation of metallic or non-metallic ore: More than 500 000 but not more than 5 000 00	300	$2,040.00
6 - Mine dewatering: More than 500 000 tonnes per year	100	$680.00
64 - Class II or III putrescible landfill site: Not more than 5 000 tonnes per year	24	$163.20
57 - Used tyre storage (general): Not applicable	20	$136.00
	0	$0.00
	0	$0.00
	0	$0.00
	0	$0.00
	0	$0.00
	0	$0.00

Note: Amendment fee is determined by the category with the largest fee units

Fee Payable	**$2,040.00**

APPENDIX C
Air Quality Assessment

Marvel Loch Crushing Circuit Air Quality Assessment

Final Report
Version 1

Prepared for Barto Gold Mining Pty Ltd

October 2020

Project Number: 1179

Marvel Loch Crushing Circuit Air Quality Assessment

Final Report

DOCUMENT CONTROL

Version	Description	Date	Author	Reviewer
A	Draft for client review	12.10.2020	ETA (EC)	ETA (JH)
1	Final report	23.10.2020	ETA (EC)	ETA (JH)

Approval for Release

Name	Position	File Reference
Jon Harper	Director /Principal Air Quality Specialist	1179 Barto Mining Crushing Circuit_Ver1.docx
Signature		

Executive Summary

An air quality assessment was conducted to determine potential impacts associated with the installation, and operation, of a new crushing/screening circuit at the Barto Gold Mining Pty Ltd operations adjacent to Marvel Loch. The circuit aims to process approximately 6,000 tonnes per day of ore sourced from local underground and open-cut mines. Dust generation activities, from the operations, include; wheel-generated dust from ore transport, front-end loaders, crushing/screening, stacking, and wind erosion from stockpiles and open areas.

Overview of assessment

The potential impacts were determined through a dispersion modelling study, which incorporated site-specific meteorological data, emissions information, source characteristics, and the location of model receptors. Emission rates were estimated using recognised and accepted methods of emissions estimation, which included published emission factors from the NPI Emission Estimation Technique Manual for Mining (EA, 2012) and USEPA AP-42 documents.

A site-specific meteorological dataset was generated using the AERMET meteorological processor, which used a combination of observations at the Bureau of Meteorology (BoM) automated weather station (AWS) at Southern Cross (Station ID 12320) and meteorological data produced by the prognostic model TAPM. These were then used to drive the AERMOD dispersion model in order to predict ground-level concentrations of pollutants at identified sensitive receptors and the surrounding environment.

Ground-level TSP, PM_{10}, and $PM_{2.5}$ concentrations predicted at sensitive receptors and the surrounding environment were compared with the relevant air quality assessment criteria. These were presented in isolation, and with the inclusion of background concentrations.

Key findings

The key findings of the assessment are:

- Ground-level TSP concentrations predicted due to the proposed operations, with and without background concentrations, comply with the air quality assessment criteria at all sensitive receptors.
- Ground-level PM10 concentrations predicted due to the proposed operations, with and without background concentrations, comply with the air quality assessment criteria at all sensitive receptors.
- Ground-level PM2.5 concentrations predicted due to the proposed operations, with and without background concentrations, comply with the air quality assessment criteria at all sensitive receptors.

Furthermore, dust deposition rates predicted at all sensitive receptors are well within the guideline for dust deposition.

Table of Contents

Tables

Figures

1 Introduction

1.1 Background

Barto Gold Mining Pty Ltd (Barto) is proposing to install a new crushing/screening circuit (the Project) as part of their Southern Cross operations. The project is located adjacent to Marvel Loch approximately 30 kilometres (km) south of Southern Cross and 350 km east of Perth in Western Australia and the location of the proposed operations is presented in Figure 1-1. An indicative layout of the Project is shown in Figure 1-2.

An air quality assessment was conducted to determine the potential impacts of emissions (as particulates) from the Project, and included:

- Wheel-generated dust from ore transport
- Unloading of ore onto Run of Mine (ROM) pad
- Crushing and screening operations
- Stockpiling of ore from a radial stacker
- Operation of front end loaders
- Wind erosion from stockpiles and open areas.

Figure 1-1 Project location and setting

Figure 1-2 Site layout

1.2 Scope of work

The potential impacts due to the operation of the Project were determined through a desktop dispersion modelling study, which incorporated site-specific meteorological data, emissions information, source characteristics, and the location of model receptors. For the purposes of the air quality assessment, the Project comprises:

- Haul truck movements on unpaved sections of the roads
- Unloading of ore to the ROM PAD
- Front-end loaders
- Crushers/screening
- Stacking
- Wind erosion

Ambient air quality and potential impacts are assessed in terms of the following:

- Particles as Total Suspended Particulates (TSP)
- particles as PM_{10}
- particles as $PM_{2.5}$

1.3 Structure of report

This report describes the methods and findings of an assessment of the potential impacts to the air environment arising from the Project. The assessment includes:

- The study approach and methodology in Section 2.
- Assessment of existing environment in Section 3.
- Ambient air quality assessment criteria in Section 4.
- Atmospheric dispersion modelling of the emissions using AERMET/AERMOD model suite in Section 5.
- Project emission estimation and inventory in Section 6.
- An evaluation of the modelled change in air quality and interpretation of the potential impact from the Mine and Operations in Section 7.
- Conclusions of the assessment are presented in Section 8.

The appendices contain supporting information.

2 Study approach and assessment methodology

This section outlines the air quality study and assessment approach. It includes the methodology applied to define the meteorological characteristics of the project area relevant to the assessment, the emission estimation, the dispersion, and the ambient assessment criteria selected for the purposes of determining the significance of the dispersion model results, and therefore the potential impact.

The study structure is shown in Figure 2-1.

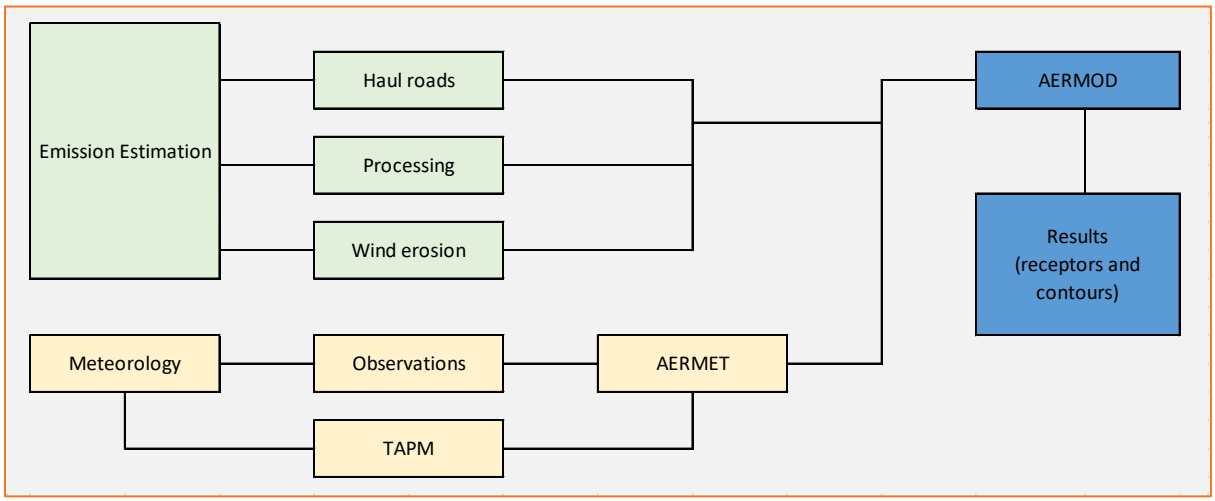


Figure 2-1 Air quality assessment – study approach

3 Existing Environment

The climate and meteorological characteristics of the region control the dispersion, transformation and removal (or deposition) of pollutants from the atmosphere. This section outlines the key climate and meteorological characteristics of the region important for the dispersion, transformation and removal (or deposition) of pollutants from the atmosphere, and therefore ambient air quality.

3.1 Local Meteorology

Marvel Loch is characterised, according to the Koppen-Geiger classification, as a hot desert climate (BWh), with no distinct rainy season. The nearest Bureau of Meteorology (BoM) meteorological station is Southern Cross Aero, located approximately 30 km northwest of Marvel Loch. The long-term temperature statistics from this station are presented in Figure 3-1. The warmest months generally occur from November to February, while the coolest month is July. Temperatures may drop to less than 0 °C between May and October.

Rainfall is sparse and highly variable, with no distinct rainy season (Figure 3-2).

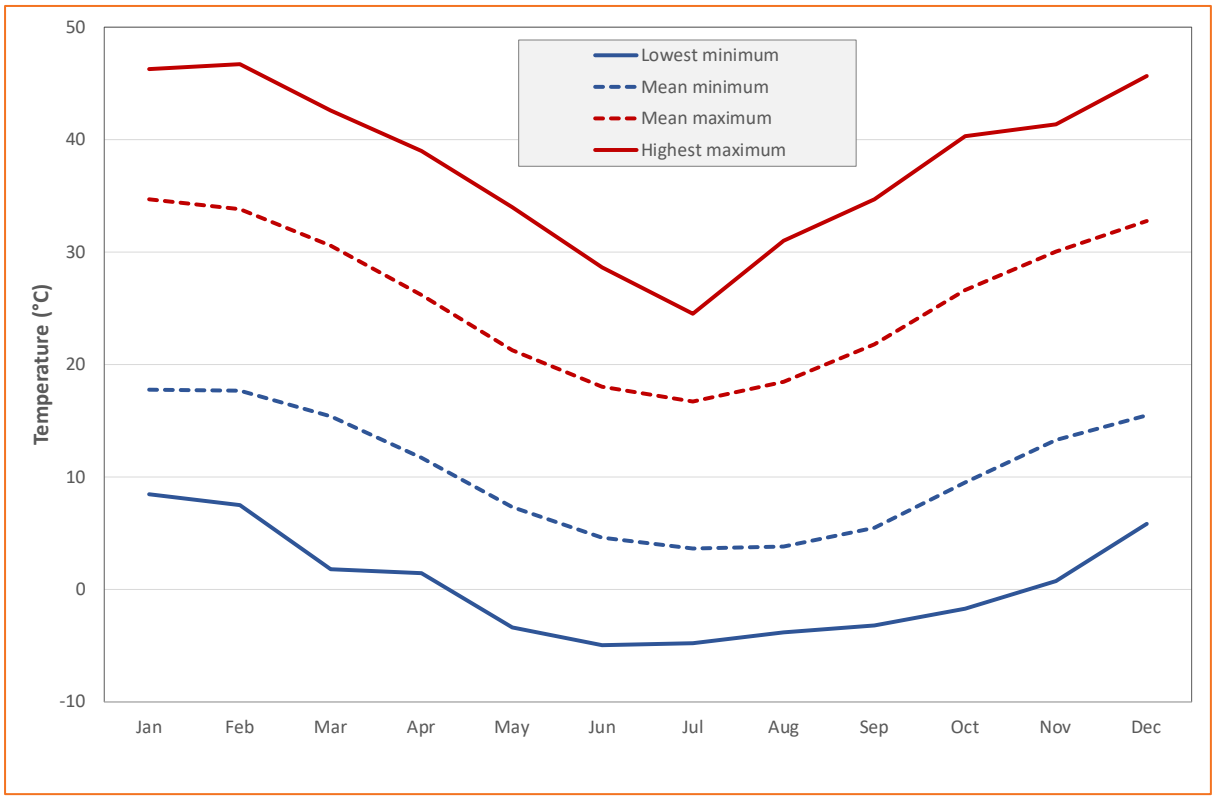


Figure 3-1 Long term temperature statistics, Southern Cross Aero AWS (1996-2019)

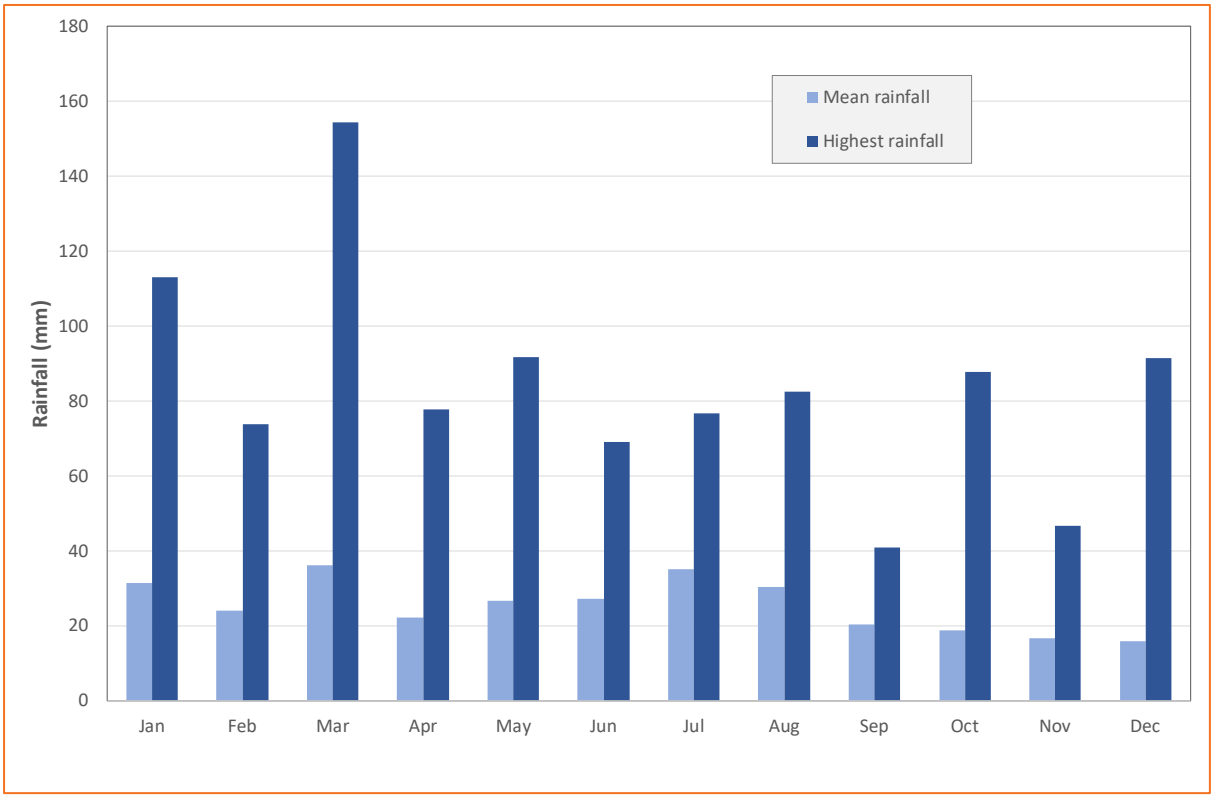


Figure 3-2 Long term rainfall statistics, Southern Cross Aero AWS, BOM (1996-2019)

3.2 Local Air quality

The existing air quality in the region is expected to be influenced by natural sources such as wind erosion and bushfires. Dust may also occur due to anthropogenic activities, such as the additional mining and agricultural activities.

To account for background dust in the region, monitoring data from the closest representative air quality monitoring station, Kalgoorlie, maintained and operated by the Department of Water and Environment Regulation (DWER), were used. The 2018 WA air monitoring report (DWER, 2019) reported statistics on PM_{10} and $PM_{2.5}$ concentrations measured at Kalgoorlie, which were used as the basis for background concentrations in this assessment. Background TSP concentration is estimated based on an assumption that 50% of total dust particles are in the size range for PM_{10}.

Table 3-1 Background concentrations used to assess cumulative impacts

Parameter	Averaging period	Concentration (µg/m³)	Basis
TSP	24-hour	30.6	PM_{10} assumed to be 50% of TSP
PM_{10}	24-hour	15.3	75th percentile 24-hour PM_{10} concentration measured at Kalgoorlie for 2018
	Annual	12.8	Annual average PM_{10} concentration measured at Kalgoorlie for 2018
$PM_{2.5}$	24-hour	5.8	75th percentile 24-hour PM_{10} concentration measured at Kalgoorlie for 2018
	Annual	5.1	Annual average PM_{10} concentration measured at Kalgoorlie for 2018

4 Ambient Air Quality Assessment Criteria

4.1 Human Health Assessment and Amenity Criteria

Ambient air quality assessment criteria have been adopted based on the protection of human health and amenity impacts, consistent with the guideline for air quality published by the Environmental Protection Authority (EPA, 2016).

Modelled ground level concentrations for particles (TSP, PM_{10} and $PM_{2.5}$) have been compared to ambient air quality assessment criteria to determine the potential impact on nearest sensitive receptors. This assessment has considered the potential impact attributable to the Project, as well as the cumulative impact (i.e. in conjunction with the existing emission sources in the area). The assessment has been made across the model domain, as well as at key sensitive receptor locations identified as being representative or important for assessment.

The National Environmental Protection Measure (NEPM) for Ambient Air Quality (NEPC, 1998; NEPC, 2003; NEPC, 2016) specifies an ambient standard (based on the protection of human health) of 50 µg/m^3 for PM_{10}, (24-hour average) with exceedances based on an exceptional event rule (ie directly related to bushfire, jurisdiction authorised hazard reduction burning, or continental scale windblown dust). The PM_{10} and $PM_{2.5}$ (24-hour) criteria are used to assess the potential health impact on the community receptors within the project model domain.

In Western Australia, the main criterion used to assess TSP comes from the *Environmental Protection (Kwinana) (Atmospheric Wastes) Policy* and associated regulations (Kwinana EPP). The Kwinana EPP specifies three different zones; Area A, B and C. These areas represent industrial zoning (A), buffer zoning (B), and the zone outside Area A and B (C) (EPA, 1999). The Area C criteria for TSP will therefore be referenced in this assessment.

The assessment criteria adopted for this study are broadly consistent with the ambient air quality guideline values outlined in the draft Air Emissions Guideline released in October 2019 for public consultation by the Department of Water and Environmental Regulation (DWER), noting that the guideline has not been finalised and does not yet have any legislative basis. In their current form, the guidelines would require the assessment criteria for criteria pollutants, which includes particulates as PM_{10} and $PM_{2.5}$, to generally be 'met at all existing and future offsite sensitive receptors in the modelling domain'.

The assessment criteria adopted in this study is shown in Table 4-1.

Table 4-1 Summary of Adopted Assessment Criteria

Parameter	Air quality assessment criteria	Reference
TSP	90 µg/m^3 (24-hour average)	Kwinana EPP (EPA, 1999)
PM_{10}	50 µg/m^3 (24-hour average)	NEPM (NEPC, 2016)
	25 µg/m^3 (annual average)	NEPM (NEPC, 2016)
$PM_{2.5}$	25 µg/m^3 (24-hour average)	NEPM (NEPC, 2016)
	8 µg/m^3 (annual average)	NEPM (NEPC, 2016)

4.2 Depositional dust

While standards for amenity, such as deposition of dust particles, is not defined, various Australian State jurisdictions have adopted guidelines for dust deposition to protect residential amenity. The following published guidelines are relevant:

- The NSW Environment Protection Authority (EPA) assessment criterion is an annual average of 2 g/m^2/month for the maximum increase in deposited dust or 4 g/m^2/month for the total dust deposition rate (NSW EPA, 2016).
- The Victorian Protocol for Environmental Management (PEM) (EPA Victoria, 2007) for extractive industries defines a guideline of 4 g/m^2/month for dust deposition rate (no more than 2 g/m^2/month above background) as a monthly average.

These dust deposition guidelines from Victoria and the NSW EPA are numerically consistent although the NSW EPA explicitly requires an assessment of the annual average deposition rate against the assessment criterion.

The guideline for dust deposition of 2 g/m^2/month adopted in Victoria has been selected for use within this assessment.

5 Model Assessment

For this assessment, air dispersion modelling has been conducted using the most recent version of the AERMOD dispersion model (v19191). The model has been used to predict ground-level concentrations across the model domain using a network of gridded receptors and at identified sensitive receptor locations. The potential air quality impacts associated with operations of theProject have been considered in isolation of other emission sources in the region, and with the inclusion of background concentrations.

The model was configured to predict the ground-level concentrations on a rectangular grid. The model domain was defined with the Southwest corner of the grid cell aft 735147 m Easting (mE) and 6513604 m Northing (mN) (UTM Zone 50 S). Specifics for the modelling configuration are described further in this section.

5.1 Meteorological model and data

A site-specific meteorological data was generated using a combination of observations at the closest automated weather station (AWS) operated by the Bureau of Meteorology (BoM) and the prognostic model TAPM (version 4.0.5), with some reference to the guideline construction of input meteorological data files for EPA Victoria's regulatory air pollution model (Vic EPA, 2014).

Observations at the BoM site at Southern Cross Aero AWS were used in the assessment to:

- determine a suitable and representative period for modelling
- assimilation of wind speed and direction to the TAPM model
- direct input to the AERMET meteorological processor

5.1.1 Representative year

The closest BoM AWS is at Southern Cross Aero (Station ID 12320, Lat -31.2353, Lon 119.356), located approximately 30 km northwest of the Project. As an airport AWS, Southern Cross Aero AWS is expected to comply with the World Meteorological Organisation (WMO) standards.

The selection of representative year for modelling considered observations of meteorological variables critical to dispersion, including air temperature, relative humidity, wind speed, and wind direction. The selection process was based on an analysis of the five year period from 2014 to 2018 in order to determine which years provided the closest representation of the average state of the climate based on the variation of each meteorological parameter from the mean and all other years.

In addition to these, the El Niño Southern Oscillation Index (SOI) was also considered in selecting a representative period for modelling. The SOI indicates the development and intensity of El Niño or La Niña events in the Pacific Ocean. Sustained values of the SOI below -7 are indicative of El Niño events which may have limited influence over Western Australia, causing a reduction in winter and spring rainfall due to a weaker Leeuwin current, a warm ocean current which flows southwards near the western coast of Australia. Likewise sustained positive values above +7 indicate La Niña events are generally associated with by wetter than normal conditions (DPIRD, 2019). The SOI for the periods assessed were sourced from the BoM website (2019).

The selection of a representative year also took into account the completeness of meteorological data collected at the AWS.

In general, the analysis considered the following:

- The distributions of temperature, wind speed, wind direction (U- and V- components), and relative humidity should be as close to the mean distribution as possible.
- A year with a moderate or strong ENSO classification should be avoided, where possible.
- The meteorological data collected at the AWS should be as complete as possible.

The results of the analysis showed that:

- the correlation coefficients of the individual years relative to the mean of the five-year period was similar for all meteorological variables (Figure 5-1). Therefore, any of the years could be used to conduct the air quality assessment.
- the period from 2017 onwards can be considered to be the mostly neutral, as shown in Figure 5-1. While SOI exceeds the threshold range of -7 to 7 for individual months, these are not sustained and tend to be closer to the threshold value compared to earlier periods.
- cloud cover data was only available for the period from 13 September 2018 onwards.

The period from 1 October 2018 to 30 September 2019 was selected as the period of assessment.

Table 5-1: Pearson correlation coefficients of individual years and mean of the most recent five years

Meteorological Parameter	Oct 2014 Sep 2015	Oct 2015 Sep 2016	Oct 2016 Sep 2017	Oct 2017 Sep 2018	Oct 2018 Sep 2019
Temperature	0.9966	0.9939	0.9934	0.9974	0.9781
Wind Speed	0.9985	0.9977	0.9956	0.9981	0.9981
U component of wind	0.9930	0.9893	0.9959	0.9946	0.9918
V component of wind	0.9993	0.9981	0.9997	0.9990	0.9979
Relative Humidity	0.9959	0.9781	0.9943	0.9855	0.9728

Notes:
Green cells (best): > 0.99
Yellow cells: 0.98 – 0.99
Blue cells: <0.98

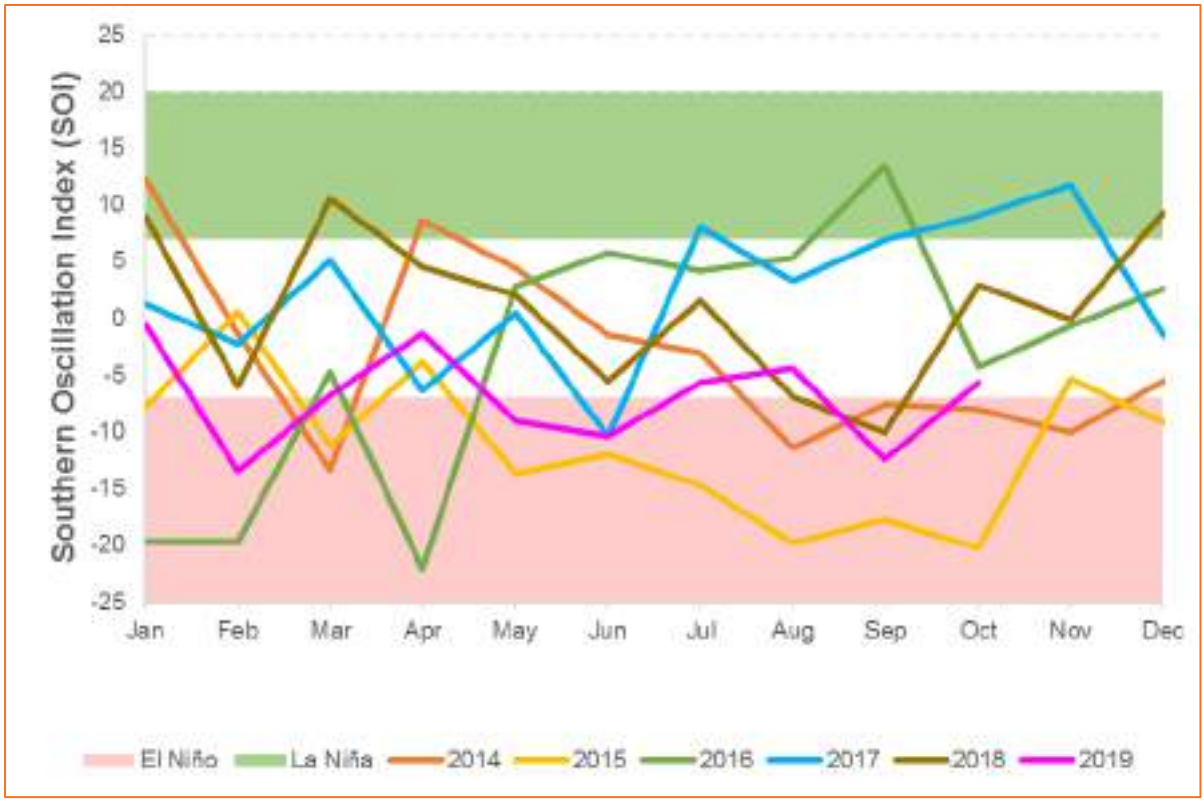


Figure 5-1 Monthly SOI for 2014 to 2019

5.1.2 Surface observations

Observations at Southern Cross Aero AWS for the period 1 October 2018 to 30 September 2019 were used in the assessment as direct input to the AERMET meteorological processor.

Wind speed and direction from Southern Cross Aero AWS were also assimilated into the TAPM model to ensure consistency between observations and the generated meteorological dataset.

The distribution of winds is shown in Figure 5-2, and shows that moderate to strong winds in the range of 4 to 8 m/s originating from the south-easterly sectors are most common, occurring approximately 30% of the time. Calm winds occur 5% of the time.

Wind roses showing the seasonal distribution of winds are presented in Figure 5-3, showing that winds originating from the south-easterly sectors occur most frequently during summer, autumn, and spring. Winds from the north-easterly sectors are dominant during winter. Calm winds area also shown to be more common during winter, occurring over 10% of the time.

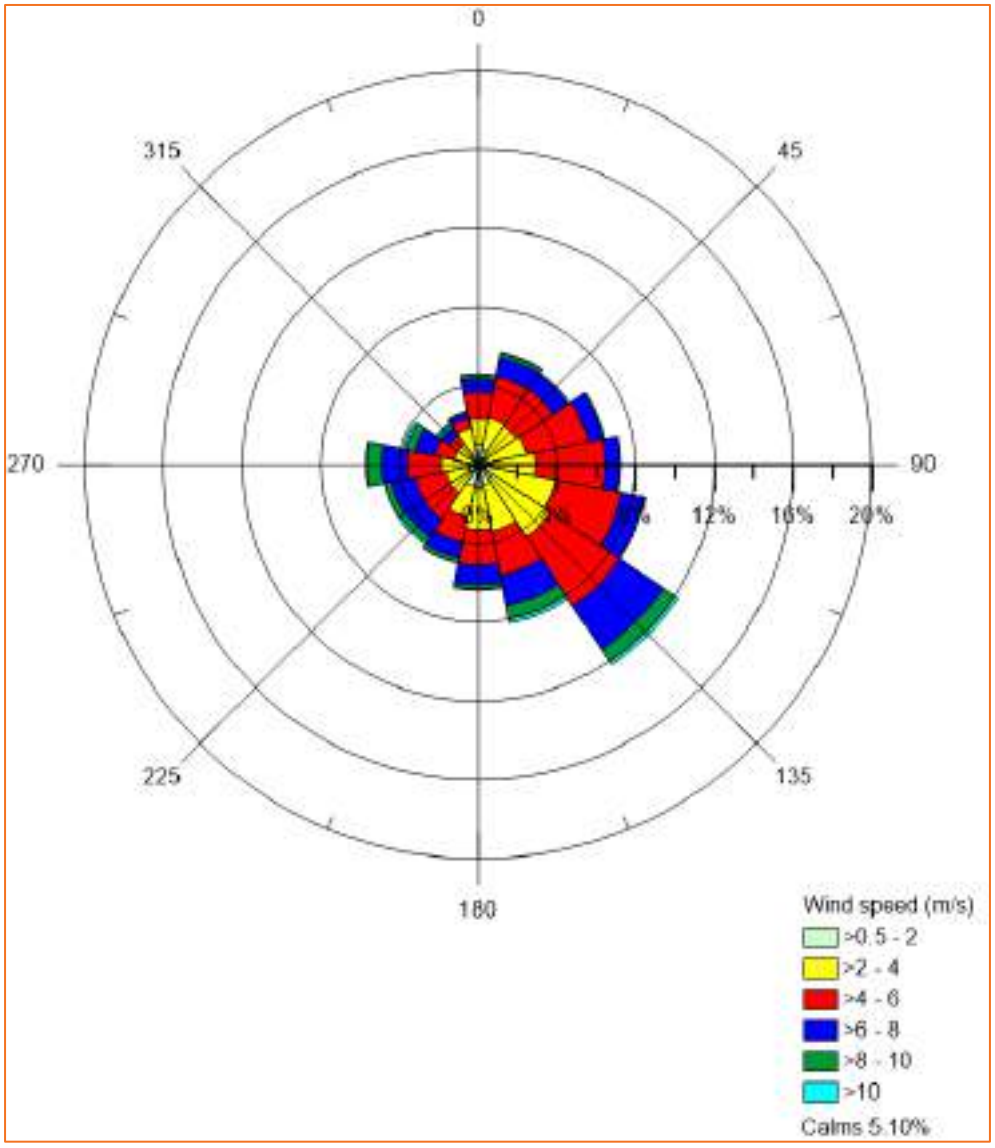


Figure 5-2: Annual distribution of wind at Southern Cross Aero AWS

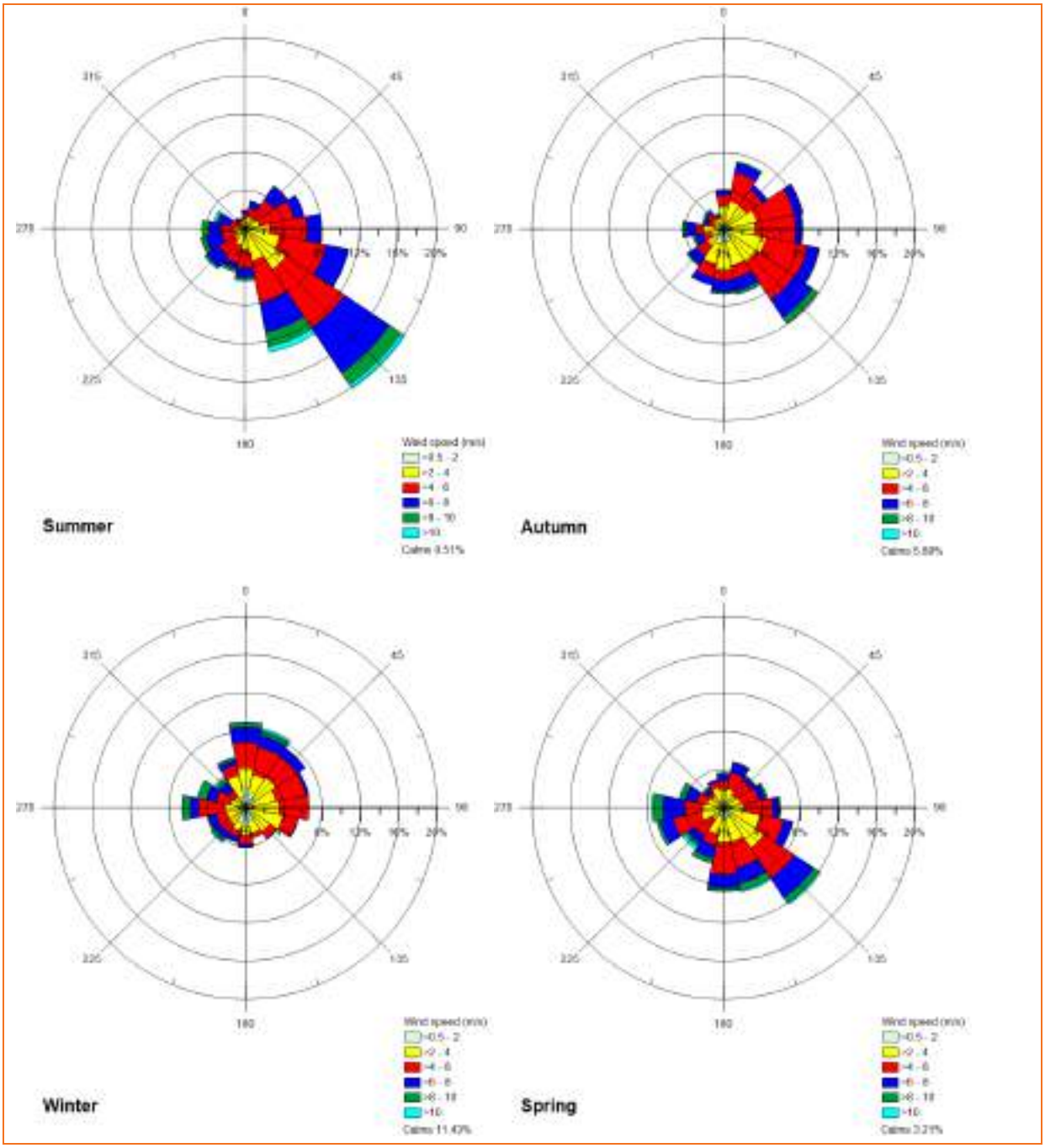


Figure 5-3: Seasonal distribution of wind at Southern Cross Aero AWS

5.1.3 TAPM

TAPM (The Air Pollution Model) is a prognostic meteorological model developed by Commonwealth Scientific and Industrial Research Organisation (CSIRO), which predicts the flows important to regional and local scale meteorology, such as sea breezes and terrain-induced flows from the larger-scale meteorology provided by the synoptic analyses. TAPM solves the fundamental fluid dynamics equations to predict meteorology at a mesoscale (20 km to 200 km) and at a local scale (down to a few hundred metres). TAPM includes parameterisations for cloud/rain micro-physical processes, urban/vegetation canopy and soil, and radiative fluxes.

TAPM was configured in a manner consistent with best practice, and which also takes into account the guidelines defined by Vic EPA (2014):

- 41 x 41 grid point domain with an outer grid of 30 kilometres and nesting grid of 10 km, 3 km and 1 km
- 35 vertical levels (additional levels compared to the recommended 25 vertical levels)
- Grid centred approximately over Southern Cross Aero AWS (latitude –31° 14' 0", longitude 119° 21' 30")
- Geoscience Australia 9 second DEM terrain
- Land cover data derived from the TAPM default database based on US Geological Survey, Earth Resources Observation Systems (EROS) Data Center Distributed Active Archive Center (EDC DAAC)
- TAPM default databases for sea surface temperature

Furthermore, observations of wind speed and direction from the Southern Cross Aero AWS were assimilated into the TAPM model to ensure consistency of the generated dataset with observations.

The modelling period was conducted for a period of one year from 1 October 2018 to 30 September 2019, selected as a representative period as discussed in Section 5.1.1.

5.1.4 AERMET

AERMOD requires meteorological variables that are both measured (e.g. wind speed, wind direction, temperature at varying heights) and those that are not measured but derived from measurements. Some of these variables can be derived from observed parameters. However, this requires the assurance of a reliable quality dataset that includes measurements of all mandatory variables. Some variables cannot be easily derived from observations and are typically sourced from prognostic meteorological models such as TAPM.

While prognostic models can produce files ready for direct use with AERMOD (in SFC and PFL formats), it is generally recommended to process raw model output using the USEPA AERMET program, in order to develop AERMOD-ready files. This is a requirement for some jurisdictions, notably the Victorian EPA (Vic EPA, 2014). The use of AERMET ensures that the derived parameters within the final AERMOD-ready meteorological files have been calculated in accordance with USEPA-sanctioned procedures for modelling (rather than research) processes.

AERMET also screens data, removing extremely low wind speeds and adjusting derived parameters such as friction velocity (U*), which if left unadjusted can produce extreme modelling results and unusual artefacts in predicted ground level pollutant concentration isopleths. As a standard practice, model predictions are passed through the AERMET process prior to its use in AERMOD, which can be a lengthy, iterative process, but produces more reliable datasets.

Observations and model-generated data were processed as a three-stage process using the most recent version (v19191) of AERMET.

- Stage 1 – extraction or retrieval of data and the assessment of the quality of data
- Stage 2 – combination of data processed during Stage 1, including setting missing value indicators
- Stage 3 – creation of model input files, including computation of boundary layer scaling parameters (surface friction velocity, mixing height, and Monin-Obukhov length)

The following meteorological parameters were used as input to Stage 1 of AERMET:

- Extracted from observations at the BoM site at Southern Cross Aero AWS:
  - wind speed (m/s)
  - wind direction (°)
  - temperature (°C)
  - relative humidity (%)
  - precipitation (mm)
  - sea level pressure (mB)
  - cloud cover (8ths)
- Extracted from twice-daily TAPM-generated upper air files corresponding to hour UTC 0Z ad UTC 12Z
  - wind speed (m/s)
  - wind direction (°)
  - dew point temperature (°C) – derived from relative humidity and temperature
  - temperature (°C)
  - pressure level (mB)

Wind speed and direction were assimilated into the TAPM model, so these are consistent with the generated datasets.

In addition to these, the Bulk Richardson Number (BULKRN) option was used for estimating stable boundary layer u* using ΔT, or low-level temperature difference (USEPA, 2018).

Surface characteristics for the land use classification of the area surrounding the Southern Cross Aero AWS are based on the array of seasonal surface roughness, albedo, and Bowen ratio compiled by Vic EPA (2013) for Australian geography, detailed in Table 5-2. These are combined in a manner consistent with the guidelines for AERMET (USEPA, 2018).

Surface roughness was based on the sectors for the area covering a 1-km radius centred on the Southern Cross Aero AWS, which included a combination of airport, grassland, and forests.

Albedo and Bowen ratio are based on the unweighted geomean of the combined land use classification of the sectors for the area covering a 10-km radius centred on the Southern Cross Aero AWS, which was classified as a combination of airport, grassland, forest, and low-density residential areas.

Table 5-2 Surface characteristics used in the AERMET model

Parameter	Land use	Summer	Autumn	Winter	Spring
Albedo	Airport	0.18	0.18	0.18	0.18
	Grassland	0.18	0.19	0.20	0.18
	Forest	0.14	0.14	0.14	0.14
	Residential area	0.16	0.16	0.18	0.16
Bowen Ratio	Airport	1.5	1.5	1.5	1.5
	Grassland	2	2	2	1
	Forest	0.6	1.75	1.75	1.5
	Residential area	0.8	1	1	0.8
Surface Roughness	Airport	0.07	0.07	0.07	0.07
	Grassland	0.1	0.1	0.01	0.05
	Forest	1.3	1.3	0.9	1.1

5.2 AERMOD

Air dispersion modelling has been conducted using the United Stated Environmental Protection Agency (USEPA) approved model AERMOD (USEPA, 2018b). AERMOD is the USEPA's preferred model for predicting near surface pollutant concentrations within 50 km of the source (US EPA, 2018). It is also the model approved for regulatory purposes within Victoria (Vic EPA, 2015).

The AERMOD atmospheric dispersion model is a steady-state Gaussian plume model in wide use within Australia and is suitable for use in most simple, near-field applications. In the stable boundary layer (SBL) the model assumes that the distribution of concentrations, in both the horizontal and vertical, is Gaussian while in a convective boundary layer the horizontal distribution is Gaussian and the vertical distribution taken as a bi-Gaussian probability density function (pdf).

The model settings used in this assessment are as follows:

- modelling period from 1 October 2018 to 30 September 2019
- model domain was 50 x 50 grid point domain at 100 m resolution
- centre of the southwest grid defined at 735147 mE and 6513604 mN (UTM Zone 50 S)
- rural dispersion coefficients
- surface and upper air meteorological data processed using the AERMET meteorological pre-processor using observations and TAPM-generated upper air data (Section 5.1.4)
- emissions sources modelled as volume sources (Section 5.2.1)
- ALPHA (LOW_WIND) option used to improve model performance during low wind conditions
- LOW_WIND parameters:
    - minimum sigma-v (SVmin) of 0.4 m/s
    - minimum wind speed (WSmin) of 0.5 m/s
    - meander factor (FRANmax) of 1.0
- pollutant concentrations were predicted on uniform gridded receptors and sensitive receptors (Section 5.2.2)
- terrain information derived from SRTM (Shuttle Radar Topography Mission) 90-m terrain data dry deposition (Section 5.3)

5.2.1 Emission sources

Each emission source within the mines were characterised as volume sources in the dispersion model. Details of the sources including source identification, type, location and characteristics (effective height, initial vertical and horizontal spread) are listed in Appendix C.

5.2.2 Sensitive Receptors

Comparison of the modelled results to the assessment criteria is intended to provide an objective evaluation of the potential impact of the operations at the nearest sensitive receptor. The sensitive receptors used in the assessment are listed in Table 5-3 and shown Figure 5-4. These were identified based on the residences provided.

Table 5-3 Discrete sensitive receptor locations

Receptor ID	Easting (m)	Northing (m)
1	734541.44	6515585.58
2	735120.00	6515986.34
3	736186.38	6516140.71
4	736316.20	6516142.12
5	736314.79	6516087.09
6	736370.53	6516154.12
7	736403.69	6516137.89
8	736464.37	6516132.95
9	736440.38	6516004.54
10	736502.47	6516004.54
11	736273.87	6515953.74
12	736368.41	6515955.15
13	736400.87	6515953.74
14	736483.42	6515966.00
15	736418.50	6515866.00
16	736544.09	6515866.00
17	736572.32	6515866.00
18	736676.03	6515866.00
19	736614.65	6515811.22
20	736632.99	6515809.81
21	736731.07	6515581.21
22	736489.77	6515666.00
23	736557.00	6515666.00
23	736567.38	6515576.97
25	736486.24	6515555.10
26	736514.46	6515525.47
27	736557.00	6515481.72

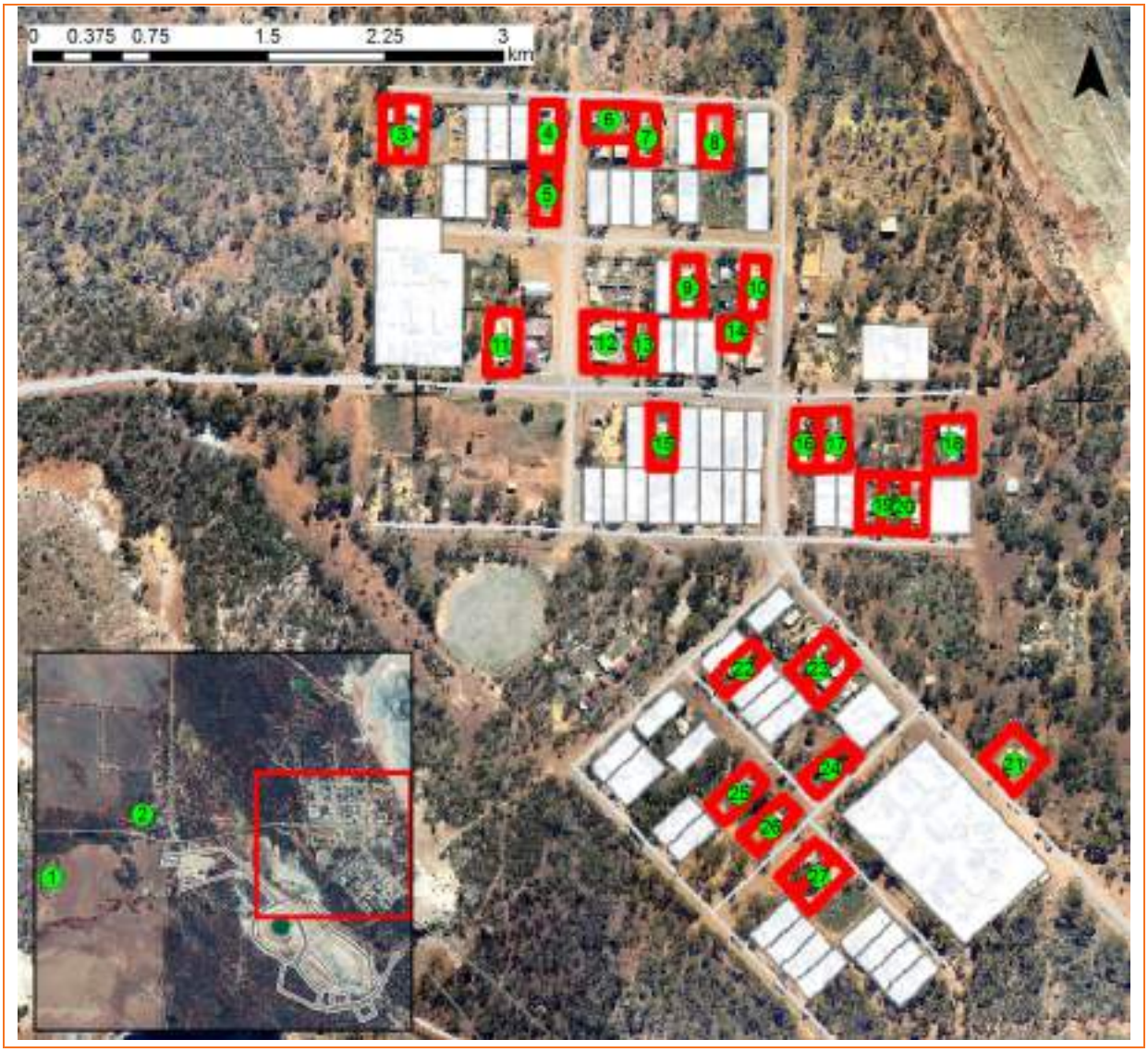


Figure 5-4 Discrete sensitive receptor locations

5.3 Deposition

Dry deposition is the process whereby particles will settle under gravity, impaction or diffusion onto surfaces. To incorporate dry deposition (and depletion) into the modelling requires that the particle size, percentage distribution and density be specified. Table 5-4 lists the particle size distributions and mass fraction used in dispersion modelling. All particles have an assumed density of 1 g/cm^3.

Table 5-4 Particle size distribution and mass fraction used in dispersion modelling

Dust particle size (µm)	Mass fraction (%)		
	TSP	PM_{10}	$PM_{2.5}$
1.3	9%	30%	100%
3.8	8%	27%	-
6.3	7%	23%	-
8.7	6%	20%	-
12.5	14%	-	-
19	15%	-	-
26	15%	-	-
35	15%	-	-
45	11%	-	-
TOTAL	**100%**	**100%**	**100%**

6 Emission Estimation

6.1 Emissions Sources

This section outlines the emission estimation process for the Project. Activities of the proposed facility that have the potential to generate dust emissions include:

- Wheel-generated dust from ore transport
- Unloading of ore from trucks
- Front-end loaders (push ore delivered and load to crusher)
- Crushing/screening
- Stacking
- Ore handling
- Wind erosion from stockpiles

Locations of potential sources of dust emissions within the facility are shown in Figure 6-1.

Ore processed are sourced from underground and open-cut mines in the area. Sections of the transport routes where wheel-generated dust from truck movements during ore transport are anticipated are shown in Figure 6-2.

Information used to estimate dust emissions are summarised in Table 6-1. The following sections outline the emission estimation technique for each source within the model.

The frequency and duration of equipment use during operations have been accounted for in the dispersion modelling. A conservative approach was used in representing the frequency of operations.

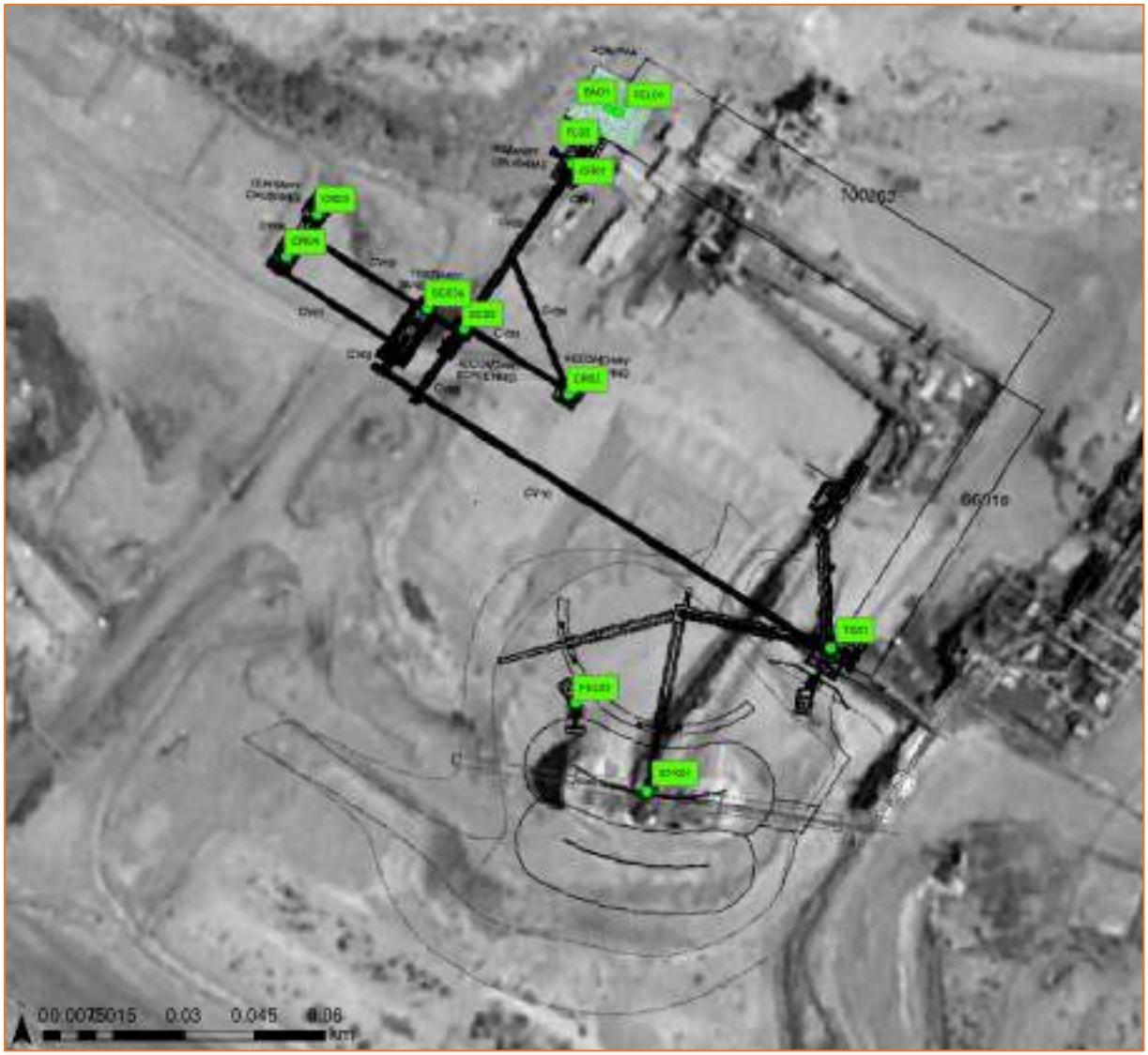


Figure 6-1 Location of emissions sources within Marvel Loch Crushing Circuit

Figure 6-2 Transport route for ore

Table 6-1 Operations data for Marvel Loch Crushing Circuit

Parameter		Units	Value
Operating hours (ore transport, crushing)		availability	75%
		days/yr	365
		hrs/day	18
		time	0:00 – 23:59 [1]
		hrs/yr	6,570
Operating hours for FEL pushing ore		hrs/day	10
Back-up FEL for pushing crushed ore		hrs/yr	6,570
Plant availability		%	75%
Ore throughput (ore transport, crushing)		t/day	6000
		tpa	2,190,000
Road silt content		%	10
Average moisture content		%	5.2
Ore processed	Primary crusher	%	100%
	Secondary crusher	%	70% [2]
	Tertiary crusher	%	100%
Ore transport (Transport Corridor)	Ore sourced	tpa	230,000 [3]
	Equipment	-	articulated truck [4]
	Empty weight	t	33
	Capacity	t	41
Ore transport (Haul Road 1)	Ore sourced	tpa	980,000 [5]
	Equipment	-	Road train
	Empty weight	t	90
	Capacity	t	180
Ore transport (Haul Road 2)	Ore sourced	tpa	980,000 [5]
	Equipment	-	Road train
	Empty weight	t	90
	Capacity	t	180
Approximate area	ROM stockpile	m^2	193
	Waste dump	m^2	27,530

Notes:

1. Ore transport and crushing facility will operate for 18 hours per day (75% availability), but activities can occur at any time.
2. Secondary screen assumes that 30% of the processed ore will bypass the secondary crusher and will be processed directly to the tertiary crushers.
3. Ore throughput sourced from Jacoletti undeground mine based on highest ore production (2022).
4. Articulated truck assumed to be similar to a Caterpillar 745.
5. Remaining ore brought into the crushing facility assumed to be transported equally using two haul routes.

6.2 Emission Estimates

The following sections outline the emission estimation technique for each source within the model. For all activities, $PM_{2.5}$ emissions are taken as 30% of PM_{10} emissions (Table 5-4).

6.2.1 Haul roads

To determine emissions from wheel generated dust along the haul roads the default equation for 'unpaved roads from wheels' was utilised (Equation 1).

There are three routes used in transporting ore to the proposed crushing facility. Sections of the roads anticipated to generate dust emissions are shown in Figure 6-2. The assessment considered a total ore throughput of 6,000 tonnes per day, equivalent to 2,190,000 tpa.

Ore sourced from the Jacoletti underground mine will be transported using the Transport Corridor, with the use of an articulated truck. The assessment considered the highest ore tonnage mined of 230,000 tpa for year 2022.

The remaining 1,960,000 tpa of ore are assumed to be sourced from the open-cut mines in the region and will be transported using the two remaining haul routes using road trains.

Truck movements for all haul routes were assumed to occur at any time within the day but will only occur 75% of the time (18 hours). Haul truck movements were randomised during the hours of operation throughout the year.

Equation 1: $$EF_{(kg/VKT)} = \frac{0.4536}{1.6093} \times k \times \left(\frac{s_{(\%)}}{12}\right)^{a} \times \left(\frac{W_{(t)}}{3}\right)^{b}$$

Where: k = constant (TSP = 4.9, PM_{10} = 1.5)
$s_{(\%)}$ = silt content (%)
$W_{(t)}$ = vehicle mass (t)
a = constant (TSP = 0.7, PM_{10} = 0.9)
b = constant (0.45)

6.2.2 Unloading ore to ROM

Emissions for unloading ore and waste have been calculated using the default values of:

- TSP: 0.012 kg/t
- PM_{10}: 0.0043 kg/t

6.2.3 Front-end loaders

Emissions for the operation of front-end loaders, at the Run of Mine (ROM) pad, used the default emission factor listed in Appendix A of the EET for Mining (EA, 2012) for overburden. These factors are:

- TSP: 0.025 kg/tonne
- PM_{10}: 0.012 kg/tonne

One of front-end loaders used to feed the primary crusher was assumed to operate at any time within the day but will only occur 75% of the time (18 hours). A second front-end loader will push the ore being delivered and will operate for 10 hours within the day.

Another front-end loader has been accounted for in the dispersion modelling. This has been modelled to operate conservatively in an emergency crushed ore stockpile at a capacity of 50 tph.

6.2.4 Crushing

Emissions for the crushers were based on the USEPA AP42 document, chapter 11.19.2 (USEPA, 2004). These factors are:

- TSP: 0.0027 kg/tonne
- PM_{10}: 0.0012 kg/tonne

The facility includes 1 primary, 1 secondary, and 2 tertiary crushers. It is assumed that the secondary screen will allow 30% of the processed ore to bypass the secondary crusher. The two tertiary crushers are assumed to have equal capacity.

6.2.5 Screening

Emissions for the screens were based on the USEPA AP42 document, chapter 11.19.2 (USEPA, 2004). These factors are:

- TSP: 0.0125kg/tonne
- PM_{10}: 0.0043 kg/tonne

6.2.6 Materials transfer

Emissions for materials transfer were calculated using the equation (Equation 2) for miscellaneous transfer (EA, 2012). This is consistent with the USEPA AP42 emission factors (USEPA,2016b).

Average wind speed for Southern Cross Aero AWS if 4.35 m/s. The average moisture content of ore is 5.2%.

Equation 2: $$\boldsymbol{EF_{(kg/t)} = k \times 0.0016 \times \frac{\left(\frac{U}{2.2}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}}}$$

Where: k = constant (TSP = 0.74, PM_{10} = 0.35)
M = moisture content (%) of the material
U = mean wind speed (m/s)

6.2.7 Wind erosion

The default emission factor for wind erosion in the EET for Mining is a constant emission of 0.2 kg/ha/hr which, while potentially suitable for the calculation of annual emissions, is not suitable for inclusion in atmospheric modelling due to the constant nature of the emission. This assessment used the modified Shao equation to estimate hourly varying emissions due to wind erosion based on the equation outlined in SKM (2005) which is represented as Equation 2

Equation 3: $$\boldsymbol{PM_{10_{(g/m^2/s)}} = k \times \left\{WS^3 \times \left(1 - \left(WS_0{}^2/WS^2\right)\right)\right\}} \quad WS > WS_O$$

$$\boldsymbol{PM_{10_{(g/m^2/s)}} = 0} \quad WS < WS_O$$

Where:
WS = wind speed
WS_0 = wind speed threshold for particulate matter lift off (m/s)
k = constant

For this assessment the following parameters were used, resulting in an overall PM_{10} emission rate of 0.4 kg/ha/hr for open areas within the mining areas:

WS_0 = 6 m/s
K = 2.88 x 10^{-7}

The emission factor for TSP is taken as twice that of the PM_{10} emissions while $PM_{2.5}$ emissions are taken as 30% of the PM_{10} emissions.

Wind erosion from the ROM stockpile have been accounted for.

6.3 Emission Controls

Emissions controls (for dust abatement) were included in the emissions estimation, based on information provided and assumptions based on standard operating practices. These controls are summarised in Table 6-2, along with the percentage reduction applied to each source type.

Table 6-2 Project dust abatement in place (included in model)

Location	Dust abatement description	Emission reduction	Activity
Haul roads	Level 1 watering using saline water	75%	Wheel-generated dust
ROM PAD	Water spray	50%	Wind erosion from stockpile
			Unloading ore from truck
			FEL – push ore delivered/feed crusher
Crushers	Water spray	50%	Primary crusher
			Secondary crusher
			Tertiary crusher (1 and 2)
Stacker	Water spray (50%) Luffing stacker (25%)	62.5%	Stacker
Transfer station	Water spray	50%	Material transfer
Ore stockpile	Water spray	50%	FEL – back up stockpile
Open areas	Water spray	50%	Wind erosion from exposed area
Haul roads	Level 1 watering using saline water	75%	Wheel-generated dust

6.4 Emission Rates

A summary of the estimated annual emissions is shown in Table 6-3. The statistics of the variable emission files, for all sources, are presented in Appendix B.

Table 6-3 Estimate of TSP, PM_{10}, and $PM_{2.5}$ emissions from Marvel Loch Crushing Circuit (kg/yr)

Project Activity		TSP	PM_{10}	$PM_{2.5}$
Wheel-generated from ore transport	Transport Corridor	9,717	2,868	860
	Haul Road 1	78,142	23,064	6,919
	Haul Road 2	55,186	16,289	4,887
Truck unloading		13,140	4,709	1,413
Front end loader	push ore being delivered	15,208	7,300	2,190
	feed primary crusher	27,375	13,140	3,942
	back up ore stockpile	4,106	1,971	591
Crushing	Primary Crusher	2,957	1,314	394
	Secondary Crusher	2,070	920	276
	Tertiary Crusher 1	1,478	657	197
	Tertiary Crusher 2	1,478	657	197
Screening	Secondary screening	27,375	9,417	2,825
	Tertiary product screen	27,375	9,417	2,825
Stacker	Luft stacker	4,106	1,971	591
Transfer station	Transfer station	3,285	1,396	419
Wind erosion	ROM stockpile	67	34	10
	TOTAL	269,785	95,014	28,504

7 Predicted air quality impact

Comparison of the modelled results to the assessment criteria is intended to provide an objective evaluation of the potential impact of the operations at the nearest sensitive receptors. Modelled ground-level concentrations for key air pollutants have been compared to ambient air quality assessment criteria to determine the potential impacts.

To assess the potential air quality impact, ground-level concentrations of TSP, PM_{10}, and $PM_{2.5}$ are compared to the following criteria:

- Kwinana EPP for TSP of 90 µg/m³
- NEPM 24-hour average of 50 µg/m³ for PM_{10}
- NEPM annual average of 25 µg/m³ for PM_{10}
- NEPM 24-hour average of 25 µg/m³ for $PM_{2.5}$
- NEPM annual average of 8 µg/m³ for $PM_{2.5}$

In addition, the amenity guideline of 2 g/m²/month for dust deposition rate has also been adopted in this assessment.

The predicted ground level concentrations of particles as TSP, PM_{10}, and $PM_{2.5}$ at key sensitive receptor locations are presented. The modelled concentration statistics (i.e. maximum, 99th percentile, 95th percentile, 90th percentile and 70th percentile) are tabulated. Background air quality have also been accounted for.

Contour plots showing the spatial distribution of TSP, PM_{10}, and $PM_{2.5}$ concentrations predicted across the modelling domain, with and without the inclusion of background concentrations, are also presented.

7.1 TSP

The model results for TSP, with and without background concentrations, are summarised in Table 7-2. The predicted concentrations indicate that maximum and percentile (99^{th}, 95^{th}, 90^{th} and 70^{th}) 24-hour average ground-level TSP concentrations predicted due to the proposed operations, with and without background concentrations, **comply** with the air quality assessment criteria of 90 µg/m³ at all sensitive receptors.

Contour plots of the maximum 24-hour TSP concentrations predicted across the modelling domain due to the proposed operations, with and without background concentrations, are presented in Figure 7-1 and Figure 7-2, respectively. The red line represents the air quality assessment criteria of 90 µg/m³.

Table 7-1 Statistics for predicted TSP concentrations

Id	Without background					With background (24-hour: 30.6 µg/m³)				
	Maximum	Percentile				Maximum	Percentile			
		99th	95th	90th	70th		99th	95th	90th	70th
R1	7.3	5.0	2.8	2.0	1.0	37.9	35.6	33.4	32.6	31.6
R2	9.7	8.0	4.1	3.1	1.5	40.3	38.6	34.7	33.7	32.1
R3	25.8	23.7	10.6	7.2	4.1	56.4	54.3	41.2	37.8	34.7
R4	30.4	27.3	12.3	8.5	4.7	61.0	57.9	42.9	39.1	35.3
R5	27.3	24.1	11.7	8.6	4.6	57.9	54.7	42.3	39.2	35.2
R6	34.3	29.4	12.8	9.1	5.1	64.9	60.0	43.4	39.7	35.7
R7	34.0	29.9	13.9	9.4	5.3	64.6	60.5	44.5	40.0	35.9
R8	37.0	32.1	15.0	10.2	5.9	67.6	62.7	45.6	40.8	36.5
R9	31.8	25.4	12.9	10.1	5.1	62.4	56.0	43.5	40.7	35.7
R10	34.7	27.7	14.0	10.9	5.7	65.3	58.3	44.6	41.5	36.3
R11	24.8	20.5	10.5	8.0	4.1	55.4	51.1	41.1	38.6	34.7
R12	27.8	23.0	11.7	8.9	4.6	58.4	53.6	42.3	39.5	35.2
R13	28.8	23.9	12.1	9.3	4.8	59.4	54.5	42.7	39.9	35.4
R14	32.5	27.0	13.6	10.5	5.4	63.1	57.6	44.2	41.1	36.0
R15	29.6	24.4	12.2	8.9	4.7	60.2	55.0	42.8	39.5	35.3
R16	39.7	29.4	14.4	10.6	5.5	70.3	60.0	45.0	41.2	36.1
R17	41.6	30.4	14.9	11.0	5.8	72.2	61.0	45.5	41.6	36.4
R18	48.7	34.6	17.4	12.9	6.5	79.3	65.2	48.0	43.5	37.1
R19	41.1	33.5	16.2	11.6	5.8	71.7	64.1	46.8	42.2	36.4
R20	43.0	35.4	16.7	12.0	5.9	73.6	66.0	47.3	42.6	36.5
R21	50.9	29.8	16.5	12.5	5.4	81.5	60.4	47.1	43.1	36.0
R22	39.3	26.3	11.6	9.8	4.6	69.9	56.9	42.2	40.4	35.2

Id	Without background					With background (24-hour: 30.6 µg/m³)				
	Maximum	Percentile				Maximum	Percentile			
		99th	95th	90th	70th		99th	95th	90th	70th
R23	45.4	28.3	13.0	10.3	4.8	76.0	58.9	43.6	40.9	35.4
R24	43.5	24.1	13.7	9.6	4.5	74.1	54.7	44.3	40.2	35.1
R25	39.4	23.1	12.3	8.5	4.0	70.0	53.7	42.9	39.1	34.6
R26	38.6	21.8	12.6	8.8	4.1	69.2	52.4	43.2	39.4	34.7
R27	33.9	21.1	12.1	9.1	4.1	64.5	51.7	42.7	39.7	34.7

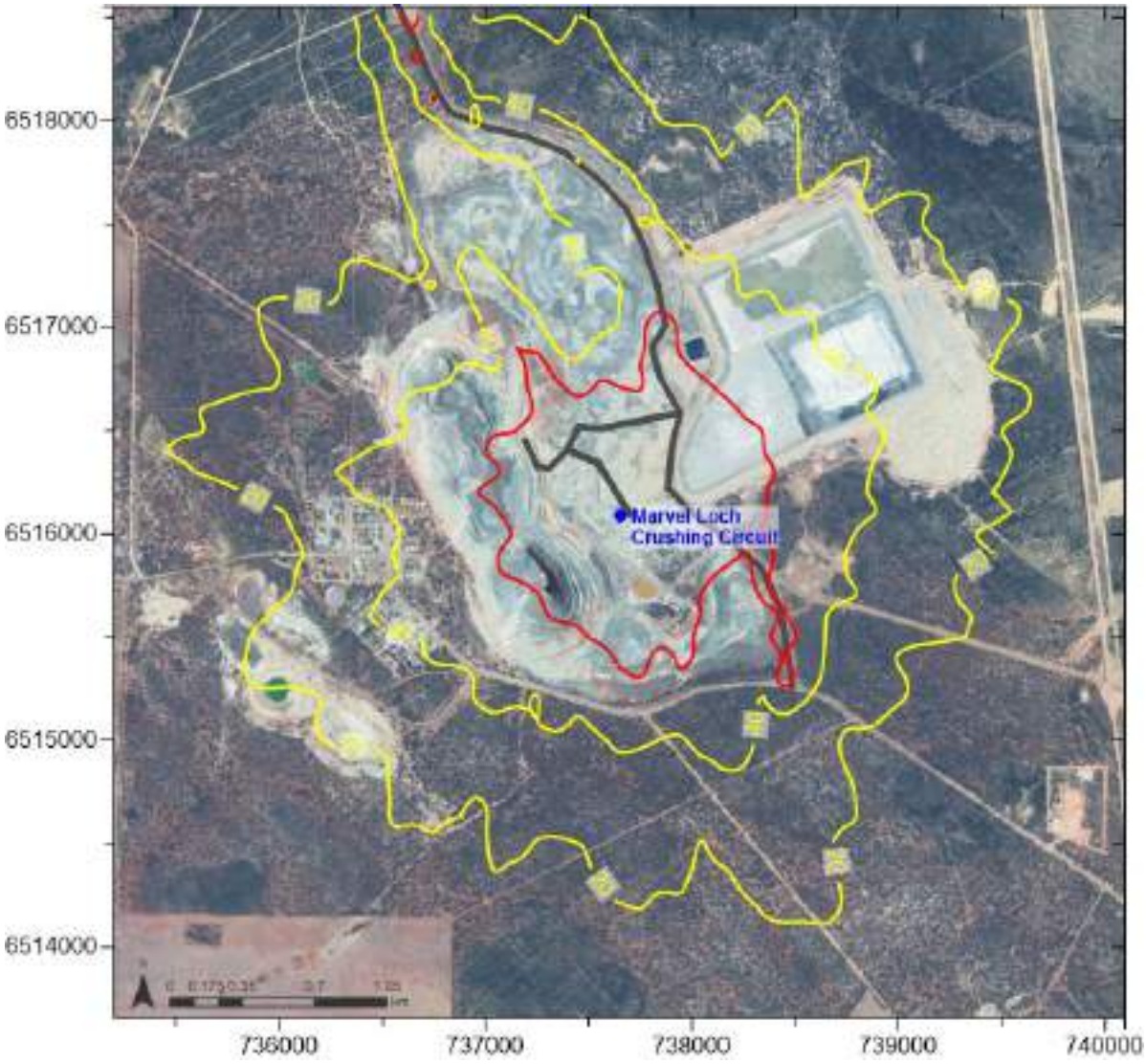


Figure 7-1 Predicted maximum 24-hour average ground-level TSP concentration contours (µg/m³) – the Project in isolation. Red line represents air quality assessment criteria of 90 µg/m³.

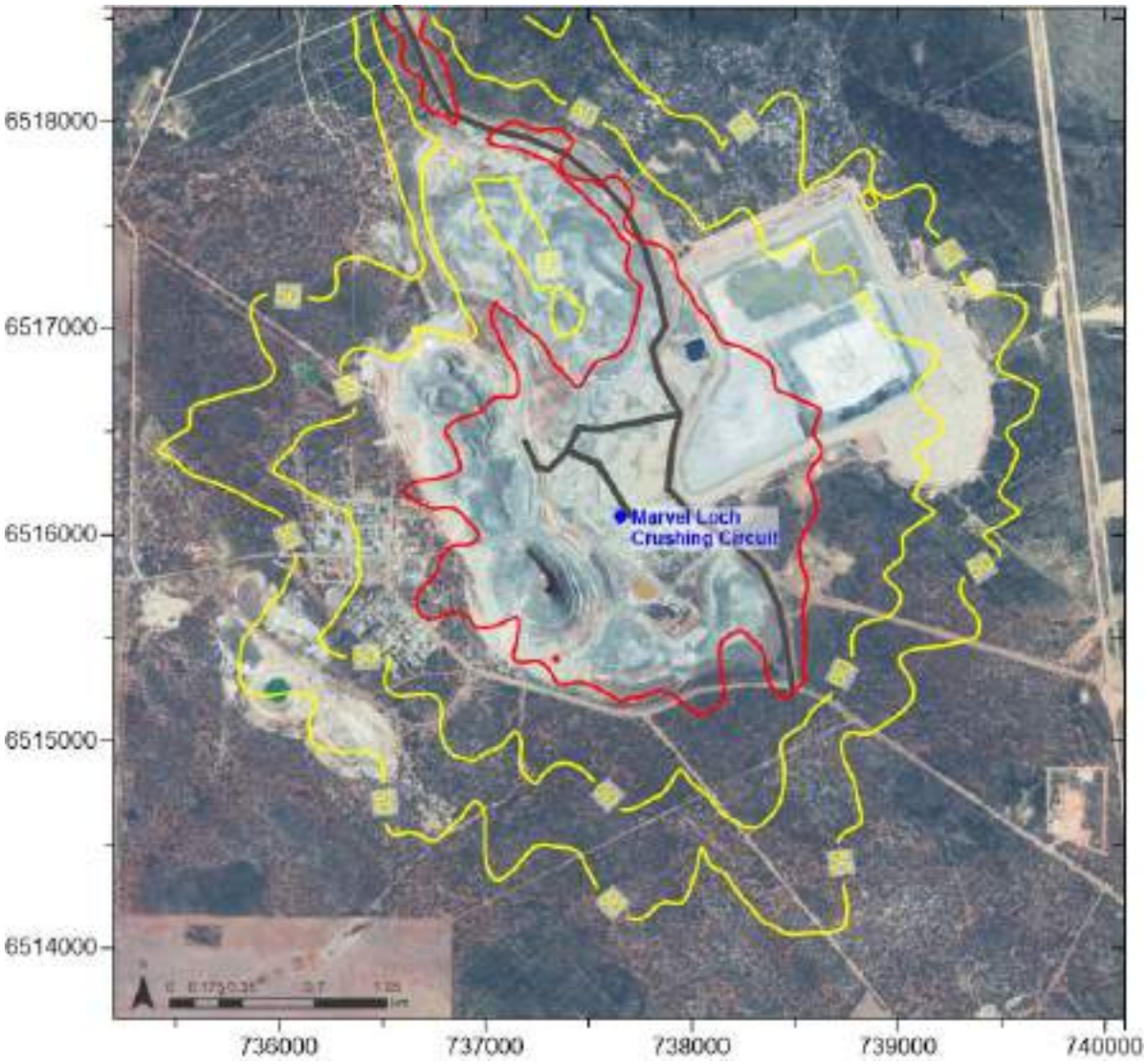


Figure 7-2 Predicted maximum 24-hour average ground-level TSP concentration contours (µg/m³) – the Project and background concentration of 30.6 µg/m³. Red line represents air quality assessment criteria of 90 µg/m³.

7.2 PM_{10}

The model results for PM_{10}, with and without background concentrations, are summarised in Table 7-2. The predicted concentrations indicate that:

- Maximum and percentile (99th, 95th, 90th and 70th) 24-hour average ground-level PM_{10} concentrations predicted due to the proposed operations, with and without background concentrations, **comply** with the air quality assessment criteria of 50 µg/m³ at all sensitive receptors.
- Annual average ground-level PM_{10} concentrations predicted due to the proposed operations, with and without background concentrations, **comply** with the air quality assessment criteria of 25 µg/m³ at all sensitive receptors.

Contour plots of the maximum 24-hour average PM_{10} concentrations predicted across the modelling domain due to the proposed operations, with and without background concentrations, are presented in Figure 7-3 and Figure 7-4, respectively. The red line represents the air quality assessment criteria of 50 µg/m³.

Contour plots of the annual average PM_{10} concentrations predicted across the modelling domain due to the proposed operations, with and without background concentrations, are presented in in Figure 7-5 and Figure 7-6, respectively. The red line represents the air quality assessment criteria of 25 µg/m³.

Table 7-2 Statistics for predicted PM_{10} concentrations

Id	Without background						With background (24-hour: 15.3 µg/m³ / annual: 12.8 µg/m³)					
	Maximum	Percentile				Annual Average	Maximum	Percentile				Annual Average
		99th	95th	90th	70th			99th	95th	90th	70th	
R1	4.9	3.4	1.8	1.3	0.7	0.6	20.2	18.7	17.1	16.6	16.0	13.4
R2	6.3	5.3	2.8	2.1	1.0	0.9	21.6	20.6	18.1	17.4	16.3	13.7
R3	16.3	14.6	6.5	4.9	2.6	2.2	31.6	29.9	21.8	20.2	17.9	15.0
R4	18.8	16.9	7.5	5.8	3.0	2.5	34.1	32.2	22.8	21.1	18.3	15.3
R5	17.0	14.7	7.7	5.5	3.0	2.5	32.3	30.0	23.0	20.8	18.3	15.3
R6	20.3	18.2	8.0	6.2	3.2	2.7	35.6	33.5	23.3	21.5	18.5	15.5
R7	20.8	18.6	8.4	6.4	3.3	2.8	36.1	33.9	23.7	21.7	18.6	15.6
R8	22.4	19.9	9.0	7.0	3.6	3.1	37.7	35.2	24.3	22.3	18.9	15.9
R9	20.1	16.3	8.6	6.8	3.3	2.8	35.4	31.6	23.9	22.1	18.6	15.6
R10	21.8	17.8	9.3	7.5	3.6	3.0	37.1	33.1	24.6	22.8	18.9	15.8
R11	16.0	12.8	6.7	5.5	2.7	2.2	31.3	28.1	22.0	20.8	18.0	15.0
R12	17.9	14.2	7.4	6.2	3.0	2.5	33.2	29.5	22.7	21.5	18.3	15.3
R13	18.5	14.7	7.8	6.4	3.1	2.6	33.8	30.0	23.1	21.7	18.4	15.4
R14	20.7	16.5	8.6	7.2	3.4	2.9	36.0	31.8	23.9	22.5	18.7	15.7
R15	19.6	15.2	8.0	5.9	3.1	2.6	34.9	30.5	23.3	21.2	18.4	15.4
R16	25.9	17.7	9.3	7.1	3.6	3.0	41.2	33.0	24.6	22.4	18.9	15.8
R17	26.9	18.3	9.6	7.3	3.7	3.1	42.2	33.6	24.9	22.6	19.0	15.9
R18	30.8	20.6	11.0	8.7	4.4	3.6	46.1	35.9	26.3	24.0	19.7	16.4
R19	26.1	18.8	9.9	7.9	3.9	3.2	41.4	34.1	25.2	23.2	19.2	16.0
R20	26.4	19.9	10.1	8.1	4.1	3.3	41.7	35.2	25.4	23.4	19.4	16.1
R21	33.9	18.8	11.1	8.1	3.6	3.1	49.2	34.1	26.4	23.4	18.9	15.9
R22	25.4	16.8	8.0	6.4	3.0	2.6	40.7	32.1	23.3	21.7	18.3	15.4

Id	Without background						With background (24-hour: 15.3 µg/m³ / annual: 12.8 µg/m³)					
	Maximum	Percentile				Annual Average	Maximum	Percentile				Annual Average
		99th	95th	90th	70th			99th	95th	90th	70th	
R23	29.5	17.9	8.7	6.9	3.2	2.8	44.8	33.2	24.0	22.2	18.5	15.6
R24	28.9	15.1	8.8	6.6	3.1	2.6	44.2	30.4	24.1	21.9	18.4	15.4
R25	26.3	14.0	8.0	5.9	2.8	2.3	41.6	29.3	23.3	21.2	18.1	15.1
R26	25.9	13.2	8.1	6.1	2.8	2.3	41.2	28.5	23.4	21.4	18.1	15.1
R27	23.1	13.6	8.2	6.1	2.8	2.3	38.4	28.9	23.5	21.4	18.1	15.1

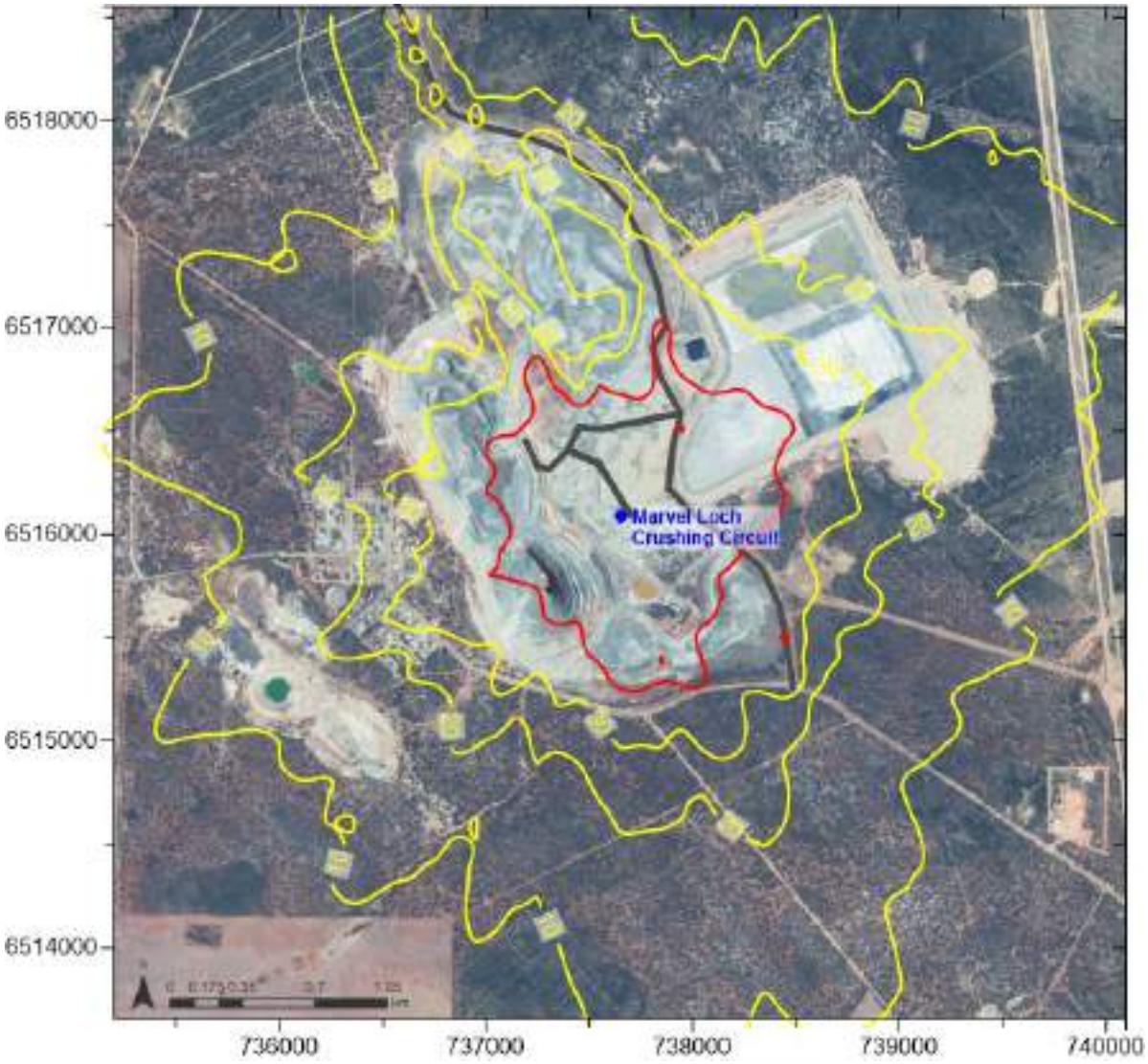


Figure 7-3 Predicted maximum 24-hour average ground-level PM_{10} concentration contours (µg/m³) – the Project in isolation. Red line represents air quality assessment criteria of 50 µg/m³.

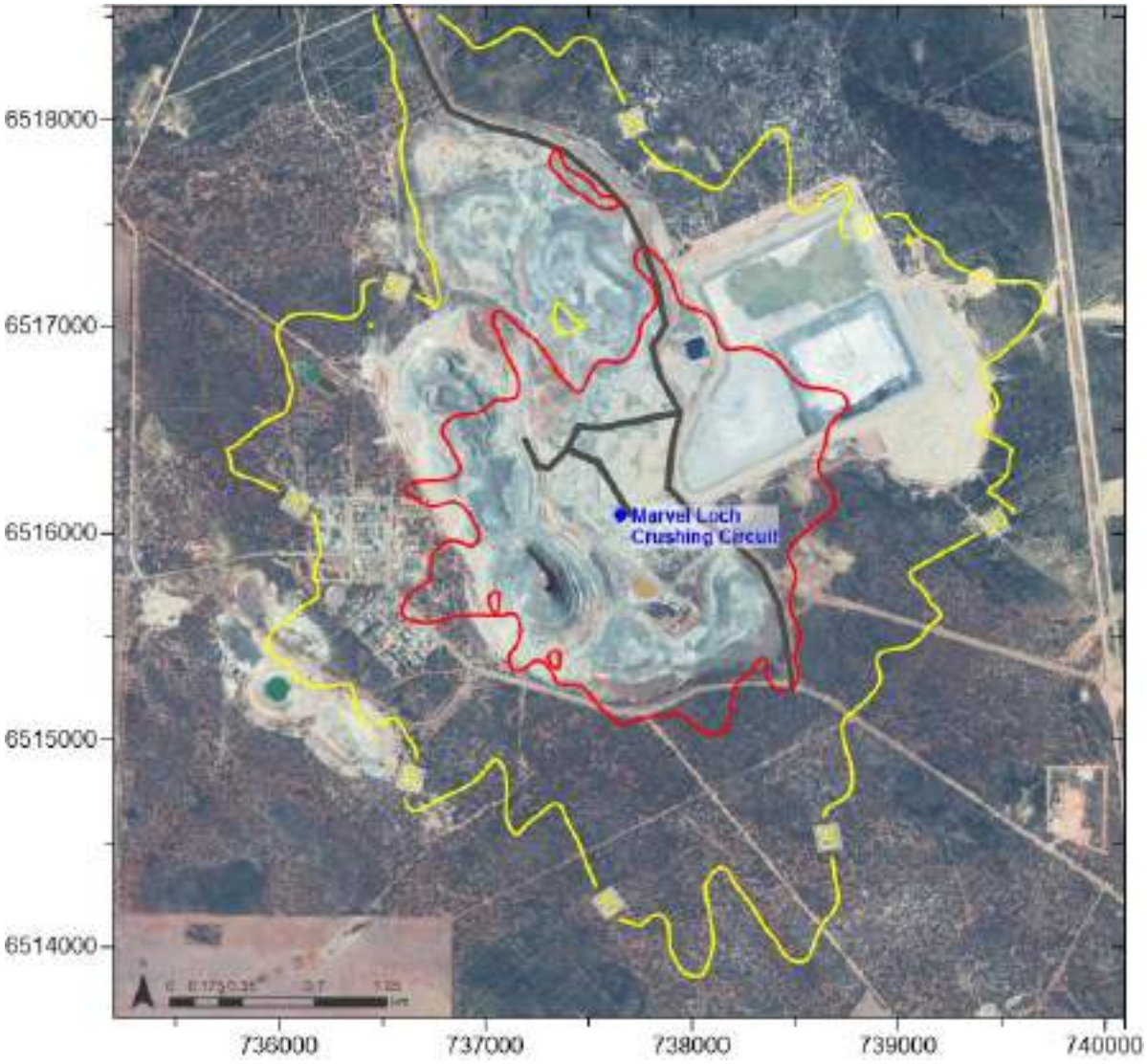


Figure 7-4 Predicted maximum 24-hour average ground-level PM_{10} concentration contours (µg/m³) – the Project and background concentration of 15.3 µg/m³. Red line represents air quality assessment criteria of 50 µg/m³.

Figure 7-5 Predicted annual average ground-level PM_{10} concentration contours (µg/m³) – the Project in isolation. Red line represents air quality assessment criteria of 25 µg/m³.

Figure 7-6 Predicted annual average ground-level PM_{10} concentration contours (µg/m³) – the Project and background concentration of 12.8 µg/m³. Red line represents air quality assessment criteria of 25 µg/m³.

7.3 $PM_{2.5}$

The model results for $PM_{2.5}$, both with and without background concentrations, are summarised in Table 7-3 The predicted concentrations indicate that:

- Maximum and percentile (99th, 95th, 90th and 70th) 24-hour average ground-level $PM_{2.5}$ concentrations predicted due to the proposed operations, with and without background concentrations, **comply** with the air quality assessment criteria of 25 µg/m³ at all sensitive receptors.
- Annual average ground-level $PM_{2.5}$ concentrations predicted due to the proposed operations, with and without background concentrations, **comply** with the air quality assessment criteria of 8 µg/m³ at all sensitive receptors.

Contour plots of the maximum 24-hour average $PM_{2.5}$ concentrations predicted across the modelling domain due to the proposed operations, with and without background concentrations, are presented in Figure 7-7 and Figure 7-8, respectively. The red line represents the air quality assessment criteria of 25 µg/m³.

Contour plots of the annual average $PM_{2.5}$ concentrations predicted across the modelling domain due to the proposed operations, with and without background concentrations, are presented in Figure 7-9 and Figure 7-10, respectively. The red line represents the air quality assessment criteria of 8 µg/m³.

Table 7-3 Statistics for predicted $PM_{2.5}$ concentrations

Id	Without background						With background (24-hour: 5.8 µg/m³ / annual: 5.1 µg/m³)					
	Maximum	Percentile				Annual Average	Maximum	Percentile				Annual Average
		99th	95th	90th	70th			99th	95th	90th	70th	
R1	1.6	1.0	0.6	0.4	0.2	0.2	7.4	6.8	6.4	6.2	6.0	5.3
R2	2.0	1.6	0.9	0.7	0.3	0.3	7.8	7.4	6.7	6.5	6.1	5.4
R3	5.0	4.5	2.0	1.6	0.8	0.7	10.8	10.3	7.8	7.4	6.6	5.8
R4	5.8	5.2	2.3	1.8	0.9	0.8	11.6	11.0	8.1	7.6	6.7	5.9
R5	5.3	4.6	2.4	1.7	1.0	0.8	11.1	10.4	8.2	7.5	6.8	5.9
R6	6.3	5.6	2.5	1.9	1.0	0.9	12.1	11.4	8.3	7.7	6.8	6.0
R7	6.4	5.7	2.6	2.0	1.0	0.9	12.2	11.5	8.4	7.8	6.8	6.0
R8	6.9	6.1	2.8	2.2	1.1	1.0	12.7	11.9	8.6	8.0	6.9	6.1
R9	6.2	5.1	2.6	2.2	1.1	0.9	12.0	10.9	8.4	8.0	6.9	6.0
R10	6.7	5.5	2.9	2.4	1.2	1.0	12.5	11.3	8.7	8.2	7.0	6.1
R11	5.0	3.9	2.1	1.8	0.9	0.7	10.8	9.7	7.9	7.6	6.7	5.8
R12	5.5	4.3	2.4	2.0	0.9	0.8	11.3	10.1	8.2	7.8	6.7	5.9
R13	5.7	4.5	2.4	2.0	1.0	0.8	11.5	10.3	8.2	7.8	6.8	5.9
R14	6.4	5.0	2.7	2.3	1.1	0.9	12.2	10.8	8.5	8.1	6.9	6.0
R15	6.1	4.8	2.5	1.9	1.0	0.8	11.9	10.6	8.3	7.7	6.8	5.9
R16	8.1	5.5	3.0	2.3	1.1	0.9	13.9	11.3	8.8	8.1	6.9	6.0
R17	8.4	5.6	3.1	2.4	1.2	1.0	14.2	11.4	8.9	8.2	7.0	6.1
R18	9.5	6.3	3.6	2.7	1.4	1.1	15.3	12.1	9.4	8.5	7.2	6.2
R19	8.1	5.8	3.1	2.5	1.2	1.0	13.9	11.6	8.9	8.3	7.0	6.1
R20	8.2	6.1	3.2	2.5	1.3	1.0	14.0	11.9	9.0	8.3	7.1	6.1
R21	10.5	5.8	3.5	2.6	1.2	1.0	16.3	11.6	9.3	8.4	7.0	6.1
R22	7.9	5.2	2.6	2.0	1.0	0.8	13.7	11.0	8.4	7.8	6.8	5.9

Id	Without background						With background (24-hour: 5.8 µg/m³ / annual: 5.1 µg/m³)					
	Maximum	Percentile				Annual Average	Maximum	Percentile				Annual Average
		99th	95th	90th	70th			99th	95th	90th	70th	
R23	9.1	5.5	2.8	2.2	1.0	0.9	14.9	11.3	8.6	8.0	6.8	6.0
R24	9.0	4.7	2.8	2.1	1.0	0.8	14.8	10.5	8.6	7.9	6.8	5.9
R25	8.2	4.3	2.6	1.9	0.9	0.7	14.0	10.1	8.4	7.7	6.7	5.8
R26	8.1	4.1	2.6	1.9	0.9	0.7	13.9	9.9	8.4	7.7	6.7	5.8
R27	7.2	4.2	2.6	1.9	0.9	0.7	13.0	10.0	8.4	7.7	6.7	5.8

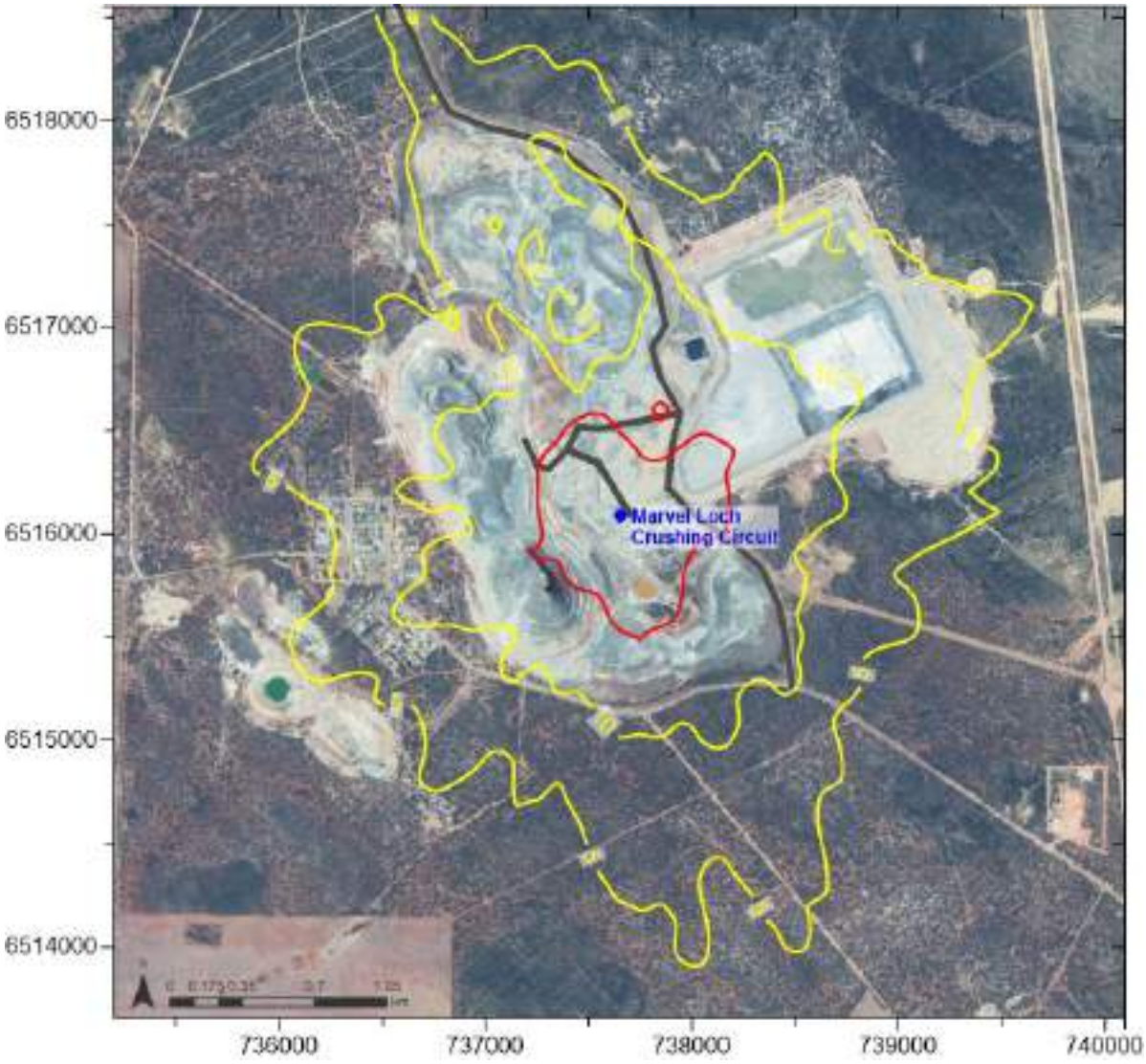


Figure 7-7 Predicted maximum 24-hour average ground-level $PM_{2.5}$ concentration contours (µg/m³) the Project in isolation. Red line represents air quality assessment criteria of 25 µg/m³.

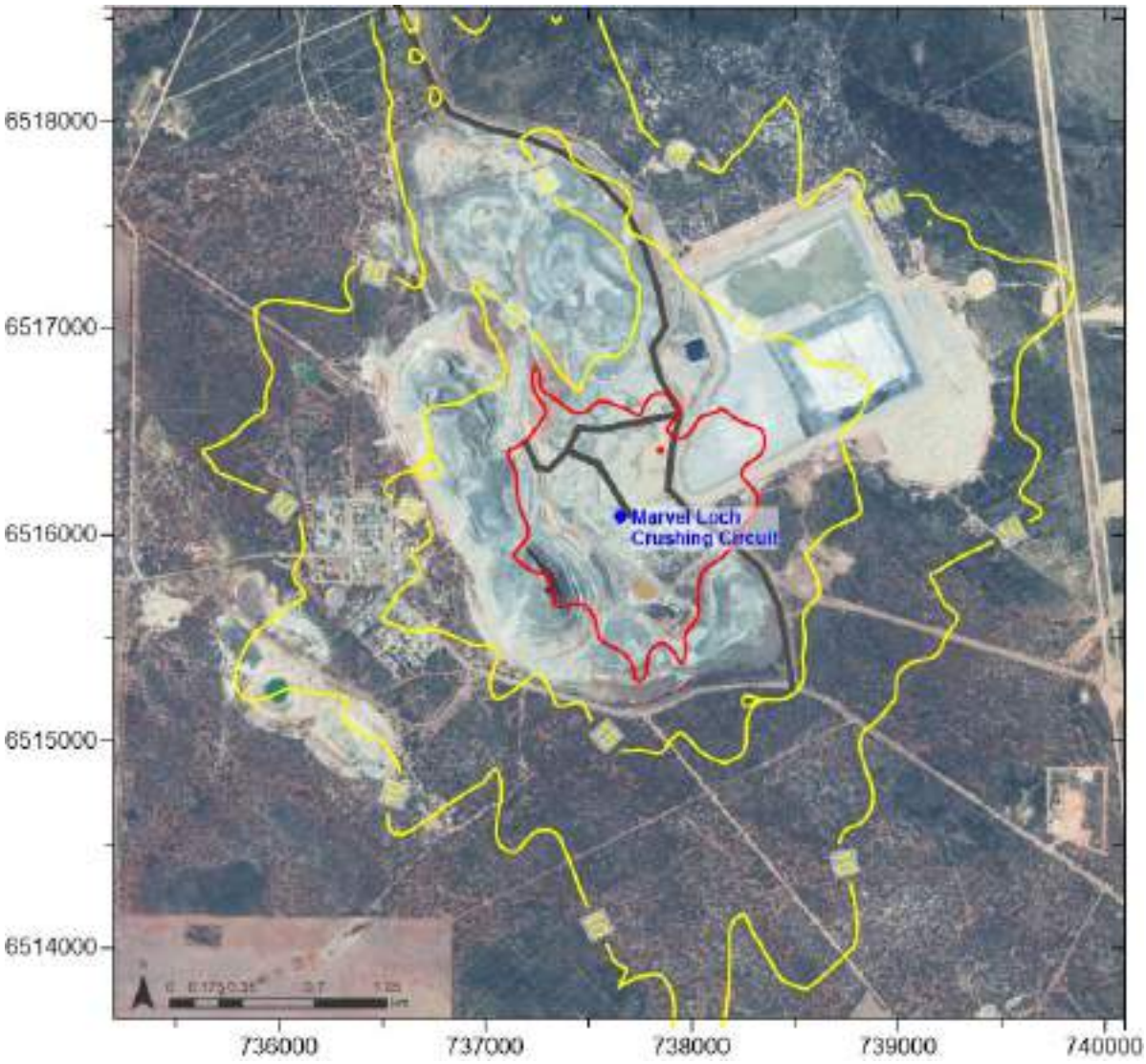


Figure 7-8 Predicted maximum 24-hour average ground-level $PM_{2.5}$ concentration contours (µg/m³) – the Project and background concentration of 5.8 µg/m³. Red line represents air quality assessment criteria of 25 µg/m³.

Figure 7-9 Predicted annual average ground-level $PM_{2.5}$ concentration contours (µg/m³) – the Project in isolation. Red line represents air quality assessment criteria of 8 µg/m³.

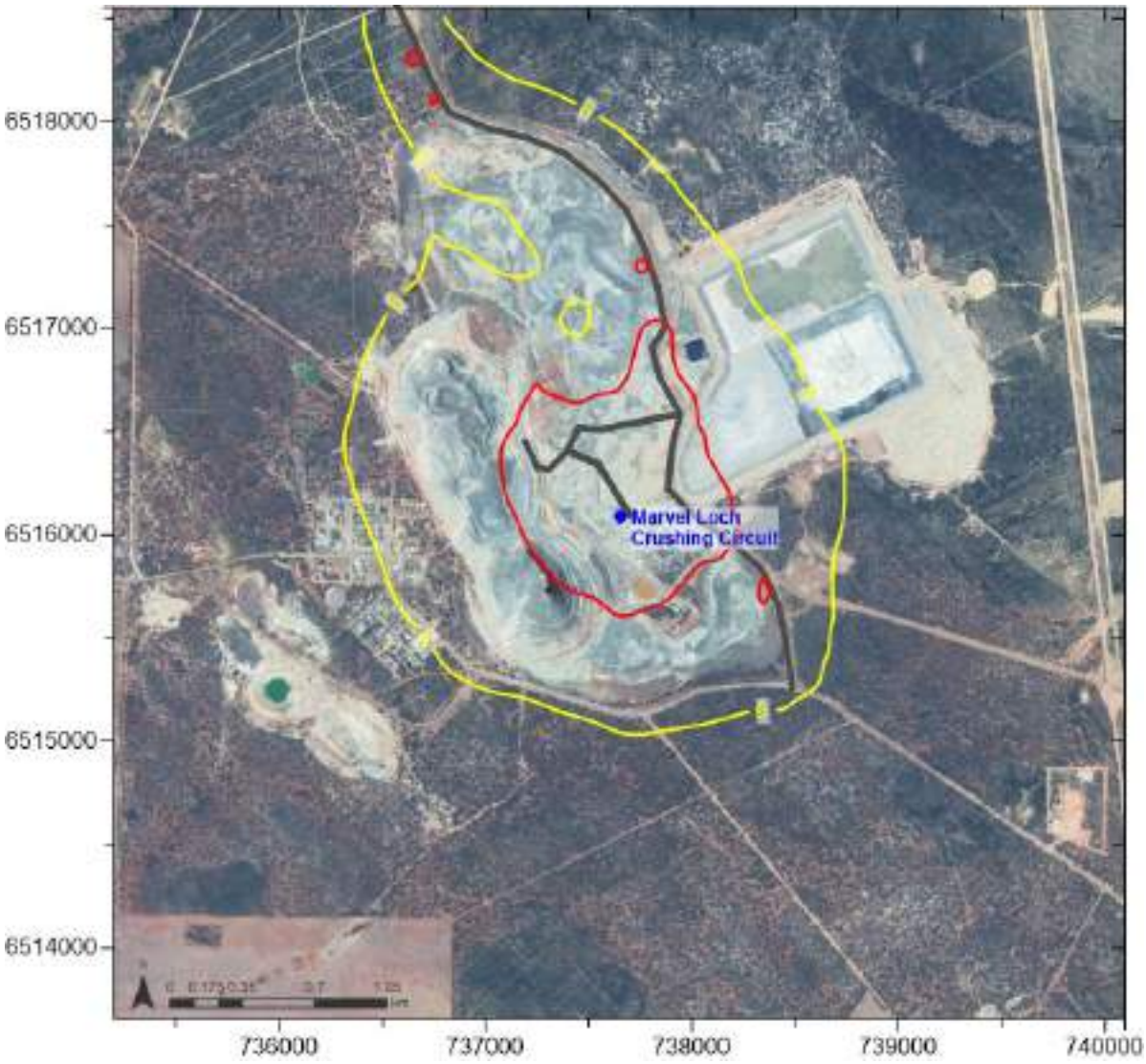


Figure 7-10 Predicted annual average ground-level $PM_{2.5}$ concentration contours (µg/m³) – the Project and background concentration of 5.1 µg/m³. Red line represents air quality assessment criteria of 8 µg/m³.

7.4 Dust deposition rate

The model results for dust deposition rates due to the proposed operations are summarised in Table 7-4. The predicted concentrations indicate that maximum dust deposition rates are well within the dust deposition rate guideline at all sensitive receptors.

Contour plot of the maximum monthly dust deposition rate predicted across the modelling domain due to the proposed operations is presented in Figure 7-11.

Table 7-4 Dust deposition rate (g/m²/month)

Id	Dust deposition rate
R1	0.05
R2	0.07
R3	0.21
R4	0.25
R5	0.24
R6	0.27
R7	0.29
R8	0.31
R9	0.28
R10	0.31
R11	0.22
R12	0.25
R13	0.26
R14	0.29
R15	0.26
R16	0.31
R17	0.33
R18	0.39
R19	0.34
R20	0.36
R21	0.31
R22	0.25
R23	0.28
R24	0.26
R25	0.23
R26	0.23
R27	0.22

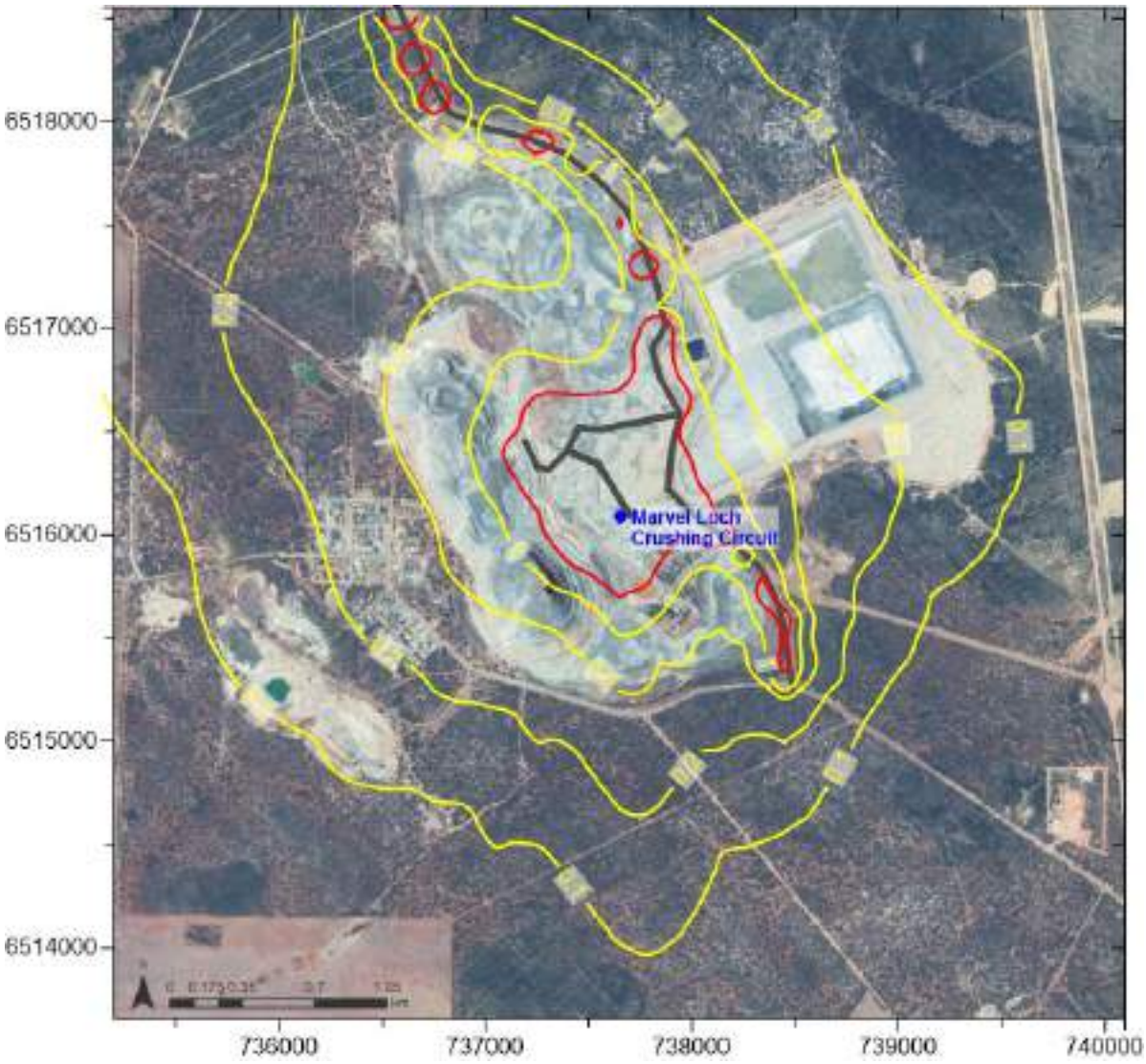


Figure 7-11 Predicted maximum monthly dust deposition rate contours (g/m²/month) – the Project in isolation. Red line represents dust deposition rate guideline of 2 g/m²/month.

8 Conclusions

An air quality assessment was conducted to determine potential impacts associated with proposed operations of the Marvel Loch Crushing Circuit, to be installed at the Marvel Loch Processing Plant. The crushing circuit aims to process 6,000 tonnes per day of ore, equivalent to 2.190 million tonnes per annum (Mtpa) sourced from local underground and open-cut mines. The ore will be transported from the underground mine using a transport corridor. Ore sourced from open-cut mines will be transported through two haul roads using road trains. Activities expected to generate dust emissions include wheel-generated dust from ore transport, front-end loaders, crushers, screens, and wind erosion from stockpiles. Ore transport and most equipment will operate 75% of the time.

The potential impacts were determined through a dispersion modelling study, which incorporated site-specific meteorological data, emissions information, source characteristics, and the location of model receptors. Emission rates were estimated using recognised and accepted methods of emissions estimation, which included published emission factors from the NPI Emission Estimation Technique Manual for Mining (EA, 2012) and USEPA AP42 documents.

A site-specific meteorological dataset was generated using the AERMET meteorological processor, which used a combination of observations at the Bureau of Meteorology (BoM) automated weather station (AWS) at Southern Cross (Station ID 12320) and meteorological data produced by the prognostic model TAPM. These were then used to drive the AERMOD dispersion model in order to predict ground-level concentrations of pollutants at identified sensitive receptors and the surrounding environment.

Ground-level TSP, PM_{10}, and $PM_{2.5}$ concentrations predicted at sensitive receptors and the surrounding environment were compared with the relevant air quality assessment criteria. These were presented in isolation, and with the inclusion of background concentrations including existing sources in the area.

The key findings of the assessment are:

- Ground-level TSP concentrations predicted due to Marvel Loch Crushing Circuit operations, with and without background concentrations, **comply** with the air quality assessment criteria at all sensitive receptors.
- Ground-level PM_{10} concentrations predicted due to Marvel Loch Crushing Circuit operations, with and without background concentrations, **comply** with the air quality assessment criteria at all sensitive receptors.
- Ground-level $PM_{2.5}$ concentrations predicted due to Marvel Loch Crushing Circuit operations, with and without background concentrations, **comply** with the air quality assessment criteria at all sensitive receptors.

Furthermore, dust deposition rates predicted at all sensitive receptors are well within the guideline for dust deposition.

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10 Glossary

Acronym	Meaning
BoM	Bureau of Meteorology
C	Degrees Celsius (temperature)
DWER	Department of Water and Environmental Regulation
EET	Emissions Estimation Technique
ETA	Environmental Technologies& Analytics Pty Ltd
FEL	Front end loader
GLC	Ground Level Concentration
h/yr	Hours per year
kg	kilogram
kg/t	kilogram per tonne
kg/yr	kilograms per year
kPa	kiloPascals
km	kilometre
m	metre
m/s	metres per second
mm	millimetre
Mt	Million tonnes
Mtpa	Million tonnes per annum
NEPC	National Environment Protection Council
NEPM	National Environmental Protection Measure
NPI	National Pollutant Inventory
PM	Particulate matter, small particles and liquid droplets that can remain suspended in air.
PM_{10}	Particulate matter with an aerodynamic diameter of 10 µm or less.
tpa	tonnes per annum
TSSC	Threatened Species Scientific Committee
t/h	tonnes per hour
USEPA	United States Environment Protection Agency
Vic EPA	Victorian Environment Protection Authority
$\mu g/m^3$	micro grams (one millionth of a gram) per cubic metre
µm	micrometre

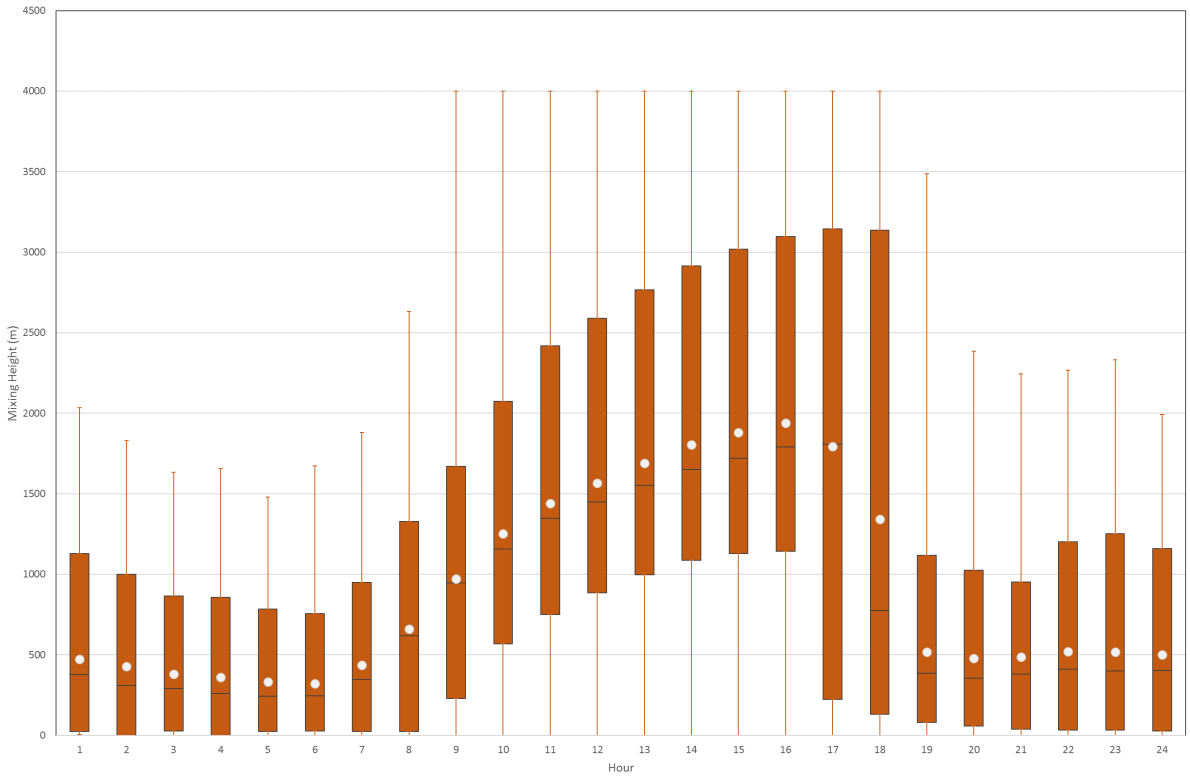
11 Appendices

Appendix A– Meteorology

A.1: Mixing Height

Mixing height is the depth of the atmospheric surface layer beneath an elevated temperature inversion. It is an important parameter within air pollution meteorology. Vertical diffusion or mixing of a plume is limited by the mixing height, as the air above this layer tends to be stable, with restricted vertical motion.

Within AERMET the mixing height is formed through mechanical means (wind speed) at night and through a mixture of mechanical and convective means (wind speed and solar radiation) during the day. During the night and early morning when the convective mixed layer is absent or small, the full depth of the planetary boundary layer (PBL) may be controlled by mechanical turbulence. During the day, the height of the PBL during convective conditions is then taken as the maximum of the estimated (or measured if available) convective boundary layer height and the estimated (or measured if available) mechanical mixing height.



Appendix Figure 1 Simulated annual statistics of hourly mixing heights

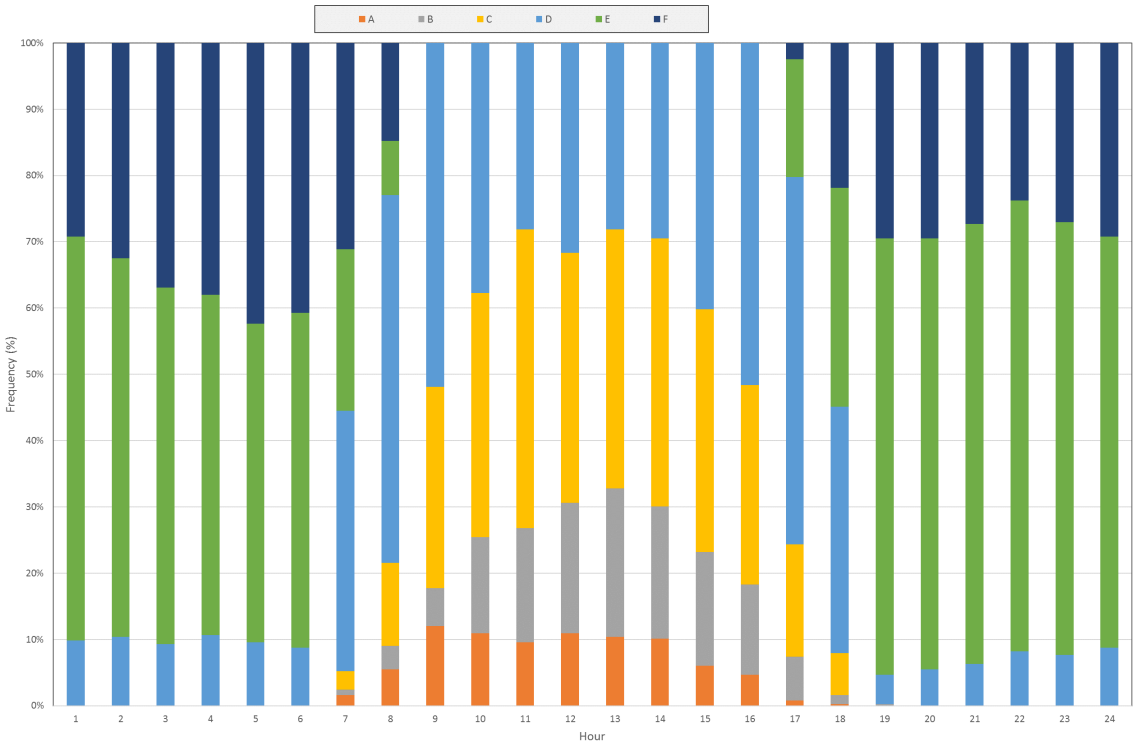
A.2: Stability

An important aspect of pollutant dispersion is the level of turbulence in the lowest 1 km or so of the atmosphere, known as the Planetary Boundary Layer (PBL). Turbulence controls how effectively a plume is diffused into the surrounding air and hence diluted. It acts by increasing the cross-sectional area of the plume due to random motions. With stronger turbulence, the rate of plume diffusion increases. Weak turbulence limits diffusion and contributes to high plume concentrations downwind of a source.

Turbulence is generated by both thermal and mechanical effects to varying degrees. Thermally driven turbulence occurs when the surface is being heated, in turn transferring heat to the air above by convection. Mechanical turbulence is caused by the frictional effects of wind moving over the earth's surface and depends on the roughness of the surface as well as the flow characteristics.

Turbulence in the boundary layer is influenced by the vertical temperature gradient, which is one of several indicators of stability. Plume models use indicators of atmospheric stability in conjunction with other meteorological data to estimate the dispersion conditions in the atmosphere.

Stability can be described across a spectrum ranging from highly unstable through neutral to highly stable. A highly unstable boundary layer is characterised by strong surface heating and relatively light winds, leading to intense convective turbulence and enhanced plume diffusion. At the other extreme, very stable conditions are often associated with strong temperature inversions and light winds, which commonly occur under clear skies at night and in the early morning. Under these conditions, plumes can remain relatively undiluted for considerable distances downwind. Neutral conditions are linked to windy and/or cloudy weather, and short periods around sunset and sunrise, when surface rates of heating or cooling are very low.



Appendix Figure 2 Simulated annual statistics of hourly stability

Appendix B – Emission Rates

B.1: Variable emissions file – wind erosion sources

Appendix Table 1 Statistical summary of hourly varying TSP, PM_{10}, and $PM_{2.5}$ emission rates (g/s) from wind erosion sources

	Pollutant	Maximum	99th Percentile	95th Percentile	90th Percentile	70th Percentile	Average
SP_ROM	TSP	0.1323	0.0349	0.0134	0.0065	0.0000	0.0021
	PM_{10}	0.0662	0.0174	0.0067	0.0032	0.0000	0.0011
	$PM_{2.5}$	0.0198	0.0052	0.0020	0.0010	0.0000	0.0003

Notes:

1. WD1 and WD2 refer to exposed areas used as waste dump for Jacoletti Underground Mine.

B.2: Variable emissions file – ore transport

Appendix Table 2 TSP, PM_{10}, and $PM_{2.5}$ emission rates (g/s) for wheel-generated dust from ore transport

Type	Source Id	Modelled				TSP (g/s)		PM_{10} (g/s)		$PM_{2.5}$ (g/s)	
		# sources	days/yr	hrs/day	hrs/yr	total [1]	per source	total [1]	per source	total [1]	per source
Transport corridor [2]	TC01 – TC05	5	365	18	6,570	0.41	8.22E-02	0.12	2.43E-02	0.04	7.28E-03
Haul Road 1 [2]	HRA01 – HRA21	21	365	18	6,570	3.30	1.57E-01	0.98	4.64E-02	0.29	1.39E-02
Haul Road 2 [2]	HRB01 – HRB15	15	365	18	6,570	2.33	1.56E-01	0.69	4.59E-02	0.21	1.38E-02

Notes:

1. Total emission rates refer to the emission rates for each hour modelled from entire section of unpaved roads modelled.
2. Modelled for a total of 18 hours per day (randomised) at any time.

B.3: Variable emissions file – crushing facility

Appendix Table 3 TSP, PM_{10}, and $PM_{2.5}$ emission rates (g/s) for wheel-generated dust from Marvel Loch Crushing Circuit

Type	Source Id	Modelled			Emission rate (g/s)		
		days/yr	hrs/day	hrs/yr	TSP	PM_{10}	$PM_{2.5}$
Truck unloading ore	BN01	365	18 [1]	6,570	5.56E-01	1.99E-01	5.97E-02
FEL – push ore being delivered	FEL01	365	10 [2]	3,650	1.16E+00	5.56E-01	1.67E-01
FEL – feed primary crusher	FEL02	365	18 [1]	6,570	1.16E+00	5.56E-01	1.67E-01
Primary crusher	CR01	365	18 [1]	6,570	1.25E-01	5.56E-02	1.67E-02
Secondary screen	SC02	365	18 [1]	6,570	1.16E+00	3.98E-01	1.19E-01
Secondary crusher	CR02	365	18 [1]	6,570	8.75E-02	3.89E-02	1.17E-02
Tertiary crusher 1	CR03	365	18 [1]	6,570	6.25E-02	2.78E-02	8.33E-03
Tertiary crusher 2	CR04	365	18 [1]	6,570	6.25E-02	2.78E-02	8.33E-03
Tertiary product screen	SC03	365	18 [1]	6,570	1.16E+00	3.98E-01	1.19E-01
FEL – backup ore stockpile	FEL03	365	18 [1]	6,570	1.74E-01	8.33E-02	2.50E-02
Stacker	STK01	365	18 [1]	6,570	1.39E-01	5.90E-02	1.77E-02
Transfer station	TS01	365	18 [1]	6,570	3.49E-02	7.87E-02	2.36E-02

Notes:

1. Modelled for a total of 18 hours per day (randomised) at any time.
2. Modelled for a total of 10 hours per day (randomised) at any time.

Appendix C – Emission Parameters

Appendix Table 4 Emission parameters for each volume source

Type	Source Id	# of Sources	Release height (m)	Sigma Y (m)	Sigma Z (m)
Wheel-generated dust from ore transport	TC01 – TC05	5	4.1	16.7	3.8
	HRA01 – HRA21	21	4.1	16.7	3.8
	HRB01 – HRB15	15	4.1	16.7	3.8
Truck unloading ore	BN01	1	3	30	1.4
FEL – push ore being delivered	FEL01	1	6	6.98	2.79
FEL – feed primary crusher	FEL02	1	6	6.98	2.79
FEL – backup ore stockpile	FEL03	1	6	6.98	2.79
Primary crusher	CR01	1	4	1.9	1.86
Secondary crusher	CR02	1	4	1.9	1.86
Tertiary crusher 1	CR03	1	4	1.9	1.86
Tertiary crusher 2	CR04	1	4	1.9	1.86
Secondary screen	SC02	1	4	1.9	1.86
Tertiary product screen	SC03	1	4	1.9	1.86
Stacker	STK01	1	8	4.7	3.7
Transfer station	TS01	1	6	6.98	2.79
Wind erosion – ROM stockpile	SP_ROM	1	1.5	3.23	0.7

Appendix Table 5 Source locations

Type	Source Id	Easting	Northing
Haul from underground mine (Transport Corridor)	TC01	737219.16	6516390.98
	TC02	737276.48	6516322.19
	TC03	737350.13	6516361.44
	TC04	737469.66	6516378.34
	TC05	737619.60	6516223.33
Haul from open-cut mine (Haul Road 1)	HRA01	736605.46	6518492.77
	HRA02	736688.72	6518311.19
	HRA03	736774.86	6518131.15
	HRA04	736916.38	6518006.19
	HRA05	737106.37	6517945.77
	HRA06	737295.71	6517883.77
	HRA07	737465.55	6517781.73
	HRA08	737611.97	6517646.19
	HRA09	737723.21	6517482.95
	HRA10	737798.24	6517297.89
	HRA11	737850.56	6517105.28
	HRA12	737837.33	6516956.04
	HRA13	737891.52	6516674.06
	HRA14	737823.55	6516833.14
	HRA15	737842.13	6516566.29
	HRA16	737645.95	6516527.42
	HRA17	737500.39	6516514.93
	HRA18	737424.32	6516464.14
	HRA19	737469.66	6516373.52
	HRA20	737597.44	6516255.35
	HRA21	737673.27	6516134.13
Haul from open-cut mine (Haul Road 2)	HRB01	738470.68	6515354.88
	HRB02	738439.84	6515552.39
	HRB03	738379.48	6515741.48
	HRB04	738263.37	6515899.29
	HRB05	738106.37	6516022.41
	HRB06	737953.38	6516149.74
	HRB07	737892.05	6516320.53
	HRB08	737920.49	6516503.37

Type	Source Id	Easting	Northing
Haul from open-cut mine (Haul Road 2)	HRB09	737842.13	6516566.29
	HRB10	737645.95	6516527.42
	HRB11	737500.39	6516514.93
	HRB12	737424.32	6516464.14
	HRB13	737469.66	6516373.52
	HRB14	737597.44	6516255.35
	HRB15	737673.27	6516134.13
Trucking unloading	BN01	737675.32	6516118.77
FEL – push ore being delivered	FEL01	737679.14	6516119.94
FEL – feed primary crusher	FEL02	737672.61	6516113.50
Primary crusher	CR01	737667.38	6516106.95
Secondary screen	SC02	737644.45	6516071.85
Secondary crusher	CR02	737666.67	6516058.09
Tertiary crusher 1	SC03	737636.69	6516076.31
Tertiary crusher 2	CR03	737613.14	6516096.24
Tertiary product screen	CR04	737606.79	6516087.25
FEL – backup ore stockpile	FEL03	737668.09	6515992.54
Stacker	STK01	737683.26	6515973.68
Transfer station	TS01	737722.33	6516004.07
ROM stockpile	SP_ROM	737677.26	6516117.73

Appendix D – Model input file

```
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   RUNORNOT RUN
   ERRORFIL SensRec.LST
   LOW_WIND 0.4 0.5 1.0
CO FINISHED

SO STARTING

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SRCPARAM SC03     0.00 4.00 1.90 1.86
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   PLOTFILE ANNUAL ALL TSP_Avg_Annual_SensRec.DAT 33

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APPENDIX D

Surface Water Assessment

Level 9, Suite 2, 109 St Georges Terrace
Perth WA 6000

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www.emmconsulting.com.au

29 October 2020

Elina Vuorenmaa
Senior Approvals Advisor
Barto Gold Mining Pty Ltd
Level 3, 66 Kings Park Road
West Perth WA 6005

Re: Marvel Loch replacement crushing circuit - surface water management plan

Dear Elina,

EMM Consulting Pty Limited (EMM) is pleased to provide Barto Gold Mining Pty Ltd (Barto) with this letter report summarising the surface water management plan and recommendations to support a License Amendment Application (LAA) for a replacement crushing circuit at the Marvel Loch mine operations.

This assessment is directly related to the audit of surface water management around the processing plant and administration areas documented in a separate report prepared by EMM (2020). The surface water audit request from Department of Water and Environment (DWER) was triggered by an uncontrolled release event from the site which occurred following a significant storm event on 25 February 2020. This event was traced back to buried pipe works linking the site to the downstream environment.

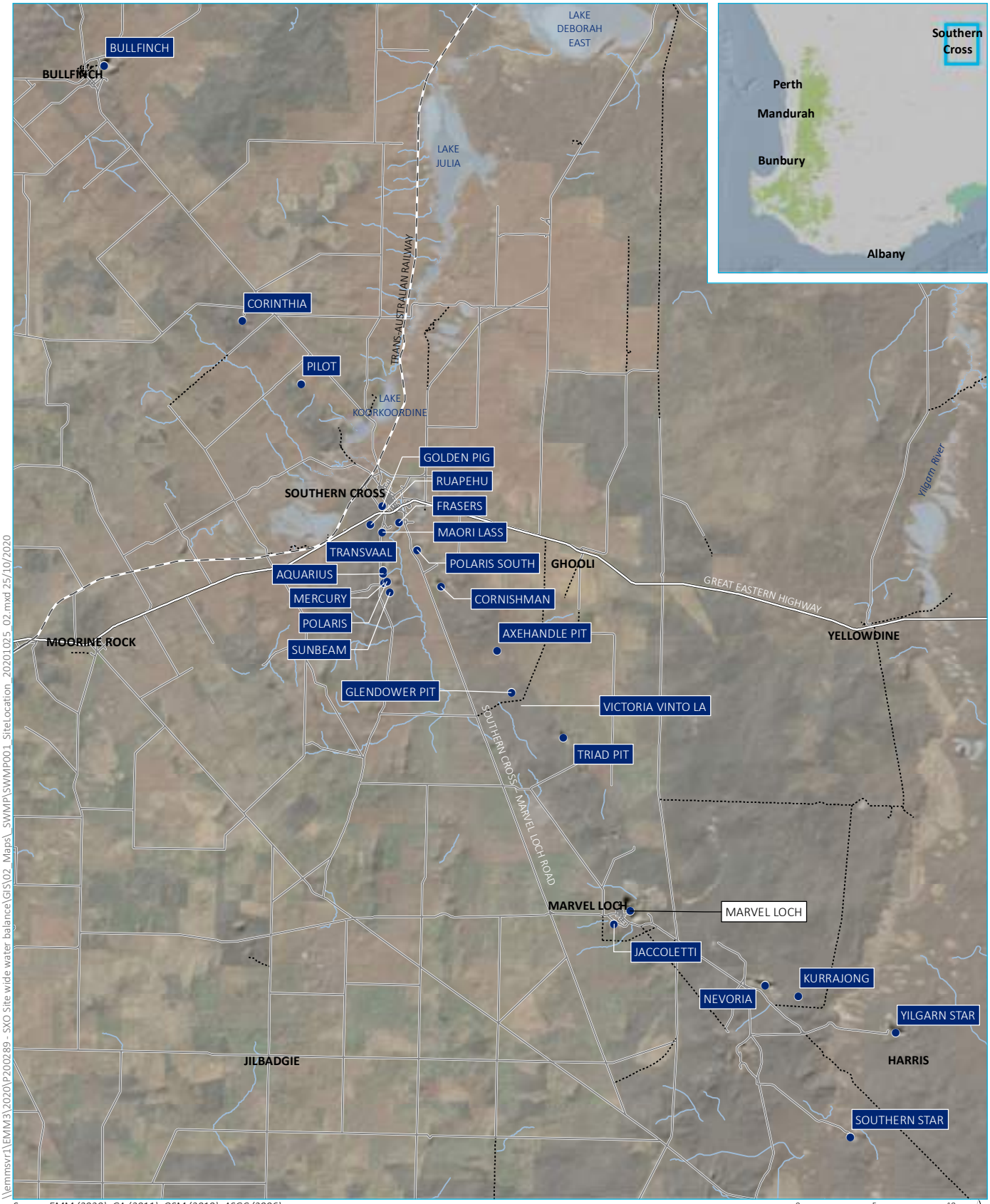
1 Introduction

1.1 Overview

The Marvel Loch mine site and mineral processing centre is located approximately 30 kilometres (km) southeast of Southern Cross in the Yilgarn Shire of Western Australia. At a broader regional catchment scale, the site is in the Lake Julia sub-catchment which forms part of the regional Yilgarn River catchment in the western extent of the Avon River catchment (refer to Figure 1.1).

Marvel Loch mine site (presented in Figure 1.2) comprises of the following infrastructure:

- a large open cut mine void approximately 87 hectares (ha) in area, that has been partially backfilled with waste;
- a large northern, and smaller southern and eastern waste rock dumps (WRD);
- a tailings storage facility (TSF 1 and TSF 2) approximately 107 ha in area;
- crushing and mineral processing facilities; and
- administration buildings.



\\emmsvr1\EMM3\2020\P200289 - SXO Site wide water balance\GIS\02_Maps_SWMP\SWMP001_SiteLocation_20201025_02.mxd 25/10/2020

Source: EMM (2020); GA (2011); OSM (2019); ASGC (2006)

0 5 10 km

GDA 1994 MGA Zone 50

N

KEY

- Mine void
- Railway
- Main road
- Local road
- Vehicle track
- Watercourse/drainage line
- Waterbody

General locations

Barto Gold Mining Pty Ltd
Marvel Loch new crushing facilities
Surface water management plan
Figure 1.1

EMM
creating opportunities

Figure 1.2 Marvel Loch mine site – site infrastructure

1.2 Objectives

Mineral processing of a defined size with the potential to cause emissions and discharges to air, land or water are known as 'prescribed premises' and trigger regulation under the *Environmental Protection Act 1986* (EP Act). The DWER regulates industrial emissions and discharges to the environment through a works approval and licensing process, under Part V of the EP Act. DWER regulate to ensure there is no unacceptable risk of harm to public health or the environment.

DWER require applicants to provide technical and general information, as necessary, to inform its assessment of the risks associated with the proposed activity. LAA often have associated conditions to manage potential or uncertain risks, including outcomes-based conditions, process and management conditions and monitoring and reporting conditions that may require supplemental technical information.

The objectives of the review and assessment undertaken and presented in this letter report are to address the surface water and stormwater management requirements supporting a LAA for the proposed replacement crushing circuit and to provide information to the site surface water audit. The following water management aspects of the proposed development are addressed:

- characterisation and description of the proposed development with respect to local surface water features and potential water receptors;
- review of existing surface water management at the site;
- review of potential surface water risks and impacts associated with the proposed development; and
- recommendations for appropriate surface water management controls and measures to mitigate and manage any risks.

2 Surface water characterisation

2.1 Regional surface water systems

At a regional scale, the Marvel Loch mine site and mineral processing plant (the Project) is located within the Lake Julia sub-catchment which forms part of the regional Yilgarn River catchment in the western extent of the Avon River catchment. Lake Deborah East, a playa lake in the relict drainage of the Yilgarn River, represents the ultimate receptor of surface water drainage from the Yilgarn River catchment.

The Yilgarn River is characterised by a very low relief landscape and sluggish drainage through salt lake systems in broad valley floors, generally 5 to 8 km wide. A key characteristic of this zone of ancient drainage is the low valley-flood gradients (commonly of less than 0.5%) which makes drainage very slow and mostly internal. The low gradient and high storage capacity within these surface water systems and the flood plain means that surface water systems do not commonly flow or respond as one linked system unless a major summer rainfall event occurs or there is a prolonged wet winter period.

2.2 Local surface water systems

At a local scale, the Marvel Loch mine site is situated in the upper reaches of the ephemeral surface water drainage system referred to as the Polaris palaeodrainage system. This surface water system drains westward from Marvel Loch before draining north towards Southern Cross and discharging to Lake Koorkoordine.

The Marvel Loch mine area is located on the side of a hill with the crusher and plant area and surrounds draining to the south west. The Project site lies within a highly modified landscape and is almost fully surrounded by mining landforms, with WRDs to the north and south, the existing TSF to the north and a new TSF under construction to the east, and the Marvel Loch pit to the south and west (downslope of the site). Upslope contributing catchments are therefore limited based on the surrounding mining landforms and, downstream of the site, surface water drainage, ultimately drains towards the pit.

Stormwater runoff within the site is therefore predominantly generated from incident rainfall falling directly on the development footprint rather than including significant volumes of surface runoff from upslope catchment areas. Stormwater management and site drainage infrastructure have, in some areas of the mine site, been integrated in the site development. A description of the existing surface water management system, particularly focussing on the Project site, is provided in Section 3 below.

In summary, based on the available site survey and topographic information, there are no natural links or connections between surface water runoff generated locally within the Project site and the downstream environment. Surface water and stormwater generated within the Project footprint is captured, managed, and retained within the mine area.

3 Existing surface water management

The following sections provide a brief summary of existing surface water drainage system and features relevant to the Project area (summarised in Section 3.1) and review of storm rainfalls and expected stormwater responses within the Project area (presented in Section 3.3).

3.1 Site drainage

The following description of the Project area surface water drainage system is based on information sourced from the following:

- site survey information and aerial imagery provided by Barto;
- observations made during the site inspection carried out on 10 and 11 September 2020; and

- review of information presented in the Coffey (2007) drainage study for the Marvel Loch operations.

A plan layout of the Project site and associated surface water drainage features is presented in Figure 3.1. Photos of drainage infrastructure taken during the site inspection, and reflecting the current condition of site drainage infrastructure, are presented below.

According to Coffey (2007), the drainage system for the crusher and processing plant was designed in 2002 and comprises internal drains and perimeter drains located downstream of the site which direct stormwater runoff to a culvert under the Access road to the south of the site. A plant site drainage plan and earthworks figure included in the Coffey (2007) report indicates grading of earthworks around the crusher and plant to convey runoff to swale drains and perimeter drains. Crusher and process plant perimeter drains were observed to be significantly silted– refer to Photograph 3.1

Culverts under the Access road consist of 2 x 500-millimetre (mm) diameter steel pipe with an approximate length of 50 metres (m). The culverts discharge to a drain, of approximately 90 m in length, on the southern side of the Access road and ultimately discharges to the pump sump. During the site inspection these culverts were observed to be in extremely poor condition. There is sediment blocking the culverts at the upstream inlet and the outlet pipes have been damaged (crushed) and compromised at their outlet – refer to Photograph 3.2. It is not known if there is any damage or blockage of the culvert pipes under the road between the inlet and outlet. The drain between the culverts and the pump sump is also significantly silted up – refer to Photograph 3.3.

The pump sump (also referred to as the 'duck pond') is described as a HDPE lined facility approximately 20 m x 20 m in area with concrete silt traps constructed on the inlets to the sump in order to reduce siltation of the pond (Coffey 2007). During the site inspection it was not possible to verify or confirm the presence or condition of the pump sump liner due to significant sediment accumulation across the facility – refer to Photograph 3.4. When required, pumps transfer water collected in the pump sump to the adjacent process water dam.

The pump sump does not have clearly defined storage and retention controls, ie embankments, and it is likely that following significant storm events water collected at the sump ponds up against the process dam embankment and further inundates the area southwest of the process dam – refer to Photograph 3.6.

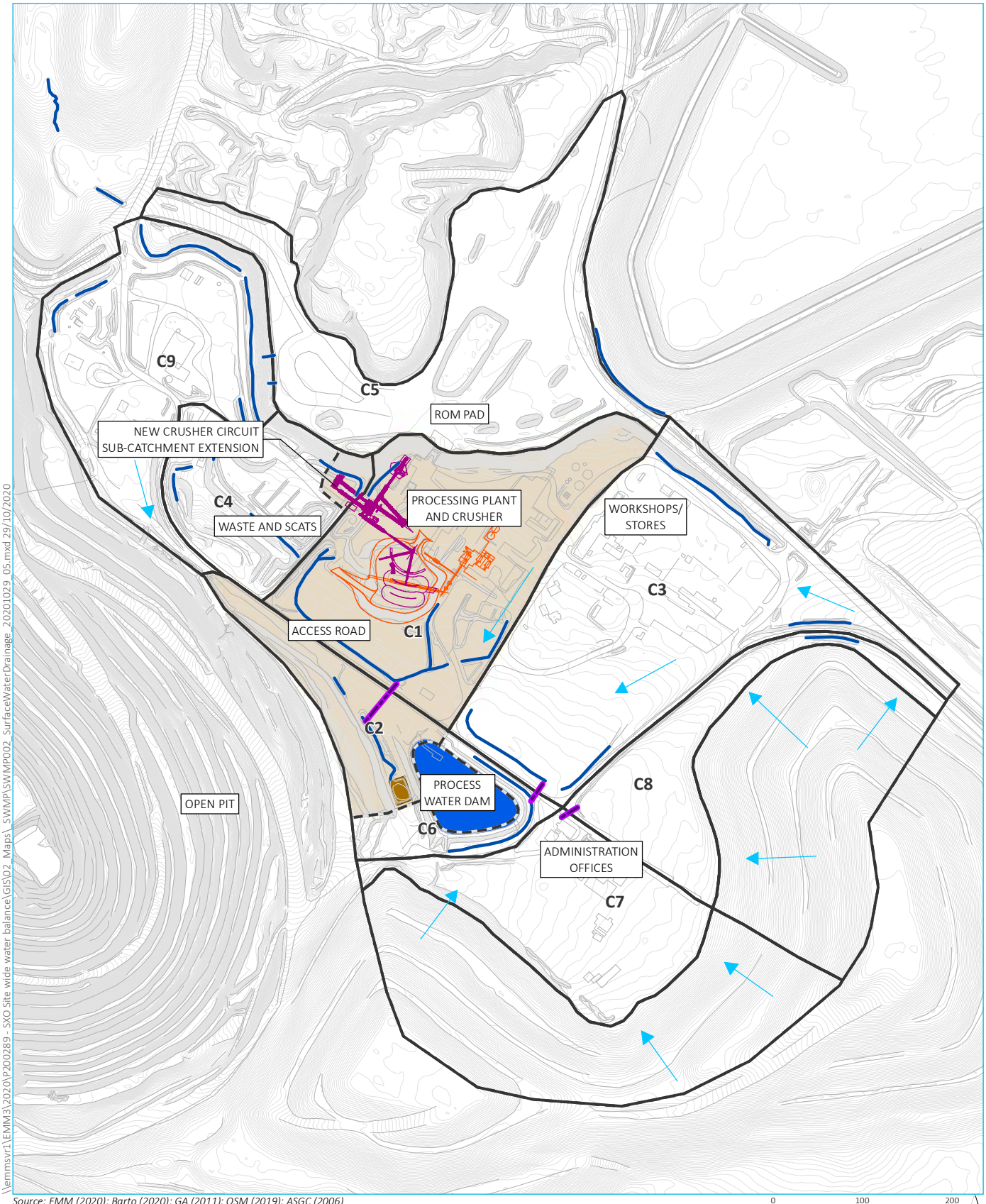
The process water dam (shown in Photograph 3.5) is located on the southern side of the Access road to the plant site and directly above the pump sump (refer to Figure 3.1). According to the Coffey (2007) report, the process water dam is an artificially lined facility with a storage capacity of approximately 32,000 m^3. The ponded surface area at full storage is approximately 7,000 m^2. The facility is a paddock type storage facility with perimeter embankments which are nominally 3.0 m to 4.0 m high.

Process water use from the dam is currently estimated to be approximately 80 litres per second (L/s) (or 6.9 megalitres per day (ML/d)). It is understood that the process water dam is kept at a full operational level (refer to Photograph 3.4), close to the dam crest, receiving pumped water from two sources;

1. Water (stormwater and/or process water discharge) collected at the pump sump; and

2. Dewatering water (from Nevoria mine and Jaccoletti / Marvel Loch underground mine) which if not used for the process water supply is directed to the Yilgarn Star open pit approximately 17 km southwest of Marvel Loch

There are no other defined stormwater storage areas or facilities. It appears that 'clean' stormwater generated from adjacent areas, particularly to the east of the Project area is captured and conveyed, via drains and culverts, to an area southwest of the process water pond – refer to Photograph 3.6. Communications from site personnel mention that (uncontrolled) stormwater accumulation in this area can inundate to form a single ponding area with the adjacent pump sump stormwater (potentially contaminated) from the processing plant catchment



\\emmsvr1\EMM3\2020\P200289 - SXO Site wide water balance\GIS\02_Maps_SWMP\SWMP002_SurfaceWaterDrainage_20201029_05.mxd 29/10/2020

Source: EMM (2020); Barto (2020); GA (2011); OSM (2019); ASGC (2006)

0 100 200 m

GDA 1994 MGA Zone 50

N

KEY

- Replacement crushing circuit
- Existing crushing circuit
- Culvert
- Surface water drain
- Indicative drainage direction
- Existing sub-catchment boundary
- New sub-catchment boundary
- Contour (0.5 m)
- Survey feature
- Process water dam
- Pump sump
- Processing plant sub-catchments (potentially impacted stormwater)

Project site and surface water drainage features

Barto Gold Mining Pty Ltd
Marvel Loch new crushing facilities
Surface water management plan
Figure 3.1

EMM
creating opportunities

Photograph 3.1 Condition of internal surface water drain (left) and perimeter drain (right)

Photograph 3.2 Culverts under Access road downstream of Project site – inlet (left) and outlet (right)

Photograph 3.3 Condition of drain below culverts and flowing towards toe pump sump. Looking downstream (left) and upstream from pump sump (right)

Photograph 3.4 Pump sump and sediment deposition at upstream end (left) and concrete sump (right)

Photograph 3.5 Process water dam pumped inflow (left) and looking north towards processing facility (right)

Photograph 3.6 Stormwater runoff accumulation area looking south from process water dam (left) and looking north towards pump sump (right)

3.2 Previous surface water management recommendations

The Coffey (2007) report identified possible options (for the then mine owner, St Barbara Ltd) to upgrade and modify the existing surface water management system to mitigate stormwater impacts experienced in earlier severe storm events.

The recommended option from Coffey (2007) was that the surface water runoff to the pump sump (duck pond) be managed by 'attenuating' the catchment flows, upstream of the duck pond / process water dam, by the use of rock dams or retention basins. The objective outcome of this approach was to increase the time of concentration of flows through the system and reduce the risk of overwhelming the existing pumping capacity to the process water dam of between 95 and 190 L/s.

The hydrological assessment of the Coffey (2007) investigation estimated there would be a requirement to store approximately 4,000 m^3 within the catchment above the pump sump (ie for an equivalent 10% annual exceedance probabilities (AEP) or 1 in 10-year design storm). The retention basins would require an area of approximately 0.5 ha based on an assumed average water depth of 1 m.

It is noted that, for the purpose of the assessment presented in this report, it is assumed that the process water dam is maintained at a 'full' operational level, either through topping up with stormwater or surplus dewatering sources, prior to a storm event occurring. Therefore, the primary stormwater management approach is focused on conveyance and storage of water rather than assuming active management of stormwater by means of pumping of water from the pump sump.

3.3 Site rainfall and storm event characterisation

The following section provides a summary of rainfall characteristics for the site. Rainfall records have been supplemented using information from the SILO (Scientific Information for Land Owners) database of rainfall climate data (Queensland DES 2020). SILO is a national database of Australian climate data from 1889 to the present providing daily meteorological datasets for a range of climate variables suitable for biophysical modelling, research and climate applications.

Monthly and annual total rainfall for the Project area, and regionally, are low. Mean annual rainfall for the period 1961 to 2020, based on daily SILO rainfall, is approximately 340 mm and mean monthly rainfall ranges between a low of approximately 20 mm during the summer period up to a maximum average monthly rainfall of just under 50 mm during the winter period. However, significant and intense rainfall events are experienced at the site and commonly these are associated with summer storm events.

Site observations provided to EMM describe the stormwater management systems, particularly around the pump sump area becoming overwhelmed because of significant rainfall-runoff events. Additionally, surface flows through and around the administration areas have resulted in significant water ponding at the low point to the south of the process water dam. This uncontrolled inundation has reached a level where there has been a joining of the inundated area with the pump sump stormwater water storage.

Severe storm events have resulted in the pump sump system being overwhelmed and the stormwater inundation water having to be pumped away. Notable storm events are, detailed in the Coffey (2007) report and approximate dates of subsequent inundation events were provided to EMM by site personnel during the site inspection. This information indicates that the significant stormwater responses are experienced across the site as a result of intense storm events recording over 30 mm over a 24-hour period and in excess of 40 to 60 mm over a 2-day period.

It is noted that rainfall from intense thunderstorms, particularly during the summer months, may generate the majority of the daily recorded rainfall in a much shorter period. For instance, it has been indicated by site personnel that the February 2020 rainfall event may only have occurred over a period of 2 to 3 hours (pers com) and resulted in significant runoff through the site which overwhelmed the existing drainage system.

3.4 Review of potential stormwater response events

Typically, in arid regions such as this, significant rainfall runoff only occurs as a response to the following types of extreme rainfall events:

- very short duration (ie over a period of hours or less) intense rainfall, when the rate of rainfall exceeds the infiltration capacity of the soil (such as the February 2020 event); or
- when the storage capacity of the soils is exceeded by longer duration (ie over a period of days) high magnitude rainfall events (such as the December 2006 event).

In this region it may be assumed that runoff generating events may be limited to occurring only when rainfall exceeds a given threshold, which may be in region of up to 15 to 20 mm.

Based on the SILO daily rainfall data for the 60 year period from 1961 to 2020, Table 3.1 presents a summary of total (over the 60 year record) and average annual number of days when rainfall has exceeded a given threshold depth. The data indicates that, on average, the site could expect approximately two daily rainfall events per year exceeding 20 millimetres per day (mm/d) and approximately one event per year exceeding 30 mm/d. Daily rainfall exceeding 60 mm only occurred five times over the 60 year period, ie occurring less than once every 10 years.

Table 3.1 Summary of daily Marvel Loch rainfalls exceeding defined threshold values (1961-2020)

Value	>10 mm	>20 mm	>30 mm	>40 mm	>50 mm	>60 mm
Total exceedances (over 60 years)	510	144	54	22	13	5
Average annual exceedances	8.5	2.4	0.9	0.4	0.2	0.1

Figure 3.2 provides a graphical summary of the number of daily rainfall events within each year exceeding a defined threshold of greater than 30 mm/d and 60 mm/d. This time series appears to indicate a reduction in the frequency of high daily rainfall events over the 60-year period, particularly for the 20-year period since 2000. Recent research by Scanlon and Doncon (2020) highlight the influence of shifts in Indian Ocean sea surface temperatures, in 1976 and more recently in 2000, on reductions in rainfall in the eastern Wheatbelt, particularly for the April to October period.

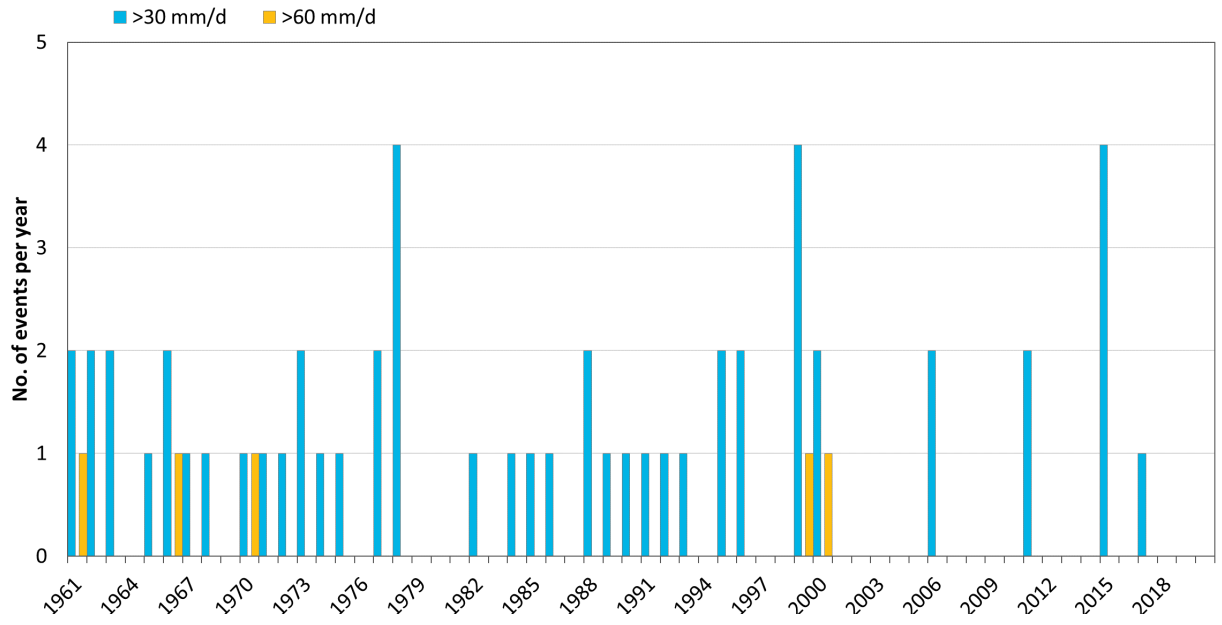


Figure 3.2 Marvel Loch (SILO data) daily rainfalls exceeding defined threshold values

3.5 Design rainfalls

Design rainfall estimates for Marvel Loch were derived using the Bureau of Meteorology's (BoM) Computerised Design IFD Rainfall System (CDIRS) to provide estimation of a full set of design rain depth and intensity duration curves. This approach is consistent with procedures described in Ball et al, (2019). Table 3.2 and Figure 3.3 summarise design rainfall depths associated with design storms with durations up to 168 hours and annual exceedance probabilities (AEPs) up to the 1% (equivalent to a 1 in 100-year) event.

Table 3.2 Rainfall depth (mm) for standard durations and annual exceedance probabilities (AEPs)

Duration (mins)	AEP							Duration (hours)
	63%	50%	20%	10%	5%	2%	1%	
5	4.1	4.8	6.9	8.5	10.3	12.8	15.0	**0.083**
10	6.0	7.0	10.4	13.0	15.8	19.9	23.4	**0.167**
15	7.3	8.5	12.6	15.7	19.1	24.1	28.4	**0.25**
30	9.6	11.1	16.3	20.2	24.4	30.6	35.8	**0.50**
60	12.3	14.1	20.0	24.5	29.3	36.3	42.2	**1**
120	15.7	17.6	24.4	29.5	34.9	42.8	49.4	**2**
180	18.0	20.1	27.5	33.1	39.1	47.7	55.0	**3**
360	22.5	25.2	34.4	41.3	48.7	59.6	68.7	**6**
720	27.7	31.3	43.3	52.5	62.3	76.7	88.9	**12**
1440	33.1	37.7	53.7	65.9	78.9	98.2	114.0	**24**
2880	38.1	43.9	63.7	78.8	95.0	119.0	138.0	**48**
4320	40.9	47.1	68.5	84.8	102.0	127.0	148.0	**72**
5760	43.1	49.5	71.4	88.0	106.0	131.0	152.0	**96**
7200	45.0	51.5	73.5	90.1	108.0	133.0	154.0	**120**
8640	46.9	53.3	75.2	91.7	109.0	133.0	154.0	**144**

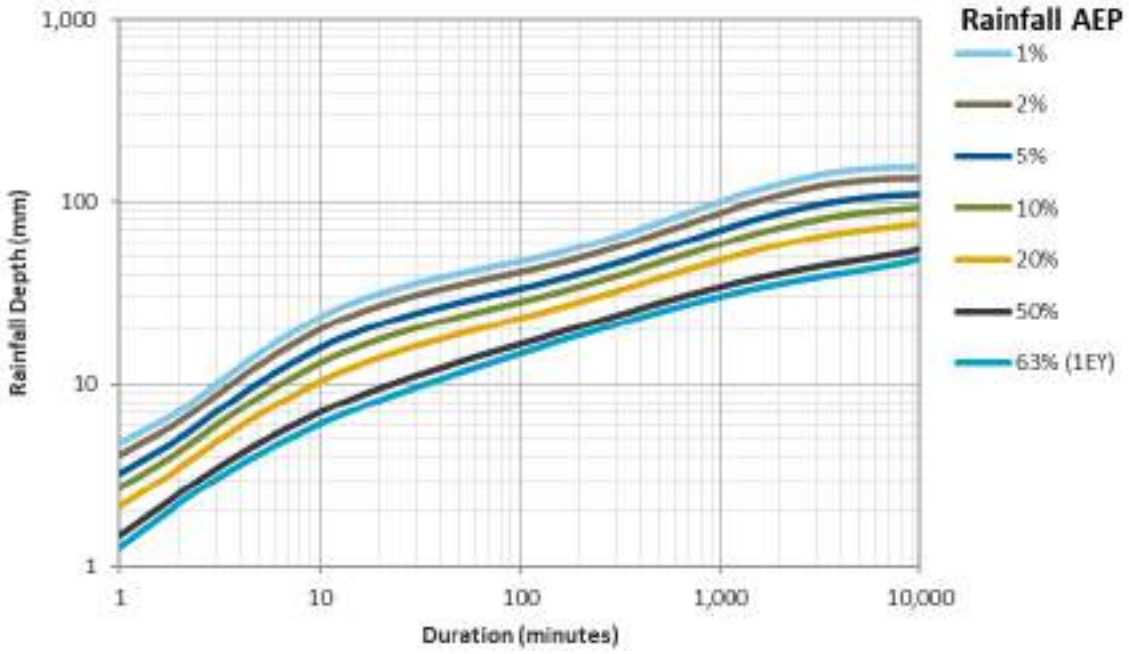


Figure 3.3 Design depth-frequency-duration plots for given annual exceedance probabilities (AEPs)

Based on the available information it may be inferred that significant stormwater runoff events at the Project site, as described by site personnel, resulting in storm water volumes exceeding the capacity of the existing stormwater system to potentially occur at least every 5 years or so. A 30-mm storm event over an assumed 2- or 3-hour period is equivalent to an approximate 20% or 10% AEP event, respectively, ie a 1 in 5 or 1 in 10-year event. Daily rainfall events of 30 mm lie within the 63% to 50% AEP range, ie on average they occur every 1 to 2 years. A 60-mm 2-day rainfall is equivalent to an approximately 20% AEP event.

It is noted from the design rainfall data presented in Table 3.2 that for the lower AEP events, ie 5%, 2% and 1% AEP, the depth-duration curves flatten notably beyond the 4,320-minute (72-hour) duration events. This is indicative that, for the study area, there is only a small incremental increase in rainfall depth at increasing storm durations beyond 72 hours duration.

4 Review of potential surface water risks

The replacement crusher circuit at the Marvel Loch mine operations, as shown in Figure 3.1, is proposed to be located directly adjacent to the existing crusher. As the location, footprint and operation of the primary crusher is largely the same as the existing crusher, any potential relative changes to surface water management relating to the proposed development are expected to be minimal.

The following points provide a summary of the potential surface water risks associated with the proposed replacement crusher circuit and relevant to the LAA:

- the proposed development is not located in proximity to any natural watercourses and does not required a permit to interfere with the bed and banks of a watercourse;
- there are no sensitive surface water receptors identified within, or within close proximity to, the proposed Project boundary;
- ongoing discharge and drainage of water used in processing from the Project area to the downstream surface water management system will occur during operation, generally water from dust suppression;
- there is no proposed incremental increase in the potential discharge of process water;
- potentially contaminated stormwater runoff will be captured by the surface water drains and discharged from the Project area to the downstream surface water management system. Potential stormwater contaminants may include process water and sediments, particularly fines mobilised by stormwater runoff;
- based on the proposed replacement crusher circuit footprint there may be a marginal increase in the surface water drainage area. As shown in Figure 3.1 below, the development is estimated to represent an increase in the processing plant and crusher catchment from 7.3 ha to 7.5 ha (an approximate 3% increase in the contributing catchment area);
- there is no incremental increase in rate or frequency of discharge of potentially contaminated stormwater;
- the downstream site surface water management system is structured to manage and retain potentially impacted stormwater within the site and enable water reuse through pumping to the process water dam (refer to Section 3.1). The stormwater management strategy aims to provide separation of ‘clean’ and ‘dirty’ stormwater;
- The existing stormwater management system does not appear to have sufficient capacity to effectively capture and store runoff from the Project area resulting from significant storm events;

- by definition of the nature of the mine site and the location of the Marvel Loch open pit, directly downstream of the site, the risk of uncontrolled discharge from the site is very low or negligible, assuming the risk from buried pipe works potentially linking to downstream environments outside of the mine area, which caused the uncontrolled release of stormwater in February 2020, are removed; and

- it is understood that, as only the crusher circuit is proposed to be replaced, process water requirements, including dust suppression and water for cooling, are not expected to change. Sources of process water will remain consistent with existing sources, ie water pumped from the process water dam and potable water sources for cooling purposes.

A number of issues relating to degradation and lack of maintenance of the existing surface water and stormwater management system, for the proposed Project development site and the wider Marvel Loch mine operations area, are highlighted in Section 3. These problems are historic and ongoing and therefore unrelated to the proposed new primary crusher development. These issues, however, do reduce the reliability and effectiveness of the surface water management system and increase risk of potential cross contamination of 'clean' and 'dirty' stormwater sources and likelihood of impacts to site infrastructure.

It has also been reported that accidental release of stormwater from the site has recently occurred through unknown pipework below the southern WRD. Any remedial works, upgrades and/or changes to the surface water management system should therefore include a detailed review and confirmation that there is no risk of discharge from site through buried pipework. This risk is unrelated to the development of the replacement crushing circuit and is covered in the surface water audit report (EMM 2020).

5 Catchment delineation and assessment of flood discharges

5.1 Catchment delineation

To support the estimation of design floods for the contributing catchments upslope of the process water pond pump sump, the respective contributing catchment boundaries were delineated. The physical catchment characteristics associated with the delineated catchments are presented in Table 5.1 and the boundaries are shown in Figure 3.1. The catchments and associated drainage lines have been defined based on the site layout and survey information provided by Barto and site observations.

Table 5.1 Summary of catchment characteristics for primary crusher and processing plant stormwater

Catchment name	Description	Area (ha)	Slope (%)
C1	Primary crusher and processing plant U/S of culvert	7.53	3.0%
C2	Pump sump storage catchment D/S of culvert	2.12	5.0%

5.2 Design flood estimates

Design flood estimates were derived for the delineated catchments upslope of the process water pond pump sump for a range of events from 20% to 1% AEP. These summaries include estimates of the critical duration maximum flood discharge and total stormwater runoff volumes associated with a 12, 24, 48, and 72 hour duration storm. The flood estimates were derived using the XPRafts modelling software (Innovyze 2020), a runoff routing model used for hydrologic and hydraulic analyses of stormwater drainage and conveyance systems, applying ARR2019 (Ball et al 2019) methods and design rainfalls outlined in Table 3.2.

Design flood estimates have been developed using catchment characteristics presented in Table 5.1 and design rainfalls presented in Table 3.2. A relatively conservative rainfall loss model, applying an initial rainfall loss of 10 mm and a continuing loss of 2 millimetres per hour (mm/h), has been applied to both catchments.

Estimated peak design flood discharges for modelled catchments is presented in Table 5.2 and total 1% AEP design flood volumes for long duration events (up to 72 hours) are presented in Table 5.3. Critical storm durations were found to be 1 hour for all events apart from the 2% and 1% AEP for catchment C2 where the 30-minute storm was found to be the critical event.

Table 5.2 Estimated peak design flood discharge for contributing catchments

Catchment	Estimated peak design flood discharge (m^3/s)				
	20%	**10%**	**5%**	**2%**	**1%**
C1	0.251	0.406	0.573	0.845	1.077
C2	0.105	0.158	0.209	0.267	0.356

Table 5.3 Estimated total 1% AEP design flood volume for contributing catchments

Catchment	Estimated total flood volume (m^3)							
	2% AEP				1% AEP			
	12h	**24h**	**48h**	**72h**	**12h**	**24h**	**48h**	**72h**
C1	3,500	4,140	4,010	3,150	4,390	5,400	5,260	4,180
C2	990	1,170	1,130	890	1,250	1,460	1,480	1,200
Total	**4,490**	**5,310**	**5,140**	**4,040**	**5,640**	**6,860**	**6,740**	**5,380**

6 Recommended surface water management plan

6.1 Objectives

During construction, operation and post closure, the control and management of surface runoff and stormwater discharges in and immediately downstream of the mine area or infrastructure development are essential to provide:

- protection to mine personnel and infrastructure during larger storm events;
- diversion of non-impacted (clean) surface runoff around mine infrastructure to be discharged to the downstream environment, where feasible;
- separation of impacted and non-impacted stormwater;
- retention and treatments and/or reuse of impacted water on-site;
- safe containment of water that cannot be released;
- retain sediment generated from mine infrastructure on site to minimise discharge of material to the downstream environment or to process water systems; and

- long-term protection of the environment from any mine infrastructure or mining landforms post-closure.

6.2 Proposed stormwater management strategy

The proposed stormwater management strategy for the replacement crushing circuit and processing plant catchment area (outlined below) remains consistent with the existing approach for the management of site drainage (detailed in Section 3.1). Additionally, as detailed in Section 4 the proposed replacement crushing circuit development is not expected to result in significant incremental increases in surface water risks with regards to both rate, volume or frequency of stormwater runoff and process water discharge from the site.

The objectives and outcomes of the proposed stormwater management strategy for the Project are:

- to effectively intercept and convey stormwater and process water discharge within the internal surface water drainage system to the pump sump storage;
- to size stormwater management infrastructure to minimise the risk of discharge offsite or contamination of other 'clean' stormwater systems;
- to provide sufficient capacity in the pump sump storage to capture and retain potentially impacted stormwater runoff;
- to allow retained stormwater to be pumped (as required) back into the process water dam for reuse; and
- to size and design stormwater management measures for adjacent areas to effectively capture, convey and store 'clean' stormwater and provide effective separation from the processing area stormwater systems.

A summary of recommended surface water management measures and controls, identified to achieve the objectives and outcomes detailed above, are provided in Section6.3.1.

As detailed above, a primary requirement for the implementation of the proposed surface water management strategy includes undertaking remedial works, upgrades, and improvements to existing surface water control measures. A summary of recommended remedial works and actions relevant to the surface water systems are summarised in Section 6.4.2.

The effective implementation of surface water management for the Project area (assumed to represent a potentially impacted water system) also requires equivalent works be undertaken across the wider mine operations area to maintain separation of clean and potentially impacted water. High level recommendations for site-wide surface water management are outlined in the related Marvel Loch Processing Centre surface water audit report (EMM 2020).

A schematic representation of the conceptual surface water management plan for the Project area, including the increased contributing area affected by the extended replacement crushing circuit footprint, is presented in Figure 6.1.

6.3 Design criteria considerations

In adopting appropriate design criteria for the sizing of surface water control infrastructure a range of factors should be considered, including:

- compliance criteria of regulating authorities;
- potential impact to the environment if impacted water was released to the downstream environment;

- risk to infrastructure in the event of inundation during more extreme storms;
- duration of the mining operation;
- magnitude of design flood discharges, flow velocities and associated duration of flow; and
- locations of mine infrastructure in relation to the existing surface drainage network.

The currently proposed life-of-operations for the wider Marvel Loch mine operations is estimated to be in the region of 10 years. The sizing of surface water management and control infrastructure associated with the replacement crushing circuit and processing plant drainage catchment area will adopt design criteria consistent with the surface water management measures across the wider Marvel Loch mine operations.

6.3.1 Recommended design criteria

The following design criteria were adopted in developing provisional sizing estimates for surface water management measure and control infrastructure.

i Diversion drains and bunds around mine infrastructure.

These surface water management measures should be sized to manage an event with a probability of exceedance of 20% over the proposed life of mine/facility operations. This is based on recommendations in Austroads (2019) Hydraulic Design of Waterway Structures guidelines and risk management approaches adopted widely in other mining operations in Western Australia. The probability of a flood event being exceeded during the design life of the site, infrastructure asset or mine operation can be calculated according to the formula:

$$P_N(X) = 1 - [1 - P(X)]^N$$

Where, $P_N(X)$ is the probability of exceedance. $P(X)$ is the annual exceedance probability (AEP), and N (years) is the design life (ie life-of-mine or asset).

A summary of the probabilities of exceedance for various AEPs and life of operation is presented in Table 6.1. For an assumed life of operation of approximately 10 years and a 20% probability of exceedance, the recommended design AEP to be adopted is equivalent to the 2% AEP event.

Table 6.1 Probability of exceedance for various AEP events and design file

Design life (years)	Annual exceedance probability					
	50%	**20%**	**10%**	**5%**	**2%**	**1%**
1	50%	20%	10%	5%	2%	1%
3	88%	49%	27%	14%	6%	3%
5	97%	67%	41%	23%	10%	5%
10	100%	89%	65%	40%	**18%**	10%
20	100%	99%	88%	64%	33%	18%
30	100%	100%	96%	79%	45%	26%
50	100%	100%	99%	92%	64%	39%

ii Stormwater retention basins and storage ponds

Stormwater retention and storage infrastructure should adopt design criteria consistent with the risk-based approaches presented above. There are currently no specific regulatory requirements or guidelines stipulating design criteria for stormwater retention facilities on mine sites, however, the adoption of a 1% AEP design event for the sizing of storage infrastructure and dams is widely recommended and for the assessment of freeboard requirements. For this purpose, long-duration design storms, ie those potentially generating the highest total volume of stormwater runoff, should be considered in the assessment process.

iii Sediment management and retentions ponds

Volumes, surface dimensions and performance criteria should be based on the approaches recommended by the International Erosion Control Association (2008) guidelines.

iv Culverts

Culvert sizing and associated analyses should, where possible, consider recommended guidance and methods outlined in the Austroads (2013) Drainage-Open Channels, Culverts and Floodways guidelines. Culvert sizing should provide conveyance capacity consistent with upstream and downstream surface water drainage systems. However, site constraints and structural requirements, particularly with regards to associated access/haul road design criteria may constrain culvert design criteria and sizing. Hydraulic analyses should be applied to assess maximum allowable headwater conditions and potential design recurrence interval both for the culvert and scour protection (inlet and outlet).

6.4 Proposed water management measures

The following sections describe the stormwater management strategy and measures proposed to mitigate and minimise any potential stormwater and water quality risks (as detailed in Section 4) associated with the replacement crushing circuit and associated processing plant.

6.4.1 Surface water management measures and controls

A summary of recommended surface water management measures for the replacement crushing circuit and processing plant drainage areas are outlined in Table 6.2 and an annotated plan is presented in Figure 6.1

Table 6.2 Surface water management measures and controls

Control measure / structure	Sub-catchment [1]	Comments
Perimeter drains to culvert	C1	Stormwater runoff will be captured and conveyed via crusher and processing plant area perimeter drains to the Access road culvert. Runoff and discharge from the processing plant will be discharged to the culvert via internal drains. Interception drain to be added (or cleared) along toe of embankment to ROM pad. Preliminary sizing recommendations for stormwater drains are provided in Section 6.4.1 i.
Access road culvert	C1 to C2	Access road culverts to convey potentially impacted discharge and stormwater runoff across the road. Culverts to be refurbished, repaired, and maintained where possible. Replacement of culverts recommended where pipes are blocked and/or damaged and cannot be opened to provide sufficient conveyance capacity. Rock stabilisation may be required at inlet to manage potential localised ponding during extreme storm events. Preliminary sizing recommendations for stormwater drains are provided in Section 6.4.1

Table 6.2 Surface water management measures and controls

Control measure / structure	Sub-catchment [1]	Comments
Diversion drain to pump sump	C2	Diversion drain from Access road culvert to convey potentially impacted discharge and stormwater runoff to pump sump adjacent to process water dam. Locally generated stormwater will be accommodated in the drainage channel.
Pump sump stormwater storage	C2	Options and required civil and geotechnical works to be assessed in detail to enable the pump sump stormwater storage capacity to be increased to effectively retain contributing stormwater runoff volumes from significant storm events based on appropriate design criteria. The 1% AEP 24 hr duration design event is estimated to be up to 7,000 m^3 and a 2% AEP 24h duration design event is estimated to be approximately 5,300 m^3 (refer to Table 5.3). Preliminary sizing recommendations for stormwater drains are provided in Section 6.4.1 iii. Pump sump storage to be separated with an embankment from stormwater contributions from adjacent areas. These are proposed to be managed and retained in a separate stormwater management system.
Process water dam	C2	Review maximum operational level and freeboard requirements, including measures to maintain freeboard and remove risk of dam overtopping . Undertake maintenance, clearing and de-silting of process water dam to maintain operating capacity. Review options to provide additional stormwater storage capacity, ie by reducing the operational level, if the storage capacity increase requirements of the pump sump are not feasible.
Grading of ROM pad U/S of site	C5	ROM pad to be graded away from southern boundary (edge) in order minimise the risk of stormwater discharge from the replacement crushing circuit and processing plant catchment. Edge bund/windrow to be maintained. Locally generated stormwater to be directed (through grading) to Blue Pit acting as stormwater basin.
Road drainage	C7 and C8	Grade roads to direct stormwater to defined stormwater drains and/or perimeter drains. Stormwater runoff from western end of the Access road (from Catchments C7 and C8) to be managed away from crusher and processing plant stormwater system.
Divert 'clean' stormwater away from crusher and process plant catchments	C3 and C4	Surface water management and drainage upgrades and improvements to be implemented to minimise the risk of stormwater contributions to the crusher and processing plant stormwater system from adjacent catchments. Stormwater runoff to be captured in adjacent sub-catchment C3 (to the east) to be conveyed in perimeter drains away from eastern boundary with crusher and process plant catchment (C5) – refer to Figure 6.1. Sub-catchment C3 stormwater to report (ultimately) to a separate stormwater storage dam/basin. Stormwater runoff to be retained locally in adjacent sub-catchment C4 (west of processing plant catchment). Ensure no drainage links to (ie buried or old pipes) from adjacent sub-catchments to the crusher and processing plant stormwater system..
Monitoring and maintenance	All	A monitoring and maintenance plan should be implemented to provide regular review and inspections of the site surface water drainage system. Objectives of the monitoring and maintenance plan will be to identify requirements to maintain the capacity of the surface water system, adapt the strategy where deficiencies are identified and minimise the risk of impacts and contamination. A summary of monitoring and maintenance plan recommendations are provided in Section 6.4.3.

1 see Figure 3.1 for sub-catchments

i Perimeter and stormwater drains

As described in Table 6.2, stormwater runoff will be captured and conveyed via crusher and processing plant area perimeter drains to the Access road culvert and from downstream of the culvert to the pump sump. Details of recommended drain sizing is presented in Table 6.3. Flow velocities in the perimeter drains are estimated to be less than 2.0 metres per second (m/s) for the critical 2% AEP flood therefore no erosion protection will be required. Downstream of the Access road culvert, peak flow velocities may be up to 2.6 m/s for the critical 2% AEP flood therefore facing class rock protection may be required.

Table 6.3 Typical diversion drain sizing

Location	Channel side slopes (H:V)	Minimum base width (m)	Channel depth (m) [1]
Perimeter drains to culvert	3:1	1.0	0.8
Diversion drain to pump sump	3:1	1.5	0.8

Notes: [1] Includes 0.3 m freeboard

ii Access Road Culvert

As described in Table 6.2, stormwater runoff will be captured and conveyed across the Access road via a long culvert and from downstream of the culvert to the pump sump. The existing (degraded and damaged) culverts consist of 2 x 500 mm diameter steel pipe with an approximate length of 50 m. Estimated maximum culvert conveyance capacity for 500 mm steel pipe culvert options are presented in Table 6.4. Estimated peak storm discharge from the C1 sub-catchment are presented in Table 5.2.

Table 6.4 Estimated culvert conveyance capacity

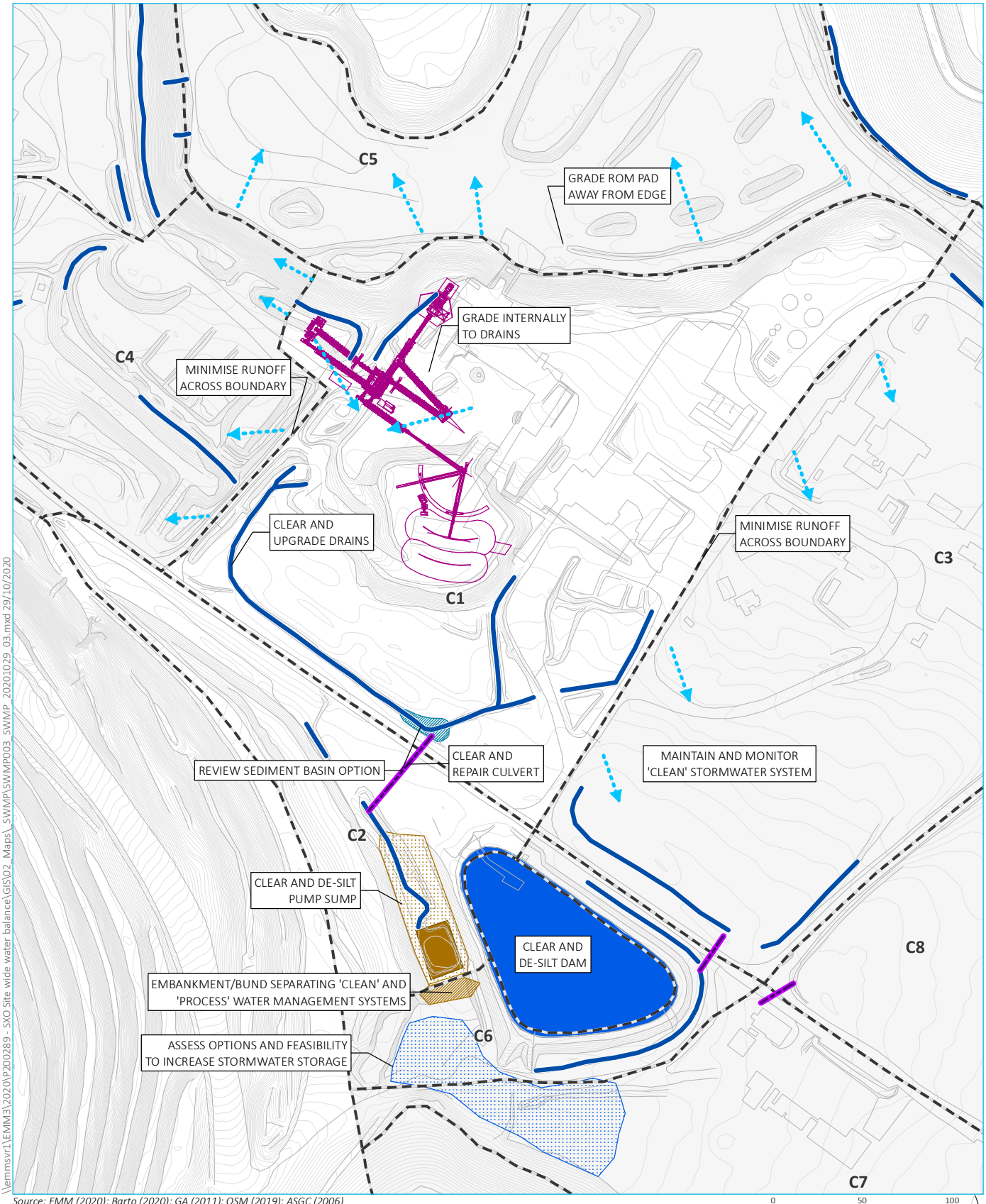
Culvert pipe type and number	Maximum Flow (m^3/s)
2 x 500 mm diameter steel pipe	0.84
3 x 500 mm diameter steel pipe	1.24
4 x 500 mm diameter steel pipe	1.68

More than two pipes would potentially be prohibitive to implement and install. Therefore, replacement of the existing 2 x 500 mm diameter steel pipe culvert (or equivalent or larger) would be recommended, acknowledging that there will likely be temporary ponding upstream of the culvert during extreme storm events. Rock stabilisation is recommended at the inlet and rock protection is recommended at the culvert outlet.

iii Pump sump stormwater storage

The lack of or absence of stormwater storage capacity at the pump sump has been highlighted as a key risk to the effective management of stormwater for the Project area, particularly with regards to maintaining separation of clean and potentially impacted stormwater.

Under the proposed stormwater management strategy, outlined in Section 6.2, high level estimates of the required stormwater storage capacity for the pump sump is presented for a range long duration 1% AEP storm events in Table 5.3. These estimated volumes represent a possible upper limit of the storage requirements and smaller storm volumes would result from the adoption of a lower severity design storm criteria, ie the 2% AEP. It is recommended that sufficient freeboard allowance be included for the pump sump storage, ie 0.5 m minimum freeboard allowance. Consideration of a spillway of controlled outlet discharge should be included in the storage pond design.



\\emmsvr1\EMM3\2020\P200289 - SXO Site wide water balance\GIS\02_Maps_SWMP\SWMP003_SWMP_20201029_03.mxd 29/10/2020

Source: EMM (2020); Barto (2020); GA (2011); OSM (2019); ASGC (2006)

0 50 100 m

GDA 1994 MGA Zone 50

N

KEY

- Replacement crushing circuit
- Culvert
- Surface water drain
- Graded drainage
- New sub-catchment boundary
- Contour (0.5 m)
- Survey feature
- Process water dam
- Pump sump
- Sediment basin option
- Separation bund
- Upgraded pump sump
- Potential stormwater storage area

Replacement crushing circuit and processing plant surface water management plan

Barto Gold Mining Pty Ltd
Marvel Loch new crushing facilities
Surface water management plan
Figure 6.1

EMM creating opportunities

6.4.2 Recommended remedial works

The proposed surface water management approach remains consistent with the existing strategy and utilises, to some degree, the existing infrastructure and/or drainage alignments. Therefore, the following remedial works are recommended to be undertaken, as a minimum, in order to maximise the capacity and reduce risks associated with the existing system. These works, actions and monitoring may provide short-term benefits for the period until the feasibility of proposed changes and upgrades to the surface water management system can be confirmed and implemented.

Suggested remedial works and actions include:

- clearing (and ultimately upgrading) existing stormwater drains;
- clearing (and ultimately upgrading, where required) culverts;
- clearing of sediment from pump sump to increase effective storage capacity;
- clearing and desilting of process water dam to maintain operating capacity;
- review existing controls to mitigate the risk of stormwater ingress to the system from outside areas;
- grading back of ROM above the crusher location;
- reviewing stormwater drainage paths and contributions along access and haul roads; and
- checking and monitoring for evidence of uncontrolled stormwater runoff into or out of the site, ie scour and erosion.

6.4.3 Monitoring and maintenance plan

A comprehensive, monitoring and maintenance plan should be developed as part of the detailed analysis and design of the site-wide surface water management plan and associated control measure and infrastructure. High level recommendations for monitoring and maintenance of the surface water management system are detailed below.

- Visual monitoring of stormwater runoff from Project areas to the receiving process water dam to be undertaken during wet weather conditions.
- Comprehensive monitoring of water quality, including turbidity, at the pump sump and process water pond to be undertaken at regular intervals (ie monthly) and when runoff from the Project area occurs.
- Inspection and maintenance of stormwater system infrastructure, including clearing of accumulated sediment in drains and storages and clearing of blockages and obstructions in drains and culverts, to be undertaken at regular intervals and as required.
- Inspection and maintenance, as required, at key locations to maintain separation of clean and potentially impacted stormwater.

7 Conclusion

A detailed review of the stormwater management system and surface water drainage infrastructure to support a LAA application for the proposed new crushing facilities is provided herein. Potential surface water risks to the Project area associated with surface water management across the wider mine operations area have also been considered.

A review of key surface water risks associated with the proposed development are summarised in Section 4 and a recommended surface water management plan, including surface water management measures, remedial works and a monitoring and maintenance plan, is presented in Section 6. Implementation of the surface water management plan will mitigate surface water management risks from legacy maintenance practises and the proposed new crusher facility.

Key outcomes and findings from this study include:

- Based on available information, there is not anticipated to be an incremental increase in rate or frequency of discharge of potentially contaminated stormwater or process water discharge from the site. The proposed new crusher layout may result in a marginal increase (of approximately 3%) in the local drainage area.

- There is no anticipated increase in water demand requirements for the new crusher and water will continue to be sourced from existing supplies.

- Stormwater responses requiring local and site wide management across the site, based on an assumed 20 to 30 mm rainfall threshold, are expected to occur at least every 1 to 2 years.

- While there is a very low (or negligible) risk of uncontrolled discharge of potentially contaminated stormwater from the site, deficiencies and degradation of the existing surface water management infrastructure may result in an increased risk of stormwater impacts to site operations and infrastructure.

- The existing system does not appear to have sufficient capacity to effectively capture, convey, and store stormwater runoff from significant storm events. Additionally, the lack of defined stormwater storage infrastructure means there is a high risk of mixing between ‘clean’ and ‘impacted’ stormwater runoff.

- The limitations and deficiencies of the existing surface water management system have manifested largely as a result of:

    - changes in site layouts and infrastructure over time;

    - changes in operation of the water management system and sources of process water;

    - a probable lack of monitoring of condition and performance of the surface water system; and

    - and related ongoing maintenance and upgrades.

- The proposed surface water management plan for the replacement crushing circuit and processing plant catchment areas aims to work towards clearly delineating this area as a separate surface water management system from the surrounding mine site.

- The primary recommendation for the surface water management plan involves undertaking clearing, repairs and ongoing maintenance to the existing surface water drainage infrastructure, in conjunction with assessing options for increasing stormwater storage capacity (to retain potentially impacted stormwater) at the pump sump adjacent to the process water dam.

- The process water dam, along with surface water drains across the site, should be cleared and de-silted to reinstate their original storage or conveyance capacity.

- Replacement and/or upgrades to surface water management measures should only be undertaken where existing infrastructure are damaged, obstructed or do not provide a level of management consistent with stormwater design criteria.

- Surface water management measures, including grading and drainage improvements are recommended to be undertaken in adjacent areas to minimise of remove the risk of stormwater inflows to the replacement crushing circuit and processing plant catchment area.

- The ongoing and long-term effectiveness of the proposed surface water management plan for the replacement crushing circuit and processing plant catchment areas is reliant upon upgrades and improvements to the site-wide stormwater management strategy, as detailed in EMM (2020) review of surface water management across the Marvel Loch operations.

- Initial recommendations for a surface water infrastructure monitoring and maintenance plan are provided and these should be finalised when the proposed surface water management plan and approach is agreed and designed. Regular monitoring and maintenance of the system will be important to ensure the capacity and reliability of the system is not compromised in a similar way to the existing system.

- The surface water management plan should also be reviewed and, where necessary, updated and/or adapted if potential issues and failures occur or when there are changes in site infrastructure and layouts which may affect stormwater responses and drainage.

A key recommendation from this assessment, and from the surface water audit (EMM 2020) is that a thorough and detailed review of potentially buried pipework in the area to the south of the process water dam should be undertaken. This are is a key location for proposed site-wide stormwater management strategy, as detailed in the EMM (2020) review of surface water management across the Marvel Loch operations and is the area impacted by previous failures or exceedances of the capacity of the existing stormwater management system. The option to securely retain stormwater at this low point of the site will mitigate the surface water risks to downstream areas, maximise water available for re-use in the process water system and minimise potential risks to site infrastructure, operations and personnel.

It should be emphasised that all modelling and stormwater management sizing presented in this letter report should be considered as preliminary estimates at this stage. Detailed stormwater modelling and hydraulic analyses are recommended to be undertaken to assess the feasibility of the surface water management plan.

8 References

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9 Closing

EMM hope this letter report summarising the surface water management risks and recommended surface water management plan for the replacement crushing circuit and processing plant catchment at the Marvel Loch operations addresses all your requirements to support the LAA.

If you have any questions or require any additional information, please do not hesitate to contact the undersigned.

Yours sincerely

Steven Boxall
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APPENDIX E

Noise Assessment Report

Environmental Noise Impact Assessment

Marvel Loch Operations

Prepared for Barto Gold Mining Pty Ltd

30 October 2020

Project Number: TN20002-15

DOCUMENT CONTROL					
Version	**Description**	**Date**	**Author**	**Reviewer**	**Approver**
0	Internal Review	19/10/2020	RK	GB/AM	
1	Client Review	26/10/2020	RK	EV/BS/LS	GB
2	First Issue	29/10/2020	GB	EV/BS/LS	GB
3	Final issue – updated figures 6-2 and 8-1	30/10/2020	GB	EV	GB

Executive Summary

Barto Gold Mining Pty Ltd (Barto) operates the Southern Cross Operations (SXO) in the Yilgarn region, comprising mining, processing, transport and supporting infrastructure. The Processing plant is located near the townsite of Marvel Loch, approximately 30 km south of Southern Cross. This report details an environmental noise impact assessment of the Marvel Loch operations.

The aim of the noise assessment was to assess noise impacts of Barto's Marvel Loch operations and their proposed replacement crushing circuit on the Town of Marvel Loch and to determine appropriate noise controls to reduce the predicted noise impacts.

The study determined Barto's existing impacts at receptors within Marvel Loch using a combination of noise modelling and monitoring. It was found that the operational noise levels exceed the assigned levels as prescribed within the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations). Despite these operations pre-dating the Noise Regulations, to support the approvals process for the replacement infrastructure, Barto has developed a noise reduction strategy with the goal of ensuring "no net" increase in cumulative noise levels in the community and that the noise levels will progressively reduce over time with the application of various noise reduction strategies. Additionally, a noise control and As Low As Reasonably Practicable (ALARP) process was developed and approved by the company.

This process involved modelling the proposed replacement crushing circuit against the Base Case scenario (i.e. existing operations).

Through this process and in order to ensure that noise levels from the replacement crusher infrastructure were as low as reasonably practicable, noise controls were identified using Barto's noise control and ALARP process and then approved by Barto's senior management. The approved noise controls (shielding) were then applied to the replacement crushing circuit model scenario. Comparing these results to that of the Base Case found that the cumulative received levels were predicted to be between 2 and 3dB quieter.

As a result of the study findings, the following recommendations have been made:

- The proposed shielding be designed and implemented to achieve the modelled outcomes.
- Noise measurements be taken after commissioning (during operation) to assess the effectiveness of the noise controls, to confirm noise source levels used in the model and to verify community impacts against the Noise Regulations.
- The noise model be updated with the findings of the site-based measurements.

Table of Contents

Tables

Table in Appendices

Figures

Appendices

1 Overview

1.1 Background

The Marvel Loch Mine, which is owned by Barto Gold Mining Pty Ltd (Barto), has been intermittently mined over the past 115 years. The Processing Plant for Barto's Southern Cross Operations (SXO) is located near the townsite of Marvel Loch approximately 30 km south of Southern Cross (Marvel Loch Operations). Operations include a crushing and processing plant as shown in Figure 1-1. Barto is now seeking approval to replace the existing crushing circuit at Marvel Loch (as shown in Figure 1-2) with new infrastructure.

Figure 1-1: Image showing the township and the Crushing and Processing plant (Source: Nearmaps).

Figure 1-2: Barto Marvel Loch Current Crushing Circuit and Processing Plant (Source: Nearmaps).

1.2 Aim

The aim of the noise assessment was to assess noise impacts of Barto's Marvel Loch Operations and their proposed replacement crushing circuit on the town of Marvel Loch and to determine appropriate noise controls to reduce the predicted noise impacts.

1.3 Scope

The scope of this document includes:

Section 2 – Summary of legislation

Section 3 – Noise Modelling

Section 4 – Existing Facility Noise Impacts

Section 5 – Noise Modelling Existing Facility (Base Case)

Section 6 – Noise Modelling Replacement Crushing Circuit (No Noise Controls)

Section 7 – Noise Controls

Section 8 – Noise Modelling Replacement Crushing Circuit (Including Noise Controls)

Section 9 – Conclusion and Recommendations

1.4 Applicable Documents

[1] *Environmental Protection Act 1986* (EP Act).

[2] *Environmental Protection (Noise) Regulations 1997* (Noise Regulations).

[3] Draft Guideline on Environmental Noise for Prescribed Premises.

[4] Barto SXO Noise Control ALARP Process Rev 2.0

1.5 Project Overview

The Marvel Loch Crushing Circuit and Processing Plant was constructed in 1988 prior to the introduction of the Noise Regulations. Due to increased maintenance requirements impacting production, Barto is now seeking approval to replace the existing crushing circuit (see Figure 1-3) with new infrastructure as shown in Figure 1-4.

The existing crusher infrastructure will be demolished and replaced with the following new equipment:

- Primary Crusher;
- Secondary Crusher;
- Tertiary Crushers;
- Screens; and
- Interconnecting conveyor belt system.

Figure 1-3: Barto's Existing Crushing Infrastructure (yellow) Source: Nearmaps.

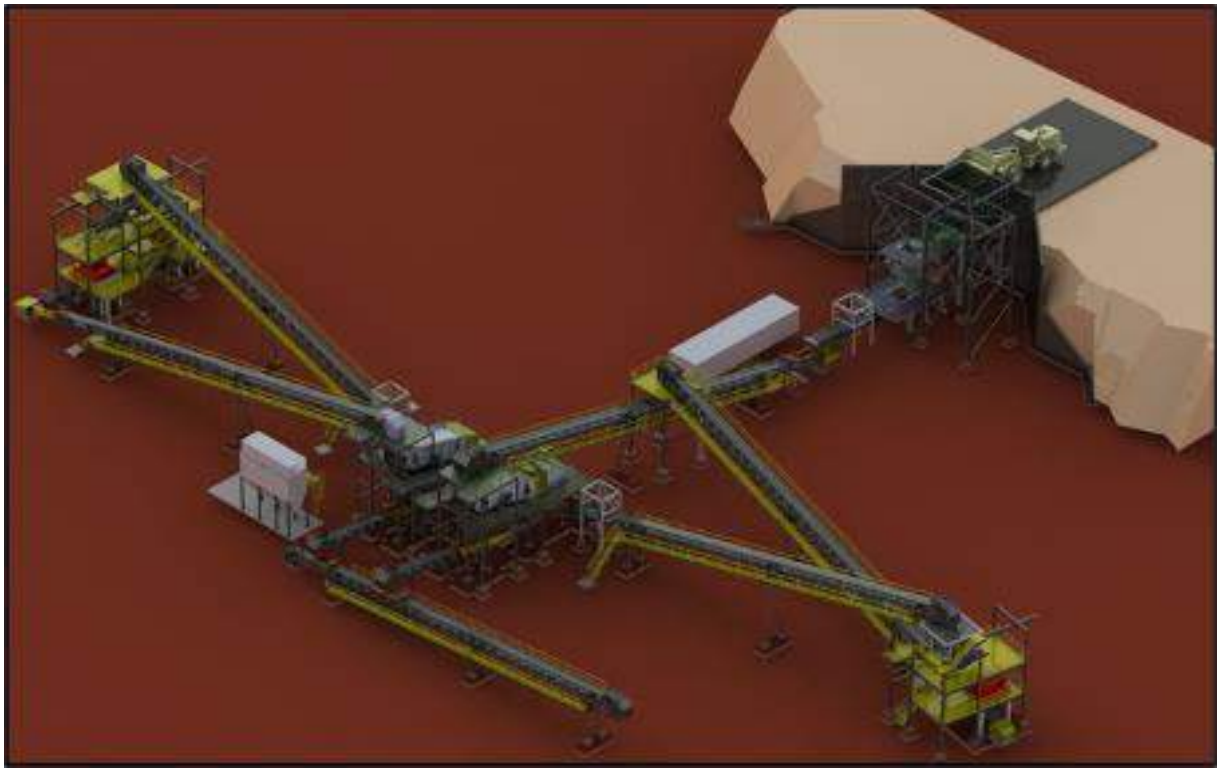

Figure 1-4: Barto's Proposed Replacement Crushing Circuit

2 Summary of Legislation

The applicable legislation for the Barto's mining operations are the Noise Regulations as well as various provisions within the EP Act.

2.1 *Environmental Protection (Noise) Regulations 1997*

Noise management in Western Australia is implemented through the Noise Regulations which operate under the EP Act. The Regulations prescribe 'assigned levels' within Regulation 8 and state that, subject to certain exclusions, noise levels emitted in contravention of the assigned levels are considered to be unreasonable and that noise emitted from a premises when received at other premises must not cause, or significantly contribute to, a level of noise which exceeds the assigned level (Regulation 7).

The Regulations define three types of assigned noise levels:

- LA_{max} assigned noise level means a noise level which is not to be exceeded at any time;
- LA_1 assigned noise level which is not to be exceeded for more than 1% of the time; and
- LA_{10} assigned noise level which is not to be exceeded for more than 10% of the time.

For noise sensitive residences, the time of day also affects the assigned levels.

The LA_{10} noise limit has been used for this study as it is representative of noise from continuous mining operations.

2.1.1 Influencing Factors

Influencing factors, as determined under Schedule 3 of the Noise Regulations, are adjustments applied to the base assigned level in relation to noise received at a highly sensitive area on a noise sensitive premise.

Due to the proximity of the sensitive receivers to an active mining area, the influencing factor for the noise sensitive receivers has been determined to be 1dB.

2.1.2 Tonality

Received noise levels are subject to adjustments if the noise exhibits intrusive or dominant characteristics (i.e. if the noise is impulsive, tonal or modulating). Considering the equipment and type of operation, noise from the mine will be tonal at the receiver. As a result, a 5 dB tonal adjustment has been applied to predicted and measured levels (see APPENDIX A for more details).

2.1.3 Assigned Noise Levels

Received noise levels have been assessed against the Noise Regulations [2] (see APPENDIX A for a more detailed overview of the Noise Regulations). The applicable assigned noise levels including a 1 dB influencing factor (i.e. assessment criteria) are presented in Table 2-1.

As mining is a continuous operation, the noise modelling results have been assessed against the most stringent LA_{10} night-time level of 36 dB(A).

Table 2-1 : Assigned Noise Levels as defined in the Noise Regulations

Time of Day	LA_{10} Assigned Noise Level in dB(A) incl IF
0700 to 1900 hours Monday to Saturday	46
0900 to 1900 hours Sundays and Public Holidays	41
1900 to 2200 hours all days	41
2200 to 0700 hours all days	36

2.1.4 Construction Noise

Site preparation and construction activities fall under Regulation 13 of the Noise Regulations. Regulation 13 does not require noise from a construction site to comply with the prescribed standard for noise emissions set in Regulations 7[1], provided the following requirements are met[2]:

1. Construction work is carried out in accordance with control of environmental noise practices set out in section 4 of AS2436-2010; and
2. The equipment used on the premises is the quietest reasonably available.

Unless requested by the Chief Executive Officer (CEO) of the Department of Environmental and Water Regulation (DWER)[3], a construction noise management plan does not need to be submitted to the CEO for construction activities carried out during normal working hours as defined in the Regulation. For construction activities taking place between 19:00 and 07:00 hours on any day or on a Sunday or public holiday a construction noise management plan must be prepared in accordance with Regulation 13, Subregulation 6 and be given to the CEO of DWER not later than 7 days before construction work commences.

Noise from construction work has therefore not been included in the assessment, as construction work is covered under Regulation 13. Barto will comply with the requirements of Regulation 13, and where necessary submit a construction noise management plan to the CEO 7 days before construction commences.

[1] Note: Regulation 13 – Construction Sites, Noise Regulation Fact Sheet includes not only Regulation 7, but also Regulation 8 as an exclusion. The exclusion of Regulation 7 and 8 implies that the assigned levels are not applicable.

[2] If the requirements are not met, the noise must comply with the assigned levels.

[3] Chief Executive Officer (the CEO) of the Department of Water and Environment Regulation (DWER) or any employee of the Local Government under the LGA who is appointed as an authorised person under section 87 of the *Environmental Protection Act 1986* (EP Act).

3 Noise Modelling Overview

A desktop environmental noise model was created to simulate the existing and proposed operations using a combination of SoundPlan v8.2 and Nexus Noise Management software programs. Nexus has been validated against SoundPlan to ensure that there is no difference[4] in the predictive outcomes between the two applications. These software packages calculate sound pressure levels at nominated receiver locations, and they produce noise contours over a defined area of interest. SoundPlan can be used to model different types of noise, such as industrial noise, traffic noise and aircraft noise, and it has been recognised as accepted software by the DWER.

SoundPlan provides a range of prediction algorithms that can be selected by the user. The CONCAWE[5][6] prediction algorithm has been used for this model.

The inputs required by Nexus and SoundPlan are noise sources, ground topographical data, meteorological data and sensitive receiver point locations.

3.1 Topography

Topography (2 m contour height), including pit/ROM cut outs have been obtained from Barto.

3.2 Ground Absorption

The acoustic properties of the ground surface have a considerable effect on the propagation of noise. Flat non-porous surfaces such as concrete, asphalt and calm water are highly reflective whereas soft, porous surfaces such as foliage and grass are highly absorptive.

For CONCAWE, the ground factor (G) varies from 0 (totally reflective) to 1 (totally adsorptive). The ground surface applied to the model was G=0.8.

3.3 Meteorological Conditions

Table 3-1 presents the worst-case meteorological conditions applied to the model, which are defined in the DWER “Draft Guideline on Environmental Noise for Prescribed Premises” [3].

Table 3-1 : Worst-case meteorological conditions for noise propagation

Time of day	Temperature	Relative Humidity	Wind Speed	Pasquil Stability Category (PSC)
Night (22:00 - 07:00)	15º Celsius	50%	3 m/s	F

[4]Apart from small rounding differences to the 100th of a decibel.
[5] CONCAWE (Conservation of Clean Air and Water in Europe) was established in 1963 by a group of oil companies to carry out research on environmental issues relevant to the oil industry.
[6] The propagation of noise from petroleum and petrochemical complexes to neighbouring communities, CONCAWE Report 4/81, 1981

The LA_{10} night-time noise limit is the most stringent Regulatory level for compliance as a result the night-time meteorological conditions in Table 3-1have been used as worst case for modelling purposes. Additionally, the wind direction has been modelled as worst case, which assumes the wind direction is always in the direction from source to receiver.

3.4 Noise Sensitive Receivers (Surrounding Community)

As the town of Marvel Loch is in proximity to the proposed operations, multiple receiver locations were selected as detailed in Table 3-2 and Figure 3-1.

Table 3-2 : Receiver Coordinates

Receiver	GDA94/MGAz50	
	x	y
R1	735093	6515963
R2	734517	6515554
R3	736488	6516158
R4	736176	6516165
R5	736693	6515863
R6	736652	6515791
R7	736565	6515874
R8	736747	6515579
R9	736587	6515655
R10	736474	6515666
R11	736579	6515565
R12	736518	6515510
R13	736564	6515482

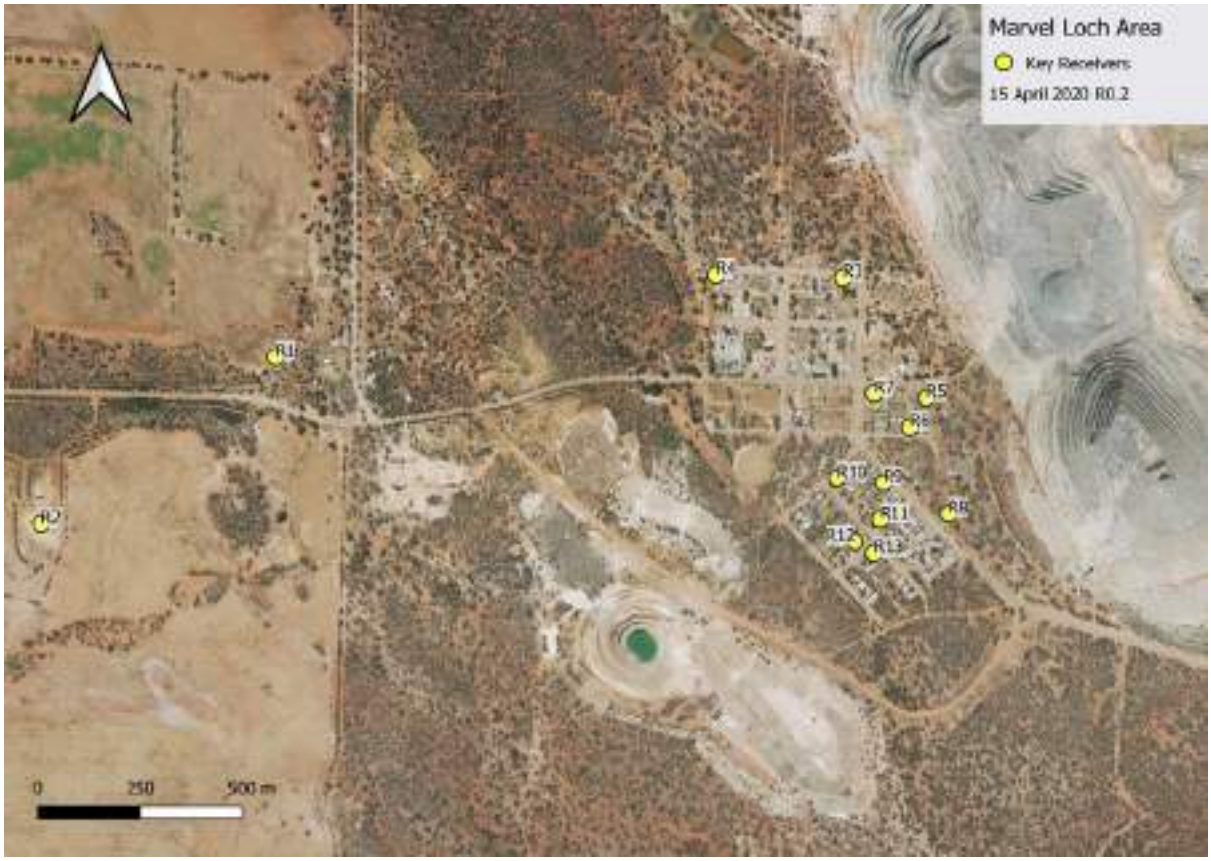

Figure 3-1: Marvel Loch aerial view showing Noise Sensitive Receiver locations

3.5 Noise Source Levels

Noise source information for equipment items for the current and proposed operations are detailed in APPENDIX C.

4 Existing Facility Noise Impacts

4.1 Overview

Both noise monitoring and modelling were used to determine the existing noise impacts from Barto's operations on the town of Marvel Loch. This approach was adopted as noise logging measurements always include both mining as well as background noise. It is not technically possible to completely remove background noise from the measured levels and there will therefore always be some ambiguity as to what Barto's actual impacts are on the town. As a result, modelling, which is not affected by background noise, was also used to support the noise logging measurements to make a more accurate assessment of the mine's noise levels in town.

4.2 Noise Monitoring

Two noise loggers were placed close to receivers R5 and R6 (see Figure 3-1) for a period of 10 days in in July 2019. Both the Processing Plant and crushing circuit were operating during the monitoring period. The logged noise data was analysed taking into consideration measured noise and weather conditions at the time of monitoring.

The following provides is a summary of the noise logging analysis undertaken (see APPENDIX B for a more detailed overview):

- The data was filtered spectrally (12.5Hz to 1.6kHz) and meteorologically (using wind direction and speed);
- Measured noise levels in town ranged from 45.9 to 54.5 dB(A)[7]; and
- These levels exceed the Regulatory assigned levels during both day and night-time. The night-time limits are exceeded by 10-19 dB[8].

4.3 Noise Modelling

A noise model was developed based on plant layout diagrams and information obtained from site. Equipment noise source levels used in the model were based on site measurements taken in September 2020. The September measurements were also used to verify noise source locations and plant layout and included measurements to validate the model for determining model accuracy. Following this process, the model accuracy has been estimated to be ± 2.5 dB.

4.4 Existing Facility Noise Impacts

Table 4-1 provides a summary of the noise monitoring and modelling undertaken to determine Barto's impacts on the town of Marvel Loch. The predicted and measured levels quoted in the table include a 5dB tonality adjustment.

The outcome of the monitoring and modelling found that Barto's impacts on the town exceed the assigned level within Regulations.

7 5 dB tonality adjustment added

8 The variance is due to different weather conditions which result in a variance in Plant noise levels received in the Marvel Loch townsite.

Table 4-1: Predicted and Measured Receiver Noise levels

Receiver	L_{A10} Noise Level in dB(A)[7]		
	Assigned Noise Level	Predicted Level	Measured Levels
R5	36	**50.6**	**45.9 to 54.5**
R6		**50.2**	

4.5 Noise Control and ALARP Process

As a result of this outcome and to support an application to the DWER to replace the crushing infrastructure onsite, Barto has developed a noise reduction strategy with the goal of ensuring that there is no net increase in cumulative environmental noise levels in the community and that the noise levels will progressively reduce over time with the application of various noise reduction strategies.

As part of this strategy, Barto has developed a noise control and As Low As Reasonably Practicable (ALARP) process. This process outlines how the company will determine potential noise control opportunities and how noise control options will be selected and implemented. The ALARP assessment (as discussed in [4]), which forms part of the noise control process, is used to finalise the selection of an appropriate noise control option to ensure that noise experienced at the receptors is not unreasonable.

An overview of the noise control and ALARP process is provided in the next sections.

4.5.1 Engineering Noise Control Process

Once an equipment item has been identified for noise control and risk-assessed, the Engineering Noise Control Process will be followed. The Engineering Noise Control Process consists of the following steps:

- **Identify Noise Control Options;**
- **ALARP Process -** Evaluate the practicability of the noise control options using the ALARP process; and
- **Noise Control Implementation -** The approved control advances to the Noise Control Implementation Process.

4.5.2 ALARP Process

Barto's ALARP process (see section 3.3. and 4.2 of [4]) uses an evidence-based approach that follows industry recognised principles. The ALARP process adopted by Barto is summarised as follows:

i) Preliminary noise control analysis (prior to ALARP); and

ii) ALARP Workshop and Noise Control Selection.

The purpose of the ALARP workshops is to weigh up noise control options against various factors (e.g. safety, maintenance, operations, noise reduction) in order to determine the reasonableness and practicality of each option.

The ALARP workshop is held with stakeholders from various disciplines, providing them an overview of the noise modelling findings and noise control options. The purpose of their participation in these workshops is to review and score noise control options against ALARP factors relevant to their discipline.

The noise control options are ranked during the ALARP workshop using the ALARP worksheet and scores compiled during the workshop. Noise control solutions will be recommended in accordance with the ALARP Assessment which takes into consideration:

i) Amount of noise reduction;
ii) Safety impacts of the noise control;
iii) Equipment operability;
iv) Equipment maintenance;
v) Impacts on process flow or outputs;
vi) Social Impacts; and
vii) Cost of treatment.

4.6 Summary of Impacts

The following can be concluded from the work conducted for the existing facility and its operations:

- Both the measurements and the modelling show that the current operations exceed the assigned levels within the Town of Marvel Loch;
- As a result of this finding Barto has developed noise reduction strategy in order to support the application to DWER for replacement crushing infrastructure; and
- As part of this strategy, Barto has developed a noise control and As Low As Reasonably Practicable (ALARP) process.

5 Existing Facility (Base Case)

5.1 Background

The Base Case model consists of the existing Marvel Loch operations and the planned (2021 to 2024) Marvel Loch West Underground (MLWU) operations which will be accessed via a tunnel located in an existing Marvel Loch mine pit. The Base Case model will be used for comparison purposes with the addition of the replacement crushing circuit.

5.2 Base Case Model

The Base Case model is a relatively detailed model that consists of 57 noise sources (see APPENDIX C for a detailed list). The model has been set up with the following activities:

- Marvel Loch Operations:
  - Crushing Circuit;
  - Processing Plant;
  - Road Train movements between Nevoria and Marvel Loch (southern haul road); and
  - Road Train movements between Aquarius and Marvel Loch (northern haul road).
- MLWU Operations:
  - Haul road movements from the Marvel Loch tunnel to the Run Of Mine (ROM) pad;
  - Backfill movements from the tunnel to Marvel Loch; and
  - Mine ventilation fans and pumps.

5.3 Base Case Received Levels

The Base Case noise model was run using worst case meteorological conditions (see section 3.3) with all equipment operating. The predicted noise levels for the Base Case scenario are given in Table 5-1 and a noise contour map is provided in Figure 5-1. The predicted levels in Table 5-1 include a tonality adjustment of 5 dB. The received levels are predicted to be non-compliant with the assigned levels at all receivers except at R2.

Note: Predicted noise levels of Marvel Loch Operations without the crushing circuit operating are also non-compliant with the assigned levels (e.g. R8 is predicted to be 45.7 dB(A)[9]).

[9] 5 dB penalty included for tonality.

Table 5-1 Base Case Predicted Received Noise Levels.

Receiver	Assigned Level	LA10 Received Levels[dB(A)] 10	Exceedance [dB]
		Base Case	
R1	36	37.5	1.5
R2		34	-
R3		48	12
R4		45	9
R5		51	15
R6		50	14
R7		49	13
R8		50	14
R9		49	13
R10		48	12
R11		49	13
R12		48	12
R13		48	12

[10] 5 dB adjustment added for tonality.

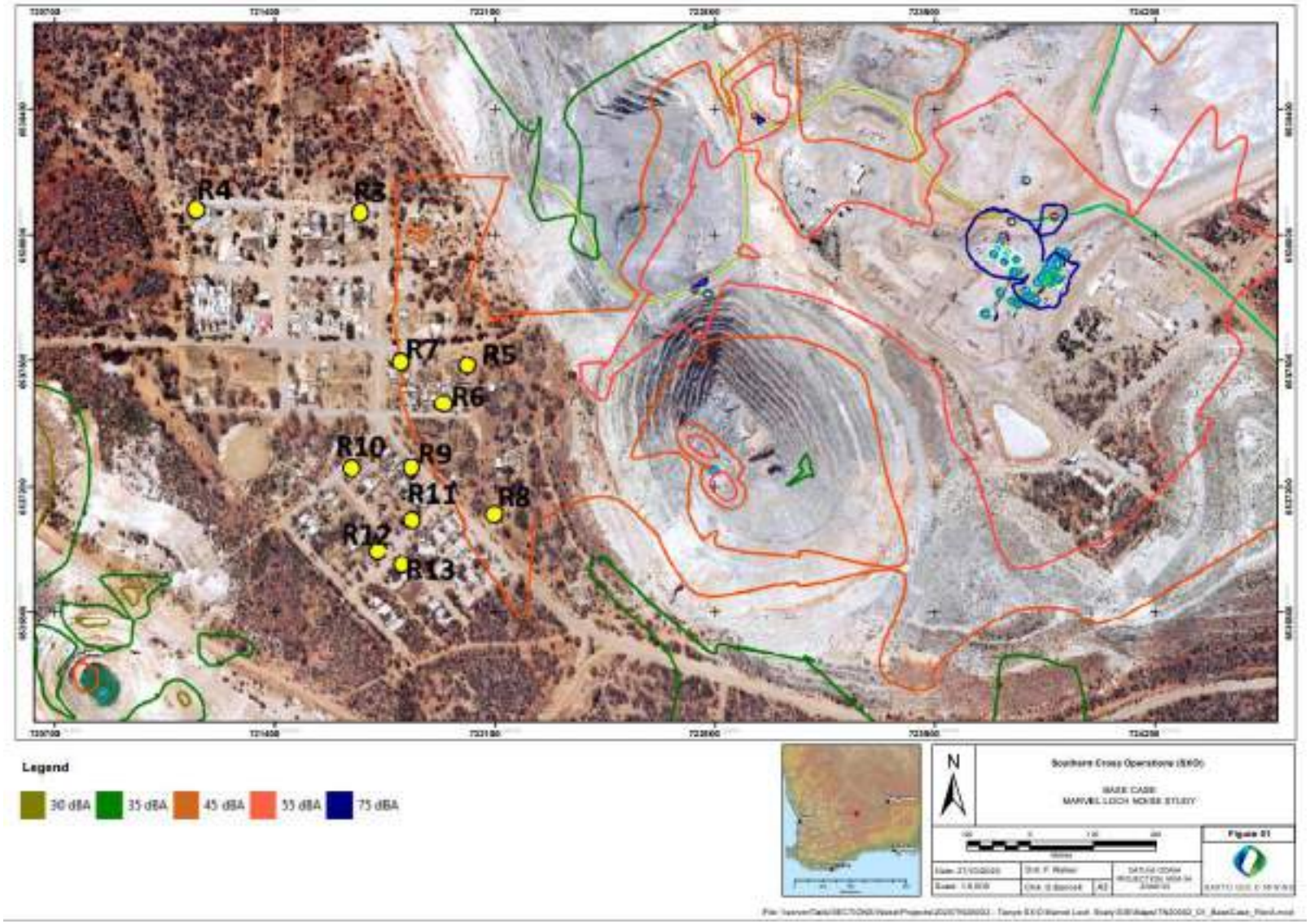

Figure 5-1: Base Case Predicted Noise Contour Map (5 dB adjustment has not been included)

6 Replacement Crushing Circuit (No Noise Controls)

6.1 Overview

The Base Case model was updated with the removal of the existing crushing circuit and addition of the replacement crushing circuit. One of the most significant changes in the design of the replacement crushing circuit was the changing the primary crusher from a gyratory to jaw crusher. Figure 1-4 shows a 3D image of proposed replacement crushing circuit and Figure 6-1 shows the layout. The Crushing Circuit Replacement model including the existing Processing Plant consists of 58 noise sources (see APPENDIX C for a detailed list). The model has been set up with the same activities as the Base Case model. New equipment source levels (see APPENDIX D) have been based on manufacturer information provided by Barto.

6.2 Replacement Crushing Circuit Received Levels

As with the Base Case assessment, the updated noise model with the replacement crushing circuit was run using worst case meteorological conditions (see section 3.3) with all equipment operating. The predicted noise levels for this scenario are given in Table 6-1 and a noise contour map is provided in Figure 6-2. The predicted levels in Table 6-1 include a tonality penalty of 5 dB.

Receivers R1 to R4, located on the northern part of the town, show no increase in received level due to the shielding that the ROM provides to the primary crusher as can be seen in Figure 6-1. All the other receivers show a 1 to 2 dB increase in noise level when compared to the Base Case. As a result, noise controls will be required.

Note: As part of the initial noise control process the layout of the replacement crushing circuit was considered. Initially the primary crusher was located more to the east and had direct line-of-site to the northern receivers (i.e. R1 to R4). Considering the topography of the ROM area it was found that the original layout did not take advantage of the shielding that could be afforded by the shape of the ROM for receivers R1 to R4. As a result, the design layout was changed having a positive benefit of approximately 2 dB reduction at R1 to R4.

Table 6-1 Predicted Received Noise Levels after Replacement Crushing Circuit

Receiver	LA_{10} [dB(A)] [11]		Difference (**2** minus 1) [dB]
	1. Base Case	2. Replacement Crushing Circuit	
R1	37.5	37.4	-0.1
R2	34	34	0
R3	48	48	0
R4	45	45	0
R5	51	53	2
R6	50	52	2
R7	49	51	1
R8	50	52	2
R9	49	51	2
R10	48	50	2
R11	49	51	2
R12	48	50	2
R13	48	50	2

[11] 5 dB adjustment added for tonality.

Figure 6-1: New crushing circuit layout.

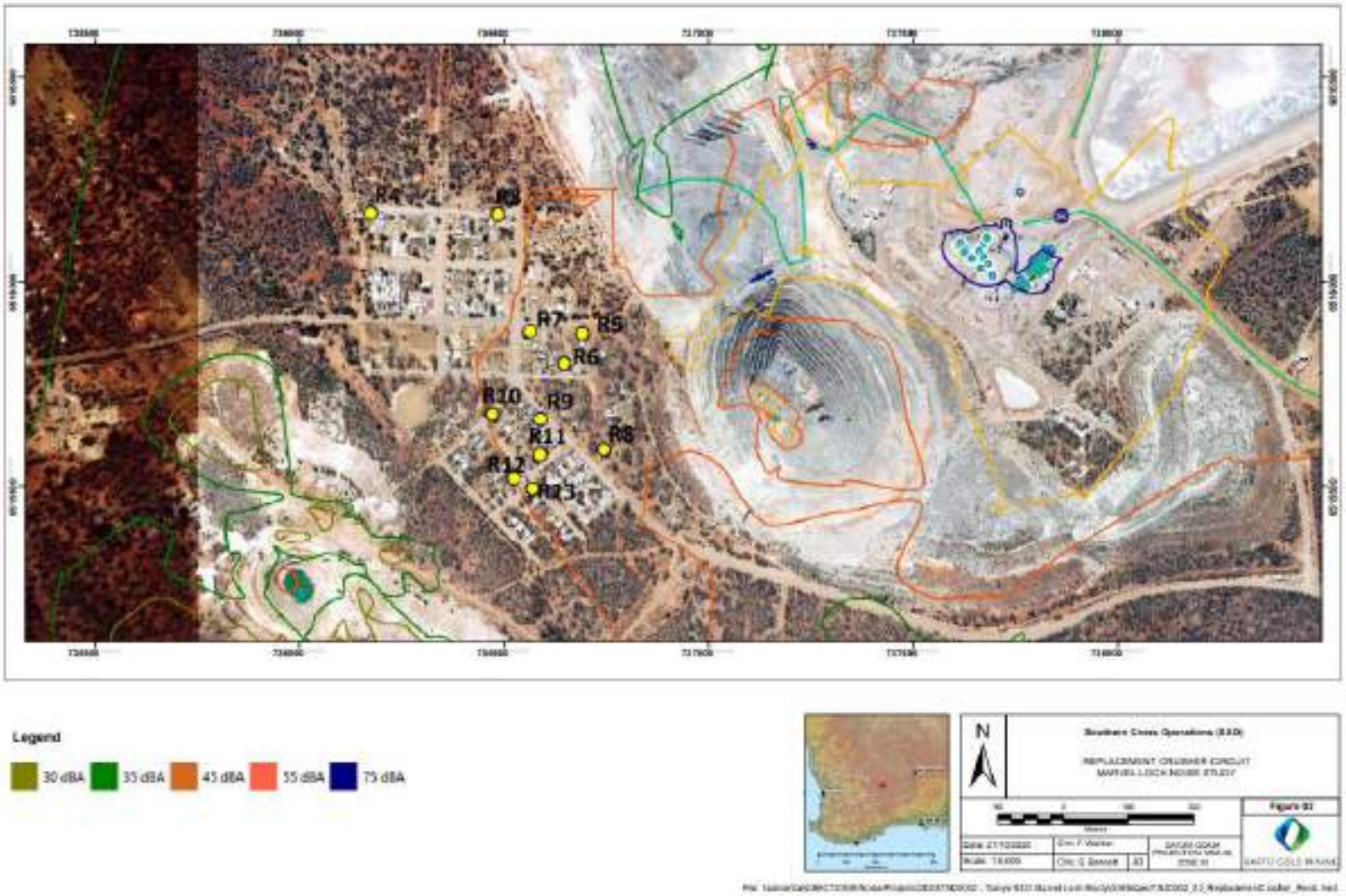

Figure 6-2: Crushing Circuit Replacement Predicted Noise Contour Map (5 dB penalty has not been included)

7 Noise Control

7.1 Overview

Determining noise controls for the replacement crushing circuit followed Barto's noise control and ALARP process described in section 4.5.

The noise control process started with determining which noise sources were contributing significantly to the noise level at the receivers in the town of Marvel Loch. The most significant contributors were then targeted for noise controls. This is key, because without addressing the top contributors, the overall noise level will not be reduced.

As a result, the top contributing noise sources at each of the receivers were investigated and a number of potential noise control options were considered during an ALARP work session. The options considered included relocating the crushing circuit, low noise equipment, bunding and screens.

7.2 Top Contributing Equipment Items

A Pareto chart for receiver R8 (being the closest receptor to the proposed replacement infrastructure) is provided in Figure 7-1 which shows the contribution of all the equipment at this receiver for the Crushing Circuit Replacement scenario. The findings for R8 reflect the broader range of receptors in Marvel Loch and show that for all receivers the crushers and screens were the most significant contributors. As a result, these items were targeted for noise control.

Note: Figure 7-1 also shows that there are a number of other noise sources that do not form part of the crushing circuit that when added up cumulatively results in a received level of 46 dB(A)[12].

7.3 Selected Noise Control

An ALARP workshop was held with stakeholders from various disciplines. The purpose of the workshop was to review and score noise control options. The noise control options were ranked during the ALARP workshop. Noise control solutions were recommended in accordance with the ALARP Assessment which took into consideration:

- Amount of noise reduction;
- Safety impacts of the noise control;
- Equipment operability;
- Equipment maintenance;
- Impacts on process flow or outputs;
- Social Impacts; and
- Cost of treatment.

[12] 5 dB included for tonality.

7.4 ALARP Workshop Outcome

Shielding of the primary, secondary, and tertiary crushers and their associated screens was determined to be the most practicable noise control to implement. As a result, this option has been selected for inclusion in the final design and assessment process.

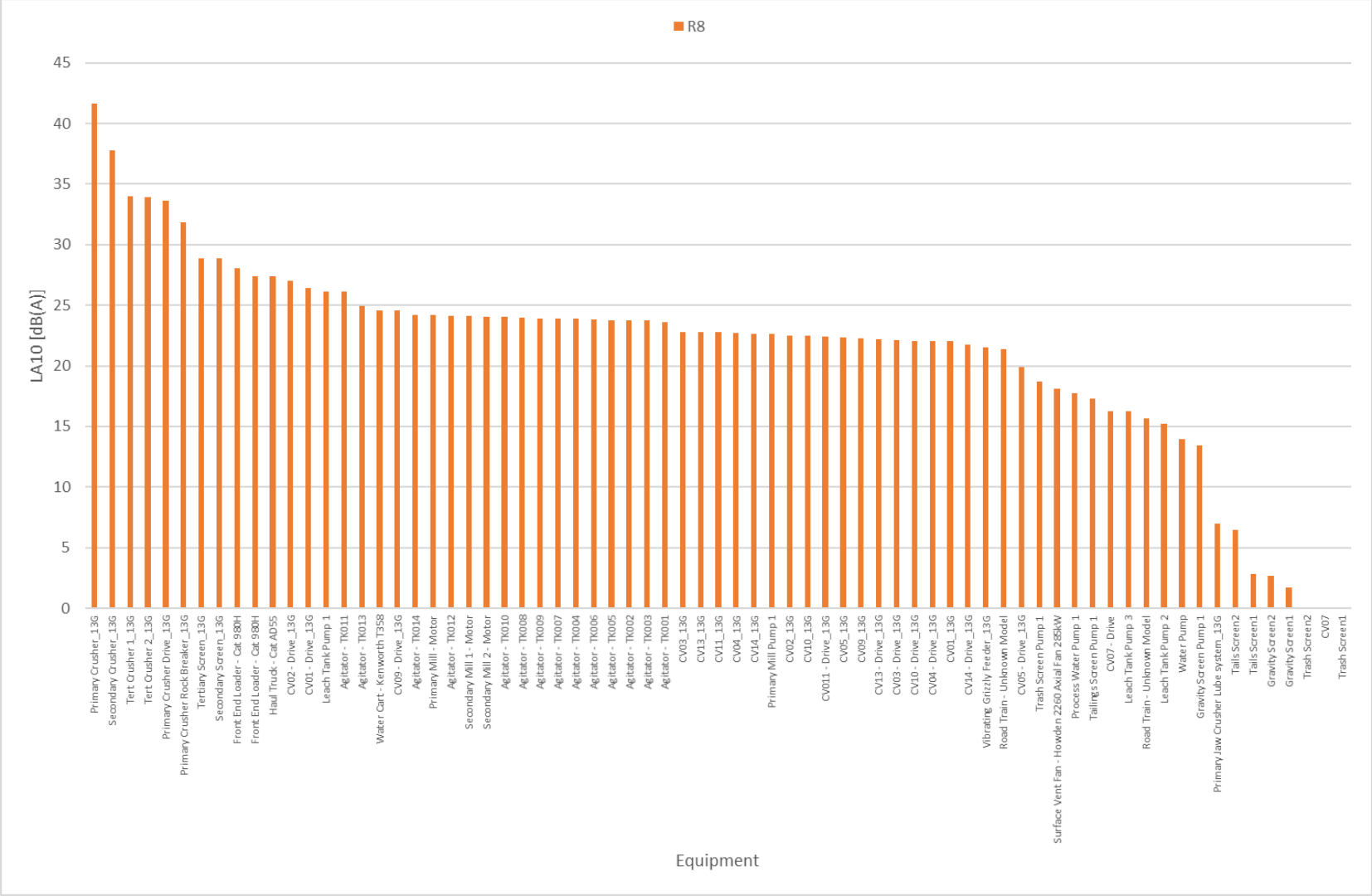

Figure 7-1: Pareto Chart Showing the Top Contributing Equipment at Receiver R8 (Note: 5 Db Tonality Penalty Not Added as the Chart Shows Individual Noise Sources).

8 Replacement Crushing Circuit (Including Noise Controls)

The selected noise controls (i.e. shielding) were added to the replacement crushing circuit noise model and the model was run using the same meteorological conditions as previous model runs. The shielding included in the model run was based on a conceptual design which involved a shielding arrangement placed on the town facing sides of the vibrating screens, primary, secondary and tertiary crushers.

The shielding in the conceptual design provided enough coverage to block the direct and indirect acoustic paths between the town of Marvel Loch and the noise emitting equipment. The shielding was therefore placed on the north-western and south-western sides of the vibrating screens, tertiary and secondary crushers. Similarly, the primary crusher shielding was placed on the south-western side of the crusher with the ROM pad providing additional shielding to the north-western direction.

The shielding is planned to be constructed using materials of suitable attenuating properties to achieve the modelled reduction in the town of Marvel Loch. Barto is currently in the process of optimising the shielding design and is looking at alternate design and material options to achieve the same or better reduction than that of the conceptual design.

The predicted noise levels for this scenario are given in Table 8-1 and a noise contour map is provided in Figure 8-2. The predicted levels in Table 8-1 include a tonality adjustment of 5 dB. With the noise controls in place all receiver noise levels are less than the base case with receivers R1 to R4 and R11 and R12 predicted to be 3 dB less than the base case.

A Pareto chart for receiver R8 is provided in Figure 8-1 which shows the contributing equipment noise levels from the replacement crushing circuit before and after noise control. Before noise control predicted noise levels from the replacement crushing circuit at R8 were 50 dB(A)[13]. After noise controls the predicted levels from the crushing circuit are 44 dB(A) [13]. Predicted received noise levels at R8 from the operations that do not form part of the crushing circuit are 46 dB(A)[13]. This implies that the proposed replacement crushing circuit, after the noise controls have been added, will be quieter than the rest of the operations. Future noise controls should therefore focus on other noise sources from the operations that do not form part of the crushing circuit to reduce the Marvel Loch Operations' impacts on the town.

[13] 5 dB included for tonality.

Table 8-1 Predicted Received Noise Levels with noise controls.

Receiver	Assigned Level	LA_{10} Received Levels [dB(A)] [14]			Difference (3 minus 1) [dB]
		Base Case	Replacement Crushing Circuit	Replacement Crushing Circuit with Noise Control	
R1	36	37	37	34	-3
R2		34	34	31	-3
R3		48	48	45	-3
R4		45	45	42	-3
R5		51	53	49	-2
R6		50	52	48	-2
R7		49	51	47	-2
R8		50	52	48	-2
R9		49	51	47	-2
R10		48	50	46	-2
R11		49	51	46	-3
R12		48	50	45	-3
R13		48	50	46	-2

[14] 5 dB adjustment added for tonality.

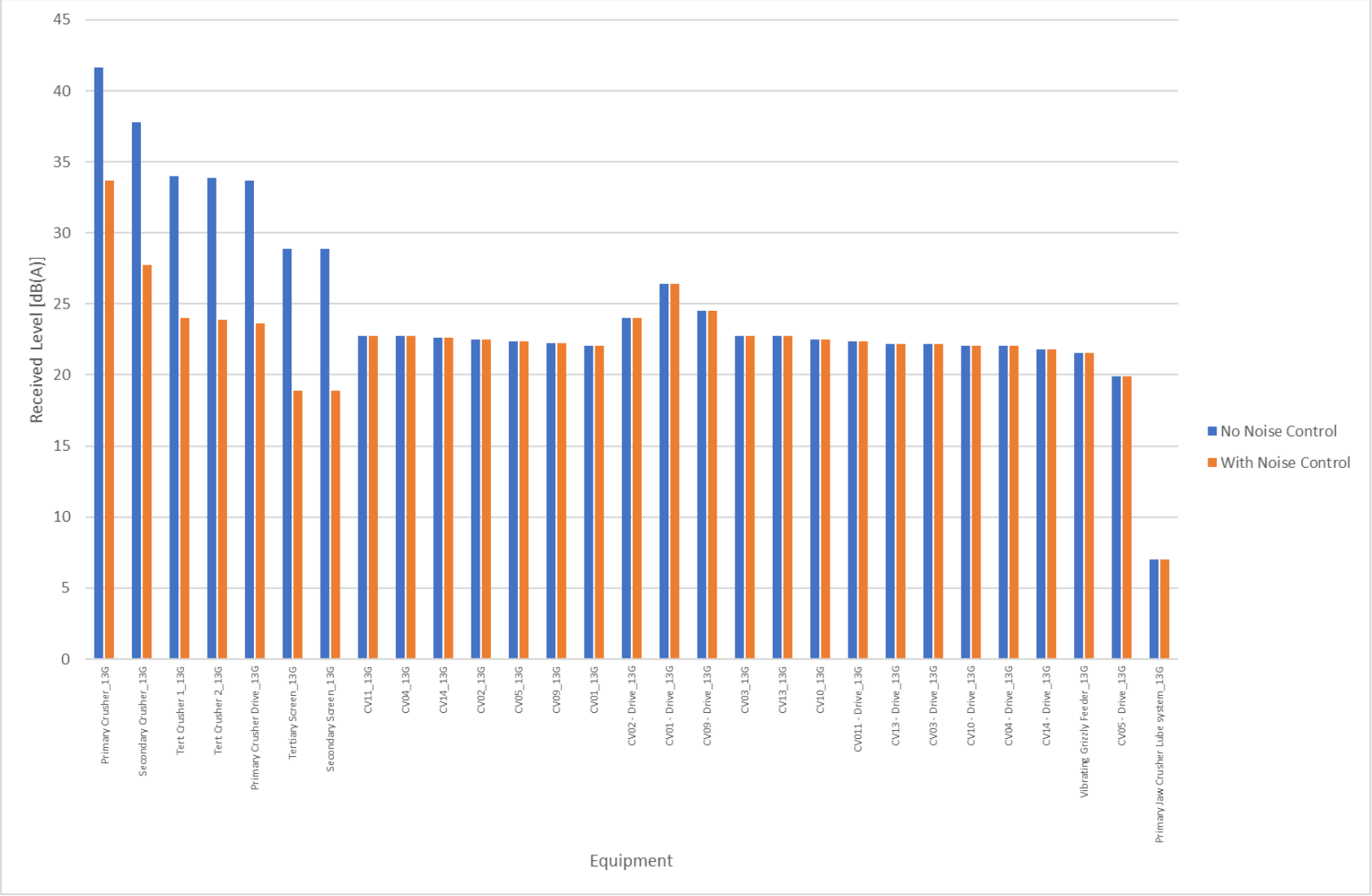

Figure 8-1: A before and after noise control Pareto chart showing the top contributing crusher equipment for the replacement crushing circuit at receiver R8 (note: 5 dB tonality penalty not added as the chart shows individual noise sources).

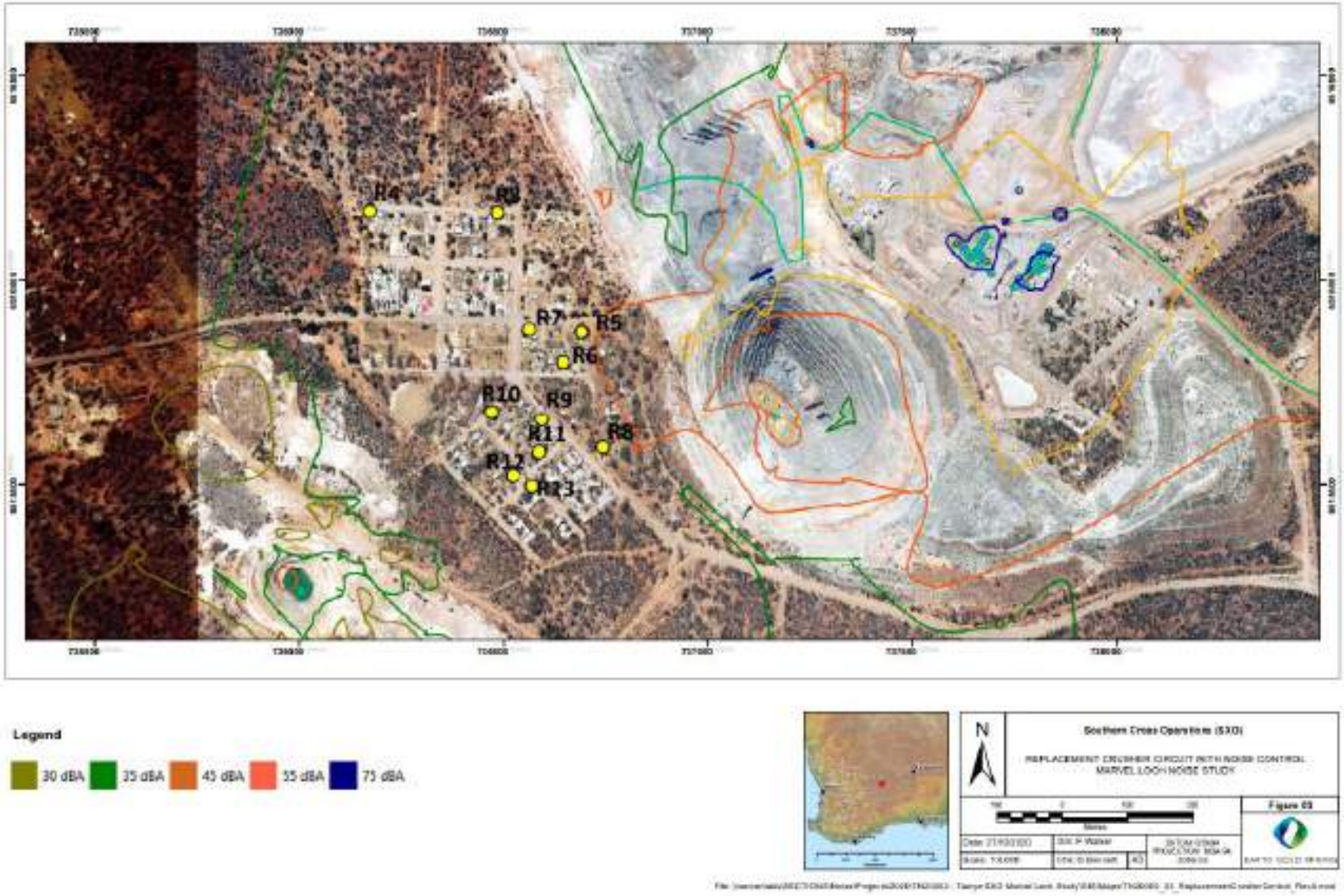

Figure 8-2: Crushing Circuit Replacement Predicted Noise Contour Map with Noise Controls (5 dB adjustment for tonality has not been included).

9 Summary and Recommendations

A noise impact study of Barto's Marvel Loch Operations and proposed replacement crushing circuit was undertaken. The existing noise impacts from the Marvel Loch Operations were determined using a combination of noise modelling and monitoring.

Noise monitoring involved noise logging close to receivers R5 and R6 for a period of 10 days in July 2019. Both the Processing Plant and crushing circuit were operating during the monitoring period. Noise monitoring showed that the measured noise levels in town ranged from 45.9 to 54.5 dB(A) [13] exceeding the assigned levels stipulated in Noise Regulations during both day and night-time.

A desktop environmental noise model was created to simulate the existing and proposed operations using a combination of SoundPlan v8.2 and Nexus Noise Management software programs. It was found that the Marvel Loch Operations cumulative noise levels exceed the Noise Regulations in every other receiver except at R2 and are ranging between 34 and 51 dB(A) [13](Base Case).

An additional scenario was modelled where the existing crushing circuit was replaced with the proposed replacement crushing circuit. This model was compared with the Base Case (i.e. existing operations) and it was found that the cumulative received levels in the town of Marvel Loch were predicted to be higher than the Base Case at some receptors. As a result, the layout for the crushing circuit was modified taking an advantage of the shadowing impact of the ROM pad. Further to this, applicable noise controls were identified using Barto's noise control and ALARP process and approved by Barto's senior management. The approved noise controls were then applied to the replacement crushing circuit model. By comparing these modelling results to that of the Base Case it was found that the cumulative received levels are predicted to be between 2 and 3dB quieter when noise controls are implemented (see Table 8-1).

Before the application of noise controls the predicted noise levels from the replacement crushing circuit at the closest receiver (R8) were 50 dB(A) [13]. After noise controls the predicted levels from the replacement crushing circuit were found to be 44 dB(A) [13]. Predicted received noise levels at R8 from the operations that do not form part of the crushing circuit are 46 dB(A) [13]. This implies that the proposed replacement crushing circuit, after the noise controls have been added, will be quieter than the rest of the operations. Future noise controls should therefore focus on other noise sources in rest of the operations to reduce the Marvel Loch Operations' impacts on the town.

Based on the findings of the noise impact study, the following recommendations can be made:

- The proposed shielding be designed and implemented to achieve the modelled outcomes;
- Noise measurements to be taken after commissioning to assess the effectiveness of the noise controls, to confirm noise source levels used in the model and to verify community impacts against the Noise Regulations; and
- The noise model to be updated with the findings of the site-based measurements.

APPENDIX A
Noise Legislation

Noise management in Western Australia is implemented through the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations), which operate under *the Environmental Protection Act 1986*. Noise Regulations specify maximum noise levels (assigned noise levels) which are the highest noise levels that can be received at noise-sensitive (residential), commercial and industrial premises.

Assigned noise levels are defined differently for noise sensitive premises, commercial premises, and industrial premises. For noise sensitive premises, an Influencing Factor (IF) is included in the assigned noise levels. The IF depends on the presence of major/minor roads and commercial/industrial land use zonings within circles of 100 metres and 450 metres radius from the noise sensitive premises.

For noise sensitive residences, the time of day also affects the assigned levels. The regulations define three types of assigned noise level:

LAS_{MAX} means an assigned level that is not to be exceeded at any time;

LAS_1 means an assigned level that is not to be exceeded for more than 1% of time;

LAS_{10} means an assigned level that is not to be exceeded for more than 10% of time.

Table A-1: Assigned Noise Levels for Noise Sensitive Receivers

Type of premises receiving noise	Time of day	Assigned Levels (dB)		
		LA_{10}	LA_1	LA_{max}
Noise sensitive premises: highly sensitive area	0700 to 1900 hours Monday to Saturday	45 + influencing factor	55 + influencing factor	65 + influencing factor
	0900 to 1900 hours Sunday and public holidays	40 + influencing factor	50 + influencing factor	65 + influencing factor
	1900 to 2200 hours all days	40 + influencing factor	50 + influencing factor	55 + influencing factor
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays	35 + influencing factor	45 + influencing factor	55 + influencing factor

Type of premises receiving noise	Time of day	Assigned Levels (dB)		
		LA_{10}	LA_1	LA_{max}
Noise sensitive premises: any area other than highly sensitive area	All hours	60	75	80
Commercial premises	All hours	60	75	80
Industrial and utility premises other than those in the Kwinana Industrial Area	All hours	65	80	90
Industrial and utility premises in the Kwinana Industrial Area	All hours	75	85	90

APPENDIX B
Detailed Analysis of Monitoring Data

Weather data was used to filter the measured data by wind direction and speed to determine the most favourable meteorological conditions for propagation thus eliminating, as far as possible, any ambiguity due to weather. Additionally, high frequency noise attributed to insects (i.e. 2.5 kHz) was removed from the data by excluding frequencies greater than 1.6 kHz from the 1/3 octave band noise logging results. The analysis can be summarised as follows:

- Measurement log consisted of ~2,500 noise measurements at 5-minute sampling intervals taken over two weeks.
- The average LA_{90} night-time level over the monitoring period was determined[15] to be 42 dB(A). With a tonality adjustment applied the LA_{90} night-time level will be 47 dB(A).
- The measured samples were correlated to local weather data Barto obtained from BoM.
- Data was filtered using the following weather parameters:
  - WS<5ms
  - WD between 0 and 180degrees (crushing plant is located at approximate 90 degrees from the Town)
  - no rain
  - Noise data was filtered to only include noise levels between 12.5 Hz and 1.6 kHz.

The outcomes of the analysis are shown in Table 9-1 where it can be seen that the mines noise levels in the townsite of Marvel Loch potentially range from 45.9 to 54.5 dB(A).

Table 9-1: Noise Logging Non-Compliances[7]

Date and Time	LAS10-(12.5 Hz to 1.6kHz)	LA90	Wind Speed (m/s)	Wind Direction (⁰)	Rain (mm)	Period
26/07/2019 00:00	49.4	46.0	3.1	67.5	0.0	Night
26/07/2019 01:00	50.8	48.5	2.9	75.2	0.0	Night
26/07/2019 02:00	50.5	49.4	3.4	33.8	0.0	Night
26/07/2019 03:00	50.9	49.4	3.0	33.8	0.0	Night
26/07/2019 04:00	50.3	49.1	2.3	58.5	0.0	Night
26/07/2019 05:00	50.6	49.5	1.7	40.6	0.0	Night
26/07/2019 06:00	49.9	48.8	2.7	30.0	0.0	Night
26/07/2019 07:00	51.1	49.1	2.8	6.4	0.0	Day

[15] Wood and Grieve (AC-RE-001-43751_004; 2019) (unfiltered)

26/07/2019 19:00	43.1	42.4	1.3	25.4	0.0	Evening
26/07/2019 22:00	44.7	43.6	1.2	54.3	0.0	Night
27/07/2019 04:00	47.8	46.4	0.6	28.7	0.0	Night
27/07/2019 05:00	48.2	46.7	0.6	28.7	0.0	Night
27/07/2019 06:00	49.5	47.9	0.1	5.4	0.0	Night
27/07/2019 22:00	47.5	45.0	2.8	37.5	0.0	Night
29/07/2019 22:00	50.0	48.9	4.8	71.2	0.0	Night
29/07/2019 23:00	49.4	47.2	3.9	63.8	0.0	Night
30/07/2019 00:00	47.9	47.3	2.4	83.0	0.0	Night
30/07/2019 01:00	47.2	45.6	3.0	71.3	0.0	Night
30/07/2019 02:00	48.9	46.9	1.3	50.1	0.0	Night
30/07/2019 03:00	49.7	47.5	2.3	37.7	0.0	Night
30/07/2019 04:00	49.0	46.8	2.5	75.2	0.0	Night
30/07/2019 05:00	48.4	46.8	2.6	78.8	0.0	Night
30/07/2019 06:00	47.6	45.1	3.2	52.5	0.0	Night
30/07/2019 07:00	49.0	46.5	3.2	48.7	0.0	Day
30/07/2019 08:00	48.5	48.9	3.4	29.8	0.0	Day
30/07/2019 10:00	46.8	44.5	4.8	11.3	0.0	Day
30/07/2019 11:00	46.3	44.7	4.9	3.7	0.0	Day
30/07/2019 21:00	49.5	46.8	4.9	75.0	0.0	Evening
31/07/2019 02:00	48.3	46.3	1.4	70.0	0.0	Night
31/07/2019 03:00	47.8	45.0	1.8	28.0	0.0	Night
31/07/2019 04:00	48.5	45.3	2.3	71.2	0.0	Night
31/07/2019 05:00	47.4	45.6	2.1	82.5	0.0	Night
31/07/2019 06:00	48.0	44.9	2.2	78.8	0.0	Night
31/07/2019 09:00	47.4	45.8	2.7	7.1	0.0	Day
31/07/2019 11:00	46.4	43.1	3.6	14.8	0.0	Day
31/07/2019 12:00	47.2	44.0	3.8	34.0	0.0	Day
31/07/2019 14:00	46.4	43.7	4.4	40.4	0.0	Day
31/07/2019 15:00	46.1	42.6	3.8	52.7	0.0	Day
31/07/2019 17:00	46.9	40.9	3.3	52.5	0.0	Day
31/07/2019 18:00	49.0	44.3	3.1	66.9	0.0	Day
1/08/2019 01:00	51.5	49.4	3.4	86.3	0.0	Night
1/08/2019 03:00	49.6	47.1	4.6	67.5	0.0	Night
1/08/2019 04:00	49.9	45.6	3.9	67.5	0.0	Night
1/08/2019 05:00	51.0	47.1	3.8	67.5	0.0	Night
1/08/2019 06:00	50.2	48.8	4.1	75.0	0.0	Night
1/08/2019 08:00	48.8	49.3	4.3	56.0	0.0	Day
1/08/2019 17:00	47.7	43.6	3.5	41.3	0.0	Day
1/08/2019 18:00	50.4	45.1	3.6	48.7	0.0	Day
1/08/2019 19:00	50.5	47.5	4.5	67.5	0.0	Evening
2/08/2019 00:00	49.2	47.2	4.5	45.6	0.0	Night
2/08/2019 01:00	47.6	47.4	3.7	20.8	0.0	Night
2/08/2019 02:00	48.4	47.1	4.0	26.2	0.0	Night
2/08/2019 03:00	49.3	48.7	4.3	22.5	0.0	Night

2/08/2019 06:00	50.3	50.6	3.1	11.3	0.0	Night
2/08/2019 07:00	49.9	49.7	1.8	30.2	0.0	Day
2/08/2019 08:00	49.6	49.2	4.4	30.0	0.0	Day

Figure 9-1: LA_{10} logged noise data during the logging period

APPENDIX C
Equipment List

Base Case	Base Case + Replacement Crushing Circuit
Agitator - TK001	Agitator - TK001
Agitator - TK002	Agitator - TK002
Agitator - TK003	Agitator - TK003
Agitator - TK004	Agitator - TK004
Agitator - TK005	Agitator - TK005
Agitator - TK006	Agitator - TK006
Agitator - TK007	Agitator - TK007
Agitator - TK008	Agitator - TK008
Agitator - TK009	Agitator - TK009
Agitator - TK010	Agitator - TK010
Agitator - TK011	Agitator - TK011
Agitator - TK012	Agitator - TK012
Agitator - TK013	Agitator - TK013
Agitator - TK014	Agitator - TK014
Cone Crushers (2x)	CV01 - Drive_13G
CV02	CV01_13G
CV02 - Drive	CV011 - Drive_13G
CV03	CV02 - Drive_13G
CV03 - Drive	CV02_13G
CV04	CV03 - Drive_13G
CV04 - Drive	CV03_13G
CV05a	CV04 - Drive_13G
CV05a - Drive	CV04_13G
CV05b - Drive	CV05 - Drive_13G
CV05c - Drive	CV05_13G
CV06	CV07
CV06 - Drive	CV07 - Drive
CV07	CV09 - Drive_13G
CV07 - Drive	CV09_13G
CV5b	CV10 - Drive_13G
CV5c	CV10_13G
Dozer - Cat D10	CV11_13G
Front End Loader - Cat 980H	CV13 - Drive_13G
Gravity Screen Pump 1	CV13_13G

Base Case	Base Case + Replacement Crushing Circuit
Gravity Screen1	CV14 - Drive_13G
Gravity Screen2	CV14_13G
Haul Truck - Cat AD55	Front End Loader - Cat 980H
Leach Tank Pump 1	Front End Loader - Cat 980H
Leach Tank Pump 2	Gravity Screen Pump 1
Leach Tank Pump 3	Gravity Screen1
Primary Crusher	Gravity Screen2
Primary Mill - Motor	Haul Truck - Cat AD55
Primary Mill Pump 1	Leach Tank Pump 1
Process Water Pump 1	Leach Tank Pump 2
Road Train	Leach Tank Pump 3
Secondary Crusher	Primary Crusher Drive_13G
Secondary Mill 1 - Motor	Primary Crusher Rock Breaker_13G
Secondary Mill 2 - Motor	Primary Crusher_13G
Surface Vent Fan - Howden 2260 Axial Fan 285kW	Primary Jaw Crusher Lube system_13G
Tailings Screen Pump 1	Primary Mill - Motor
Tails Screen1	Primary Mill Pump 1
Tails Screen2	Process Water Pump 1
Trash Screen Pump 1	Road Train - Unknown Model
Trash Screen1	Secondary Crusher_13G
Trash Screen2	Secondary Mill 1 - Motor
Water Cart - Kenworth T358	Secondary Mill 2 - Motor
Water Pump	Secondary Screen_13G
	Surface Vent Fan - Howden 2260 Axial Fan 285kW
	Tailings Screen Pump 1
	Tails Screen1
	Tails Screen2
	Tert Crusher 1_13G
	Tert Crusher 2_13G
	Tertiary Screen_13G
	Trash Screen Pump 1
	Trash Screen1
	Trash Screen2
	Vibrating Grizzly Feeder_13G
	Water Cart - Kenworth T358
	Water Pump

APPENDIX D
Noise Source SWL

BASE CASE EQUIPMENT SOURCE LEVELS

Table D-1: Base Case - Noise Source Levels

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
1	Agitator - TK001	94.6	45	56	63	71	87	90	88	87	79
2	Agitator - TK002	94.6	45	56	63	71	87	90	88	87	79
3	Agitator - TK003	94.6	45	56	63	71	87	90	88	87	79
4	Agitator - TK004	94.6	45	56	63	71	87	90	88	87	79
5	Agitator - TK005	99.1	33	51	60	73	80	96	94	89	83
6	Agitator - TK006	99.1	33	51	60	73	80	96	94	89	83
7	Agitator - TK007	99.1	33	51	60	73	80	96	94	89	83
8	Agitator - TK008	99.1	33	51	60	73	80	96	94	89	83
9	Agitator - TK009	96.1	36	55	63	81	89	92	91	84	79
10	Agitator - TK010	96.1	36	55	63	81	89	92	91	84	79
11	Agitator - TK011	96.1	36	55	63	81	89	92	91	84	79
12	Agitator - TK012	96.1	36	55	63	81	89	92	91	84	79

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
13	Agitator - TK013	96.1	36	55	63	81	89	92	91	84	79
14	Agitator - TK014	96.1	36	55	63	81	89	92	91	84	79
15	Cone Crushers (2x)	113.7	41	66	82	97	107	108	109	105	97
16	CV02	101.3	52	65	78	87	93	96	96	94	88
17	CV02 - Drive	101.0	-94	58	71	83	90	96	96	94	88
18	CV03	101.6	-94	59	69	83	90	96	97	95	88
19	CV03 - Drive	93.8	42	57	73	78	86	88	89	85	80
20	CV04	102.6	48	63	76	88	94	97	97	96	90
21	CV04 - Drive	96.4	42	57	73	80	87	91	91	89	87
22	CV05a	101.6	-94	59	69	83	90	96	97	95	88
23	CV05a - Drive	104.6	45	59	69	79	96	102	96	94	88
24	CV05b - Drive	91.6	-94	49	62	73	81	86	87	85	79
25	CV05c - Drive	88.9	46	59	70	78	83	84	82	76	68
26	CV06	97.3	48	61	74	83	89	92	92	90	84
27	CV06 - Drive	98.5	-94	56	69	80	88	93	94	92	86
28	CV07	96.0	47	66	83	84	88	90	90	88	85
29	CV07 - Drive	98.5	-94	56	69	80	88	93	94	92	86
30	CV5b	99.2	-94	52	63	73	82	89	95	94	92
31	CV5c	79.9	37	48	62	68	75	76	73	66	58
32	Dozer - Cat D10	114.4	71	81	91	98	107	110	111	102	29
33	Front End Loader - Cat 980H	103.7	61	73	90	90	98	100	97	89	84

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
34	Gravity Screen Pump 1	109.0	65	78	90	97	103	104	102	97	90
35	Gravity Screen1	90.1	45	58	69	77	83	85	84	79	73
36	Gravity Screen2	90.1	45	58	69	77	83	85	84	79	73
37	Haul Truck - Cat AD55	106.5	67	63	67	95	100	102	102	94	27
38	Leach Tank Pump 1	109.0	65	78	90	97	103	104	102	97	90
39	Leach Tank Pump 2	109.0	65	78	90	97	103	104	102	97	90
40	Leach Tank Pump 3	109.0	65	78	90	97	103	104	102	97	90
41	Primary Crusher	116.4	85	93	100	107	111	111	109	103	93
42	Primary Mill - Motor	99.6	51	65	77	85	91	97	93	85	77
43	Primary Mill Pump 1	109.0	65	78	90	97	103	104	102	97	90
44	Process Water Pump 1	109.0	65	78	89	97	103	104	103	97	90
45	Road Train	104.4	65	76	86	93	98	100	98	93	27
46	Secondary Crusher	113.7	41	66	82	97	107	108	109	105	97
47	Secondary Mill 1 - Motor	99.6	51	65	77	85	91	97	93	85	77
48	Secondary Mill 2 - Motor	99.6	51	65	77	85	91	97	93	85	77

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
49	Surface Vent Fan - Howden 2260 Axial Fan 285kW	108.0	68	79	89	100	103	103	101	92	82
50	Tailings Screen Pump 1	109.0	65	78	90	97	103	104	102	97	90
51	Tails Screen1	83.5	37	50	62	70	75	79	78	73	67
52	Tails Screen2	83.5	37	50	62	70	75	79	78	73	67
53	Trash Screen Pump 1	109.0	65	78	90	97	103	104	102	97	90
54	Trash Screen1	83.5	37	50	62	70	75	79	78	73	67
55	Trash Screen2	83.5	37	50	62	70	75	79	78	73	67
56	Water Cart - Kenworth T358	103.5	69	78	86	92	97	99	98	92	84
57	Water Pump	107.8	79	87	94	98	99	100	103	102	30

REPLACEMENT CRUSHING CIRCUIT EQUIPMENT SOURCE LEVELS

Table D-2: Replacement Crushing Circuit – New Noise Source Levels

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
1	CV01 - Drive_13G	101.1	58	71	83	90	96	96	94	88	80
2	CV01_13G	101.6	59	69	83	90	96	97	95	88	79

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
3	CV011 - Drive_13G	96.5	54	67	78	85	91	92	90	84	75
4	CV02 - Drive_13G	101.1	58	71	83	90	96	96	94	88	80
5	CV02_13G	101.6	59	69	83	90	96	97	95	88	79
6	CV03 - Drive_13G	96.5	54	67	78	85	91	92	90	84	75
7	CV03_13G	96.9	54	65	79	85	92	93	90	83	74
8	CV04 - Drive_13G	96.5	54	67	78	85	91	92	90	84	75
9	CV04_13G	111.9	69	80	94	100	107	108	105	98	90
10	CV05 - Drive_13G	93.8	57	73	78	86	88	89	85	80	68
11	CV05_13G	101.6	59	69	83	90	96	97	95	88	79
12	CV07	96.0	47	66	83	84	88	90	90	88	85
13	CV07 - Drive	98.5	-94	56	69	80	88	93	94	92	86
14	CV09 - Drive_13G	111.9	67	80	89	96	102	105	106	106	104
15	CV09_13G	101.1	58	69	83	89	96	97	95	87	79
16	CV10 - Drive_13G	96.5	54	67	78	85	91	92	90	84	75
17	CV10_13G	96.5	53	64	78	84	91	92	90	82	74
18	CV11_13G	101.6	58	69	83	89	96	97	95	88	79
19	CV13 - Drive_13G	96.5	54	67	78	85	91	92	90	84	75
20	CV13_13G	96.9	54	65	79	85	92	93	90	83	74
21	CV14 - Drive_13G	96.5	54	67	78	85	91	92	90	84	75
22	CV14_13G	101.6	59	69	83	90	96	97	95	88	79
23	Primary Crusher Drive_13G	108.1	62	73	87	99	103	103	100	92	82
24	Primary Crusher Rock Breaker_13G	107.9	84	94	101	97	100	101	101	95	88

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
25	Primary Crusher_13G	116.4	85	93	100	107	111	111	109	103	93
26	Primary Jaw Crusher Lube system_13G	81.8	39	52	63	71	76	77	75	69	61
27	Primary Mill - Motor	99.6	51	65	77	85	91	97	93	85	77
28	Primary Mill Pump 1	109.0	65	78	90	97	103	104	102	97	90
29	Process Water Pump 1	109.0	65	78	89	97	103	104	103	97	90
30	Secondary Crusher_13G	113.7	41	66	82	97	107	108	109	105	97

Table D-3: Replacement Crushing Circuit – Remaining Plant Noise Source Levels

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
1	Agitator - TK001	94.6	45	56	63	71	87	90	88	87	79
2	Agitator - TK002	94.6	45	56	63	71	87	90	88	87	79
3	Agitator - TK003	94.6	45	56	63	71	87	90	88	87	79
4	Agitator - TK004	94.6	45	56	63	71	87	90	88	87	79
5	Agitator - TK005	99.1	33	51	60	73	80	96	94	89	83
6	Agitator - TK006	99.1	33	51	60	73	80	96	94	89	83
7	Agitator - TK007	99.1	33	51	60	73	80	96	94	89	83
8	Agitator - TK008	99.1	33	51	60	73	80	96	94	89	83

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
9	Agitator - TK009	96.1	36	55	63	81	89	92	91	84	79
10	Agitator - TK010	96.1	36	55	63	81	89	92	91	84	79
11	Agitator - TK011	96.1	36	55	63	81	89	92	91	84	79
12	Agitator - TK012	96.1	36	55	63	81	89	92	91	84	79
13	Agitator - TK013	96.1	36	55	63	81	89	92	91	84	79
14	Agitator - TK014	96.1	36	55	63	81	89	92	91	84	79
15	Front End Loader - Cat 980H	103.7	61	73	90	90	98	100	97	89	84
16	Front End Loader - Cat 980H	103.7	61	73	90	90	98	100	97	89	84
17	Gravity Screen Pump 1	109.0	65	78	90	97	103	104	102	97	90
18	Gravity Screen1	90.1	45	58	69	77	83	85	84	79	73
19	Gravity Screen2	90.1	45	58	69	77	83	85	84	79	73
20	Haul Truck - Cat AD55	106.5	67	63	67	95	100	102	102	94	27
21	Leach Tank Pump 1	109.0	65	78	90	97	103	104	102	97	90
22	Leach Tank Pump 2	109.0	65	78	90	97	103	104	102	97	90
23	Leach Tank Pump 3	109.0	65	78	90	97	103	104	102	97	90
24	Primary Mill - Motor	99.6	51	65	77	85	91	97	93	85	77
25	Primary Mill Pump 1	109.0	65	78	90	97	103	104	102	97	90
26	Process Water Pump 1	109.0	65	78	89	97	103	104	103	97	90
27	Road Train	104.4	65	76	86	93	98	100	98	93	27

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
28	Secondary Mill 1 - Motor	99.6	51	65	77	85	91	97	93	85	77

Assets | Engineering | Environment | Noise | Spatial | Waste

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APPENDIX F

Stakeholder Consultation Report

Barto Gold Mining Pty Ltd

Stakeholder Engagement Report

October 2020

platform

communicate with us...

1. Purpose

The purpose of this report is to provide an overview of stakeholder engagement activities undertaken by Barto Gold Mining Pty Ltd (Barto) to support the planned replacement of the crushing circuit at its Southern Cross Operations located at Marvel Loch, Western Australia.

2. Overview

In May 2020, Barto commenced planning for stakeholder engagement activities with the intent of understanding stakeholder interest or concern with activities associated with the planned replacement of the crushing circuit.

Feedback from these engagements is being used to inform planning for the decommissioning of existing equipment, as well as construction and operation of new equipment, with a view to minimising community impacts.

In July 2020 Barto engaged the services Platform Communications[1] (Platform) to provide additional resourcing and support production of communications materials, as well as to provide an independent viewpoint on appropriate communications and analysis of stakeholder feedback.

In September 2020 Barto undertook a number of stakeholder engagements, including meetings with Shire of Yilgarn and community representatives from Southern Cross and Marvel Loch.

To date, there have been no objections or specific issues raised by stakeholders regarding the proposed activities. Barto will continue to engage stakeholders as planning matures for the proposed activities.

3. Principles of Engagement

Barto applied the following principles with respect to planning for the proposed activities:

- Identify relevant and interested stakeholders
- Engage stakeholders early in the planning process
- Develop a tailored approach to engagement that is transparent and two-way
- Develop communications that are relevant to specific stakeholder needs
- Provide adequate time for stakeholders to provide feedback
- Incorporate feedback into planning and decision making
- Provide feedback to stakeholders on how their feedback has been considered

The principles outlined above are aligned to international best practice standards and approaches, including:

- AccountAbility AA1000 Stakeholder Engagement Standard 2015
- International Association of Public Participation (IAPP, 2014) Public Participation Spectrum

They are also aligned to Western Australian Government guidance for resource development, including:

- Mining Proposal Guidance – How to prepare in accordance with Part 1 of the Statutory Guidelines for Mining Proposals

[1] Platform Communications is a Perth-based specialist communications consultancy providing professional services to clients within the resources sector, including advice and support on stakeholder engagement activities.

4. Stakeholder identification

In identifying stakeholders relevant to the planned activity, Barto used guidance provided by the Department of Mines, Industry Regulation and Safety for mining proposals, with identification criteria comprising:

- Relevant decision-making Authorities and other relevant State or Commonwealth government departments and local government authorities
- Any person or organisation whose functions, interests or activities may be affected by the activities
- Any other person or organisation that the proponent considers relevant

Barto identified the following stakeholders as being relevant to the proposed activities.

Stakeholder group / organisation	Relevance
Department of Mines, Industry Regulation and Safety (DMIRS)	WA Government department with responsibility for regulating mining and petroleum activities
Department of Water and Environmental Regulation (DWER)	WA Government department with regulatory authority for operations at the Southern Cross Operations mine site
Shire of Yilgarn	WA Local Government authority
Marvel Loch community members	Proximity to Southern Cross Operations mine site
Landowners / leaseholders	Proximity to transport routes to Southern Cross Operations mine site
Barto employees	Potential interaction with stakeholders

Engagement activities to date with the above stakeholders are outlined in **Section 6**.

5. Impact assessment

Barto undertook an assessment of potential impacts and areas of interest relevant to these stakeholders, which are outlined in the table below:

Stakeholder group / organisation	Potential impacts / area of interest
Department of Mines, Industry Regulation and Safety (DMIRS)	• Potential for regulatory approval for replacement of the existing crushing circuit
Department of Water and Environmental Regulation (DWER)	• Authorisation to decommission old crushing circuit • License amendment to construct and operate the replacement crushing circuit
Shire of Yilgarn	• Transport impacts during decommissioning and construction activities
Marvel Loch community members	• Transport impacts during decommissioning and construction activities • Noise and dust management during decommissioning, construction and operation
Landowners / leaseholders	• Transport impacts during decommissioning and construction activities
Barto employees	• Potential interaction with stakeholders

Communications materials as detailed in APPENDIX A have sought to address these areas of stakeholder impact and interest

6. Stakeholder engagement

The table below outlines engagement activities undertaken to support the proposed activities, as well as a summary of stakeholder responses:

Stakeholder group / organisation	Activity	Date	Communications materials[2]	Stakeholder feedback	Barto response
Shire of Yilgarn	Attendance at Shire meeting	17 September 2020	Presentation	Shire councillors noted the presentation and did not raise any concerns or objections about the planned activity	Continue to keep informed as planning matures
Marvel Loch community members and local landowners / leaseholders	Invitation to community meeting	10 September 2020	Invitation	No feedback received about the planned activity	No action required
	Community meeting	24 September 2020	Presentation Posters Feedback form[3]	Stakeholder asked if cranes would be coming through town Stakeholder asked if there would be road closures General comment made on provision of early advice if site activities are to have an impact on community services and amenity, e.g. water, power, road access No stakeholder feedback forms were returned to Barto	Barto advised cranes were already on site to support activities for the mobile crushing circuit Barto advised there would be no road closures as equipment would be modularised, with a haul road to be used to minimise impact to local traffic Barto advised it would continue to keep stakeholders informed as planning matured, as well as provide updates on government approvals Barto advised it would continue to provide notifications prior to material impacts to community services

[2] Communications materials are included in Appendix A
[3] Barto also offered stakeholders the opportunity to engage Platform Communications to provide confidential feedback

DWER	Project scoping meeting	6 October 2020	Presentation	DWER advised that decommissioning of the existing crushing circuit can commence, including demolition and removal of the fine ore bins, existing crushing circuit, services etc. as these activities do not form part of the Prescribed Activity DWER advised that approval for construction of the replacement crushing circuit would be via an amendment to the Prescribed Premise Licence, with approvals documentation needing to provide sufficient detail on controls to manage noise, dust and surface water DWER advised it will assess the proposal against the Assigned Noise Levels (Noise Regulations 19975) on an ALARP basis for cumulative emissions from the plant DWER advised it will seek advice and assistance from its Noise Management Branch during the assessment process and will formally consult the Shire of Yilgarn. DWER recommended Barto to keep the Shire appraised on approvals DWER also advised it would request verification noise monitoring during commissioning to determine that operations noise levels are as detailed in the approvals documentation. This will become a licence condition	Barto plans to meet with the Shire of Yilgarn on 19 November 2020. A Marvel Loch community meeting will be held following the Shire meeting.

DMIRS	Advice on requirement for DMIRS approval	29 September 2020	Phone discussion	Approval not required to replace existing crushing circuit so long as there are no major earthworks requirements. The intent of the original approval remains the same and the environmental risks do not change.	No approval required form DMIRS

7. Ongoing engagement

Barto is committed to keeping stakeholders informed about its current and planned activities. Forward looking stakeholder engagement activities relevant to the replacement of the crushing circuit include:

- Inclusion of project updates in regular community meetings, including planned decommissioning activities and government approvals for construction of the new crushing circuit
- Notification of potentially impacted stakeholders of local impacts (e.g. noise, dust, traffic) relevant to decommissioning activities
- Engagement of site staff on community engagement strategies as part of pre-start information packages
- Meeting with the Shire of Yilgarn planned for 19 November 2020, followed by a Marvel Loch community meeting with a focus on approvals for the replacement crushing circuit.

APPENDIX A

The slide below was included in a presentation to the Shire of Yilgarn on 17 September 2020.

Replacement Crushing Circuit for Process Plant

Barto Gold Mining

- The old crusher – is Old
  - Built in ~ 1986, the crusher is past its serviceable date;
  - Investment of ~$20M into new plant – underpin long term, efficient operations.
- Mobile Crushing Plant – Short Term Fix
  - Short-term solution while fixed plant is removed, and the new crusher built;
  - Sea container wall installed around the crusher to mitigate noise;
  - Initial mobile plant failed to deliver outputs required – replaced;
  - New plant being commissioned now - Sea-container noise bund to be re-installed asap.
- Fixed Plant – Long Term Investment
  - Detailed design process underway;
  - Noise and Dust – As Low as Reasonably Practicable (ALARP);
    - Determination of the practicality of emission controls using a rating system to weigh various factors (i.e. operations, maintenance, safety, cost) against the emission reduction achieved
  - Improved technology – confident the new equipment will be better all round (higher productivity, lower running costs and emissions);
  - Studies underway for dust, noise and surface water management, expected completion September-October 2020;
  - Approval via an amendment to the existing Prescribed Premise licence;
  - Consultation with Local Community, Shire, Regulators.

14

The invitation below was sent to community members and relevant landowners / leaseholders on 10 September 2020.

The three slides below were included in a presentation to community members and relevant landowners / leaseholders 24 September 2020.

Other Projects: Replacement Crushing Circuit

Barto Gold Mining

The old crusher for the processing plant – is well Old… built in ~ 1986, the crusher is now past its serviceable date.

Currently MLG are running a mobile crushing plant as a short term fix whilst the new crusher is designed and built.

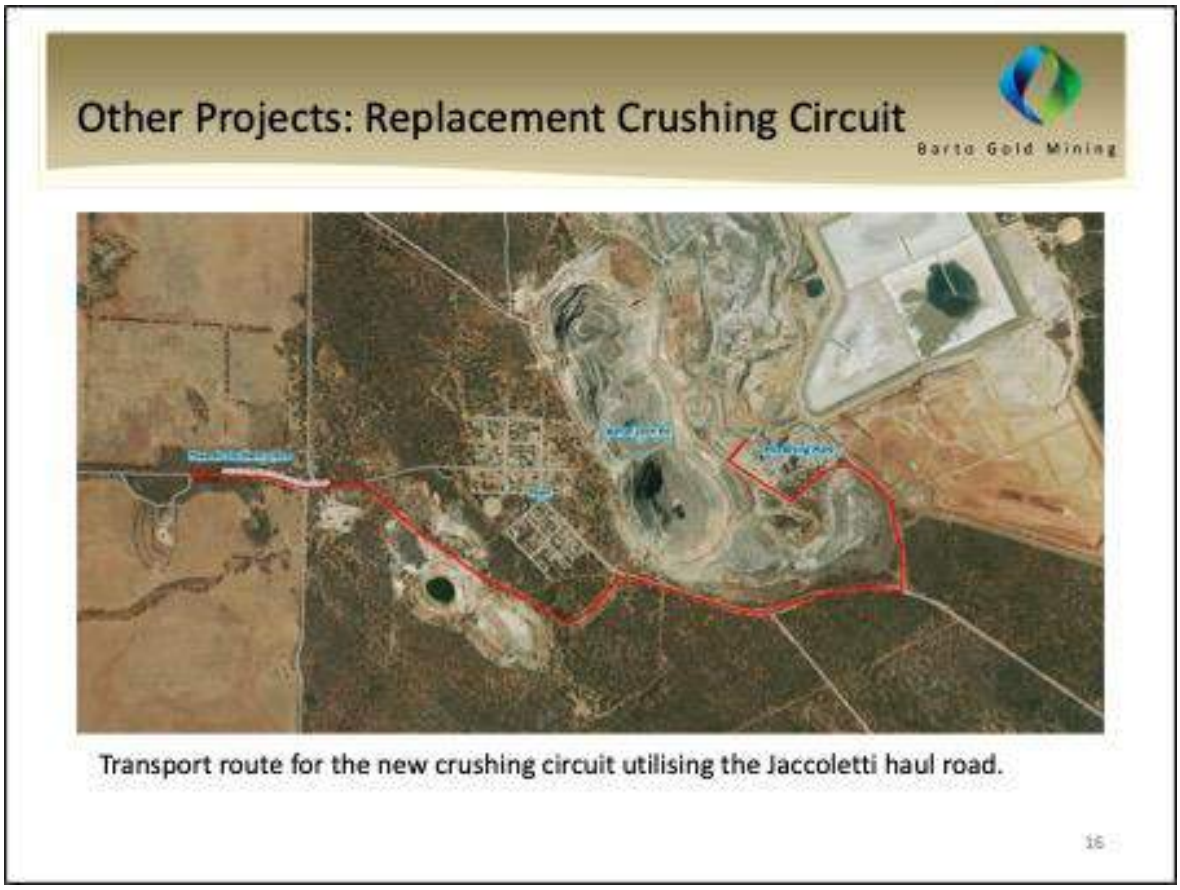
Barto are investing ~$20M into a new replacement crushing circuit which will take ~8-10 months to construct and commission.

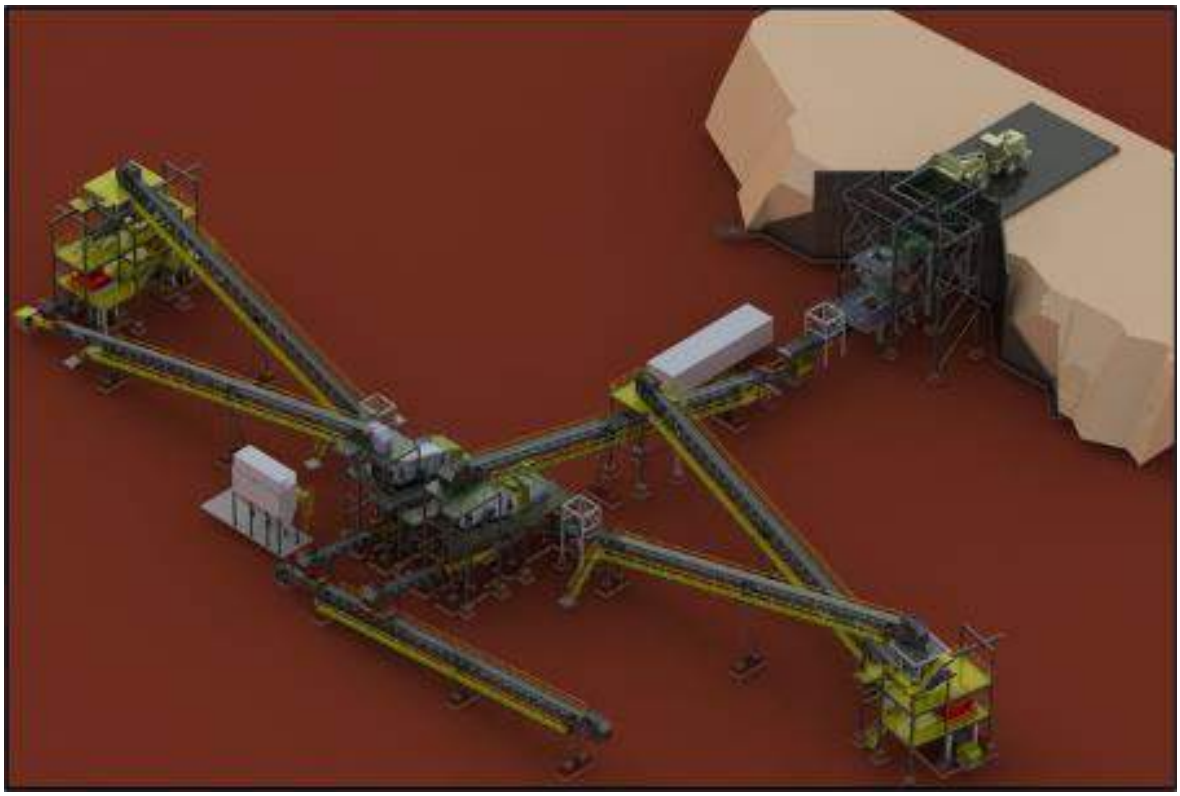
The crushing circuit change out is being conducted by Como Engineers. They will be doing the construction and pre- commissioning of the circuit.

This crushing circuit will be fabricated in Perth in modular sections where practicable to minimise site construction activities. These modules will also allow for effective transport to site via public roads and Jaccoletti haul road to avoid driving through town.

We currently have studies underway for dust, noise and surface water management focusing on this project which are expected to be completed October 2020. Approvals for this crusher will be via an amendment to the existing Prescribed Premise licence.

15


Other Projects: Replacement Crushing Circuit
Barto Gold Mining
Transport route for the new crushing circuit utilising the Jaccoletti haul road.
16



The posters below were displayed at a community meeting on 24 September 2020.

Replacement Crushing Circuit For Process Plant

SEPTEMBER 2020

BARTO GOLD MINING

Three-dimensional model of the new crushing circuit

Drawing of the old and new crushing circuits

TO PROVIDE FEEDBACK ON OUR CURRENT AND PROPOSED ACTIVITIES PLEASE CONTACT SARAH KRISTY AT BARTO GOLD MINING:

M: 0437 906 510

E: SARAH.KRISTY@MINJARGOLD.COM.AU

Replacement Crushing Circuit For Process Plant

SEPTEMBER 2020

BARTO GOLD MINING

Project Overview

- **Start date** – Following necessary approvals by the DWER
- **Duration** – 8-10 months, including decommissioning, construction and commissioning
- **New crushing circuit specifications** – Purpose-built 400 tonne per hour circuit, comprising four crushers and associated structural supports, conveyors, bins, feeders and electrical equipment
- **Project benefits** – Supports ongoing operations and planned exploration and mining projects at Marvel Loch
- Expected reduction in emissions, such as noise and dust

Proposed transportation route for decommissioning and construction activities

TO PROVIDE FEEDBACK ON OUR CURRENT AND PROPOSED ACTIVITIES PLEASE CONTACT SARAH KRISTY AT BARTO GOLD MINING:
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The Information Sheet below was provided to stakeholders at a community meeting on 24 September 2020.

Southern Cross Operations

SEPTEMBER 2020 UPDATE

BARTO GOLD MINING

Crushing Circuit Replacement for Processing Plant

Barto Gold Mining is planning to undertake a number of activities at our Southern Cross Operations to improve operational performance for existing operations and support planned new exploration and mining projects.

As a first step, we will be decommissioning the crushing circuit and replacing it with a new circuit, subject to necessary government approvals. The mill will continue to operate with feed provided by a mobile crushing service until commissioning of the replacement crushing circuit is completed.

The new crushing circuit, mechanical equipment and support structural steel will be fabricated in Perth in modular sections where practicable to minimise site construction activities. These modules will also allow for effective transport to site via public roads and mine site haul roads to minimise impacts to residents nearby to our operations (see map on reverse).

The change-out of the circuit will be undertaken by Como Engineers, which will undertake construction and pre-commissioning of the new circuit prior to handover to Barto Gold for final commissioning and operations. Como Engineers will also assist Barto with decommissioning of the old circuit.

Government approvals

Decommissioning of the old circuit and construction and operation of the new circuit will be undertaken within the broader context of the site operational license, which is regulated by the Western Australian (WA) Department of Water and Environmental Regulation (DWER).

Barto Gold will seek authorisation from DWER to decommission the old circuit and a License Amendment under the relevant WA Government Regulations to construct and operate the new circuit.

Project Overview

Start date	Following necessary approvals by the DWER
Duration	8-10 months, including decommissioning, construction and commissioning
New crushing circuit specifications	Purpose-built 400 tonne per hour circuit, comprising four crushers and associated structural supports, conveyors, bins, feeders and electrical equipment
Project benefits	Supports ongoing planned exploration and mining projects at Marvel Loch
	Expected reduction in emissions, such as noise and dust

Providing feedback

Barto Gold Mining Pty Ltd is a gold explorer, developer and producer focused on gold exploration and production in Western Australia (Southern Cross).

We are committed to safe and reliable operations, as well as responsibly managing our community impacts. This commitment extends to providing opportunities for our stakeholders to provide feedback on our current and planned activities.

We welcome your feedback to help inform our planning for this activity, including how we can minimise any potential impacts during decommissioning, construction and commissioning.

Your feedback about this activity will also be submitted to DWER for its consideration on our proposed licence amendment so please let us know if you would like your feedback to remain confidential to DWER.

Contact details

To provide feedback on our current and proposed activities please contact Sarah Kristy at Barto Gold Mining:

M: 0437 906 510
E: sarah.kristy@minjargold.com.au

Questions and Answers

Q. Why is the existing circuit being replaced?
A. The existing crushing circuit is approximately 30 years old, is unreliable and parts of it are a safety hazard. A new crusher will improve reliability and will help support our long-term aspirations for Marvel Loch. We also expect emissions such as noise and dust to be reduced.

Q. Will I be impacted during decommissioning and construction?
A. We are preparing a number of management plans to manage potential safety, environmental and community impacts, such as traffic, dust, noise and vibration. These will be reviewed by DWER as part of the approvals for the construction and operation of the new circuit.

Q. Will equipment be trucked through Marvel Loch?
A. Trucks transporting equipment to site will not be impacting Marvel Loch, with trucks entering site via mine site haul roads. We expect some minor impacts on public roads, such as wide or long loads, but nothing out of keeping with equipment typically transported to the Eastern Goldfields and surrounds.

Q. Will there be any environmental impacts?
A. There will be no new environmental impacts given that the new crushing circuit will be constructed within the same area as the old circuit.

Q. How many contractors will be on site?
A. We will have a small contractor workforce of up to 20 people during peak activities next year.

Q. Where will they be staying?
A. Barto Gold Mining camp.

Q. Will you be putting in place any additional health and safety measures with the contractors to manage COVID-19?
A. Contractors will be subject to the same COVID-19 measures that apply to Barto employees, with a health screening before coming to work.

The Feedback Form below was provided to stakeholders at a community meeting on 24 September 2020.

BARTO GOLD MINING

FEEDBACK FORM

Barto Gold Mining is committed to safe and reliable operations, as well as responsibly managing our community impacts.

We welcome your feedback to help inform our planning for our current and planned activities. Please let us know your thoughts.

Feedback type

☐ Comment ☐ Suggestion ☐ Question

Describe your feedback

First name **Last name**

Contact details

Barto Gold Mining
Community contact: Sarah Kristy 0437 906 510
sarah.kristy@miniargold.com.au

Assets | Engineering | Environment | Noise | Spatial | Waste

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Environmental Noise Impact Assessment

Marvel Loch Operations

Prepared for Barto Gold Mining Pty Ltd

30 October 2020

Project Number: TN20002-15

DOCUMENT CONTROL					
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2	First Issue	29/10/2020	GB	EV/BS/LS	GB
3	Final issue – updated figures 6-2 and 8-1	30/10/2020	GB	EV	GB

Executive Summary

Barto Gold Mining Pty Ltd (Barto) operates the Southern Cross Operations (SXO) in the Yilgarn region, comprising mining, processing, transport and supporting infrastructure. The Processing plant is located near the townsite of Marvel Loch, approximately 30 km south of Southern Cross. This report details an environmental noise impact assessment of the Marvel Loch operations.

The aim of the noise assessment was to assess noise impacts of Barto's Marvel Loch operations and their proposed replacement crushing circuit on the Town of Marvel Loch and to determine appropriate noise controls to reduce the predicted noise impacts.

The study determined Barto's existing impacts at receptors within Marvel Loch using a combination of noise modelling and monitoring. It was found that the operational noise levels exceed the assigned levels as prescribed within the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations). Despite these operations pre-dating the Noise Regulations, to support the approvals process for the replacement infrastructure, Barto has developed a noise reduction strategy with the goal of ensuring "no net" increase in cumulative noise levels in the community and that the noise levels will progressively reduce over time with the application of various noise reduction strategies. Additionally, a noise control and As Low As Reasonably Practicable (ALARP) process was developed and approved by the company.

This process involved modelling the proposed replacement crushing circuit against the Base Case scenario (i.e. existing operations).

Through this process and in order to ensure that noise levels from the replacement crusher infrastructure were as low as reasonably practicable, noise controls were identified using Barto's noise control and ALARP process and then approved by Barto's senior management. The approved noise controls (shielding) were then applied to the replacement crushing circuit model scenario. Comparing these results to that of the Base Case found that the cumulative received levels were predicted to be between 2 and 3dB quieter.

As a result of the study findings, the following recommendations have been made:

- The proposed shielding be designed and implemented to achieve the modelled outcomes.
- Noise measurements be taken after commissioning (during operation) to assess the effectiveness of the noise controls, to confirm noise source levels used in the model and to verify community impacts against the Noise Regulations.
- The noise model be updated with the findings of the site-based measurements.

Table of Contents

Tables

Table in Appendices

Figures

Appendices

1 Overview

1.1 Background

The Marvel Loch Mine, which is owned by Barto Gold Mining Pty Ltd (Barto), has been intermittently mined over the past 115 years. The Processing Plant for Barto's Southern Cross Operations (SXO) is located near the townsite of Marvel Loch approximately 30 km south of Southern Cross (Marvel Loch Operations). Operations include a crushing and processing plant as shown in Figure 1-1. Barto is now seeking approval to replace the existing crushing circuit at Marvel Loch (as shown in Figure 1-2) with new infrastructure.

Figure 1-1: Image showing the township and the Crushing and Processing plant (Source: Nearmaps).

Figure 1-2: Barto Marvel Loch Current Crushing Circuit and Processing Plant (Source: Nearmaps).

1.2 Aim

The aim of the noise assessment was to assess noise impacts of Barto's Marvel Loch Operations and their proposed replacement crushing circuit on the town of Marvel Loch and to determine appropriate noise controls to reduce the predicted noise impacts.

1.3 Scope

The scope of this document includes:

Section 2 – Summary of legislation

Section 3 – Noise Modelling

Section 4 – Existing Facility Noise Impacts

Section 5 – Noise Modelling Existing Facility (Base Case)

Section 6 – Noise Modelling Replacement Crushing Circuit (No Noise Controls)

Section 7 – Noise Controls

Section 8 – Noise Modelling Replacement Crushing Circuit (Including Noise Controls)

Section 9 – Conclusion and Recommendations

1.4 Applicable Documents

[1] *Environmental Protection Act 1986* (EP Act).

[2] *Environmental Protection (Noise) Regulations 1997* (Noise Regulations).

[3] Draft Guideline on Environmental Noise for Prescribed Premises.

[4] Barto SXO Noise Control ALARP Process Rev 2.0

1.5 Project Overview

The Marvel Loch Crushing Circuit and Processing Plant was constructed in 1988 prior to the introduction of the Noise Regulations. Due to increased maintenance requirements impacting production, Barto is now seeking approval to replace the existing crushing circuit (see Figure 1-3) with new infrastructure as shown in Figure 1-4.

The existing crusher infrastructure will be demolished and replaced with the following new equipment:

- Primary Crusher;
- Secondary Crusher;
- Tertiary Crushers;
- Screens; and
- Interconnecting conveyor belt system.

Figure 1-3: Barto's Existing Crushing Infrastructure (yellow) Source: Nearmaps.

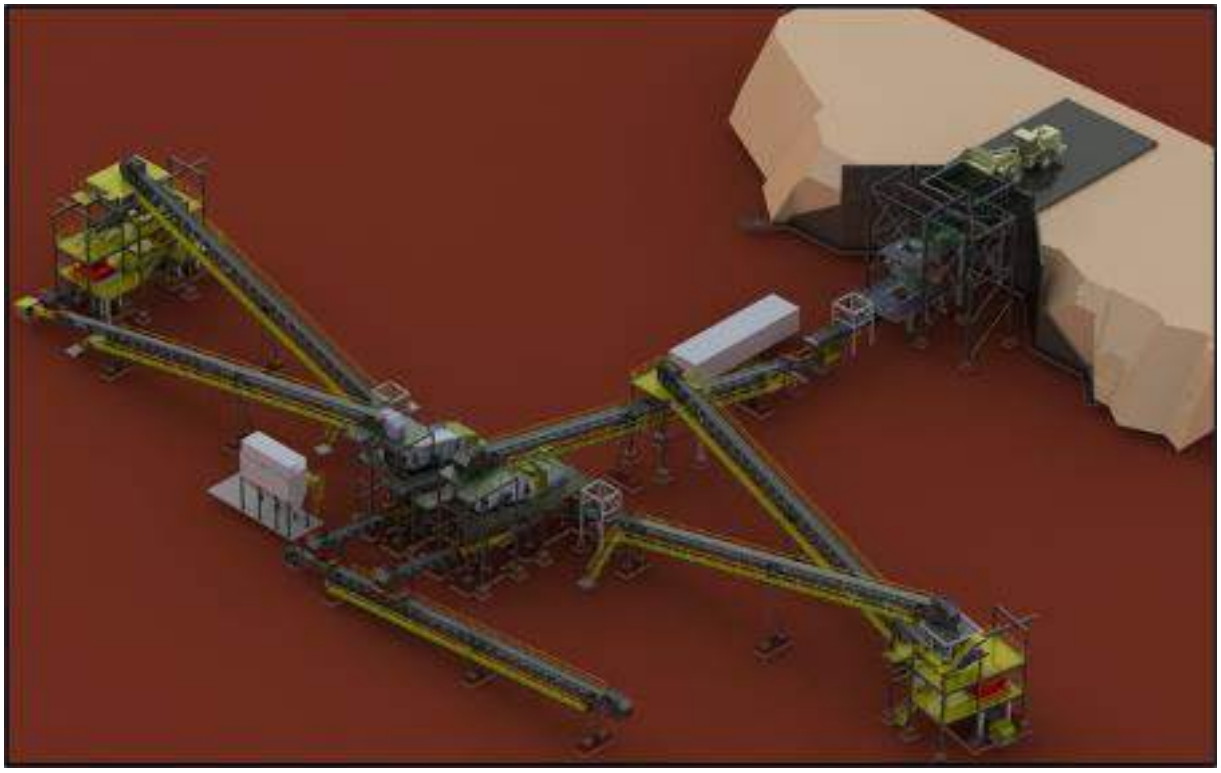

Figure 1-4: Barto's Proposed Replacement Crushing Circuit

2 Summary of Legislation

The applicable legislation for the Barto's mining operations are the Noise Regulations as well as various provisions within the EP Act.

2.1 *Environmental Protection (Noise) Regulations 1997*

Noise management in Western Australia is implemented through the Noise Regulations which operate under the EP Act. The Regulations prescribe 'assigned levels' within Regulation 8 and state that, subject to certain exclusions, noise levels emitted in contravention of the assigned levels are considered to be unreasonable and that noise emitted from a premises when received at other premises must not cause, or significantly contribute to, a level of noise which exceeds the assigned level (Regulation 7).

The Regulations define three types of assigned noise levels:

- LA_{max} assigned noise level means a noise level which is not to be exceeded at any time;
- LA_1 assigned noise level which is not to be exceeded for more than 1% of the time; and
- LA_{10} assigned noise level which is not to be exceeded for more than 10% of the time.

For noise sensitive residences, the time of day also affects the assigned levels.

The LA_{10} noise limit has been used for this study as it is representative of noise from continuous mining operations.

2.1.1 Influencing Factors

Influencing factors, as determined under Schedule 3 of the Noise Regulations, are adjustments applied to the base assigned level in relation to noise received at a highly sensitive area on a noise sensitive premise.

Due to the proximity of the sensitive receivers to an active mining area, the influencing factor for the noise sensitive receivers has been determined to be 1dB.

2.1.2 Tonality

Received noise levels are subject to adjustments if the noise exhibits intrusive or dominant characteristics (i.e. if the noise is impulsive, tonal or modulating). Considering the equipment and type of operation, noise from the mine will be tonal at the receiver. As a result, a 5 dB tonal adjustment has been applied to predicted and measured levels (see APPENDIX A for more details).

2.1.3 Assigned Noise Levels

Received noise levels have been assessed against the Noise Regulations [2] (see APPENDIX A for a more detailed overview of the Noise Regulations). The applicable assigned noise levels including a 1 dB influencing factor (i.e. assessment criteria) are presented in Table 2-1.

As mining is a continuous operation, the noise modelling results have been assessed against the most stringent LA_{10} night-time level of 36 dB(A).

Table 2-1 : Assigned Noise Levels as defined in the Noise Regulations

Time of Day	LA_{10} Assigned Noise Level in dB(A) incl IF
0700 to 1900 hours Monday to Saturday	46
0900 to 1900 hours Sundays and Public Holidays	41
1900 to 2200 hours all days	41
2200 to 0700 hours all days	36

2.1.4 Construction Noise

Site preparation and construction activities fall under Regulation 13 of the Noise Regulations. Regulation 13 does not require noise from a construction site to comply with the prescribed standard for noise emissions set in Regulations 7[1], provided the following requirements are met[2]:

1. Construction work is carried out in accordance with control of environmental noise practices set out in section 4 of AS2436-2010; and
2. The equipment used on the premises is the quietest reasonably available.

Unless requested by the Chief Executive Officer (CEO) of the Department of Environmental and Water Regulation (DWER)[3], a construction noise management plan does not need to be submitted to the CEO for construction activities carried out during normal working hours as defined in the Regulation. For construction activities taking place between 19:00 and 07:00 hours on any day or on a Sunday or public holiday a construction noise management plan must be prepared in accordance with Regulation 13, Subregulation 6 and be given to the CEO of DWER not later than 7 days before construction work commences.

Noise from construction work has therefore not been included in the assessment, as construction work is covered under Regulation 13. Barto will comply with the requirements of Regulation 13, and where necessary submit a construction noise management plan to the CEO 7 days before construction commences.

[1] Note: Regulation 13 – Construction Sites, Noise Regulation Fact Sheet includes not only Regulation 7, but also Regulation 8 as an exclusion. The exclusion of Regulation 7 and 8 implies that the assigned levels are not applicable.

[2] If the requirements are not met, the noise must comply with the assigned levels.

[3] Chief Executive Officer (the CEO) of the Department of Water and Environment Regulation (DWER) or any employee of the Local Government under the LGA who is appointed as an authorised person under section 87 of the *Environmental Protection Act 1986* (EP Act).

3 Noise Modelling Overview

A desktop environmental noise model was created to simulate the existing and proposed operations using a combination of SoundPlan v8.2 and Nexus Noise Management software programs. Nexus has been validated against SoundPlan to ensure that there is no difference[4] in the predictive outcomes between the two applications. These software packages calculate sound pressure levels at nominated receiver locations, and they produce noise contours over a defined area of interest. SoundPlan can be used to model different types of noise, such as industrial noise, traffic noise and aircraft noise, and it has been recognised as accepted software by the DWER.

SoundPlan provides a range of prediction algorithms that can be selected by the user. The CONCAWE[5][6] prediction algorithm has been used for this model.

The inputs required by Nexus and SoundPlan are noise sources, ground topographical data, meteorological data and sensitive receiver point locations.

3.1 Topography

Topography (2 m contour height), including pit/ROM cut outs have been obtained from Barto.

3.2 Ground Absorption

The acoustic properties of the ground surface have a considerable effect on the propagation of noise. Flat non-porous surfaces such as concrete, asphalt and calm water are highly reflective whereas soft, porous surfaces such as foliage and grass are highly absorptive.

For CONCAWE, the ground factor (G) varies from 0 (totally reflective) to 1 (totally adsorptive). The ground surface applied to the model was G=0.8.

3.3 Meteorological Conditions

Table 3-1 presents the worst-case meteorological conditions applied to the model, which are defined in the DWER “Draft Guideline on Environmental Noise for Prescribed Premises” [3].

Table 3-1 : Worst-case meteorological conditions for noise propagation

Time of day	Temperature	Relative Humidity	Wind Speed	Pasquil Stability Category (PSC)
Night (22:00 - 07:00)	15º Celsius	50%	3 m/s	F

[4]Apart from small rounding differences to the 100th of a decibel.
[5] CONCAWE (Conservation of Clean Air and Water in Europe) was established in 1963 by a group of oil companies to carry out research on environmental issues relevant to the oil industry.
[6] The propagation of noise from petroleum and petrochemical complexes to neighbouring communities, CONCAWE Report 4/81, 1981

The LA_{10} night-time noise limit is the most stringent Regulatory level for compliance as a result the night-time meteorological conditions in Table 3-1have been used as worst case for modelling purposes. Additionally, the wind direction has been modelled as worst case, which assumes the wind direction is always in the direction from source to receiver.

3.4 Noise Sensitive Receivers (Surrounding Community)

As the town of Marvel Loch is in proximity to the proposed operations, multiple receiver locations were selected as detailed in Table 3-2 and Figure 3-1.

Table 3-2 : Receiver Coordinates

Receiver	GDA94/MGAz50	
	x	y
R1	735093	6515963
R2	734517	6515554
R3	736488	6516158
R4	736176	6516165
R5	736693	6515863
R6	736652	6515791
R7	736565	6515874
R8	736747	6515579
R9	736587	6515655
R10	736474	6515666
R11	736579	6515565
R12	736518	6515510
R13	736564	6515482

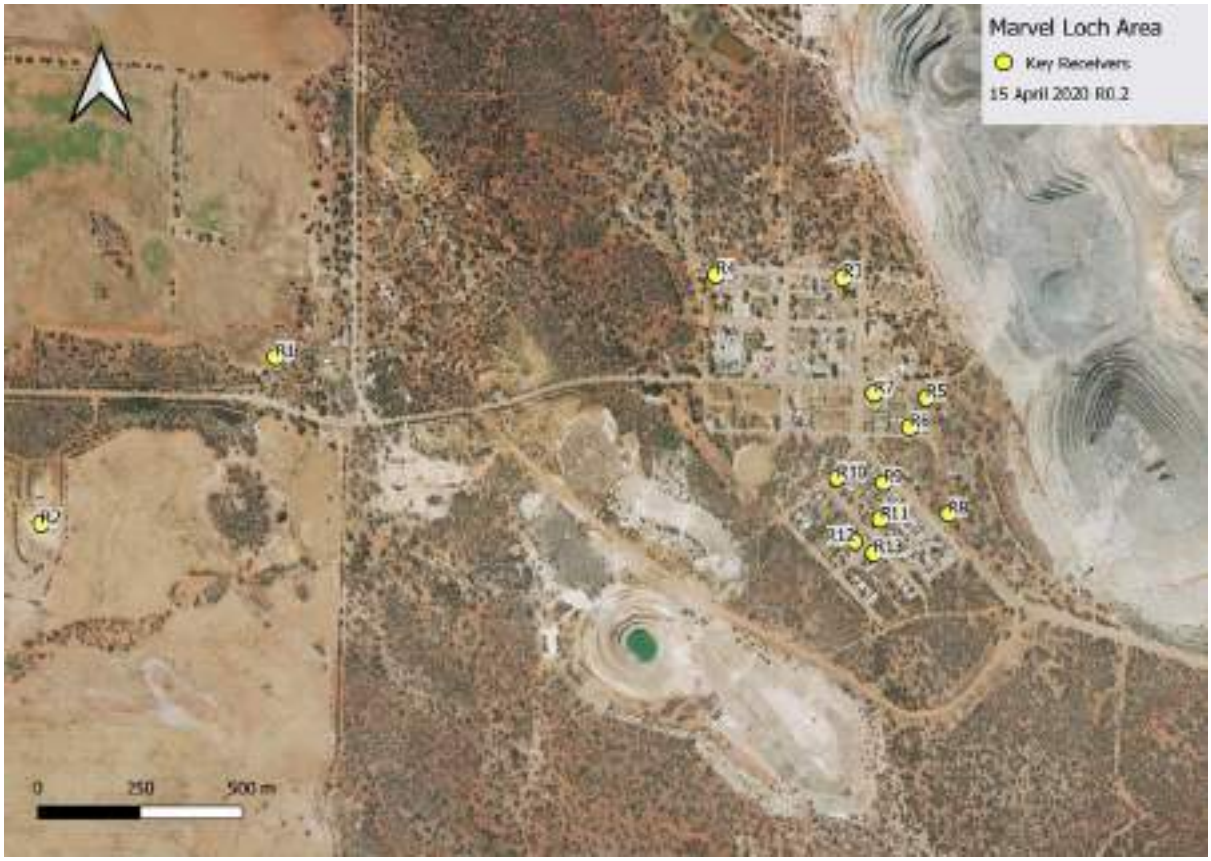

Figure 3-1: Marvel Loch aerial view showing Noise Sensitive Receiver locations

3.5 Noise Source Levels

Noise source information for equipment items for the current and proposed operations are detailed in APPENDIX C.

4 Existing Facility Noise Impacts

4.1 Overview

Both noise monitoring and modelling were used to determine the existing noise impacts from Barto's operations on the town of Marvel Loch. This approach was adopted as noise logging measurements always include both mining as well as background noise. It is not technically possible to completely remove background noise from the measured levels and there will therefore always be some ambiguity as to what Barto's actual impacts are on the town. As a result, modelling, which is not affected by background noise, was also used to support the noise logging measurements to make a more accurate assessment of the mine's noise levels in town.

4.2 Noise Monitoring

Two noise loggers were placed close to receivers R5 and R6 (see Figure 3-1) for a period of 10 days in in July 2019. Both the Processing Plant and crushing circuit were operating during the monitoring period. The logged noise data was analysed taking into consideration measured noise and weather conditions at the time of monitoring.

The following provides is a summary of the noise logging analysis undertaken (see APPENDIX B for a more detailed overview):

- The data was filtered spectrally (12.5Hz to 1.6kHz) and meteorologically (using wind direction and speed);
- Measured noise levels in town ranged from 45.9 to 54.5 dB(A)[7]; and
- These levels exceed the Regulatory assigned levels during both day and night-time. The night-time limits are exceeded by 10-19 dB[8].

4.3 Noise Modelling

A noise model was developed based on plant layout diagrams and information obtained from site. Equipment noise source levels used in the model were based on site measurements taken in September 2020. The September measurements were also used to verify noise source locations and plant layout and included measurements to validate the model for determining model accuracy. Following this process, the model accuracy has been estimated to be ± 2.5 dB.

4.4 Existing Facility Noise Impacts

Table 4-1 provides a summary of the noise monitoring and modelling undertaken to determine Barto's impacts on the town of Marvel Loch. The predicted and measured levels quoted in the table include a 5dB tonality adjustment.

The outcome of the monitoring and modelling found that Barto's impacts on the town exceed the assigned level within Regulations.

7 5 dB tonality adjustment added

8 The variance is due to different weather conditions which result in a variance in Plant noise levels received in the Marvel Loch townsite.

Table 4-1: Predicted and Measured Receiver Noise levels

Receiver	L_{A10} Noise Level in dB(A)[7]		
	Assigned Noise Level	Predicted Level	Measured Levels
R5	36	**50.6**	**45.9 to 54.5**
R6		**50.2**	

4.5 Noise Control and ALARP Process

As a result of this outcome and to support an application to the DWER to replace the crushing infrastructure onsite, Barto has developed a noise reduction strategy with the goal of ensuring that there is no net increase in cumulative environmental noise levels in the community and that the noise levels will progressively reduce over time with the application of various noise reduction strategies.

As part of this strategy, Barto has developed a noise control and As Low As Reasonably Practicable (ALARP) process. This process outlines how the company will determine potential noise control opportunities and how noise control options will be selected and implemented. The ALARP assessment (as discussed in [4]), which forms part of the noise control process, is used to finalise the selection of an appropriate noise control option to ensure that noise experienced at the receptors is not unreasonable.

An overview of the noise control and ALARP process is provided in the next sections.

4.5.1 Engineering Noise Control Process

Once an equipment item has been identified for noise control and risk-assessed, the Engineering Noise Control Process will be followed. The Engineering Noise Control Process consists of the following steps:

- **Identify Noise Control Options;**
- **ALARP Process -** Evaluate the practicability of the noise control options using the ALARP process; and
- **Noise Control Implementation -** The approved control advances to the Noise Control Implementation Process.

4.5.2 ALARP Process

Barto's ALARP process (see section 3.3. and 4.2 of [4]) uses an evidence-based approach that follows industry recognised principles. The ALARP process adopted by Barto is summarised as follows:

i) Preliminary noise control analysis (prior to ALARP); and

ii) ALARP Workshop and Noise Control Selection.

The purpose of the ALARP workshops is to weigh up noise control options against various factors (e.g. safety, maintenance, operations, noise reduction) in order to determine the reasonableness and practicality of each option.

The ALARP workshop is held with stakeholders from various disciplines, providing them an overview of the noise modelling findings and noise control options. The purpose of their participation in these workshops is to review and score noise control options against ALARP factors relevant to their discipline.

The noise control options are ranked during the ALARP workshop using the ALARP worksheet and scores compiled during the workshop. Noise control solutions will be recommended in accordance with the ALARP Assessment which takes into consideration:

i) Amount of noise reduction;
ii) Safety impacts of the noise control;
iii) Equipment operability;
iv) Equipment maintenance;
v) Impacts on process flow or outputs;
vi) Social Impacts; and
vii) Cost of treatment.

4.6 Summary of Impacts

The following can be concluded from the work conducted for the existing facility and its operations:

- Both the measurements and the modelling show that the current operations exceed the assigned levels within the Town of Marvel Loch;
- As a result of this finding Barto has developed noise reduction strategy in order to support the application to DWER for replacement crushing infrastructure; and
- As part of this strategy, Barto has developed a noise control and As Low As Reasonably Practicable (ALARP) process.

5 Existing Facility (Base Case)

5.1 Background

The Base Case model consists of the existing Marvel Loch operations and the planned (2021 to 2024) Marvel Loch West Underground (MLWU) operations which will be accessed via a tunnel located in an existing Marvel Loch mine pit. The Base Case model will be used for comparison purposes with the addition of the replacement crushing circuit.

5.2 Base Case Model

The Base Case model is a relatively detailed model that consists of 57 noise sources (see APPENDIX C for a detailed list). The model has been set up with the following activities:

- Marvel Loch Operations:
  - Crushing Circuit;
  - Processing Plant;
  - Road Train movements between Nevoria and Marvel Loch (southern haul road); and
  - Road Train movements between Aquarius and Marvel Loch (northern haul road).
- MLWU Operations:
  - Haul road movements from the Marvel Loch tunnel to the Run Of Mine (ROM) pad;
  - Backfill movements from the tunnel to Marvel Loch; and
  - Mine ventilation fans and pumps.

5.3 Base Case Received Levels

The Base Case noise model was run using worst case meteorological conditions (see section 3.3) with all equipment operating. The predicted noise levels for the Base Case scenario are given in Table 5-1 and a noise contour map is provided in Figure 5-1. The predicted levels in Table 5-1 include a tonality adjustment of 5 dB. The received levels are predicted to be non-compliant with the assigned levels at all receivers except at R2.

Note: Predicted noise levels of Marvel Loch Operations without the crushing circuit operating are also non-compliant with the assigned levels (e.g. R8 is predicted to be 45.7 dB(A)[9]).

[9] 5 dB penalty included for tonality.

Table 5-1 Base Case Predicted Received Noise Levels.

Receiver	Assigned Level	LA10 Received Levels[dB(A)] 10	Exceedance [dB]
		Base Case	
R1	36	37.5	1.5
R2		34	-
R3		48	12
R4		45	9
R5		51	15
R6		50	14
R7		49	13
R8		50	14
R9		49	13
R10		48	12
R11		49	13
R12		48	12
R13		48	12

[10] 5 dB adjustment added for tonality.

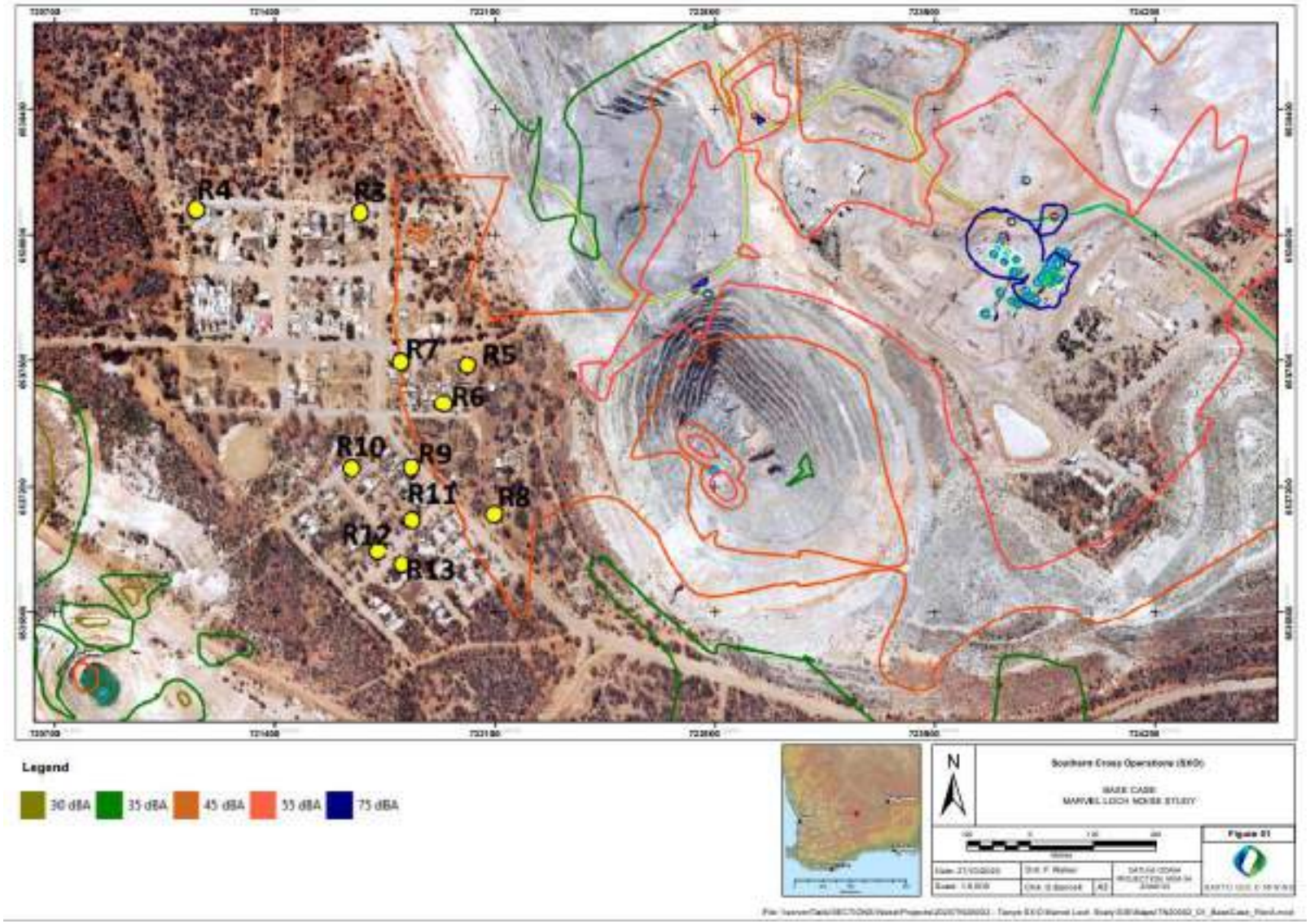

Figure 5-1: Base Case Predicted Noise Contour Map (5 dB adjustment has not been included)

6 Replacement Crushing Circuit (No Noise Controls)

6.1 Overview

The Base Case model was updated with the removal of the existing crushing circuit and addition of the replacement crushing circuit. One of the most significant changes in the design of the replacement crushing circuit was the changing the primary crusher from a gyratory to jaw crusher. Figure 1-4 shows a 3D image of proposed replacement crushing circuit and Figure 6-1 shows the layout. The Crushing Circuit Replacement model including the existing Processing Plant consists of 58 noise sources (see APPENDIX C for a detailed list). The model has been set up with the same activities as the Base Case model. New equipment source levels (see APPENDIX D) have been based on manufacturer information provided by Barto.

6.2 Replacement Crushing Circuit Received Levels

As with the Base Case assessment, the updated noise model with the replacement crushing circuit was run using worst case meteorological conditions (see section 3.3) with all equipment operating. The predicted noise levels for this scenario are given in Table 6-1 and a noise contour map is provided in Figure 6-2. The predicted levels in Table 6-1 include a tonality penalty of 5 dB.

Receivers R1 to R4, located on the northern part of the town, show no increase in received level due to the shielding that the ROM provides to the primary crusher as can be seen in Figure 6-1. All the other receivers show a 1 to 2 dB increase in noise level when compared to the Base Case. As a result, noise controls will be required.

Note: As part of the initial noise control process the layout of the replacement crushing circuit was considered. Initially the primary crusher was located more to the east and had direct line-of-site to the northern receivers (i.e. R1 to R4). Considering the topography of the ROM area it was found that the original layout did not take advantage of the shielding that could be afforded by the shape of the ROM for receivers R1 to R4. As a result, the design layout was changed having a positive benefit of approximately 2 dB reduction at R1 to R4.

Table 6-1 Predicted Received Noise Levels after Replacement Crushing Circuit

Receiver	LA_{10} [dB(A)] [11]		Difference (**2** minus 1) [dB]
	1. Base Case	2. Replacement Crushing Circuit	
R1	37.5	37.4	-0.1
R2	34	34	0
R3	48	48	0
R4	45	45	0
R5	51	53	2
R6	50	52	2
R7	49	51	1
R8	50	52	2
R9	49	51	2
R10	48	50	2
R11	49	51	2
R12	48	50	2
R13	48	50	2

[11] 5 dB adjustment added for tonality.

Figure 6-1: New crushing circuit layout.

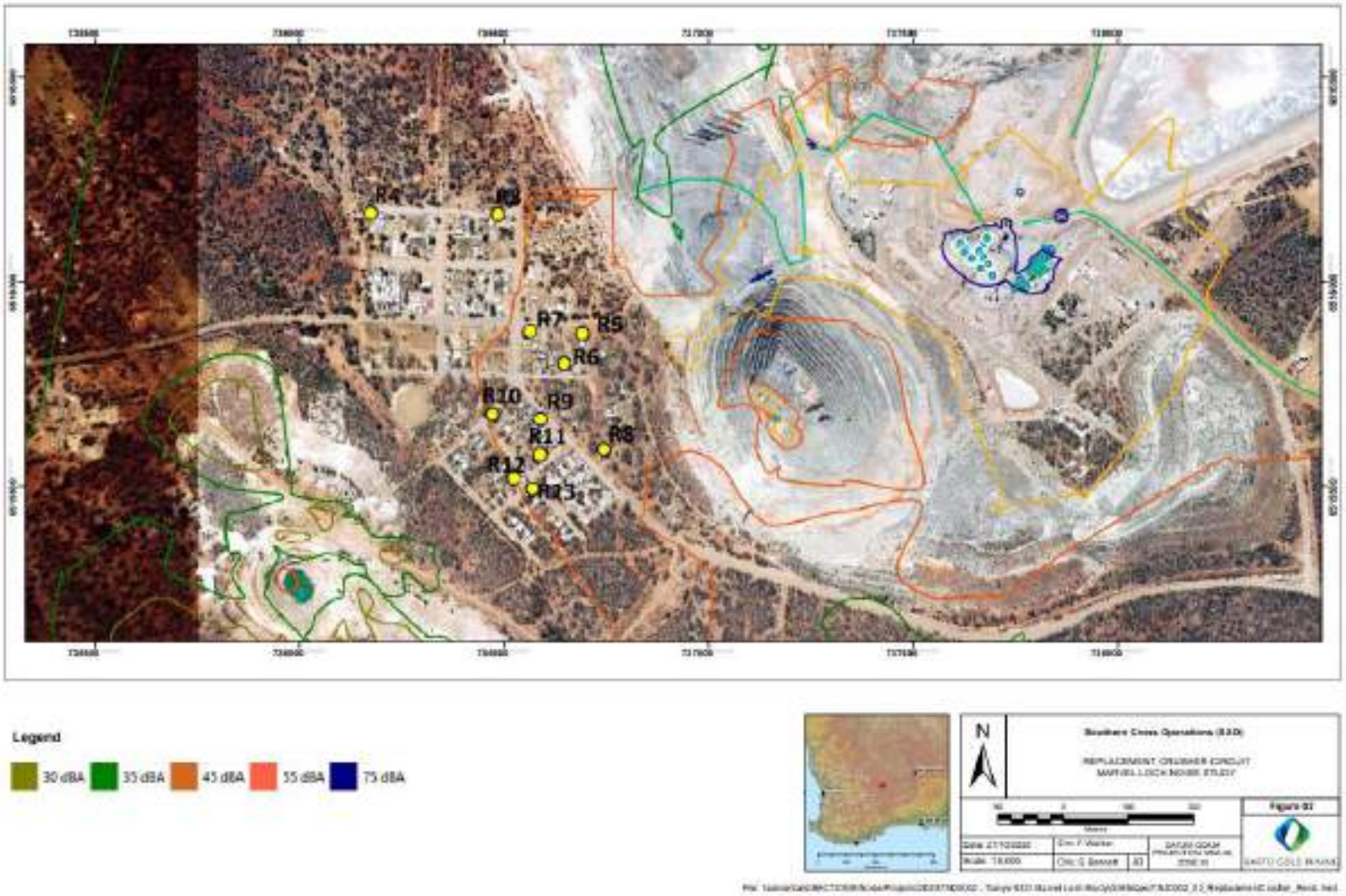

Figure 6-2: Crushing Circuit Replacement Predicted Noise Contour Map (5 dB penalty has not been included)

7 Noise Control

7.1 Overview

Determining noise controls for the replacement crushing circuit followed Barto's noise control and ALARP process described in section 4.5.

The noise control process started with determining which noise sources were contributing significantly to the noise level at the receivers in the town of Marvel Loch. The most significant contributors were then targeted for noise controls. This is key, because without addressing the top contributors, the overall noise level will not be reduced.

As a result, the top contributing noise sources at each of the receivers were investigated and a number of potential noise control options were considered during an ALARP work session. The options considered included relocating the crushing circuit, low noise equipment, bunding and screens.

7.2 Top Contributing Equipment Items

A Pareto chart for receiver R8 (being the closest receptor to the proposed replacement infrastructure) is provided in Figure 7-1 which shows the contribution of all the equipment at this receiver for the Crushing Circuit Replacement scenario. The findings for R8 reflect the broader range of receptors in Marvel Loch and show that for all receivers the crushers and screens were the most significant contributors. As a result, these items were targeted for noise control.

Note: Figure 7-1 also shows that there are a number of other noise sources that do not form part of the crushing circuit that when added up cumulatively results in a received level of 46 dB(A)[12].

7.3 Selected Noise Control

An ALARP workshop was held with stakeholders from various disciplines. The purpose of the workshop was to review and score noise control options. The noise control options were ranked during the ALARP workshop. Noise control solutions were recommended in accordance with the ALARP Assessment which took into consideration:

- Amount of noise reduction;
- Safety impacts of the noise control;
- Equipment operability;
- Equipment maintenance;
- Impacts on process flow or outputs;
- Social Impacts; and
- Cost of treatment.

[12] 5 dB included for tonality.

7.4 ALARP Workshop Outcome

Shielding of the primary, secondary, and tertiary crushers and their associated screens was determined to be the most practicable noise control to implement. As a result, this option has been selected for inclusion in the final design and assessment process.

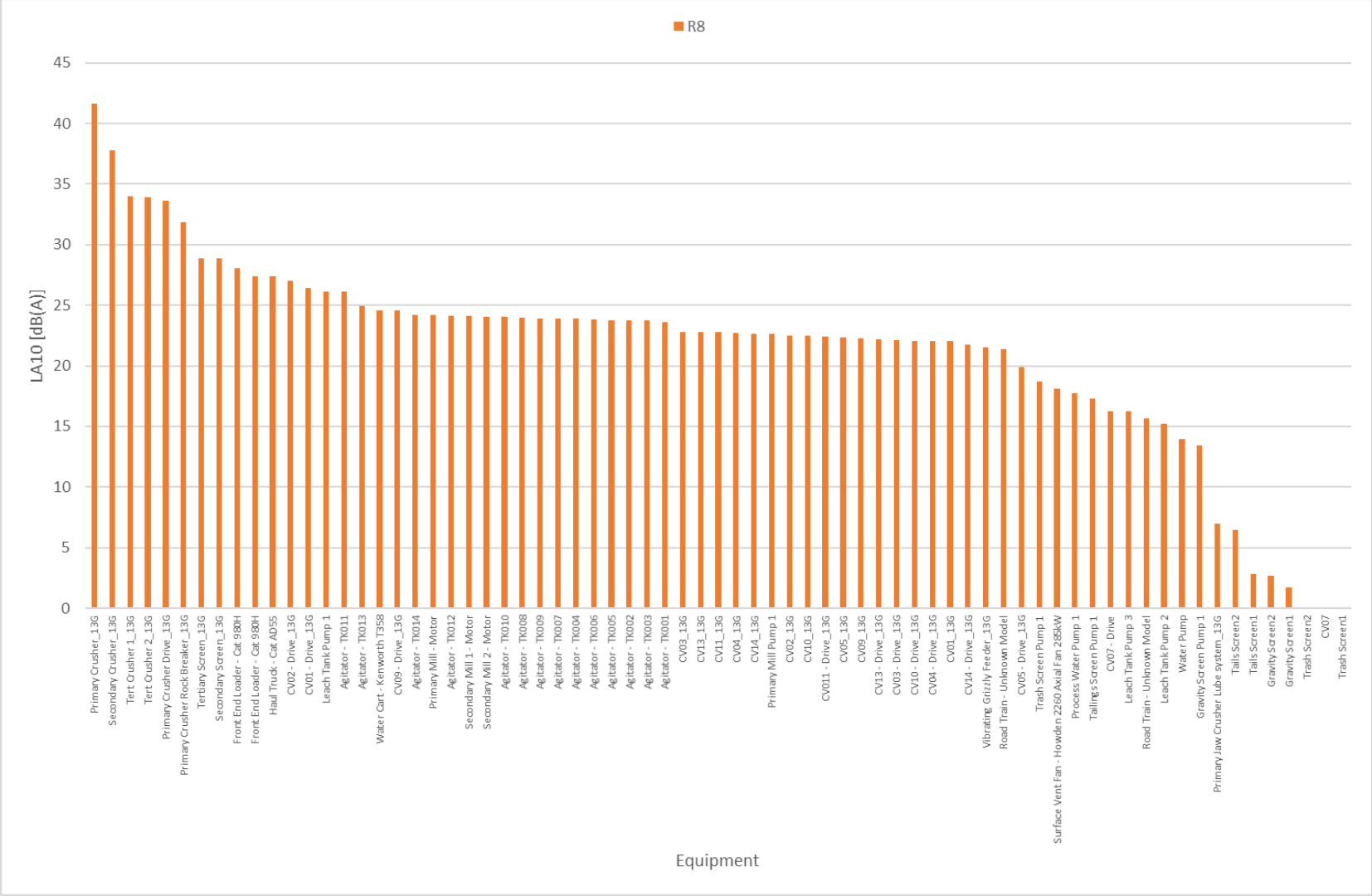

Figure 7-1: Pareto Chart Showing the Top Contributing Equipment at Receiver R8 (Note: 5 Db Tonality Penalty Not Added as the Chart Shows Individual Noise Sources).

8 Replacement Crushing Circuit (Including Noise Controls)

The selected noise controls (i.e. shielding) were added to the replacement crushing circuit noise model and the model was run using the same meteorological conditions as previous model runs. The shielding included in the model run was based on a conceptual design which involved a shielding arrangement placed on the town facing sides of the vibrating screens, primary, secondary and tertiary crushers.

The shielding in the conceptual design provided enough coverage to block the direct and indirect acoustic paths between the town of Marvel Loch and the noise emitting equipment. The shielding was therefore placed on the north-western and south-western sides of the vibrating screens, tertiary and secondary crushers. Similarly, the primary crusher shielding was placed on the south-western side of the crusher with the ROM pad providing additional shielding to the north-western direction.

The shielding is planned to be constructed using materials of suitable attenuating properties to achieve the modelled reduction in the town of Marvel Loch. Barto is currently in the process of optimising the shielding design and is looking at alternate design and material options to achieve the same or better reduction than that of the conceptual design.

The predicted noise levels for this scenario are given in Table 8-1 and a noise contour map is provided in Figure 8-2. The predicted levels in Table 8-1 include a tonality adjustment of 5 dB. With the noise controls in place all receiver noise levels are less than the base case with receivers R1 to R4 and R11 and R12 predicted to be 3 dB less than the base case.

A Pareto chart for receiver R8 is provided in Figure 8-1 which shows the contributing equipment noise levels from the replacement crushing circuit before and after noise control. Before noise control predicted noise levels from the replacement crushing circuit at R8 were 50 dB(A)[13]. After noise controls the predicted levels from the crushing circuit are 44 dB(A) [13]. Predicted received noise levels at R8 from the operations that do not form part of the crushing circuit are 46 dB(A)[13]. This implies that the proposed replacement crushing circuit, after the noise controls have been added, will be quieter than the rest of the operations. Future noise controls should therefore focus on other noise sources from the operations that do not form part of the crushing circuit to reduce the Marvel Loch Operations' impacts on the town.

[13] 5 dB included for tonality.

Table 8-1 Predicted Received Noise Levels with noise controls.

Receiver	Assigned Level	LA_{10} Received Levels [dB(A)] [14]			Difference (3 minus 1) [dB]
		Base Case	Replacement Crushing Circuit	Replacement Crushing Circuit with Noise Control	
R1	36	37	37	34	-3
R2		34	34	31	-3
R3		48	48	45	-3
R4		45	45	42	-3
R5		51	53	49	-2
R6		50	52	48	-2
R7		49	51	47	-2
R8		50	52	48	-2
R9		49	51	47	-2
R10		48	50	46	-2
R11		49	51	46	-3
R12		48	50	45	-3
R13		48	50	46	-2

[14] 5 dB adjustment added for tonality.

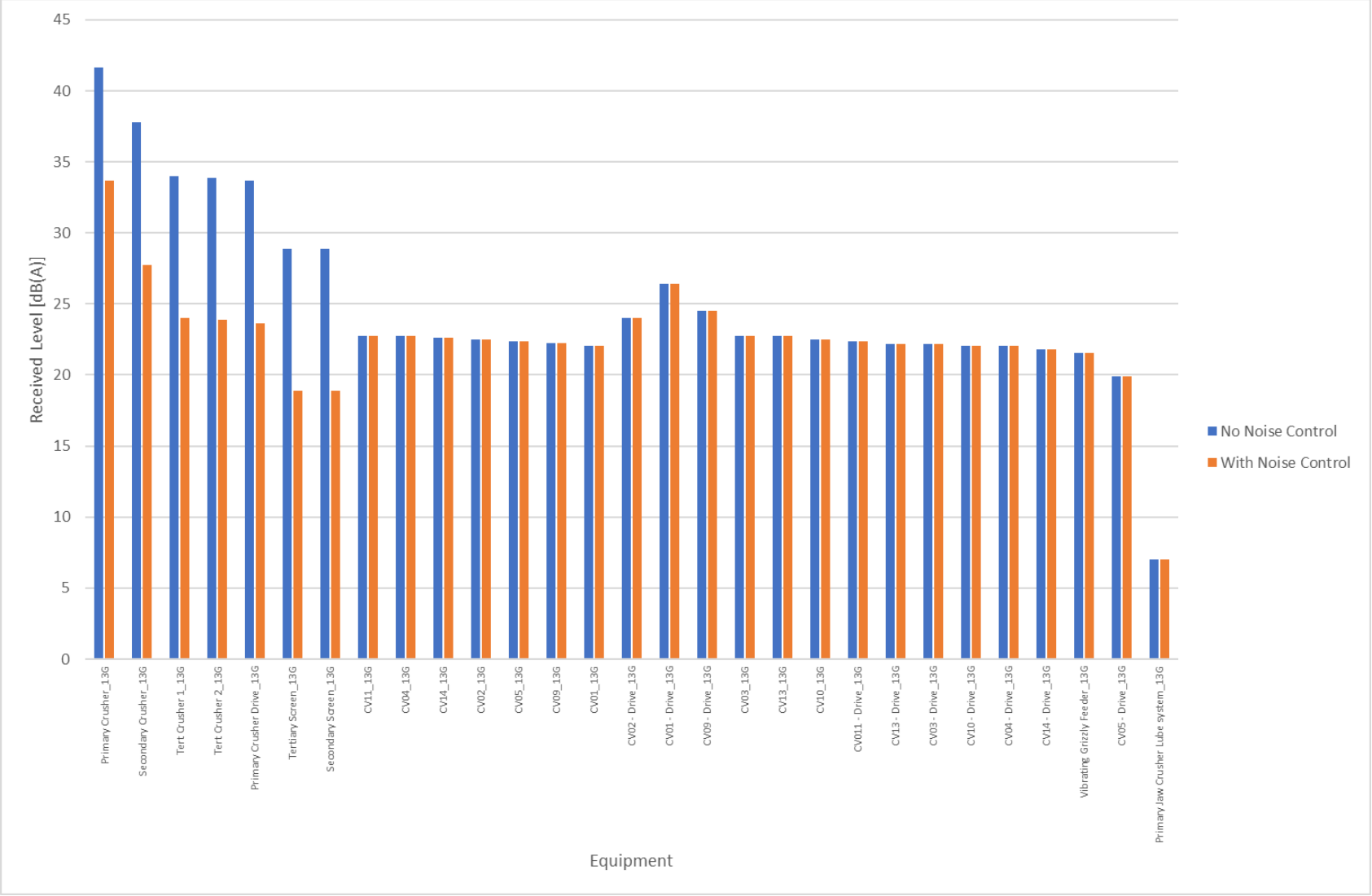

Figure 8-1: A before and after noise control Pareto chart showing the top contributing crusher equipment for the replacement crushing circuit at receiver R8 (note: 5 dB tonality penalty not added as the chart shows individual noise sources).

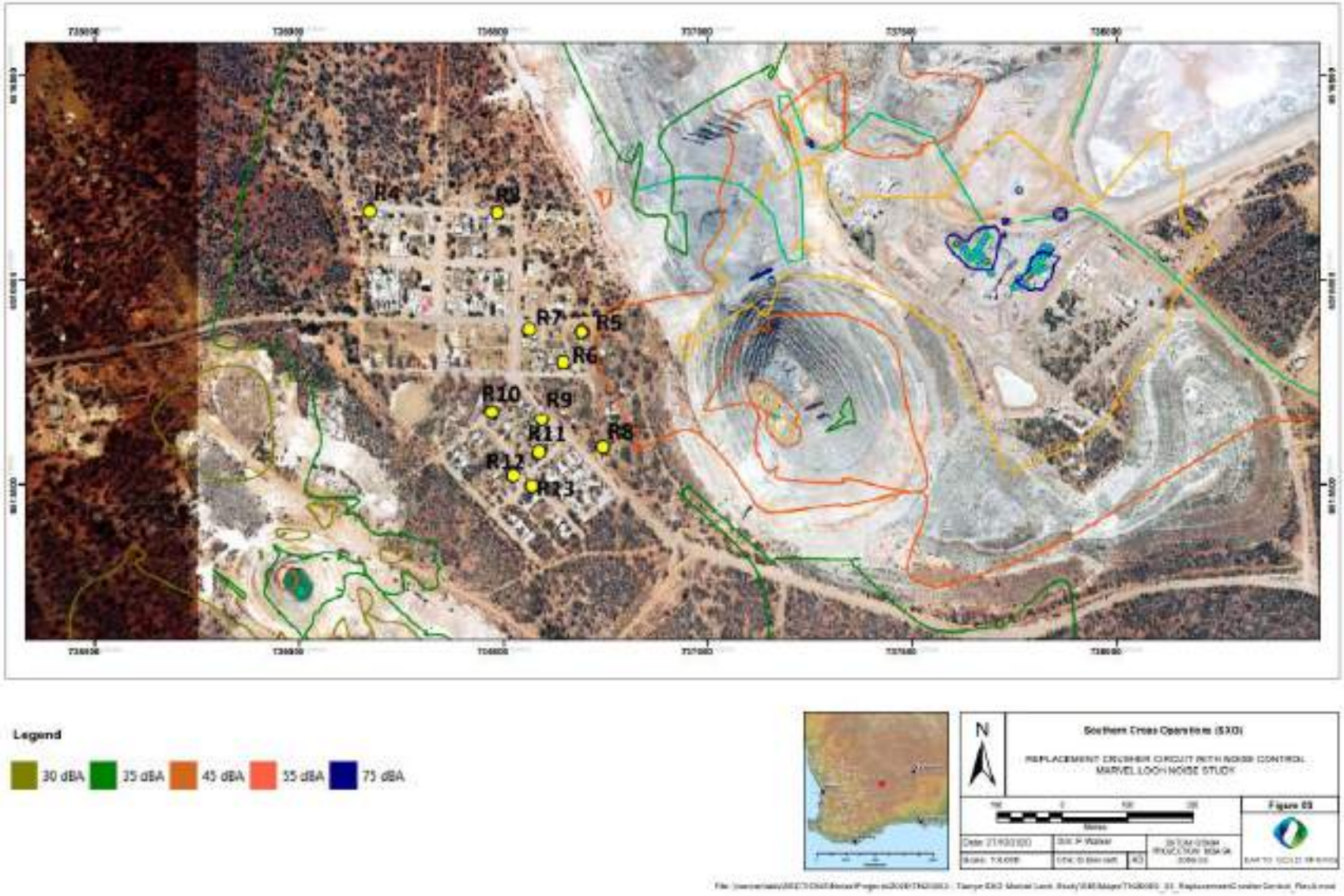

Figure 8-2: Crushing Circuit Replacement Predicted Noise Contour Map with Noise Controls (5 dB adjustment for tonality has not been included).

9 Summary and Recommendations

A noise impact study of Barto's Marvel Loch Operations and proposed replacement crushing circuit was undertaken. The existing noise impacts from the Marvel Loch Operations were determined using a combination of noise modelling and monitoring.

Noise monitoring involved noise logging close to receivers R5 and R6 for a period of 10 days in July 2019. Both the Processing Plant and crushing circuit were operating during the monitoring period. Noise monitoring showed that the measured noise levels in town ranged from 45.9 to 54.5 dB(A) [13] exceeding the assigned levels stipulated in Noise Regulations during both day and night-time.

A desktop environmental noise model was created to simulate the existing and proposed operations using a combination of SoundPlan v8.2 and Nexus Noise Management software programs. It was found that the Marvel Loch Operations cumulative noise levels exceed the Noise Regulations in every other receiver except at R2 and are ranging between 34 and 51 dB(A) [13](Base Case).

An additional scenario was modelled where the existing crushing circuit was replaced with the proposed replacement crushing circuit. This model was compared with the Base Case (i.e. existing operations) and it was found that the cumulative received levels in the town of Marvel Loch were predicted to be higher than the Base Case at some receptors. As a result, the layout for the crushing circuit was modified taking an advantage of the shadowing impact of the ROM pad. Further to this, applicable noise controls were identified using Barto's noise control and ALARP process and approved by Barto's senior management. The approved noise controls were then applied to the replacement crushing circuit model. By comparing these modelling results to that of the Base Case it was found that the cumulative received levels are predicted to be between 2 and 3dB quieter when noise controls are implemented (see Table 8-1).

Before the application of noise controls the predicted noise levels from the replacement crushing circuit at the closest receiver (R8) were 50 dB(A) [13]. After noise controls the predicted levels from the replacement crushing circuit were found to be 44 dB(A) [13]. Predicted received noise levels at R8 from the operations that do not form part of the crushing circuit are 46 dB(A) [13]. This implies that the proposed replacement crushing circuit, after the noise controls have been added, will be quieter than the rest of the operations. Future noise controls should therefore focus on other noise sources in rest of the operations to reduce the Marvel Loch Operations' impacts on the town.

Based on the findings of the noise impact study, the following recommendations can be made:

- The proposed shielding be designed and implemented to achieve the modelled outcomes;
- Noise measurements to be taken after commissioning to assess the effectiveness of the noise controls, to confirm noise source levels used in the model and to verify community impacts against the Noise Regulations; and
- The noise model to be updated with the findings of the site-based measurements.

APPENDIX A
Noise Legislation

Noise management in Western Australia is implemented through the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations), which operate under *the Environmental Protection Act 1986*. Noise Regulations specify maximum noise levels (assigned noise levels) which are the highest noise levels that can be received at noise-sensitive (residential), commercial and industrial premises.

Assigned noise levels are defined differently for noise sensitive premises, commercial premises, and industrial premises. For noise sensitive premises, an Influencing Factor (IF) is included in the assigned noise levels. The IF depends on the presence of major/minor roads and commercial/industrial land use zonings within circles of 100 metres and 450 metres radius from the noise sensitive premises.

For noise sensitive residences, the time of day also affects the assigned levels. The regulations define three types of assigned noise level:

LAS_{MAX} means an assigned level that is not to be exceeded at any time;

LAS_1 means an assigned level that is not to be exceeded for more than 1% of time;

LAS_{10} means an assigned level that is not to be exceeded for more than 10% of time.

Table A-1: Assigned Noise Levels for Noise Sensitive Receivers

Type of premises receiving noise	Time of day	Assigned Levels (dB)		
		LA_{10}	LA_1	LA_{max}
Noise sensitive premises: highly sensitive area	0700 to 1900 hours Monday to Saturday	45 + influencing factor	55 + influencing factor	65 + influencing factor
	0900 to 1900 hours Sunday and public holidays	40 + influencing factor	50 + influencing factor	65 + influencing factor
	1900 to 2200 hours all days	40 + influencing factor	50 + influencing factor	55 + influencing factor
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays	35 + influencing factor	45 + influencing factor	55 + influencing factor

Type of premises receiving noise	Time of day	Assigned Levels (dB)		
		LA_{10}	LA_1	LA_{max}
Noise sensitive premises: any area other than highly sensitive area	All hours	60	75	80
Commercial premises	All hours	60	75	80
Industrial and utility premises other than those in the Kwinana Industrial Area	All hours	65	80	90
Industrial and utility premises in the Kwinana Industrial Area	All hours	75	85	90

APPENDIX B
Detailed Analysis of Monitoring Data

Weather data was used to filter the measured data by wind direction and speed to determine the most favourable meteorological conditions for propagation thus eliminating, as far as possible, any ambiguity due to weather. Additionally, high frequency noise attributed to insects (i.e. 2.5 kHz) was removed from the data by excluding frequencies greater than 1.6 kHz from the 1/3 octave band noise logging results. The analysis can be summarised as follows:

- Measurement log consisted of ~2,500 noise measurements at 5-minute sampling intervals taken over two weeks.
- The average LA_{90} night-time level over the monitoring period was determined[15] to be 42 dB(A). With a tonality adjustment applied the LA_{90} night-time level will be 47 dB(A).
- The measured samples were correlated to local weather data Barto obtained from BoM.
- Data was filtered using the following weather parameters:
  - WS<5ms
  - WD between 0 and 180degrees (crushing plant is located at approximate 90 degrees from the Town)
  - no rain
  - Noise data was filtered to only include noise levels between 12.5 Hz and 1.6 kHz.

The outcomes of the analysis are shown in Table 9-1 where it can be seen that the mines noise levels in the townsite of Marvel Loch potentially range from 45.9 to 54.5 dB(A).

Table 9-1: Noise Logging Non-Compliances[7]

Date and Time	LAS10-(12.5 Hz to 1.6kHz)	LA90	Wind Speed (m/s)	Wind Direction (⁰)	Rain (mm)	Period
26/07/2019 00:00	49.4	46.0	3.1	67.5	0.0	Night
26/07/2019 01:00	50.8	48.5	2.9	75.2	0.0	Night
26/07/2019 02:00	50.5	49.4	3.4	33.8	0.0	Night
26/07/2019 03:00	50.9	49.4	3.0	33.8	0.0	Night
26/07/2019 04:00	50.3	49.1	2.3	58.5	0.0	Night
26/07/2019 05:00	50.6	49.5	1.7	40.6	0.0	Night
26/07/2019 06:00	49.9	48.8	2.7	30.0	0.0	Night
26/07/2019 07:00	51.1	49.1	2.8	6.4	0.0	Day

[15] Wood and Grieve (AC-RE-001-43751_004; 2019) (unfiltered)

26/07/2019 19:00	43.1	42.4	1.3	25.4	0.0	Evening
26/07/2019 22:00	44.7	43.6	1.2	54.3	0.0	Night
27/07/2019 04:00	47.8	46.4	0.6	28.7	0.0	Night
27/07/2019 05:00	48.2	46.7	0.6	28.7	0.0	Night
27/07/2019 06:00	49.5	47.9	0.1	5.4	0.0	Night
27/07/2019 22:00	47.5	45.0	2.8	37.5	0.0	Night
29/07/2019 22:00	50.0	48.9	4.8	71.2	0.0	Night
29/07/2019 23:00	49.4	47.2	3.9	63.8	0.0	Night
30/07/2019 00:00	47.9	47.3	2.4	83.0	0.0	Night
30/07/2019 01:00	47.2	45.6	3.0	71.3	0.0	Night
30/07/2019 02:00	48.9	46.9	1.3	50.1	0.0	Night
30/07/2019 03:00	49.7	47.5	2.3	37.7	0.0	Night
30/07/2019 04:00	49.0	46.8	2.5	75.2	0.0	Night
30/07/2019 05:00	48.4	46.8	2.6	78.8	0.0	Night
30/07/2019 06:00	47.6	45.1	3.2	52.5	0.0	Night
30/07/2019 07:00	49.0	46.5	3.2	48.7	0.0	Day
30/07/2019 08:00	48.5	48.9	3.4	29.8	0.0	Day
30/07/2019 10:00	46.8	44.5	4.8	11.3	0.0	Day
30/07/2019 11:00	46.3	44.7	4.9	3.7	0.0	Day
30/07/2019 21:00	49.5	46.8	4.9	75.0	0.0	Evening
31/07/2019 02:00	48.3	46.3	1.4	70.0	0.0	Night
31/07/2019 03:00	47.8	45.0	1.8	28.0	0.0	Night
31/07/2019 04:00	48.5	45.3	2.3	71.2	0.0	Night
31/07/2019 05:00	47.4	45.6	2.1	82.5	0.0	Night
31/07/2019 06:00	48.0	44.9	2.2	78.8	0.0	Night
31/07/2019 09:00	47.4	45.8	2.7	7.1	0.0	Day
31/07/2019 11:00	46.4	43.1	3.6	14.8	0.0	Day
31/07/2019 12:00	47.2	44.0	3.8	34.0	0.0	Day
31/07/2019 14:00	46.4	43.7	4.4	40.4	0.0	Day
31/07/2019 15:00	46.1	42.6	3.8	52.7	0.0	Day
31/07/2019 17:00	46.9	40.9	3.3	52.5	0.0	Day
31/07/2019 18:00	49.0	44.3	3.1	66.9	0.0	Day
1/08/2019 01:00	51.5	49.4	3.4	86.3	0.0	Night
1/08/2019 03:00	49.6	47.1	4.6	67.5	0.0	Night
1/08/2019 04:00	49.9	45.6	3.9	67.5	0.0	Night
1/08/2019 05:00	51.0	47.1	3.8	67.5	0.0	Night
1/08/2019 06:00	50.2	48.8	4.1	75.0	0.0	Night
1/08/2019 08:00	48.8	49.3	4.3	56.0	0.0	Day
1/08/2019 17:00	47.7	43.6	3.5	41.3	0.0	Day
1/08/2019 18:00	50.4	45.1	3.6	48.7	0.0	Day
1/08/2019 19:00	50.5	47.5	4.5	67.5	0.0	Evening
2/08/2019 00:00	49.2	47.2	4.5	45.6	0.0	Night
2/08/2019 01:00	47.6	47.4	3.7	20.8	0.0	Night
2/08/2019 02:00	48.4	47.1	4.0	26.2	0.0	Night
2/08/2019 03:00	49.3	48.7	4.3	22.5	0.0	Night

2/08/2019 06:00	50.3	50.6	3.1	11.3	0.0	Night
2/08/2019 07:00	49.9	49.7	1.8	30.2	0.0	Day
2/08/2019 08:00	49.6	49.2	4.4	30.0	0.0	Day

Figure 9-1: LA_{10} logged noise data during the logging period

APPENDIX C
Equipment List

Base Case	Base Case + Replacement Crushing Circuit
Agitator - TK001	Agitator - TK001
Agitator - TK002	Agitator - TK002
Agitator - TK003	Agitator - TK003
Agitator - TK004	Agitator - TK004
Agitator - TK005	Agitator - TK005
Agitator - TK006	Agitator - TK006
Agitator - TK007	Agitator - TK007
Agitator - TK008	Agitator - TK008
Agitator - TK009	Agitator - TK009
Agitator - TK010	Agitator - TK010
Agitator - TK011	Agitator - TK011
Agitator - TK012	Agitator - TK012
Agitator - TK013	Agitator - TK013
Agitator - TK014	Agitator - TK014
Cone Crushers (2x)	CV01 - Drive_13G
CV02	CV01_13G
CV02 - Drive	CV011 - Drive_13G
CV03	CV02 - Drive_13G
CV03 - Drive	CV02_13G
CV04	CV03 - Drive_13G
CV04 - Drive	CV03_13G
CV05a	CV04 - Drive_13G
CV05a - Drive	CV04_13G
CV05b - Drive	CV05 - Drive_13G
CV05c - Drive	CV05_13G
CV06	CV07
CV06 - Drive	CV07 - Drive
CV07	CV09 - Drive_13G
CV07 - Drive	CV09_13G
CV5b	CV10 - Drive_13G
CV5c	CV10_13G
Dozer - Cat D10	CV11_13G
Front End Loader - Cat 980H	CV13 - Drive_13G
Gravity Screen Pump 1	CV13_13G

Base Case	Base Case + Replacement Crushing Circuit
Gravity Screen1	CV14 - Drive_13G
Gravity Screen2	CV14_13G
Haul Truck - Cat AD55	Front End Loader - Cat 980H
Leach Tank Pump 1	Front End Loader - Cat 980H
Leach Tank Pump 2	Gravity Screen Pump 1
Leach Tank Pump 3	Gravity Screen1
Primary Crusher	Gravity Screen2
Primary Mill - Motor	Haul Truck - Cat AD55
Primary Mill Pump 1	Leach Tank Pump 1
Process Water Pump 1	Leach Tank Pump 2
Road Train	Leach Tank Pump 3
Secondary Crusher	Primary Crusher Drive_13G
Secondary Mill 1 - Motor	Primary Crusher Rock Breaker_13G
Secondary Mill 2 - Motor	Primary Crusher_13G
Surface Vent Fan - Howden 2260 Axial Fan 285kW	Primary Jaw Crusher Lube system_13G
Tailings Screen Pump 1	Primary Mill - Motor
Tails Screen1	Primary Mill Pump 1
Tails Screen2	Process Water Pump 1
Trash Screen Pump 1	Road Train - Unknown Model
Trash Screen1	Secondary Crusher_13G
Trash Screen2	Secondary Mill 1 - Motor
Water Cart - Kenworth T358	Secondary Mill 2 - Motor
Water Pump	Secondary Screen_13G
	Surface Vent Fan - Howden 2260 Axial Fan 285kW
	Tailings Screen Pump 1
	Tails Screen1
	Tails Screen2
	Tert Crusher 1_13G
	Tert Crusher 2_13G
	Tertiary Screen_13G
	Trash Screen Pump 1
	Trash Screen1
	Trash Screen2
	Vibrating Grizzly Feeder_13G
	Water Cart - Kenworth T358
	Water Pump

APPENDIX D
Noise Source SWL

BASE CASE EQUIPMENT SOURCE LEVELS

Table D-1: Base Case - Noise Source Levels

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
1	Agitator - TK001	94.6	45	56	63	71	87	90	88	87	79
2	Agitator - TK002	94.6	45	56	63	71	87	90	88	87	79
3	Agitator - TK003	94.6	45	56	63	71	87	90	88	87	79
4	Agitator - TK004	94.6	45	56	63	71	87	90	88	87	79
5	Agitator - TK005	99.1	33	51	60	73	80	96	94	89	83
6	Agitator - TK006	99.1	33	51	60	73	80	96	94	89	83
7	Agitator - TK007	99.1	33	51	60	73	80	96	94	89	83
8	Agitator - TK008	99.1	33	51	60	73	80	96	94	89	83
9	Agitator - TK009	96.1	36	55	63	81	89	92	91	84	79
10	Agitator - TK010	96.1	36	55	63	81	89	92	91	84	79
11	Agitator - TK011	96.1	36	55	63	81	89	92	91	84	79
12	Agitator - TK012	96.1	36	55	63	81	89	92	91	84	79

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
13	Agitator - TK013	96.1	36	55	63	81	89	92	91	84	79
14	Agitator - TK014	96.1	36	55	63	81	89	92	91	84	79
15	Cone Crushers (2x)	113.7	41	66	82	97	107	108	109	105	97
16	CV02	101.3	52	65	78	87	93	96	96	94	88
17	CV02 - Drive	101.0	-94	58	71	83	90	96	96	94	88
18	CV03	101.6	-94	59	69	83	90	96	97	95	88
19	CV03 - Drive	93.8	42	57	73	78	86	88	89	85	80
20	CV04	102.6	48	63	76	88	94	97	97	96	90
21	CV04 - Drive	96.4	42	57	73	80	87	91	91	89	87
22	CV05a	101.6	-94	59	69	83	90	96	97	95	88
23	CV05a - Drive	104.6	45	59	69	79	96	102	96	94	88
24	CV05b - Drive	91.6	-94	49	62	73	81	86	87	85	79
25	CV05c - Drive	88.9	46	59	70	78	83	84	82	76	68
26	CV06	97.3	48	61	74	83	89	92	92	90	84
27	CV06 - Drive	98.5	-94	56	69	80	88	93	94	92	86
28	CV07	96.0	47	66	83	84	88	90	90	88	85
29	CV07 - Drive	98.5	-94	56	69	80	88	93	94	92	86
30	CV5b	99.2	-94	52	63	73	82	89	95	94	92
31	CV5c	79.9	37	48	62	68	75	76	73	66	58
32	Dozer - Cat D10	114.4	71	81	91	98	107	110	111	102	29
33	Front End Loader - Cat 980H	103.7	61	73	90	90	98	100	97	89	84

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
34	Gravity Screen Pump 1	109.0	65	78	90	97	103	104	102	97	90
35	Gravity Screen1	90.1	45	58	69	77	83	85	84	79	73
36	Gravity Screen2	90.1	45	58	69	77	83	85	84	79	73
37	Haul Truck - Cat AD55	106.5	67	63	67	95	100	102	102	94	27
38	Leach Tank Pump 1	109.0	65	78	90	97	103	104	102	97	90
39	Leach Tank Pump 2	109.0	65	78	90	97	103	104	102	97	90
40	Leach Tank Pump 3	109.0	65	78	90	97	103	104	102	97	90
41	Primary Crusher	116.4	85	93	100	107	111	111	109	103	93
42	Primary Mill - Motor	99.6	51	65	77	85	91	97	93	85	77
43	Primary Mill Pump 1	109.0	65	78	90	97	103	104	102	97	90
44	Process Water Pump 1	109.0	65	78	89	97	103	104	103	97	90
45	Road Train	104.4	65	76	86	93	98	100	98	93	27
46	Secondary Crusher	113.7	41	66	82	97	107	108	109	105	97
47	Secondary Mill 1 - Motor	99.6	51	65	77	85	91	97	93	85	77
48	Secondary Mill 2 - Motor	99.6	51	65	77	85	91	97	93	85	77

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
49	Surface Vent Fan - Howden 2260 Axial Fan 285kW	108.0	68	79	89	100	103	103	101	92	82
50	Tailings Screen Pump 1	109.0	65	78	90	97	103	104	102	97	90
51	Tails Screen1	83.5	37	50	62	70	75	79	78	73	67
52	Tails Screen2	83.5	37	50	62	70	75	79	78	73	67
53	Trash Screen Pump 1	109.0	65	78	90	97	103	104	102	97	90
54	Trash Screen1	83.5	37	50	62	70	75	79	78	73	67
55	Trash Screen2	83.5	37	50	62	70	75	79	78	73	67
56	Water Cart - Kenworth T358	103.5	69	78	86	92	97	99	98	92	84
57	Water Pump	107.8	79	87	94	98	99	100	103	102	30

REPLACEMENT CRUSHING CIRCUIT EQUIPMENT SOURCE LEVELS

Table D-2: Replacement Crushing Circuit – New Noise Source Levels

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
1	CV01 - Drive_13G	101.1	58	71	83	90	96	96	94	88	80
2	CV01_13G	101.6	59	69	83	90	96	97	95	88	79

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
3	CV011 - Drive_13G	96.5	54	67	78	85	91	92	90	84	75
4	CV02 - Drive_13G	101.1	58	71	83	90	96	96	94	88	80
5	CV02_13G	101.6	59	69	83	90	96	97	95	88	79
6	CV03 - Drive_13G	96.5	54	67	78	85	91	92	90	84	75
7	CV03_13G	96.9	54	65	79	85	92	93	90	83	74
8	CV04 - Drive_13G	96.5	54	67	78	85	91	92	90	84	75
9	CV04_13G	111.9	69	80	94	100	107	108	105	98	90
10	CV05 - Drive_13G	93.8	57	73	78	86	88	89	85	80	68
11	CV05_13G	101.6	59	69	83	90	96	97	95	88	79
12	CV07	96.0	47	66	83	84	88	90	90	88	85
13	CV07 - Drive	98.5	-94	56	69	80	88	93	94	92	86
14	CV09 - Drive_13G	111.9	67	80	89	96	102	105	106	106	104
15	CV09_13G	101.1	58	69	83	89	96	97	95	87	79
16	CV10 - Drive_13G	96.5	54	67	78	85	91	92	90	84	75
17	CV10_13G	96.5	53	64	78	84	91	92	90	82	74
18	CV11_13G	101.6	58	69	83	89	96	97	95	88	79
19	CV13 - Drive_13G	96.5	54	67	78	85	91	92	90	84	75
20	CV13_13G	96.9	54	65	79	85	92	93	90	83	74
21	CV14 - Drive_13G	96.5	54	67	78	85	91	92	90	84	75
22	CV14_13G	101.6	59	69	83	90	96	97	95	88	79
23	Primary Crusher Drive_13G	108.1	62	73	87	99	103	103	100	92	82
24	Primary Crusher Rock Breaker_13G	107.9	84	94	101	97	100	101	101	95	88

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
25	Primary Crusher_13G	116.4	85	93	100	107	111	111	109	103	93
26	Primary Jaw Crusher Lube system_13G	81.8	39	52	63	71	76	77	75	69	61
27	Primary Mill - Motor	99.6	51	65	77	85	91	97	93	85	77
28	Primary Mill Pump 1	109.0	65	78	90	97	103	104	102	97	90
29	Process Water Pump 1	109.0	65	78	89	97	103	104	103	97	90
30	Secondary Crusher_13G	113.7	41	66	82	97	107	108	109	105	97

Table D-3: Replacement Crushing Circuit – Remaining Plant Noise Source Levels

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
1	Agitator - TK001	94.6	45	56	63	71	87	90	88	87	79
2	Agitator - TK002	94.6	45	56	63	71	87	90	88	87	79
3	Agitator - TK003	94.6	45	56	63	71	87	90	88	87	79
4	Agitator - TK004	94.6	45	56	63	71	87	90	88	87	79
5	Agitator - TK005	99.1	33	51	60	73	80	96	94	89	83
6	Agitator - TK006	99.1	33	51	60	73	80	96	94	89	83
7	Agitator - TK007	99.1	33	51	60	73	80	96	94	89	83
8	Agitator - TK008	99.1	33	51	60	73	80	96	94	89	83

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
9	Agitator - TK009	96.1	36	55	63	81	89	92	91	84	79
10	Agitator - TK010	96.1	36	55	63	81	89	92	91	84	79
11	Agitator - TK011	96.1	36	55	63	81	89	92	91	84	79
12	Agitator - TK012	96.1	36	55	63	81	89	92	91	84	79
13	Agitator - TK013	96.1	36	55	63	81	89	92	91	84	79
14	Agitator - TK014	96.1	36	55	63	81	89	92	91	84	79
15	Front End Loader - Cat 980H	103.7	61	73	90	90	98	100	97	89	84
16	Front End Loader - Cat 980H	103.7	61	73	90	90	98	100	97	89	84
17	Gravity Screen Pump 1	109.0	65	78	90	97	103	104	102	97	90
18	Gravity Screen1	90.1	45	58	69	77	83	85	84	79	73
19	Gravity Screen2	90.1	45	58	69	77	83	85	84	79	73
20	Haul Truck - Cat AD55	106.5	67	63	67	95	100	102	102	94	27
21	Leach Tank Pump 1	109.0	65	78	90	97	103	104	102	97	90
22	Leach Tank Pump 2	109.0	65	78	90	97	103	104	102	97	90
23	Leach Tank Pump 3	109.0	65	78	90	97	103	104	102	97	90
24	Primary Mill - Motor	99.6	51	65	77	85	91	97	93	85	77
25	Primary Mill Pump 1	109.0	65	78	90	97	103	104	102	97	90
26	Process Water Pump 1	109.0	65	78	89	97	103	104	103	97	90
27	Road Train	104.4	65	76	86	93	98	100	98	93	27

#	Description	SWL dB(A)	Octaves, Laeq								
			31.5Hz	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
28	Secondary Mill 1 - Motor	99.6	51	65	77	85	91	97	93	85	77

Assets | Engineering | Environment | Noise | Spatial | Waste

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29 October 2020

Elina Vuorenmaa
Senior Approvals Advisor
Barto Gold Mining Pty Ltd
Level 3, 66 Kings Park Road
West Perth WA 6005

Re: Marvel Loch replacement crushing circuit - surface water management plan

Dear Elina,

EMM Consulting Pty Limited (EMM) is pleased to provide Barto Gold Mining Pty Ltd (Barto) with this letter report summarising the surface water management plan and recommendations to support a License Amendment Application (LAA) for a replacement crushing circuit at the Marvel Loch mine operations.

This assessment is directly related to the audit of surface water management around the processing plant and administration areas documented in a separate report prepared by EMM (2020). The surface water audit request from Department of Water and Environment (DWER) was triggered by an uncontrolled release event from the site which occurred following a significant storm event on 25 February 2020. This event was traced back to buried pipe works linking the site to the downstream environment.

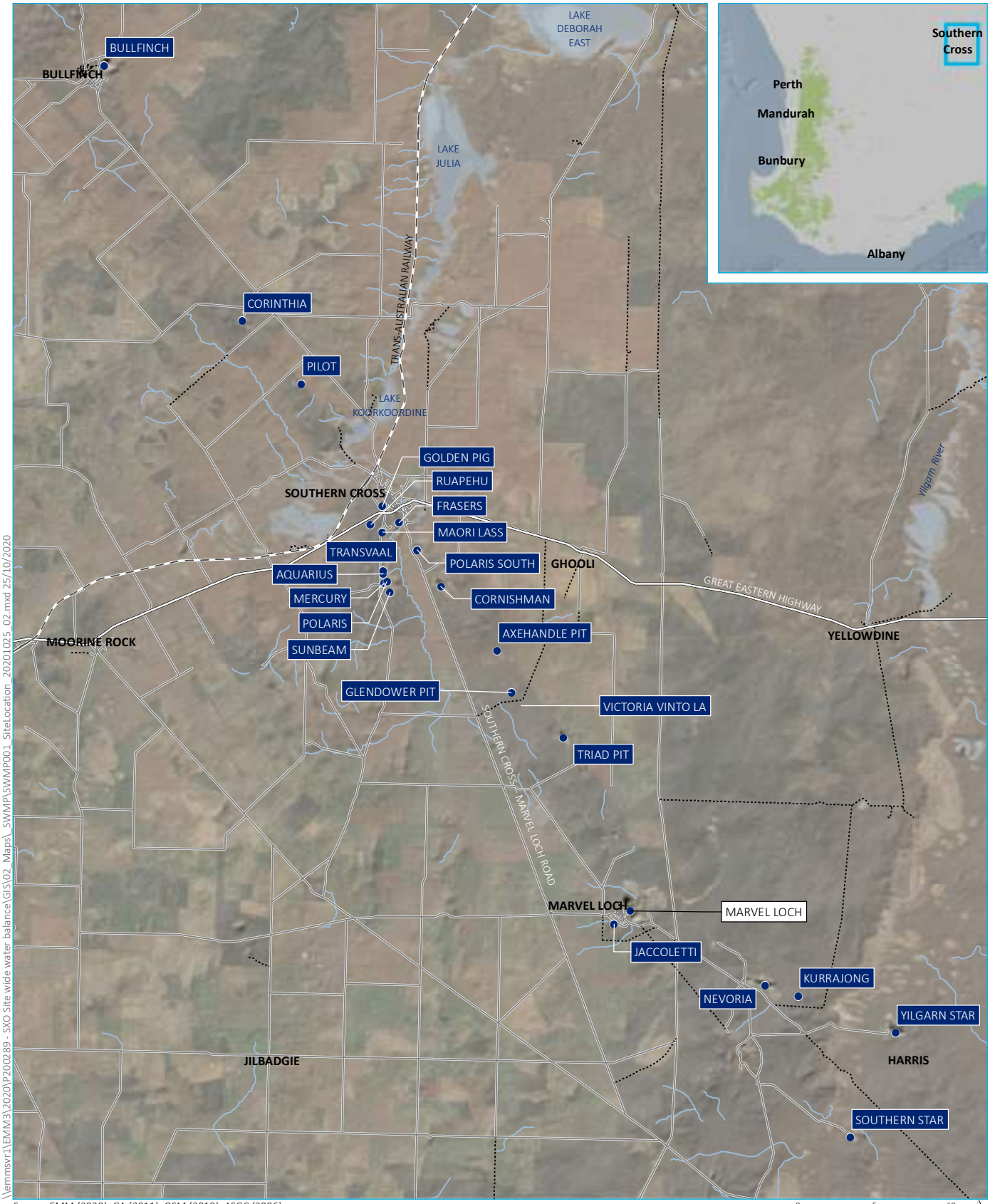
1 Introduction

1.1 Overview

The Marvel Loch mine site and mineral processing centre is located approximately 30 kilometres (km) southeast of Southern Cross in the Yilgarn Shire of Western Australia. At a broader regional catchment scale, the site is in the Lake Julia sub-catchment which forms part of the regional Yilgarn River catchment in the western extent of the Avon River catchment (refer to Figure 1.1).

Marvel Loch mine site (presented in Figure 1.2) comprises of the following infrastructure:

- a large open cut mine void approximately 87 hectares (ha) in area, that has been partially backfilled with waste;
- a large northern, and smaller southern and eastern waste rock dumps (WRD);
- a tailings storage facility (TSF 1 and TSF 2) approximately 107 ha in area;
- crushing and mineral processing facilities; and
- administration buildings.



\\emmsvr1\EMM3\2020\P200289 - SXO Site wide water balance\GIS\02_Maps_SWMP\SWMP001_SiteLocation_20201025_02.mxd 25/10/2020

Source: EMM (2020); GA (2011); OSM (2019); ASGC (2006)

0 5 10 km

GDA 1994 MGA Zone 50

N

KEY

- Mine void
- Railway
- Main road
- Local road
- Vehicle track
- Watercourse/drainage line
- Waterbody

General locations

Barto Gold Mining Pty Ltd
Marvel Loch new crushing facilities
Surface water management plan
Figure 1.1

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Figure 1.2 Marvel Loch mine site – site infrastructure

1.2 Objectives

Mineral processing of a defined size with the potential to cause emissions and discharges to air, land or water are known as 'prescribed premises' and trigger regulation under the *Environmental Protection Act 1986* (EP Act). The DWER regulates industrial emissions and discharges to the environment through a works approval and licensing process, under Part V of the EP Act. DWER regulate to ensure there is no unacceptable risk of harm to public health or the environment.

DWER require applicants to provide technical and general information, as necessary, to inform its assessment of the risks associated with the proposed activity. LAA often have associated conditions to manage potential or uncertain risks, including outcomes-based conditions, process and management conditions and monitoring and reporting conditions that may require supplemental technical information.

The objectives of the review and assessment undertaken and presented in this letter report are to address the surface water and stormwater management requirements supporting a LAA for the proposed replacement crushing circuit and to provide information to the site surface water audit. The following water management aspects of the proposed development are addressed:

- characterisation and description of the proposed development with respect to local surface water features and potential water receptors;
- review of existing surface water management at the site;
- review of potential surface water risks and impacts associated with the proposed development; and
- recommendations for appropriate surface water management controls and measures to mitigate and manage any risks.

2 Surface water characterisation

2.1 Regional surface water systems

At a regional scale, the Marvel Loch mine site and mineral processing plant (the Project) is located within the Lake Julia sub-catchment which forms part of the regional Yilgarn River catchment in the western extent of the Avon River catchment. Lake Deborah East, a playa lake in the relict drainage of the Yilgarn River, represents the ultimate receptor of surface water drainage from the Yilgarn River catchment.

The Yilgarn River is characterised by a very low relief landscape and sluggish drainage through salt lake systems in broad valley floors, generally 5 to 8 km wide. A key characteristic of this zone of ancient drainage is the low valley-flood gradients (commonly of less than 0.5%) which makes drainage very slow and mostly internal. The low gradient and high storage capacity within these surface water systems and the flood plain means that surface water systems do not commonly flow or respond as one linked system unless a major summer rainfall event occurs or there is a prolonged wet winter period.

2.2 Local surface water systems

At a local scale, the Marvel Loch mine site is situated in the upper reaches of the ephemeral surface water drainage system referred to as the Polaris palaeodrainage system. This surface water system drains westward from Marvel Loch before draining north towards Southern Cross and discharging to Lake Koorkoordine.

The Marvel Loch mine area is located on the side of a hill with the crusher and plant area and surrounds draining to the south west. The Project site lies within a highly modified landscape and is almost fully surrounded by mining landforms, with WRDs to the north and south, the existing TSF to the north and a new TSF under construction to the east, and the Marvel Loch pit to the south and west (downslope of the site). Upslope contributing catchments are therefore limited based on the surrounding mining landforms and, downstream of the site, surface water drainage, ultimately drains towards the pit.

Stormwater runoff within the site is therefore predominantly generated from incident rainfall falling directly on the development footprint rather than including significant volumes of surface runoff from upslope catchment areas. Stormwater management and site drainage infrastructure have, in some areas of the mine site, been integrated in the site development. A description of the existing surface water management system, particularly focussing on the Project site, is provided in Section 3 below.

In summary, based on the available site survey and topographic information, there are no natural links or connections between surface water runoff generated locally within the Project site and the downstream environment. Surface water and stormwater generated within the Project footprint is captured, managed, and retained within the mine area.

3 Existing surface water management

The following sections provide a brief summary of existing surface water drainage system and features relevant to the Project area (summarised in Section 3.1) and review of storm rainfalls and expected stormwater responses within the Project area (presented in Section 3.3).

3.1 Site drainage

The following description of the Project area surface water drainage system is based on information sourced from the following:

- site survey information and aerial imagery provided by Barto;
- observations made during the site inspection carried out on 10 and 11 September 2020; and

- review of information presented in the Coffey (2007) drainage study for the Marvel Loch operations.

A plan layout of the Project site and associated surface water drainage features is presented in Figure 3.1. Photos of drainage infrastructure taken during the site inspection, and reflecting the current condition of site drainage infrastructure, are presented below.

According to Coffey (2007), the drainage system for the crusher and processing plant was designed in 2002 and comprises internal drains and perimeter drains located downstream of the site which direct stormwater runoff to a culvert under the Access road to the south of the site. A plant site drainage plan and earthworks figure included in the Coffey (2007) report indicates grading of earthworks around the crusher and plant to convey runoff to swale drains and perimeter drains. Crusher and process plant perimeter drains were observed to be significantly silted– refer to Photograph 3.1

Culverts under the Access road consist of 2 x 500-millimetre (mm) diameter steel pipe with an approximate length of 50 metres (m). The culverts discharge to a drain, of approximately 90 m in length, on the southern side of the Access road and ultimately discharges to the pump sump. During the site inspection these culverts were observed to be in extremely poor condition. There is sediment blocking the culverts at the upstream inlet and the outlet pipes have been damaged (crushed) and compromised at their outlet – refer to Photograph 3.2. It is not known if there is any damage or blockage of the culvert pipes under the road between the inlet and outlet. The drain between the culverts and the pump sump is also significantly silted up – refer to Photograph 3.3.

The pump sump (also referred to as the 'duck pond') is described as a HDPE lined facility approximately 20 m x 20 m in area with concrete silt traps constructed on the inlets to the sump in order to reduce siltation of the pond (Coffey 2007). During the site inspection it was not possible to verify or confirm the presence or condition of the pump sump liner due to significant sediment accumulation across the facility – refer to Photograph 3.4. When required, pumps transfer water collected in the pump sump to the adjacent process water dam.

The pump sump does not have clearly defined storage and retention controls, ie embankments, and it is likely that following significant storm events water collected at the sump ponds up against the process dam embankment and further inundates the area southwest of the process dam – refer to Photograph 3.6.

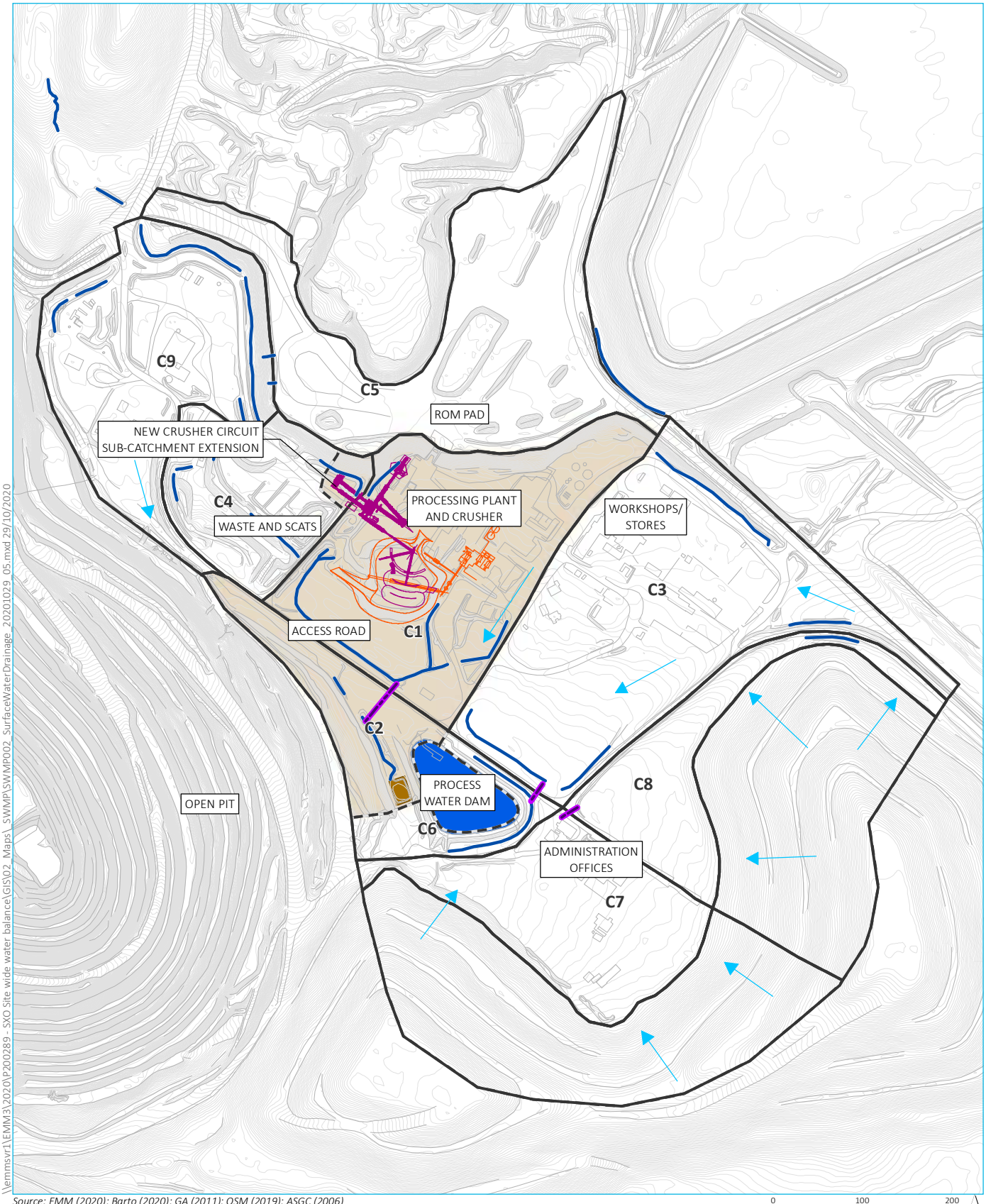
The process water dam (shown in Photograph 3.5) is located on the southern side of the Access road to the plant site and directly above the pump sump (refer to Figure 3.1). According to the Coffey (2007) report, the process water dam is an artificially lined facility with a storage capacity of approximately 32,000 m^3. The ponded surface area at full storage is approximately 7,000 m^2. The facility is a paddock type storage facility with perimeter embankments which are nominally 3.0 m to 4.0 m high.

Process water use from the dam is currently estimated to be approximately 80 litres per second (L/s) (or 6.9 megalitres per day (ML/d)). It is understood that the process water dam is kept at a full operational level (refer to Photograph 3.4), close to the dam crest, receiving pumped water from two sources;

1. Water (stormwater and/or process water discharge) collected at the pump sump; and

2. Dewatering water (from Nevoria mine and Jaccoletti / Marvel Loch underground mine) which if not used for the process water supply is directed to the Yilgarn Star open pit approximately 17 km southwest of Marvel Loch

There are no other defined stormwater storage areas or facilities. It appears that 'clean' stormwater generated from adjacent areas, particularly to the east of the Project area is captured and conveyed, via drains and culverts, to an area southwest of the process water pond – refer to Photograph 3.6. Communications from site personnel mention that (uncontrolled) stormwater accumulation in this area can inundate to form a single ponding area with the adjacent pump sump stormwater (potentially contaminated) from the processing plant catchment



\\emmsvr1\EMM3\2020\P200289 - SXO Site wide water balance\GIS\02_Maps_SWMP\SWMP002_SurfaceWaterDrainage_20201029_05.mxd 29/10/2020

Source: EMM (2020); Barto (2020); GA (2011); OSM (2019); ASGC (2006)

0 100 200 m

GDA 1994 MGA Zone 50

N

KEY

- Replacement crushing circuit
- Existing crushing circuit
- Culvert
- Surface water drain
- Indicative drainage direction
- Existing sub-catchment boundary
- New sub-catchment boundary
- Contour (0.5 m)
- Survey feature
- Process water dam
- Pump sump
- Processing plant sub-catchments (potentially impacted stormwater)

Project site and surface water drainage features

Barto Gold Mining Pty Ltd
Marvel Loch new crushing facilities
Surface water management plan
Figure 3.1

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Photograph 3.1 Condition of internal surface water drain (left) and perimeter drain (right)

Photograph 3.2 Culverts under Access road downstream of Project site – inlet (left) and outlet (right)

Photograph 3.3 Condition of drain below culverts and flowing towards toe pump sump. Looking downstream (left) and upstream from pump sump (right)

Photograph 3.4 Pump sump and sediment deposition at upstream end (left) and concrete sump (right)

Photograph 3.5 Process water dam pumped inflow (left) and looking north towards processing facility (right)

Photograph 3.6 Stormwater runoff accumulation area looking south from process water dam (left) and looking north towards pump sump (right)

3.2 Previous surface water management recommendations

The Coffey (2007) report identified possible options (for the then mine owner, St Barbara Ltd) to upgrade and modify the existing surface water management system to mitigate stormwater impacts experienced in earlier severe storm events.

The recommended option from Coffey (2007) was that the surface water runoff to the pump sump (duck pond) be managed by 'attenuating' the catchment flows, upstream of the duck pond / process water dam, by the use of rock dams or retention basins. The objective outcome of this approach was to increase the time of concentration of flows through the system and reduce the risk of overwhelming the existing pumping capacity to the process water dam of between 95 and 190 L/s.

The hydrological assessment of the Coffey (2007) investigation estimated there would be a requirement to store approximately 4,000 m^3 within the catchment above the pump sump (ie for an equivalent 10% annual exceedance probabilities (AEP) or 1 in 10-year design storm). The retention basins would require an area of approximately 0.5 ha based on an assumed average water depth of 1 m.

It is noted that, for the purpose of the assessment presented in this report, it is assumed that the process water dam is maintained at a 'full' operational level, either through topping up with stormwater or surplus dewatering sources, prior to a storm event occurring. Therefore, the primary stormwater management approach is focused on conveyance and storage of water rather than assuming active management of stormwater by means of pumping of water from the pump sump.

3.3 Site rainfall and storm event characterisation

The following section provides a summary of rainfall characteristics for the site. Rainfall records have been supplemented using information from the SILO (Scientific Information for Land Owners) database of rainfall climate data (Queensland DES 2020). SILO is a national database of Australian climate data from 1889 to the present providing daily meteorological datasets for a range of climate variables suitable for biophysical modelling, research and climate applications.

Monthly and annual total rainfall for the Project area, and regionally, are low. Mean annual rainfall for the period 1961 to 2020, based on daily SILO rainfall, is approximately 340 mm and mean monthly rainfall ranges between a low of approximately 20 mm during the summer period up to a maximum average monthly rainfall of just under 50 mm during the winter period. However, significant and intense rainfall events are experienced at the site and commonly these are associated with summer storm events.

Site observations provided to EMM describe the stormwater management systems, particularly around the pump sump area becoming overwhelmed because of significant rainfall-runoff events. Additionally, surface flows through and around the administration areas have resulted in significant water ponding at the low point to the south of the process water dam. This uncontrolled inundation has reached a level where there has been a joining of the inundated area with the pump sump stormwater water storage.

Severe storm events have resulted in the pump sump system being overwhelmed and the stormwater inundation water having to be pumped away. Notable storm events are, detailed in the Coffey (2007) report and approximate dates of subsequent inundation events were provided to EMM by site personnel during the site inspection. This information indicates that the significant stormwater responses are experienced across the site as a result of intense storm events recording over 30 mm over a 24-hour period and in excess of 40 to 60 mm over a 2-day period.

It is noted that rainfall from intense thunderstorms, particularly during the summer months, may generate the majority of the daily recorded rainfall in a much shorter period. For instance, it has been indicated by site personnel that the February 2020 rainfall event may only have occurred over a period of 2 to 3 hours (pers com) and resulted in significant runoff through the site which overwhelmed the existing drainage system.

3.4 Review of potential stormwater response events

Typically, in arid regions such as this, significant rainfall runoff only occurs as a response to the following types of extreme rainfall events:

- very short duration (ie over a period of hours or less) intense rainfall, when the rate of rainfall exceeds the infiltration capacity of the soil (such as the February 2020 event); or
- when the storage capacity of the soils is exceeded by longer duration (ie over a period of days) high magnitude rainfall events (such as the December 2006 event).

In this region it may be assumed that runoff generating events may be limited to occurring only when rainfall exceeds a given threshold, which may be in region of up to 15 to 20 mm.

Based on the SILO daily rainfall data for the 60 year period from 1961 to 2020, Table 3.1 presents a summary of total (over the 60 year record) and average annual number of days when rainfall has exceeded a given threshold depth. The data indicates that, on average, the site could expect approximately two daily rainfall events per year exceeding 20 millimetres per day (mm/d) and approximately one event per year exceeding 30 mm/d. Daily rainfall exceeding 60 mm only occurred five times over the 60 year period, ie occurring less than once every 10 years.

Table 3.1 Summary of daily Marvel Loch rainfalls exceeding defined threshold values (1961-2020)

Value	>10 mm	>20 mm	>30 mm	>40 mm	>50 mm	>60 mm
Total exceedances (over 60 years)	510	144	54	22	13	5
Average annual exceedances	8.5	2.4	0.9	0.4	0.2	0.1

Figure 3.2 provides a graphical summary of the number of daily rainfall events within each year exceeding a defined threshold of greater than 30 mm/d and 60 mm/d. This time series appears to indicate a reduction in the frequency of high daily rainfall events over the 60-year period, particularly for the 20-year period since 2000. Recent research by Scanlon and Doncon (2020) highlight the influence of shifts in Indian Ocean sea surface temperatures, in 1976 and more recently in 2000, on reductions in rainfall in the eastern Wheatbelt, particularly for the April to October period.

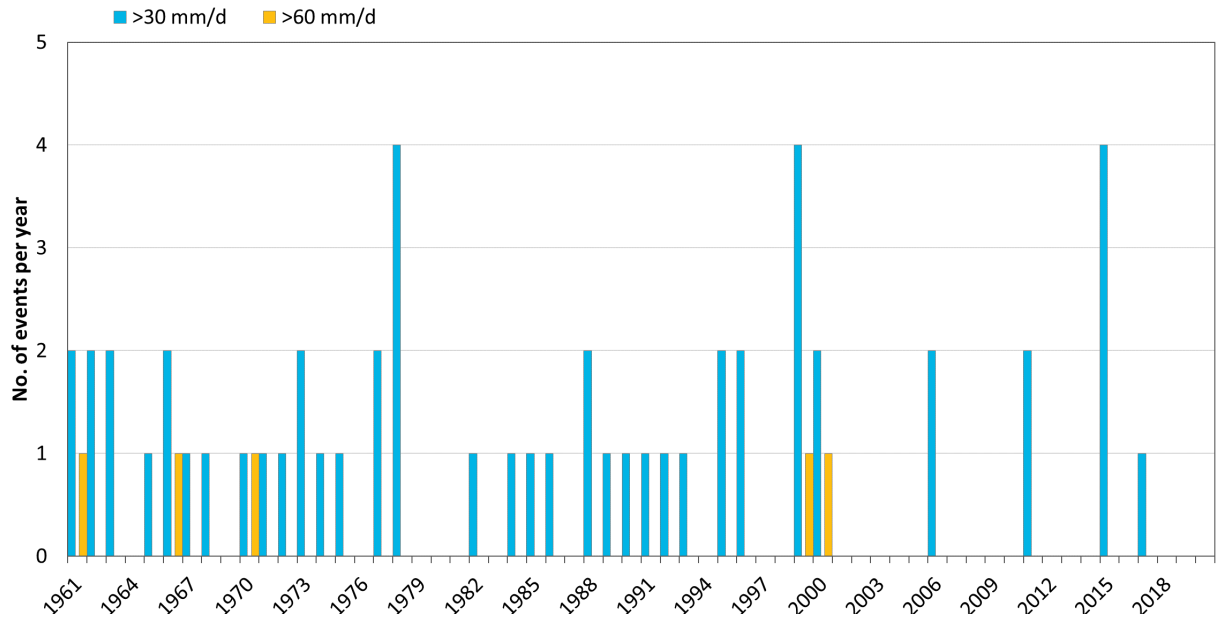


Figure 3.2 Marvel Loch (SILO data) daily rainfalls exceeding defined threshold values

3.5 Design rainfalls

Design rainfall estimates for Marvel Loch were derived using the Bureau of Meteorology's (BoM) Computerised Design IFD Rainfall System (CDIRS) to provide estimation of a full set of design rain depth and intensity duration curves. This approach is consistent with procedures described in Ball et al, (2019). Table 3.2 and Figure 3.3 summarise design rainfall depths associated with design storms with durations up to 168 hours and annual exceedance probabilities (AEPs) up to the 1% (equivalent to a 1 in 100-year) event.

Table 3.2 Rainfall depth (mm) for standard durations and annual exceedance probabilities (AEPs)

Duration (mins)	AEP							Duration (hours)
	63%	50%	20%	10%	5%	2%	1%	
5	4.1	4.8	6.9	8.5	10.3	12.8	15.0	**0.083**
10	6.0	7.0	10.4	13.0	15.8	19.9	23.4	**0.167**
15	7.3	8.5	12.6	15.7	19.1	24.1	28.4	**0.25**
30	9.6	11.1	16.3	20.2	24.4	30.6	35.8	**0.50**
60	12.3	14.1	20.0	24.5	29.3	36.3	42.2	**1**
120	15.7	17.6	24.4	29.5	34.9	42.8	49.4	**2**
180	18.0	20.1	27.5	33.1	39.1	47.7	55.0	**3**
360	22.5	25.2	34.4	41.3	48.7	59.6	68.7	**6**
720	27.7	31.3	43.3	52.5	62.3	76.7	88.9	**12**
1440	33.1	37.7	53.7	65.9	78.9	98.2	114.0	**24**
2880	38.1	43.9	63.7	78.8	95.0	119.0	138.0	**48**
4320	40.9	47.1	68.5	84.8	102.0	127.0	148.0	**72**
5760	43.1	49.5	71.4	88.0	106.0	131.0	152.0	**96**
7200	45.0	51.5	73.5	90.1	108.0	133.0	154.0	**120**
8640	46.9	53.3	75.2	91.7	109.0	133.0	154.0	**144**

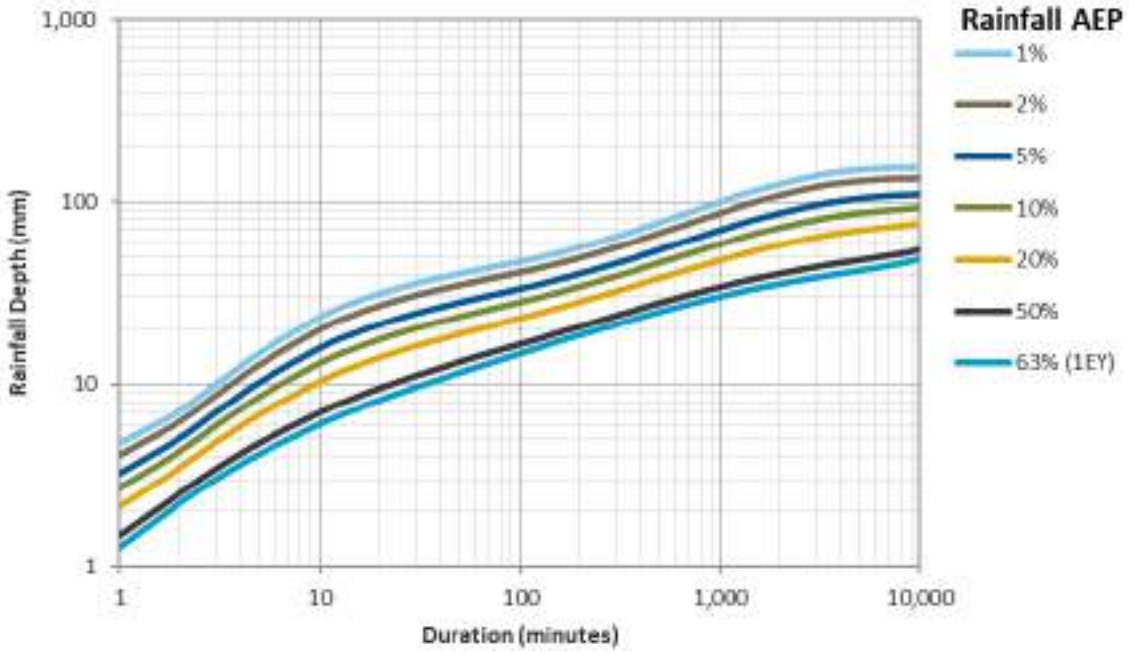


Figure 3.3 Design depth-frequency-duration plots for given annual exceedance probabilities (AEPs)

Based on the available information it may be inferred that significant stormwater runoff events at the Project site, as described by site personnel, resulting in storm water volumes exceeding the capacity of the existing stormwater system to potentially occur at least every 5 years or so. A 30-mm storm event over an assumed 2- or 3-hour period is equivalent to an approximate 20% or 10% AEP event, respectively, ie a 1 in 5 or 1 in 10-year event. Daily rainfall events of 30 mm lie within the 63% to 50% AEP range, ie on average they occur every 1 to 2 years. A 60-mm 2-day rainfall is equivalent to an approximately 20% AEP event.

It is noted from the design rainfall data presented in Table 3.2 that for the lower AEP events, ie 5%, 2% and 1% AEP, the depth-duration curves flatten notably beyond the 4,320-minute (72-hour) duration events. This is indicative that, for the study area, there is only a small incremental increase in rainfall depth at increasing storm durations beyond 72 hours duration.

4 Review of potential surface water risks

The replacement crusher circuit at the Marvel Loch mine operations, as shown in Figure 3.1, is proposed to be located directly adjacent to the existing crusher. As the location, footprint and operation of the primary crusher is largely the same as the existing crusher, any potential relative changes to surface water management relating to the proposed development are expected to be minimal.

The following points provide a summary of the potential surface water risks associated with the proposed replacement crusher circuit and relevant to the LAA:

- the proposed development is not located in proximity to any natural watercourses and does not required a permit to interfere with the bed and banks of a watercourse;
- there are no sensitive surface water receptors identified within, or within close proximity to, the proposed Project boundary;
- ongoing discharge and drainage of water used in processing from the Project area to the downstream surface water management system will occur during operation, generally water from dust suppression;
- there is no proposed incremental increase in the potential discharge of process water;
- potentially contaminated stormwater runoff will be captured by the surface water drains and discharged from the Project area to the downstream surface water management system. Potential stormwater contaminants may include process water and sediments, particularly fines mobilised by stormwater runoff;
- based on the proposed replacement crusher circuit footprint there may be a marginal increase in the surface water drainage area. As shown in Figure 3.1 below, the development is estimated to represent an increase in the processing plant and crusher catchment from 7.3 ha to 7.5 ha (an approximate 3% increase in the contributing catchment area);
- there is no incremental increase in rate or frequency of discharge of potentially contaminated stormwater;
- the downstream site surface water management system is structured to manage and retain potentially impacted stormwater within the site and enable water reuse through pumping to the process water dam (refer to Section 3.1). The stormwater management strategy aims to provide separation of ‘clean’ and ‘dirty’ stormwater;
- The existing stormwater management system does not appear to have sufficient capacity to effectively capture and store runoff from the Project area resulting from significant storm events;

- by definition of the nature of the mine site and the location of the Marvel Loch open pit, directly downstream of the site, the risk of uncontrolled discharge from the site is very low or negligible, assuming the risk from buried pipe works potentially linking to downstream environments outside of the mine area, which caused the uncontrolled release of stormwater in February 2020, are removed; and

- it is understood that, as only the crusher circuit is proposed to be replaced, process water requirements, including dust suppression and water for cooling, are not expected to change. Sources of process water will remain consistent with existing sources, ie water pumped from the process water dam and potable water sources for cooling purposes.

A number of issues relating to degradation and lack of maintenance of the existing surface water and stormwater management system, for the proposed Project development site and the wider Marvel Loch mine operations area, are highlighted in Section 3. These problems are historic and ongoing and therefore unrelated to the proposed new primary crusher development. These issues, however, do reduce the reliability and effectiveness of the surface water management system and increase risk of potential cross contamination of 'clean' and 'dirty' stormwater sources and likelihood of impacts to site infrastructure.

It has also been reported that accidental release of stormwater from the site has recently occurred through unknown pipework below the southern WRD. Any remedial works, upgrades and/or changes to the surface water management system should therefore include a detailed review and confirmation that there is no risk of discharge from site through buried pipework. This risk is unrelated to the development of the replacement crushing circuit and is covered in the surface water audit report (EMM 2020).

5 Catchment delineation and assessment of flood discharges

5.1 Catchment delineation

To support the estimation of design floods for the contributing catchments upslope of the process water pond pump sump, the respective contributing catchment boundaries were delineated. The physical catchment characteristics associated with the delineated catchments are presented in Table 5.1 and the boundaries are shown in Figure 3.1. The catchments and associated drainage lines have been defined based on the site layout and survey information provided by Barto and site observations.

Table 5.1 Summary of catchment characteristics for primary crusher and processing plant stormwater

Catchment name	Description	Area (ha)	Slope (%)
C1	Primary crusher and processing plant U/S of culvert	7.53	3.0%
C2	Pump sump storage catchment D/S of culvert	2.12	5.0%

5.2 Design flood estimates

Design flood estimates were derived for the delineated catchments upslope of the process water pond pump sump for a range of events from 20% to 1% AEP. These summaries include estimates of the critical duration maximum flood discharge and total stormwater runoff volumes associated with a 12, 24, 48, and 72 hour duration storm. The flood estimates were derived using the XPRafts modelling software (Innovyze 2020), a runoff routing model used for hydrologic and hydraulic analyses of stormwater drainage and conveyance systems, applying ARR2019 (Ball et al 2019) methods and design rainfalls outlined in Table 3.2.

Design flood estimates have been developed using catchment characteristics presented in Table 5.1 and design rainfalls presented in Table 3.2. A relatively conservative rainfall loss model, applying an initial rainfall loss of 10 mm and a continuing loss of 2 millimetres per hour (mm/h), has been applied to both catchments.

Estimated peak design flood discharges for modelled catchments is presented in Table 5.2 and total 1% AEP design flood volumes for long duration events (up to 72 hours) are presented in Table 5.3. Critical storm durations were found to be 1 hour for all events apart from the 2% and 1% AEP for catchment C2 where the 30-minute storm was found to be the critical event.

Table 5.2 Estimated peak design flood discharge for contributing catchments

Catchment	Estimated peak design flood discharge (m^3/s)				
	20%	10%	5%	2%	1%
C1	0.251	0.406	0.573	0.845	1.077
C2	0.105	0.158	0.209	0.267	0.356

Table 5.3 Estimated total 1% AEP design flood volume for contributing catchments

Catchment	Estimated total flood volume (m^3)							
	2% AEP				1% AEP			
	12h	24h	48h	72h	12h	24h	48h	72h
C1	3,500	4,140	4,010	3,150	4,390	5,400	5,260	4,180
C2	990	1,170	1,130	890	1,250	1,460	1,480	1,200
Total	**4,490**	**5,310**	**5,140**	**4,040**	**5,640**	**6,860**	**6,740**	**5,380**

6 Recommended surface water management plan

6.1 Objectives

During construction, operation and post closure, the control and management of surface runoff and stormwater discharges in and immediately downstream of the mine area or infrastructure development are essential to provide:

- protection to mine personnel and infrastructure during larger storm events;
- diversion of non-impacted (clean) surface runoff around mine infrastructure to be discharged to the downstream environment, where feasible;
- separation of impacted and non-impacted stormwater;
- retention and treatments and/or reuse of impacted water on-site;
- safe containment of water that cannot be released;
- retain sediment generated from mine infrastructure on site to minimise discharge of material to the downstream environment or to process water systems; and

- long-term protection of the environment from any mine infrastructure or mining landforms post-closure.

6.2 Proposed stormwater management strategy

The proposed stormwater management strategy for the replacement crushing circuit and processing plant catchment area (outlined below) remains consistent with the existing approach for the management of site drainage (detailed in Section 3.1). Additionally, as detailed in Section 4 the proposed replacement crushing circuit development is not expected to result in significant incremental increases in surface water risks with regards to both rate, volume or frequency of stormwater runoff and process water discharge from the site.

The objectives and outcomes of the proposed stormwater management strategy for the Project are:

- to effectively intercept and convey stormwater and process water discharge within the internal surface water drainage system to the pump sump storage;
- to size stormwater management infrastructure to minimise the risk of discharge offsite or contamination of other 'clean' stormwater systems;
- to provide sufficient capacity in the pump sump storage to capture and retain potentially impacted stormwater runoff;
- to allow retained stormwater to be pumped (as required) back into the process water dam for reuse; and
- to size and design stormwater management measures for adjacent areas to effectively capture, convey and store 'clean' stormwater and provide effective separation from the processing area stormwater systems.

A summary of recommended surface water management measures and controls, identified to achieve the objectives and outcomes detailed above, are provided in Section6.3.1.

As detailed above, a primary requirement for the implementation of the proposed surface water management strategy includes undertaking remedial works, upgrades, and improvements to existing surface water control measures. A summary of recommended remedial works and actions relevant to the surface water systems are summarised in Section 6.4.2.

The effective implementation of surface water management for the Project area (assumed to represent a potentially impacted water system) also requires equivalent works be undertaken across the wider mine operations area to maintain separation of clean and potentially impacted water. High level recommendations for site-wide surface water management are outlined in the related Marvel Loch Processing Centre surface water audit report (EMM 2020).

A schematic representation of the conceptual surface water management plan for the Project area, including the increased contributing area affected by the extended replacement crushing circuit footprint, is presented in Figure 6.1.

6.3 Design criteria considerations

In adopting appropriate design criteria for the sizing of surface water control infrastructure a range of factors should be considered, including:

- compliance criteria of regulating authorities;
- potential impact to the environment if impacted water was released to the downstream environment;

- risk to infrastructure in the event of inundation during more extreme storms;
- duration of the mining operation;
- magnitude of design flood discharges, flow velocities and associated duration of flow; and
- locations of mine infrastructure in relation to the existing surface drainage network.

The currently proposed life-of-operations for the wider Marvel Loch mine operations is estimated to be in the region of 10 years. The sizing of surface water management and control infrastructure associated with the replacement crushing circuit and processing plant drainage catchment area will adopt design criteria consistent with the surface water management measures across the wider Marvel Loch mine operations.

6.3.1 Recommended design criteria

The following design criteria were adopted in developing provisional sizing estimates for surface water management measure and control infrastructure.

i Diversion drains and bunds around mine infrastructure.

These surface water management measures should be sized to manage an event with a probability of exceedance of 20% over the proposed life of mine/facility operations. This is based on recommendations in Austroads (2019) Hydraulic Design of Waterway Structures guidelines and risk management approaches adopted widely in other mining operations in Western Australia. The probability of a flood event being exceeded during the design life of the site, infrastructure asset or mine operation can be calculated according to the formula:

$$P_N(X) = 1 - [1 - P(X)]^N$$

Where, $P_N(X)$ is the probability of exceedance. $P(X)$ is the annual exceedance probability (AEP), and N (years) is the design life (ie life-of-mine or asset).

A summary of the probabilities of exceedance for various AEPs and life of operation is presented in Table 6.1. For an assumed life of operation of approximately 10 years and a 20% probability of exceedance, the recommended design AEP to be adopted is equivalent to the 2% AEP event.

Table 6.1 Probability of exceedance for various AEP events and design file

Design life (years)	Annual exceedance probability					
	50%	**20%**	**10%**	**5%**	**2%**	**1%**
1	50%	20%	10%	5%	2%	1%
3	88%	49%	27%	14%	6%	3%
5	97%	67%	41%	23%	10%	5%
10	100%	89%	65%	40%	**18%**	10%
20	100%	99%	88%	64%	33%	18%
30	100%	100%	96%	79%	45%	26%
50	100%	100%	99%	92%	64%	39%

ii Stormwater retention basins and storage ponds

Stormwater retention and storage infrastructure should adopt design criteria consistent with the risk-based approaches presented above. There are currently no specific regulatory requirements or guidelines stipulating design criteria for stormwater retention facilities on mine sites, however, the adoption of a 1% AEP design event for the sizing of storage infrastructure and dams is widely recommended and for the assessment of freeboard requirements. For this purpose, long-duration design storms, ie those potentially generating the highest total volume of stormwater runoff, should be considered in the assessment process.

iii Sediment management and retentions ponds

Volumes, surface dimensions and performance criteria should be based on the approaches recommended by the International Erosion Control Association (2008) guidelines.

iv Culverts

Culvert sizing and associated analyses should, where possible, consider recommended guidance and methods outlined in the Austroads (2013) Drainage-Open Channels, Culverts and Floodways guidelines. Culvert sizing should provide conveyance capacity consistent with upstream and downstream surface water drainage systems. However, site constraints and structural requirements, particularly with regards to associated access/haul road design criteria may constrain culvert design criteria and sizing. Hydraulic analyses should be applied to assess maximum allowable headwater conditions and potential design recurrence interval both for the culvert and scour protection (inlet and outlet).

6.4 Proposed water management measures

The following sections describe the stormwater management strategy and measures proposed to mitigate and minimise any potential stormwater and water quality risks (as detailed in Section 4) associated with the replacement crushing circuit and associated processing plant.

6.4.1 Surface water management measures and controls

A summary of recommended surface water management measures for the replacement crushing circuit and processing plant drainage areas are outlined in Table 6.2 and an annotated plan is presented in Figure 6.1

Table 6.2 Surface water management measures and controls

Control measure / structure	Sub-catchment [1]	Comments
Perimeter drains to culvert	C1	Stormwater runoff will be captured and conveyed via crusher and processing plant area perimeter drains to the Access road culvert. Runoff and discharge from the processing plant will be discharged to the culvert via internal drains. Interception drain to be added (or cleared) along toe of embankment to ROM pad. Preliminary sizing recommendations for stormwater drains are provided in Section 6.4.1 i.
Access road culvert	C1 to C2	Access road culverts to convey potentially impacted discharge and stormwater runoff across the road. Culverts to be refurbished, repaired, and maintained where possible. Replacement of culverts recommended where pipes are blocked and/or damaged and cannot be opened to provide sufficient conveyance capacity. Rock stabilisation may be required at inlet to manage potential localised ponding during extreme storm events. Preliminary sizing recommendations for stormwater drains are provided in Section 6.4.1

Table 6.2 Surface water management measures and controls

Control measure / structure	Sub-catchment [1]	Comments
Diversion drain to pump sump	C2	Diversion drain from Access road culvert to convey potentially impacted discharge and stormwater runoff to pump sump adjacent to process water dam. Locally generated stormwater will be accommodated in the drainage channel.
Pump sump stormwater storage	C2	Options and required civil and geotechnical works to be assessed in detail to enable the pump sump stormwater storage capacity to be increased to effectively retain contributing stormwater runoff volumes from significant storm events based on appropriate design criteria. The 1% AEP 24 hr duration design event is estimated to be up to 7,000 m^3 and a 2% AEP 24h duration design event is estimated to be approximately 5,300 m^3 (refer to Table 5.3). Preliminary sizing recommendations for stormwater drains are provided in Section 6.4.1 iii. Pump sump storage to be separated with an embankment from stormwater contributions from adjacent areas. These are proposed to be managed and retained in a separate stormwater management system.
Process water dam	C2	Review maximum operational level and freeboard requirements, including measures to maintain freeboard and remove risk of dam overtopping . Undertake maintenance, clearing and de-silting of process water dam to maintain operating capacity. Review options to provide additional stormwater storage capacity, ie by reducing the operational level, if the storage capacity increase requirements of the pump sump are not feasible.
Grading of ROM pad U/S of site	C5	ROM pad to be graded away from southern boundary (edge) in order minimise the risk of stormwater discharge from the replacement crushing circuit and processing plant catchment. Edge bund/windrow to be maintained. Locally generated stormwater to be directed (through grading) to Blue Pit acting as stormwater basin.
Road drainage	C7 and C8	Grade roads to direct stormwater to defined stormwater drains and/or perimeter drains. Stormwater runoff from western end of the Access road (from Catchments C7 and C8) to be managed away from crusher and processing plant stormwater system.
Divert 'clean' stormwater away from crusher and process plant catchments	C3 and C4	Surface water management and drainage upgrades and improvements to be implemented to minimise the risk of stormwater contributions to the crusher and processing plant stormwater system from adjacent catchments. Stormwater runoff to be captured in adjacent sub-catchment C3 (to the east) to be conveyed in perimeter drains away from eastern boundary with crusher and process plant catchment (C5) – refer to Figure 6.1. Sub-catchment C3 stormwater to report (ultimately) to a separate stormwater storage dam/basin. Stormwater runoff to be retained locally in adjacent sub-catchment C4 (west of processing plant catchment). Ensure no drainage links to (ie buried or old pipes) from adjacent sub-catchments to the crusher and processing plant stormwater system..
Monitoring and maintenance	All	A monitoring and maintenance plan should be implemented to provide regular review and inspections of the site surface water drainage system. Objectives of the monitoring and maintenance plan will be to identify requirements to maintain the capacity of the surface water system, adapt the strategy where deficiencies are identified and minimise the risk of impacts and contamination. A summary of monitoring and maintenance plan recommendations are provided in Section 6.4.3.

1 see Figure 3.1 for sub-catchments

i Perimeter and stormwater drains

As described in Table 6.2, stormwater runoff will be captured and conveyed via crusher and processing plant area perimeter drains to the Access road culvert and from downstream of the culvert to the pump sump. Details of recommended drain sizing is presented in Table 6.3. Flow velocities in the perimeter drains are estimated to be less than 2.0 metres per second (m/s) for the critical 2% AEP flood therefore no erosion protection will be required. Downstream of the Access road culvert, peak flow velocities may be up to 2.6 m/s for the critical 2% AEP flood therefore facing class rock protection may be required.

Table 6.3 Typical diversion drain sizing

Location	Channel side slopes (H:V)	Minimum base width (m)	Channel depth (m) [1]
Perimeter drains to culvert	3:1	1.0	0.8
Diversion drain to pump sump	3:1	1.5	0.8

Notes: [1] Includes 0.3 m freeboard

ii Access Road Culvert

As described in Table 6.2, stormwater runoff will be captured and conveyed across the Access road via a long culvert and from downstream of the culvert to the pump sump. The existing (degraded and damaged) culverts consist of 2 x 500 mm diameter steel pipe with an approximate length of 50 m. Estimated maximum culvert conveyance capacity for 500 mm steel pipe culvert options are presented in Table 6.4. Estimated peak storm discharge from the C1 sub-catchment are presented in Table 5.2.

Table 6.4 Estimated culvert conveyance capacity

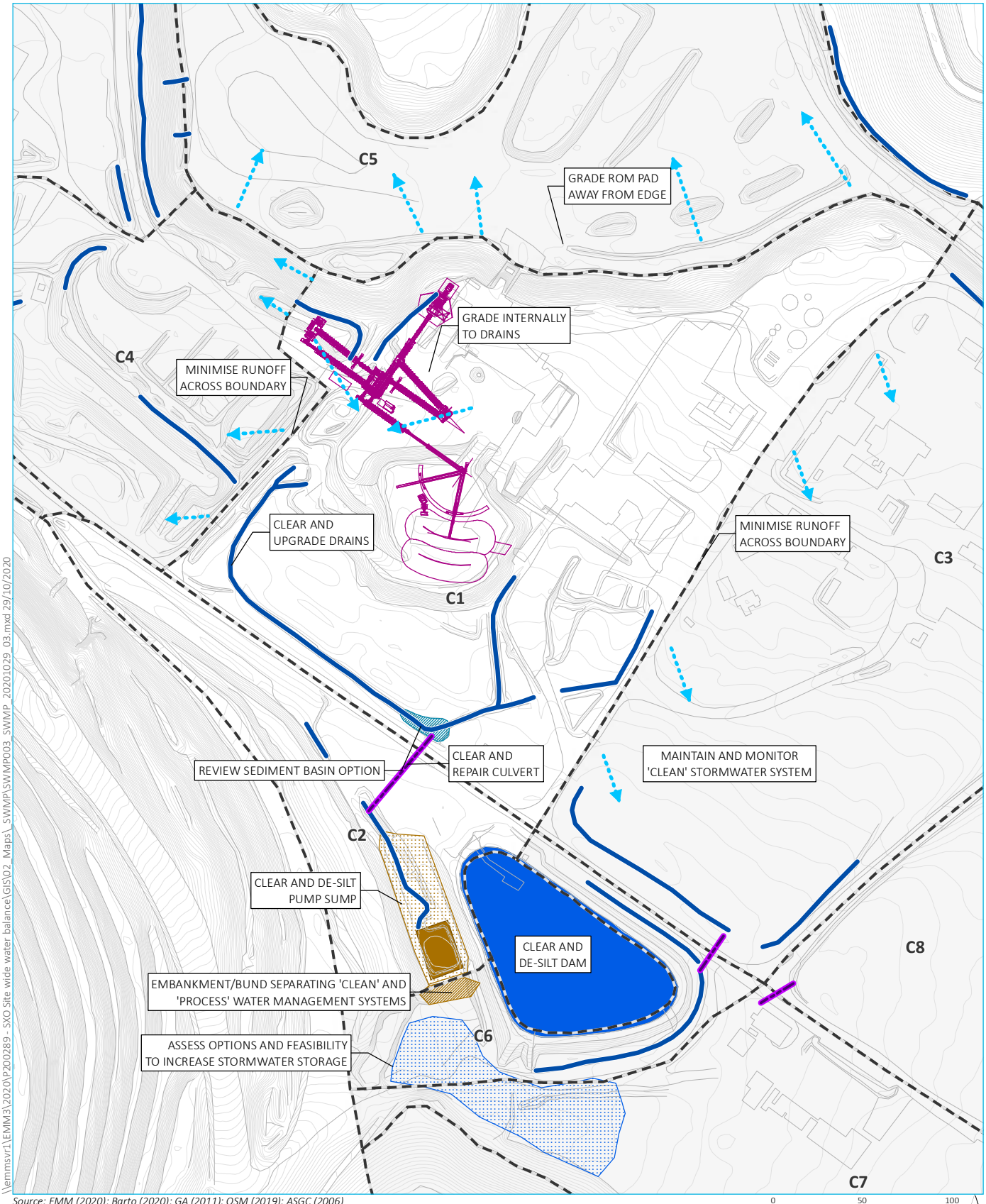
Culvert pipe type and number	Maximum Flow (m^3/s)
2 x 500 mm diameter steel pipe	0.84
3 x 500 mm diameter steel pipe	1.24
4 x 500 mm diameter steel pipe	1.68

More than two pipes would potentially be prohibitive to implement and install. Therefore, replacement of the existing 2 x 500 mm diameter steel pipe culvert (or equivalent or larger) would be recommended, acknowledging that there will likely be temporary ponding upstream of the culvert during extreme storm events. Rock stabilisation is recommended at the inlet and rock protection is recommended at the culvert outlet.

iii Pump sump stormwater storage

The lack of or absence of stormwater storage capacity at the pump sump has been highlighted as a key risk to the effective management of stormwater for the Project area, particularly with regards to maintaining separation of clean and potentially impacted stormwater.

Under the proposed stormwater management strategy, outlined in Section 6.2, high level estimates of the required stormwater storage capacity for the pump sump is presented for a range long duration 1% AEP storm events in Table 5.3. These estimated volumes represent a possible upper limit of the storage requirements and smaller storm volumes would result from the adoption of a lower severity design storm criteria, ie the 2% AEP. It is recommended that sufficient freeboard allowance be included for the pump sump storage, ie 0.5 m minimum freeboard allowance. Consideration of a spillway of controlled outlet discharge should be included in the storage pond design.



\\emmsvr1\EMM3\2020\P200289 - SXO Site wide water balance\GIS\02_Maps_SWMP\SWMP003_SWMP_20201029_03.mxd 29/10/2020

Source: EMM (2020); Barto (2020); GA (2011); OSM (2019); ASGC (2006)

0 50 100 m

GDA 1994 MGA Zone 50

N

KEY

- Replacement crushing circuit
- Culvert
- Surface water drain
- Graded drainage
- New sub-catchment boundary
- Contour (0.5 m)
- Survey feature
- Process water dam
- Pump sump
- Sediment basin option
- Separation bund
- Upgraded pump sump
- Potential stormwater storage area

Replacement crushing circuit and processing plant surface water management plan

Barto Gold Mining Pty Ltd
Marvel Loch new crushing facilities
Surface water management plan
Figure 6.1

EMM creating opportunities

6.4.2 Recommended remedial works

The proposed surface water management approach remains consistent with the existing strategy and utilises, to some degree, the existing infrastructure and/or drainage alignments. Therefore, the following remedial works are recommended to be undertaken, as a minimum, in order to maximise the capacity and reduce risks associated with the existing system. These works, actions and monitoring may provide short-term benefits for the period until the feasibility of proposed changes and upgrades to the surface water management system can be confirmed and implemented.

Suggested remedial works and actions include:

- clearing (and ultimately upgrading) existing stormwater drains;
- clearing (and ultimately upgrading, where required) culverts;
- clearing of sediment from pump sump to increase effective storage capacity;
- clearing and desilting of process water dam to maintain operating capacity;
- review existing controls to mitigate the risk of stormwater ingress to the system from outside areas;
- grading back of ROM above the crusher location;
- reviewing stormwater drainage paths and contributions along access and haul roads; and
- checking and monitoring for evidence of uncontrolled stormwater runoff into or out of the site, ie scour and erosion.

6.4.3 Monitoring and maintenance plan

A comprehensive, monitoring and maintenance plan should be developed as part of the detailed analysis and design of the site-wide surface water management plan and associated control measure and infrastructure. High level recommendations for monitoring and maintenance of the surface water management system are detailed below.

- Visual monitoring of stormwater runoff from Project areas to the receiving process water dam to be undertaken during wet weather conditions.
- Comprehensive monitoring of water quality, including turbidity, at the pump sump and process water pond to be undertaken at regular intervals (ie monthly) and when runoff from the Project area occurs.
- Inspection and maintenance of stormwater system infrastructure, including clearing of accumulated sediment in drains and storages and clearing of blockages and obstructions in drains and culverts, to be undertaken at regular intervals and as required.
- Inspection and maintenance, as required, at key locations to maintain separation of clean and potentially impacted stormwater.

7 Conclusion

A detailed review of the stormwater management system and surface water drainage infrastructure to support a LAA application for the proposed new crushing facilities is provided herein. Potential surface water risks to the Project area associated with surface water management across the wider mine operations area have also been considered.

A review of key surface water risks associated with the proposed development are summarised in Section 4 and a recommended surface water management plan, including surface water management measures, remedial works and a monitoring and maintenance plan, is presented in Section 6. Implementation of the surface water management plan will mitigate surface water management risks from legacy maintenance practises and the proposed new crusher facility.

Key outcomes and findings from this study include:

- Based on available information, there is not anticipated to be an incremental increase in rate or frequency of discharge of potentially contaminated stormwater or process water discharge from the site. The proposed new crusher layout may result in a marginal increase (of approximately 3%) in the local drainage area.

- There is no anticipated increase in water demand requirements for the new crusher and water will continue to be sourced from existing supplies.

- Stormwater responses requiring local and site wide management across the site, based on an assumed 20 to 30 mm rainfall threshold, are expected to occur at least every 1 to 2 years.

- While there is a very low (or negligible) risk of uncontrolled discharge of potentially contaminated stormwater from the site, deficiencies and degradation of the existing surface water management infrastructure may result in an increased risk of stormwater impacts to site operations and infrastructure.

- The existing system does not appear to have sufficient capacity to effectively capture, convey, and store stormwater runoff from significant storm events. Additionally, the lack of defined stormwater storage infrastructure means there is a high risk of mixing between ‘clean’ and ‘impacted’ stormwater runoff.

- The limitations and deficiencies of the existing surface water management system have manifested largely as a result of:

    - changes in site layouts and infrastructure over time;

    - changes in operation of the water management system and sources of process water;

    - a probable lack of monitoring of condition and performance of the surface water system; and

    - and related ongoing maintenance and upgrades.

- The proposed surface water management plan for the replacement crushing circuit and processing plant catchment areas aims to work towards clearly delineating this area as a separate surface water management system from the surrounding mine site.

- The primary recommendation for the surface water management plan involves undertaking clearing, repairs and ongoing maintenance to the existing surface water drainage infrastructure, in conjunction with assessing options for increasing stormwater storage capacity (to retain potentially impacted stormwater) at the pump sump adjacent to the process water dam.

- The process water dam, along with surface water drains across the site, should be cleared and de-silted to reinstate their original storage or conveyance capacity.

- Replacement and/or upgrades to surface water management measures should only be undertaken where existing infrastructure are damaged, obstructed or do not provide a level of management consistent with stormwater design criteria.

- Surface water management measures, including grading and drainage improvements are recommended to be undertaken in adjacent areas to minimise of remove the risk of stormwater inflows to the replacement crushing circuit and processing plant catchment area.

- The ongoing and long-term effectiveness of the proposed surface water management plan for the replacement crushing circuit and processing plant catchment areas is reliant upon upgrades and improvements to the site-wide stormwater management strategy, as detailed in EMM (2020) review of surface water management across the Marvel Loch operations.

- Initial recommendations for a surface water infrastructure monitoring and maintenance plan are provided and these should be finalised when the proposed surface water management plan and approach is agreed and designed. Regular monitoring and maintenance of the system will be important to ensure the capacity and reliability of the system is not compromised in a similar way to the existing system.

- The surface water management plan should also be reviewed and, where necessary, updated and/or adapted if potential issues and failures occur or when there are changes in site infrastructure and layouts which may affect stormwater responses and drainage.

A key recommendation from this assessment, and from the surface water audit (EMM 2020) is that a thorough and detailed review of potentially buried pipework in the area to the south of the process water dam should be undertaken. This are is a key location for proposed site-wide stormwater management strategy, as detailed in the EMM (2020) review of surface water management across the Marvel Loch operations and is the area impacted by previous failures or exceedances of the capacity of the existing stormwater management system. The option to securely retain stormwater at this low point of the site will mitigate the surface water risks to downstream areas, maximise water available for re-use in the process water system and minimise potential risks to site infrastructure, operations and personnel.

It should be emphasised that all modelling and stormwater management sizing presented in this letter report should be considered as preliminary estimates at this stage. Detailed stormwater modelling and hydraulic analyses are recommended to be undertaken to assess the feasibility of the surface water management plan.

8 References

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9 Closing

EMM hope this letter report summarising the surface water management risks and recommended surface water management plan for the replacement crushing circuit and processing plant catchment at the Marvel Loch operations addresses all your requirements to support the LAA.

If you have any questions or require any additional information, please do not hesitate to contact the undersigned.

Yours sincerely

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Marvel Loch Crushing Circuit Air Quality Assessment

Final Report
Version 1

Prepared for Barto Gold Mining Pty Ltd

October 2020

Project Number: 1179

Marvel Loch Crushing Circuit Air Quality Assessment

Final Report

DOCUMENT CONTROL

Version	Description	Date	Author	Reviewer
A	Draft for client review	12.10.2020	ETA (EC)	ETA (JH)
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Approval for Release

Name	Position	File Reference
Jon Harper	Director /Principal Air Quality Specialist	1179 Barto Mining Crushing Circuit_Ver1.docx
Signature		

Executive Summary

An air quality assessment was conducted to determine potential impacts associated with the installation, and operation, of a new crushing/screening circuit at the Barto Gold Mining Pty Ltd operations adjacent to Marvel Loch. The circuit aims to process approximately 6,000 tonnes per day of ore sourced from local underground and open-cut mines. Dust generation activities, from the operations, include; wheel-generated dust from ore transport, front-end loaders, crushing/screening, stacking, and wind erosion from stockpiles and open areas.

Overview of assessment

The potential impacts were determined through a dispersion modelling study, which incorporated site-specific meteorological data, emissions information, source characteristics, and the location of model receptors. Emission rates were estimated using recognised and accepted methods of emissions estimation, which included published emission factors from the NPI Emission Estimation Technique Manual for Mining (EA, 2012) and USEPA AP-42 documents.

A site-specific meteorological dataset was generated using the AERMET meteorological processor, which used a combination of observations at the Bureau of Meteorology (BoM) automated weather station (AWS) at Southern Cross (Station ID 12320) and meteorological data produced by the prognostic model TAPM. These were then used to drive the AERMOD dispersion model in order to predict ground-level concentrations of pollutants at identified sensitive receptors and the surrounding environment.

Ground-level TSP, PM_{10}, and $PM_{2.5}$ concentrations predicted at sensitive receptors and the surrounding environment were compared with the relevant air quality assessment criteria. These were presented in isolation, and with the inclusion of background concentrations.

Key findings

The key findings of the assessment are:

- Ground-level TSP concentrations predicted due to the proposed operations, with and without background concentrations, comply with the air quality assessment criteria at all sensitive receptors.
- Ground-level PM10 concentrations predicted due to the proposed operations, with and without background concentrations, comply with the air quality assessment criteria at all sensitive receptors.
- Ground-level PM2.5 concentrations predicted due to the proposed operations, with and without background concentrations, comply with the air quality assessment criteria at all sensitive receptors.

Furthermore, dust deposition rates predicted at all sensitive receptors are well within the guideline for dust deposition.

Table of Contents

Tables

Figures

1 Introduction

1.1 Background

Barto Gold Mining Pty Ltd (Barto) is proposing to install a new crushing/screening circuit (the Project) as part of their Southern Cross operations. The project is located adjacent to Marvel Loch approximately 30 kilometres (km) south of Southern Cross and 350 km east of Perth in Western Australia and the location of the proposed operations is presented in Figure 1-1. An indicative layout of the Project is shown in Figure 1-2.

An air quality assessment was conducted to determine the potential impacts of emissions (as particulates) from the Project, and included:

- Wheel-generated dust from ore transport
- Unloading of ore onto Run of Mine (ROM) pad
- Crushing and screening operations
- Stockpiling of ore from a radial stacker
- Operation of front end loaders
- Wind erosion from stockpiles and open areas.

Figure 1-1 Project location and setting

Figure 1-2 Site layout

1.2 Scope of work

The potential impacts due to the operation of the Project were determined through a desktop dispersion modelling study, which incorporated site-specific meteorological data, emissions information, source characteristics, and the location of model receptors. For the purposes of the air quality assessment, the Project comprises:

- Haul truck movements on unpaved sections of the roads
- Unloading of ore to the ROM PAD
- Front-end loaders
- Crushers/screening
- Stacking
- Wind erosion

Ambient air quality and potential impacts are assessed in terms of the following:

- Particles as Total Suspended Particulates (TSP)
- particles as PM_{10}
- particles as $PM_{2.5}$

1.3 Structure of report

This report describes the methods and findings of an assessment of the potential impacts to the air environment arising from the Project. The assessment includes:

- The study approach and methodology in Section 2.
- Assessment of existing environment in Section 3.
- Ambient air quality assessment criteria in Section 4.
- Atmospheric dispersion modelling of the emissions using AERMET/AERMOD model suite in Section 5.
- Project emission estimation and inventory in Section 6.
- An evaluation of the modelled change in air quality and interpretation of the potential impact from the Mine and Operations in Section 7.
- Conclusions of the assessment are presented in Section 8.

The appendices contain supporting information.

2 Study approach and assessment methodology

This section outlines the air quality study and assessment approach. It includes the methodology applied to define the meteorological characteristics of the project area relevant to the assessment, the emission estimation, the dispersion, and the ambient assessment criteria selected for the purposes of determining the significance of the dispersion model results, and therefore the potential impact.

The study structure is shown in Figure 2-1.

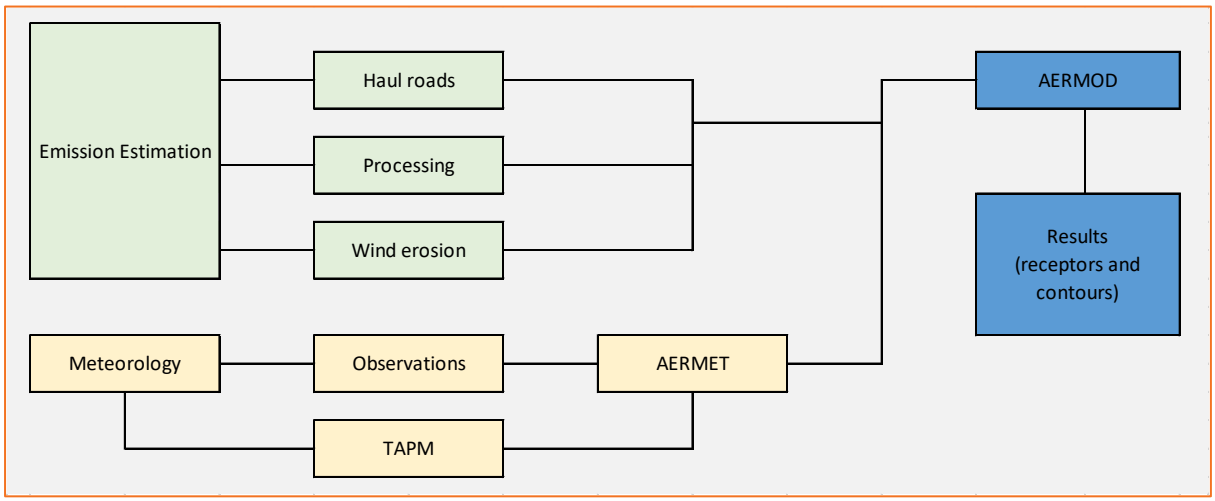

Figure 2-1 Air quality assessment – study approach

3 Existing Environment

The climate and meteorological characteristics of the region control the dispersion, transformation and removal (or deposition) of pollutants from the atmosphere. This section outlines the key climate and meteorological characteristics of the region important for the dispersion, transformation and removal (or deposition) of pollutants from the atmosphere, and therefore ambient air quality.

3.1 Local Meteorology

Marvel Loch is characterised, according to the Koppen-Geiger classification, as a hot desert climate (BWh), with no distinct rainy season. The nearest Bureau of Meteorology (BoM) meteorological station is Southern Cross Aero, located approximately 30 km northwest of Marvel Loch. The long-term temperature statistics from this station are presented in Figure 3-1. The warmest months generally occur from November to February, while the coolest month is July. Temperatures may drop to less than 0 °C between May and October.

Rainfall is sparse and highly variable, with no distinct rainy season (Figure 3-2).

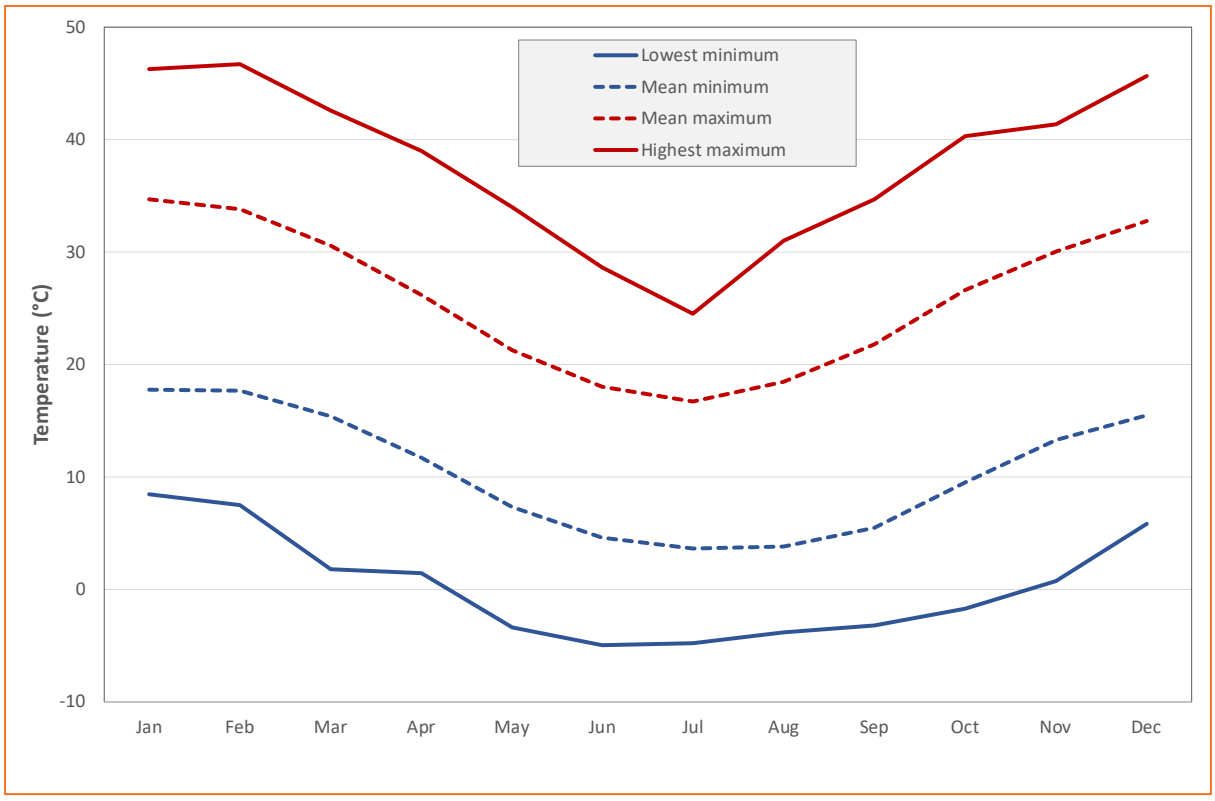

Figure 3-1 Long term temperature statistics, Southern Cross Aero AWS (1996-2019)

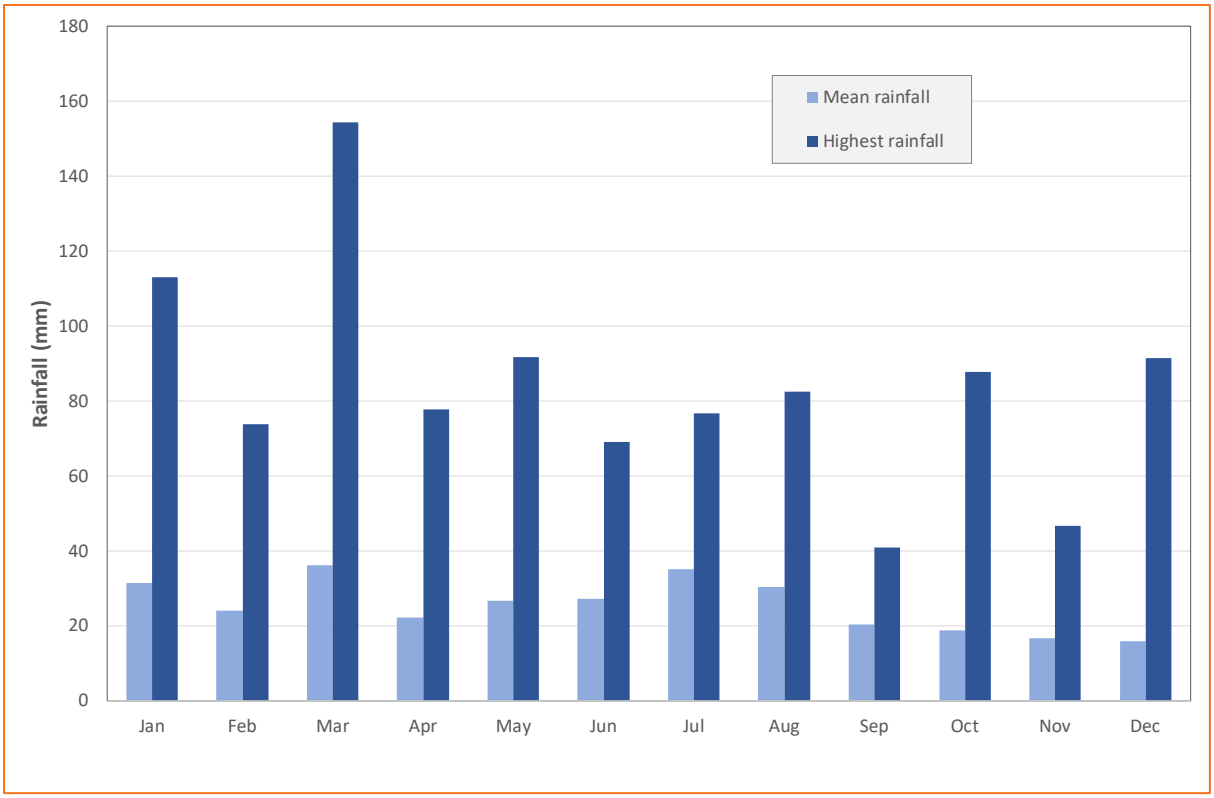

Figure 3-2 Long term rainfall statistics, Southern Cross Aero AWS, BOM (1996-2019)

3.2 Local Air quality

The existing air quality in the region is expected to be influenced by natural sources such as wind erosion and bushfires. Dust may also occur due to anthropogenic activities, such as the additional mining and agricultural activities.

To account for background dust in the region, monitoring data from the closest representative air quality monitoring station, Kalgoorlie, maintained and operated by the Department of Water and Environment Regulation (DWER), were used. The 2018 WA air monitoring report (DWER, 2019) reported statistics on PM_{10} and $PM_{2.5}$ concentrations measured at Kalgoorlie, which were used as the basis for background concentrations in this assessment. Background TSP concentration is estimated based on an assumption that 50% of total dust particles are in the size range for PM_{10}.

Table 3-1 Background concentrations used to assess cumulative impacts

Parameter	Averaging period	Concentration (µg/m³)	Basis
TSP	24-hour	30.6	PM_{10} assumed to be 50% of TSP
PM_{10}	24-hour	15.3	75th percentile 24-hour PM_{10} concentration measured at Kalgoorlie for 2018
	Annual	12.8	Annual average PM_{10} concentration measured at Kalgoorlie for 2018
$PM_{2.5}$	24-hour	5.8	75th percentile 24-hour PM_{10} concentration measured at Kalgoorlie for 2018
	Annual	5.1	Annual average PM_{10} concentration measured at Kalgoorlie for 2018

4 Ambient Air Quality Assessment Criteria

4.1 Human Health Assessment and Amenity Criteria

Ambient air quality assessment criteria have been adopted based on the protection of human health and amenity impacts, consistent with the guideline for air quality published by the Environmental Protection Authority (EPA, 2016).

Modelled ground level concentrations for particles (TSP, PM_{10} and $PM_{2.5}$) have been compared to ambient air quality assessment criteria to determine the potential impact on nearest sensitive receptors. This assessment has considered the potential impact attributable to the Project, as well as the cumulative impact (i.e. in conjunction with the existing emission sources in the area). The assessment has been made across the model domain, as well as at key sensitive receptor locations identified as being representative or important for assessment.

The National Environmental Protection Measure (NEPM) for Ambient Air Quality (NEPC, 1998; NEPC, 2003; NEPC, 2016) specifies an ambient standard (based on the protection of human health) of 50 µg/m^3 for PM_{10}, (24-hour average) with exceedances based on an exceptional event rule (ie directly related to bushfire, jurisdiction authorised hazard reduction burning, or continental scale windblown dust). The PM_{10} and $PM_{2.5}$ (24-hour) criteria are used to assess the potential health impact on the community receptors within the project model domain.

In Western Australia, the main criterion used to assess TSP comes from the *Environmental Protection (Kwinana) (Atmospheric Wastes) Policy* and associated regulations (Kwinana EPP). The Kwinana EPP specifies three different zones; Area A, B and C. These areas represent industrial zoning (A), buffer zoning (B), and the zone outside Area A and B (C) (EPA, 1999). The Area C criteria for TSP will therefore be referenced in this assessment.

The assessment criteria adopted for this study are broadly consistent with the ambient air quality guideline values outlined in the draft Air Emissions Guideline released in October 2019 for public consultation by the Department of Water and Environmental Regulation (DWER), noting that the guideline has not been finalised and does not yet have any legislative basis. In their current form, the guidelines would require the assessment criteria for criteria pollutants, which includes particulates as PM_{10} and $PM_{2.5}$, to generally be 'met at all existing and future offsite sensitive receptors in the modelling domain'.

The assessment criteria adopted in this study is shown in Table 4-1.

Table 4-1 Summary of Adopted Assessment Criteria

Parameter	Air quality assessment criteria	Reference
TSP	90 µg/m^3 (24-hour average)	Kwinana EPP (EPA, 1999)
PM_{10}	50 µg/m^3 (24-hour average)	NEPM (NEPC, 2016)
	25 µg/m^3 (annual average)	NEPM (NEPC, 2016)
$PM_{2.5}$	25 µg/m^3 (24-hour average)	NEPM (NEPC, 2016)
	8 µg/m^3 (annual average)	NEPM (NEPC, 2016)

4.2 Depositional dust

While standards for amenity, such as deposition of dust particles, is not defined, various Australian State jurisdictions have adopted guidelines for dust deposition to protect residential amenity. The following published guidelines are relevant:

- The NSW Environment Protection Authority (EPA) assessment criterion is an annual average of 2 g/m^2/month for the maximum increase in deposited dust or 4 g/m^2/month for the total dust deposition rate (NSW EPA, 2016).
- The Victorian Protocol for Environmental Management (PEM) (EPA Victoria, 2007) for extractive industries defines a guideline of 4 g/m^2/month for dust deposition rate (no more than 2 g/m^2/month above background) as a monthly average.

These dust deposition guidelines from Victoria and the NSW EPA are numerically consistent although the NSW EPA explicitly requires an assessment of the annual average deposition rate against the assessment criterion.

The guideline for dust deposition of 2 g/m^2/month adopted in Victoria has been selected for use within this assessment.

5 Model Assessment

For this assessment, air dispersion modelling has been conducted using the most recent version of the AERMOD dispersion model (v19191). The model has been used to predict ground-level concentrations across the model domain using a network of gridded receptors and at identified sensitive receptor locations. The potential air quality impacts associated with operations of theProject have been considered in isolation of other emission sources in the region, and with the inclusion of background concentrations.

The model was configured to predict the ground-level concentrations on a rectangular grid. The model domain was defined with the Southwest corner of the grid cell aft 735147 m Easting (mE) and 6513604 m Northing (mN) (UTM Zone 50 S). Specifics for the modelling configuration are described further in this section.

5.1 Meteorological model and data

A site-specific meteorological data was generated using a combination of observations at the closest automated weather station (AWS) operated by the Bureau of Meteorology (BoM) and the prognostic model TAPM (version 4.0.5), with some reference to the guideline construction of input meteorological data files for EPA Victoria's regulatory air pollution model (Vic EPA, 2014).

Observations at the BoM site at Southern Cross Aero AWS were used in the assessment to:

- determine a suitable and representative period for modelling
- assimilation of wind speed and direction to the TAPM model
- direct input to the AERMET meteorological processor

5.1.1 Representative year

The closest BoM AWS is at Southern Cross Aero (Station ID 12320, Lat -31.2353, Lon 119.356), located approximately 30 km northwest of the Project. As an airport AWS, Southern Cross Aero AWS is expected to comply with the World Meteorological Organisation (WMO) standards.

The selection of representative year for modelling considered observations of meteorological variables critical to dispersion, including air temperature, relative humidity, wind speed, and wind direction. The selection process was based on an analysis of the five year period from 2014 to 2018 in order to determine which years provided the closest representation of the average state of the climate based on the variation of each meteorological parameter from the mean and all other years.

In addition to these, the El Niño Southern Oscillation Index (SOI) was also considered in selecting a representative period for modelling. The SOI indicates the development and intensity of El Niño or La Niña events in the Pacific Ocean. Sustained values of the SOI below -7 are indicative of El Niño events which may have limited influence over Western Australia, causing a reduction in winter and spring rainfall due to a weaker Leeuwin current, a warm ocean current which flows southwards near the western coast of Australia. Likewise sustained positive values above +7 indicate La Niña events are generally associated with by wetter than normal conditions (DPIRD, 2019). The SOI for the periods assessed were sourced from the BoM website (2019).

The selection of a representative year also took into account the completeness of meteorological data collected at the AWS.

In general, the analysis considered the following:

- The distributions of temperature, wind speed, wind direction (U- and V- components), and relative humidity should be as close to the mean distribution as possible.
- A year with a moderate or strong ENSO classification should be avoided, where possible.
- The meteorological data collected at the AWS should be as complete as possible.

The results of the analysis showed that:

- the correlation coefficients of the individual years relative to the mean of the five-year period was similar for all meteorological variables (Figure 5-1). Therefore, any of the years could be used to conduct the air quality assessment.
- the period from 2017 onwards can be considered to be the mostly neutral, as shown in Figure 5-1. While SOI exceeds the threshold range of -7 to 7 for individual months, these are not sustained and tend to be closer to the threshold value compared to earlier periods.
- cloud cover data was only available for the period from 13 September 2018 onwards.

The period from 1 October 2018 to 30 September 2019 was selected as the period of assessment.

Table 5-1: Pearson correlation coefficients of individual years and mean of the most recent five years

Meteorological Parameter	Oct 2014 Sep 2015	Oct 2015 Sep 2016	Oct 2016 Sep 2017	Oct 2017 Sep 2018	Oct 2018 Sep 2019
Temperature	0.9966	0.9939	0.9934	0.9974	0.9781
Wind Speed	0.9985	0.9977	0.9956	0.9981	0.9981
U component of wind	0.9930	0.9893	0.9959	0.9946	0.9918
V component of wind	0.9993	0.9981	0.9997	0.9990	0.9979
Relative Humidity	0.9959	0.9781	0.9943	0.9855	0.9728

Notes:
Green cells (best): > 0.99
Yellow cells: 0.98 – 0.99
Blue cells: <0.98

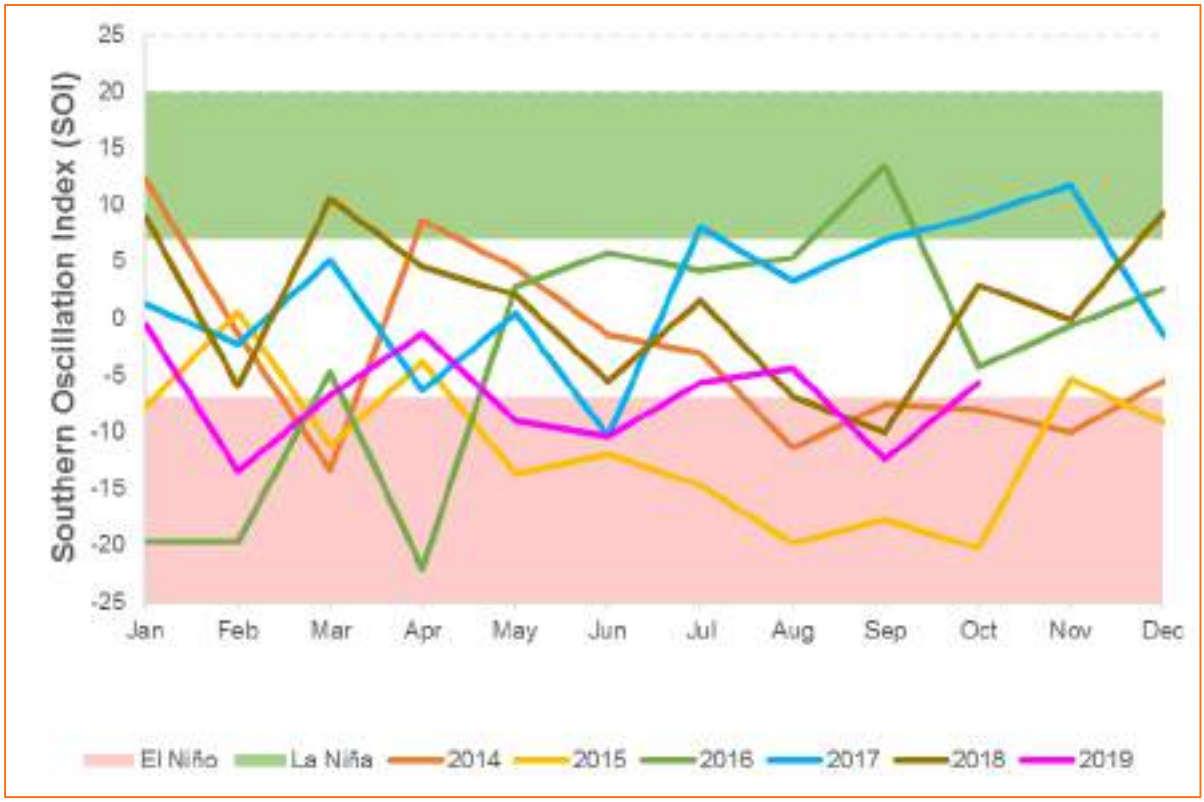

Figure 5-1 Monthly SOI for 2014 to 2019

5.1.2 Surface observations

Observations at Southern Cross Aero AWS for the period 1 October 2018 to 30 September 2019 were used in the assessment as direct input to the AERMET meteorological processor.

Wind speed and direction from Southern Cross Aero AWS were also assimilated into the TAPM model to ensure consistency between observations and the generated meteorological dataset.

The distribution of winds is shown in Figure 5-2, and shows that moderate to strong winds in the range of 4 to 8 m/s originating from the south-easterly sectors are most common, occurring approximately 30% of the time. Calm winds occur 5% of the time.

Wind roses showing the seasonal distribution of winds are presented in Figure 5-3, showing that winds originating from the south-easterly sectors occur most frequently during summer, autumn, and spring. Winds from the north-easterly sectors are dominant during winter. Calm winds area also shown to be more common during winter, occurring over 10% of the time.

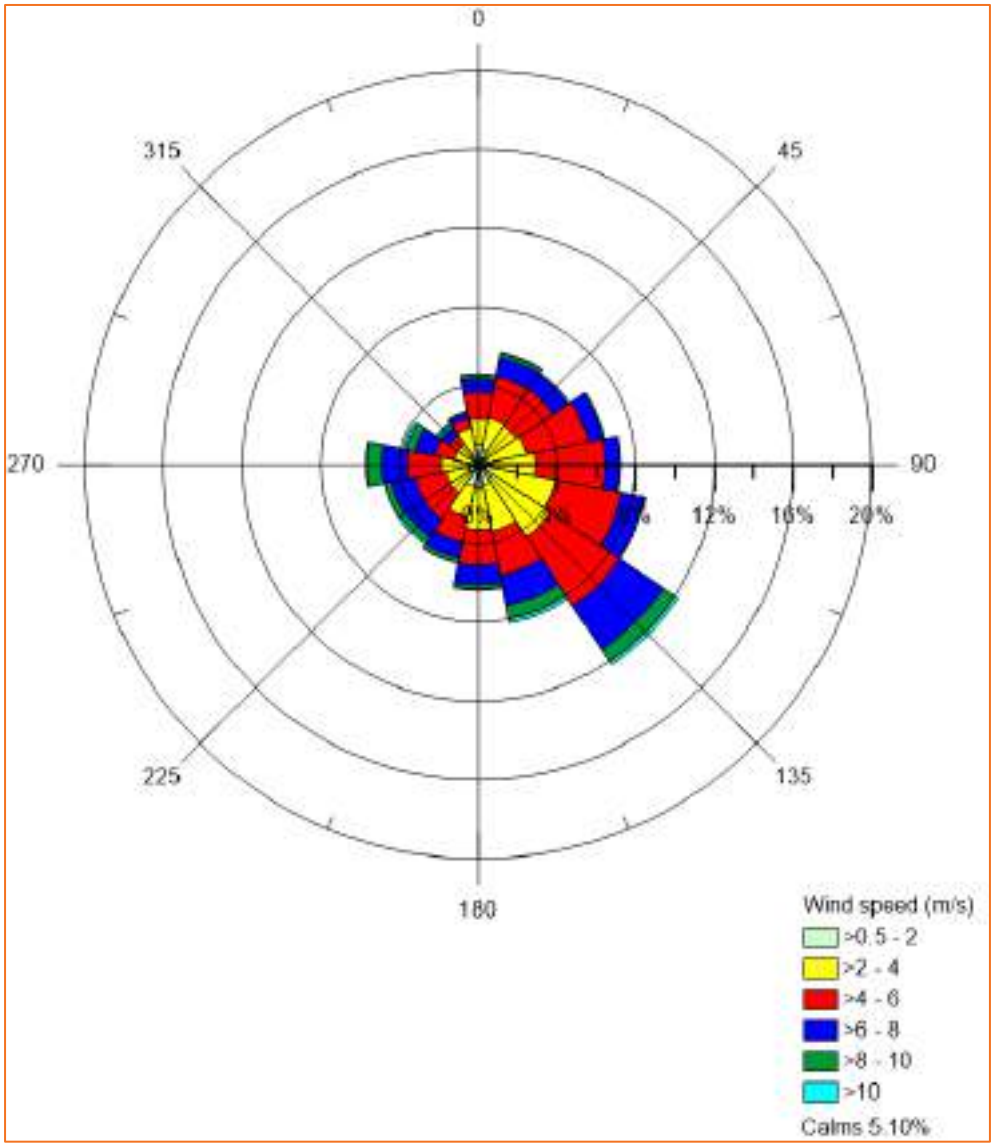

Figure 5-2: Annual distribution of wind at Southern Cross Aero AWS

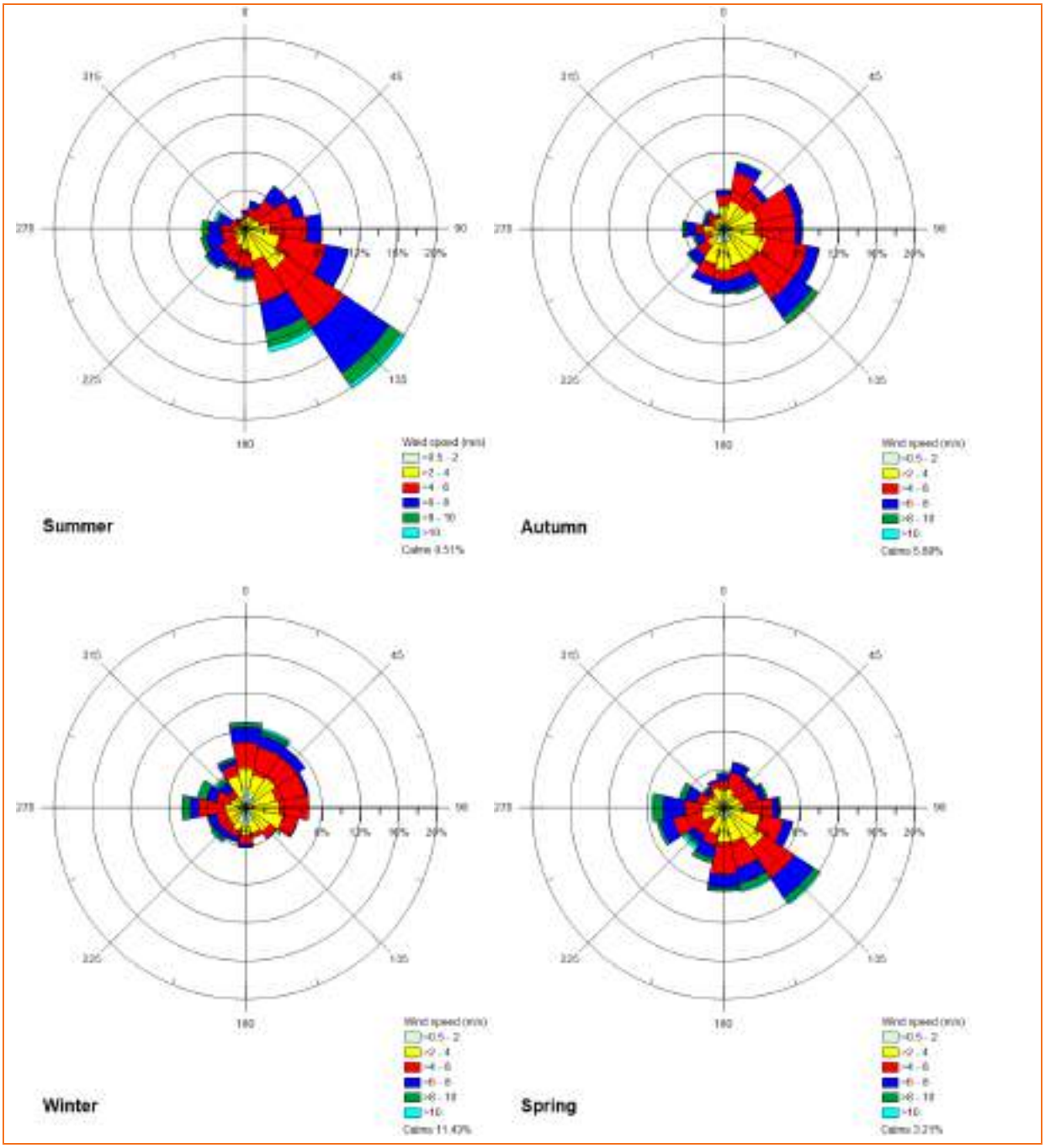

Figure 5-3: Seasonal distribution of wind at Southern Cross Aero AWS

5.1.3 TAPM

TAPM (The Air Pollution Model) is a prognostic meteorological model developed by Commonwealth Scientific and Industrial Research Organisation (CSIRO), which predicts the flows important to regional and local scale meteorology, such as sea breezes and terrain-induced flows from the larger-scale meteorology provided by the synoptic analyses. TAPM solves the fundamental fluid dynamics equations to predict meteorology at a mesoscale (20 km to 200 km) and at a local scale (down to a few hundred metres). TAPM includes parameterisations for cloud/rain micro-physical processes, urban/vegetation canopy and soil, and radiative fluxes.

TAPM was configured in a manner consistent with best practice, and which also takes into account the guidelines defined by Vic EPA (2014):

- 41 x 41 grid point domain with an outer grid of 30 kilometres and nesting grid of 10 km, 3 km and 1 km
- 35 vertical levels (additional levels compared to the recommended 25 vertical levels)
- Grid centred approximately over Southern Cross Aero AWS (latitude –31° 14' 0", longitude 119° 21' 30")
- Geoscience Australia 9 second DEM terrain
- Land cover data derived from the TAPM default database based on US Geological Survey, Earth Resources Observation Systems (EROS) Data Center Distributed Active Archive Center (EDC DAAC)
- TAPM default databases for sea surface temperature

Furthermore, observations of wind speed and direction from the Southern Cross Aero AWS were assimilated into the TAPM model to ensure consistency of the generated dataset with observations.

The modelling period was conducted for a period of one year from 1 October 2018 to 30 September 2019, selected as a representative period as discussed in Section 5.1.1.

5.1.4 AERMET

AERMOD requires meteorological variables that are both measured (e.g. wind speed, wind direction, temperature at varying heights) and those that are not measured but derived from measurements. Some of these variables can be derived from observed parameters. However, this requires the assurance of a reliable quality dataset that includes measurements of all mandatory variables. Some variables cannot be easily derived from observations and are typically sourced from prognostic meteorological models such as TAPM.

While prognostic models can produce files ready for direct use with AERMOD (in SFC and PFL formats), it is generally recommended to process raw model output using the USEPA AERMET program, in order to develop AERMOD-ready files. This is a requirement for some jurisdictions, notably the Victorian EPA (Vic EPA, 2014). The use of AERMET ensures that the derived parameters within the final AERMOD-ready meteorological files have been calculated in accordance with USEPA-sanctioned procedures for modelling (rather than research) processes.

AERMET also screens data, removing extremely low wind speeds and adjusting derived parameters such as friction velocity (U*), which if left unadjusted can produce extreme modelling results and unusual artefacts in predicted ground level pollutant concentration isopleths. As a standard practice, model predictions are passed through the AERMET process prior to its use in AERMOD, which can be a lengthy, iterative process, but produces more reliable datasets.

Observations and model-generated data were processed as a three-stage process using the most recent version (v19191) of AERMET.

- Stage 1 – extraction or retrieval of data and the assessment of the quality of data
- Stage 2 – combination of data processed during Stage 1, including setting missing value indicators
- Stage 3 – creation of model input files, including computation of boundary layer scaling parameters (surface friction velocity, mixing height, and Monin-Obukhov length)

The following meteorological parameters were used as input to Stage 1 of AERMET:

- Extracted from observations at the BoM site at Southern Cross Aero AWS:
  - wind speed (m/s)
  - wind direction (°)
  - temperature (°C)
  - relative humidity (%)
  - precipitation (mm)
  - sea level pressure (mB)
  - cloud cover (8ths)
- Extracted from twice-daily TAPM-generated upper air files corresponding to hour UTC 0Z ad UTC 12Z
  - wind speed (m/s)
  - wind direction (°)
  - dew point temperature (°C) – derived from relative humidity and temperature
  - temperature (°C)
  - pressure level (mB)

Wind speed and direction were assimilated into the TAPM model, so these are consistent with the generated datasets.

In addition to these, the Bulk Richardson Number (BULKRN) option was used for estimating stable boundary layer u* using ΔT, or low-level temperature difference (USEPA, 2018).

Surface characteristics for the land use classification of the area surrounding the Southern Cross Aero AWS are based on the array of seasonal surface roughness, albedo, and Bowen ratio compiled by Vic EPA (2013) for Australian geography, detailed in Table 5-2. These are combined in a manner consistent with the guidelines for AERMET (USEPA, 2018).

Surface roughness was based on the sectors for the area covering a 1-km radius centred on the Southern Cross Aero AWS, which included a combination of airport, grassland, and forests.

Albedo and Bowen ratio are based on the unweighted geomean of the combined land use classification of the sectors for the area covering a 10-km radius centred on the Southern Cross Aero AWS, which was classified as a combination of airport, grassland, forest, and low-density residential areas.

Table 5-2 Surface characteristics used in the AERMET model

Parameter	Land use	Summer	Autumn	Winter	Spring
Albedo	Airport	0.18	0.18	0.18	0.18
	Grassland	0.18	0.19	0.20	0.18
	Forest	0.14	0.14	0.14	0.14
	Residential area	0.16	0.16	0.18	0.16
Bowen Ratio	Airport	1.5	1.5	1.5	1.5
	Grassland	2	2	2	1
	Forest	0.6	1.75	1.75	1.5
	Residential area	0.8	1	1	0.8
Surface Roughness	Airport	0.07	0.07	0.07	0.07
	Grassland	0.1	0.1	0.01	0.05
	Forest	1.3	1.3	0.9	1.1

5.2 AERMOD

Air dispersion modelling has been conducted using the United Stated Environmental Protection Agency (USEPA) approved model AERMOD (USEPA, 2018b). AERMOD is the USEPA's preferred model for predicting near surface pollutant concentrations within 50 km of the source (US EPA, 2018). It is also the model approved for regulatory purposes within Victoria (Vic EPA, 2015).

The AERMOD atmospheric dispersion model is a steady-state Gaussian plume model in wide use within Australia and is suitable for use in most simple, near-field applications. In the stable boundary layer (SBL) the model assumes that the distribution of concentrations, in both the horizontal and vertical, is Gaussian while in a convective boundary layer the horizontal distribution is Gaussian and the vertical distribution taken as a bi-Gaussian probability density function (pdf).

The model settings used in this assessment are as follows:

- modelling period from 1 October 2018 to 30 September 2019
- model domain was 50 x 50 grid point domain at 100 m resolution
- centre of the southwest grid defined at 735147 mE and 6513604 mN (UTM Zone 50 S)
- rural dispersion coefficients
- surface and upper air meteorological data processed using the AERMET meteorological pre-processor using observations and TAPM-generated upper air data (Section 5.1.4)
- emissions sources modelled as volume sources (Section 5.2.1)
- ALPHA (LOW_WIND) option used to improve model performance during low wind conditions
- LOW_WIND parameters:
    - minimum sigma-v (SVmin) of 0.4 m/s
    - minimum wind speed (WSmin) of 0.5 m/s
    - meander factor (FRANmax) of 1.0
- pollutant concentrations were predicted on uniform gridded receptors and sensitive receptors (Section 5.2.2)
- terrain information derived from SRTM (Shuttle Radar Topography Mission) 90-m terrain data dry deposition (Section 5.3)

5.2.1 Emission sources

Each emission source within the mines were characterised as volume sources in the dispersion model. Details of the sources including source identification, type, location and characteristics (effective height, initial vertical and horizontal spread) are listed in Appendix C.

5.2.2 Sensitive Receptors

Comparison of the modelled results to the assessment criteria is intended to provide an objective evaluation of the potential impact of the operations at the nearest sensitive receptor. The sensitive receptors used in the assessment are listed in Table 5-3 and shown Figure 5-4. These were identified based on the residences provided.

Table 5-3 Discrete sensitive receptor locations

Receptor ID	Easting (m)	Northing (m)
1	734541.44	6515585.58
2	735120.00	6515986.34
3	736186.38	6516140.71
4	736316.20	6516142.12
5	736314.79	6516087.09
6	736370.53	6516154.12
7	736403.69	6516137.89
8	736464.37	6516132.95
9	736440.38	6516004.54
10	736502.47	6516004.54
11	736273.87	6515953.74
12	736368.41	6515955.15
13	736400.87	6515953.74
14	736483.42	6515966.00
15	736418.50	6515866.00
16	736544.09	6515866.00
17	736572.32	6515866.00
18	736676.03	6515866.00
19	736614.65	6515811.22
20	736632.99	6515809.81
21	736731.07	6515581.21
22	736489.77	6515666.00
23	736557.00	6515666.00
23	736567.38	6515576.97
25	736486.24	6515555.10
26	736514.46	6515525.47
27	736557.00	6515481.72

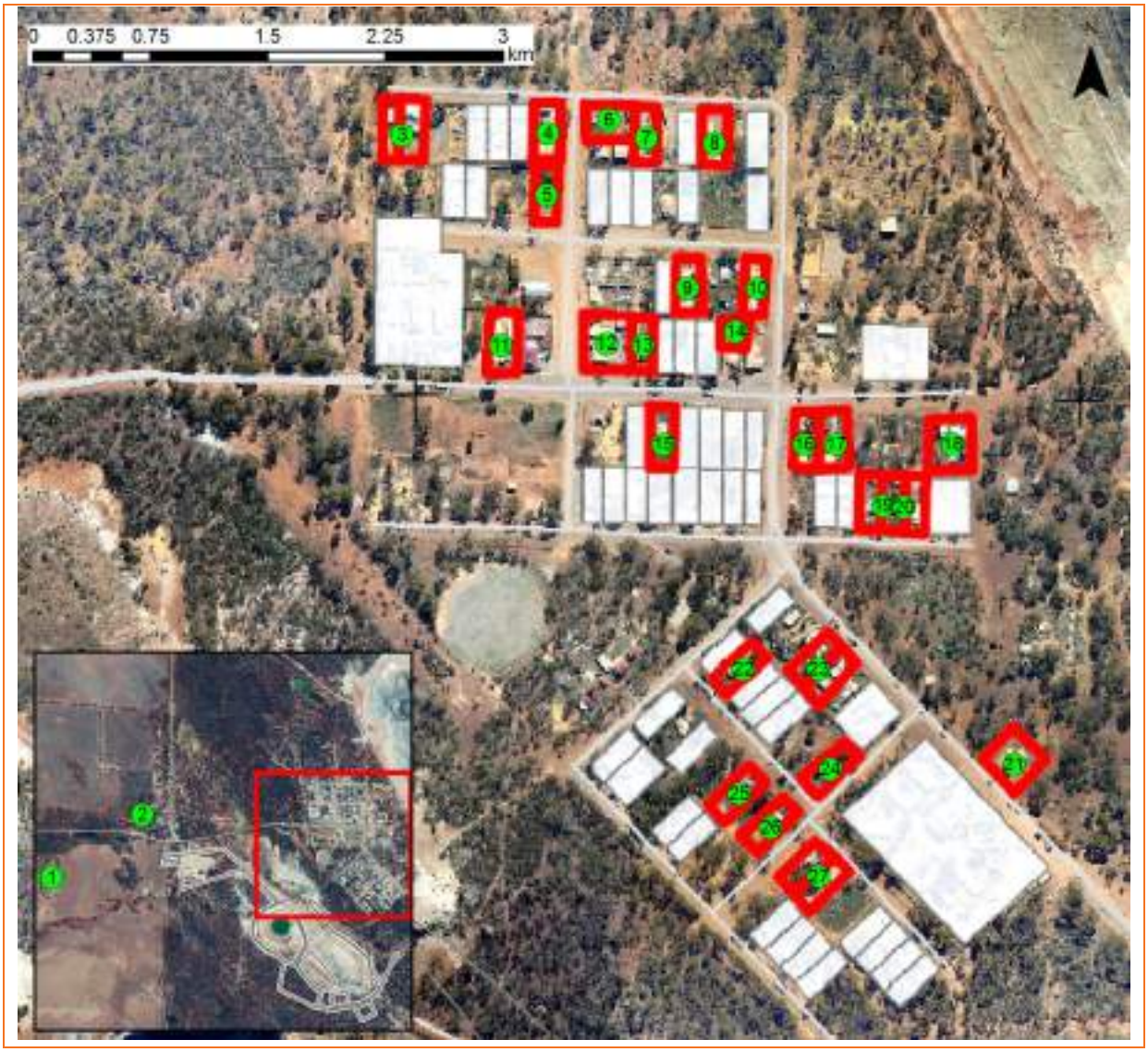

Figure 5-4 Discrete sensitive receptor locations

5.3 Deposition

Dry deposition is the process whereby particles will settle under gravity, impaction or diffusion onto surfaces. To incorporate dry deposition (and depletion) into the modelling requires that the particle size, percentage distribution and density be specified. Table 5-4 lists the particle size distributions and mass fraction used in dispersion modelling. All particles have an assumed density of 1 g/cm^3.

Table 5-4 Particle size distribution and mass fraction used in dispersion modelling

Dust particle size (µm)	Mass fraction (%)		
	TSP	PM_{10}	$PM_{2.5}$
1.3	9%	30%	100%
3.8	8%	27%	-
6.3	7%	23%	-
8.7	6%	20%	-
12.5	14%	-	-
19	15%	-	-
26	15%	-	-
35	15%	-	-
45	11%	-	-
TOTAL	**100%**	**100%**	**100%**

6 Emission Estimation

6.1 Emissions Sources

This section outlines the emission estimation process for the Project. Activities of the proposed facility that have the potential to generate dust emissions include:

- Wheel-generated dust from ore transport
- Unloading of ore from trucks
- Front-end loaders (push ore delivered and load to crusher)
- Crushing/screening
- Stacking
- Ore handling
- Wind erosion from stockpiles

Locations of potential sources of dust emissions within the facility are shown in Figure 6-1.

Ore processed are sourced from underground and open-cut mines in the area. Sections of the transport routes where wheel-generated dust from truck movements during ore transport are anticipated are shown in Figure 6-2.

Information used to estimate dust emissions are summarised in Table 6-1. The following sections outline the emission estimation technique for each source within the model.

The frequency and duration of equipment use during operations have been accounted for in the dispersion modelling. A conservative approach was used in representing the frequency of operations.

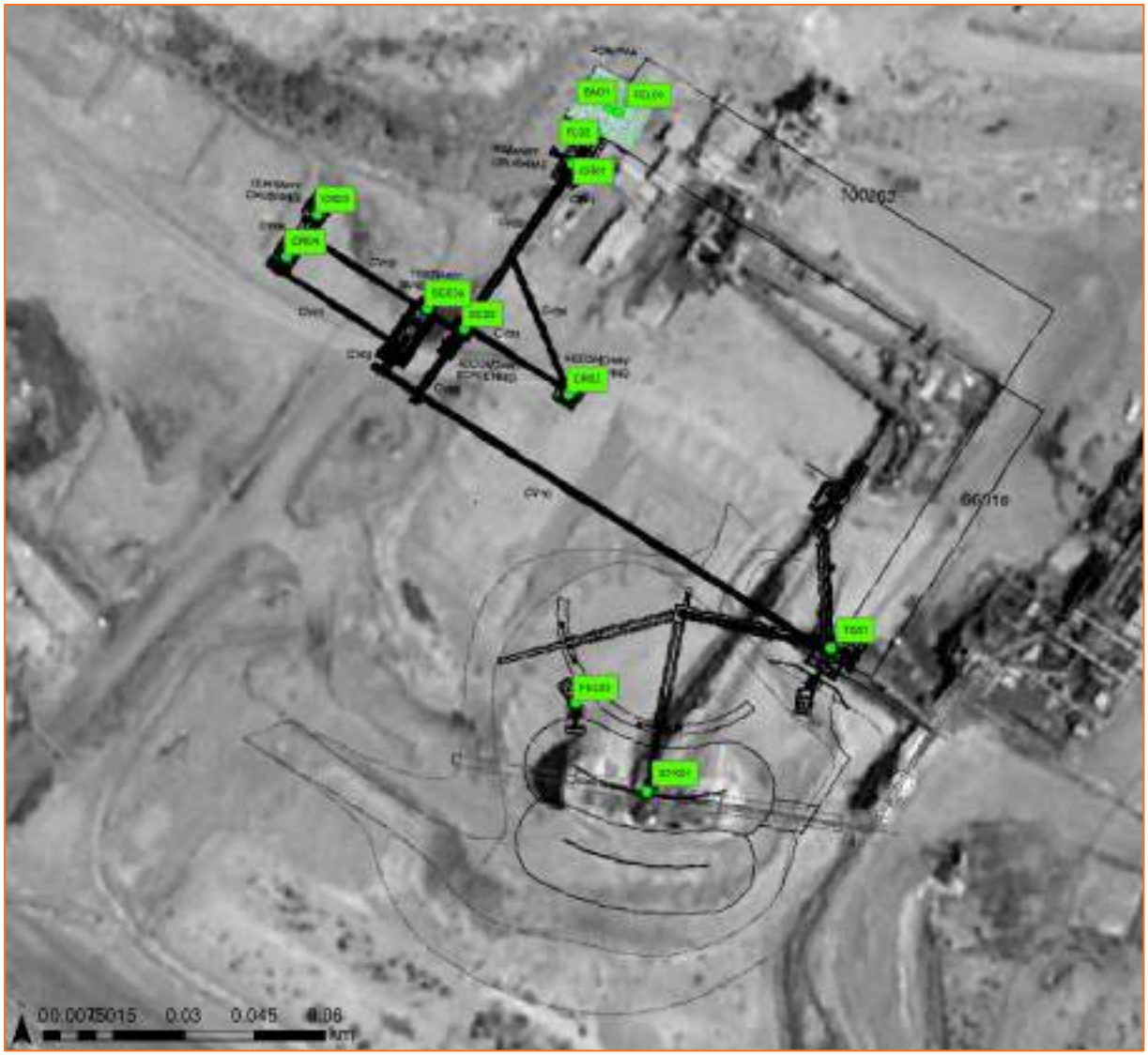

Figure 6-1 Location of emissions sources within Marvel Loch Crushing Circuit

Figure 6-2 Transport route for ore

Table 6-1 Operations data for Marvel Loch Crushing Circuit

Parameter		Units	Value
Operating hours (ore transport, crushing)		availability	75%
		days/yr	365
		hrs/day	18
		time	0:00 – 23:59 [1]
		hrs/yr	6,570
Operating hours for FEL pushing ore		hrs/day	10
Back-up FEL for pushing crushed ore		hrs/yr	6,570
Plant availability		%	75%
Ore throughput (ore transport, crushing)		t/day	6000
		tpa	2,190,000
Road silt content		%	10
Average moisture content		%	5.2
Ore processed	Primary crusher	%	100%
	Secondary crusher	%	70% [2]
	Tertiary crusher	%	100%
Ore transport (Transport Corridor)	Ore sourced	tpa	230,000 [3]
	Equipment	-	articulated truck [4]
	Empty weight	t	33
	Capacity	t	41
Ore transport (Haul Road 1)	Ore sourced	tpa	980,000 [5]
	Equipment	-	Road train
	Empty weight	t	90
	Capacity	t	180
Ore transport (Haul Road 2)	Ore sourced	tpa	980,000 [5]
	Equipment	-	Road train
	Empty weight	t	90
	Capacity	t	180
Approximate area	ROM stockpile	m^2	193
	Waste dump	m^2	27,530

Notes:

1. Ore transport and crushing facility will operate for 18 hours per day (75% availability), but activities can occur at any time.
2. Secondary screen assumes that 30% of the processed ore will bypass the secondary crusher and will be processed directly to the tertiary crushers.
3. Ore throughput sourced from Jacoletti undeground mine based on highest ore production (2022).
4. Articulated truck assumed to be similar to a Caterpillar 745.
5. Remaining ore brought into the crushing facility assumed to be transported equally using two haul routes.

6.2 Emission Estimates

The following sections outline the emission estimation technique for each source within the model. For all activities, $PM_{2.5}$ emissions are taken as 30% of PM_{10} emissions (Table 5-4).

6.2.1 Haul roads

To determine emissions from wheel generated dust along the haul roads the default equation for 'unpaved roads from wheels' was utilised (Equation 1).

There are three routes used in transporting ore to the proposed crushing facility. Sections of the roads anticipated to generate dust emissions are shown in Figure 6-2. The assessment considered a total ore throughput of 6,000 tonnes per day, equivalent to 2,190,000 tpa.

Ore sourced from the Jacoletti underground mine will be transported using the Transport Corridor, with the use of an articulated truck. The assessment considered the highest ore tonnage mined of 230,000 tpa for year 2022.

The remaining 1,960,000 tpa of ore are assumed to be sourced from the open-cut mines in the region and will be transported using the two remaining haul routes using road trains.

Truck movements for all haul routes were assumed to occur at any time within the day but will only occur 75% of the time (18 hours). Haul truck movements were randomised during the hours of operation throughout the year.

Equation 1: $$EF_{(kg/VKT)} = \frac{0.4536}{1.6093} \times k \times \left(\frac{s_{(\%)}}{12}\right)^{a} \times \left(\frac{W_{(t)}}{3}\right)^{b}$$

Where: k = constant (TSP = 4.9, PM_{10} = 1.5)
$s_{(\%)}$ = silt content (%)
$W_{(t)}$ = vehicle mass (t)
a = constant (TSP = 0.7, PM_{10} = 0.9)
b = constant (0.45)

6.2.2 Unloading ore to ROM

Emissions for unloading ore and waste have been calculated using the default values of:

- TSP: 0.012 kg/t
- PM_{10}: 0.0043 kg/t

6.2.3 Front-end loaders

Emissions for the operation of front-end loaders, at the Run of Mine (ROM) pad, used the default emission factor listed in Appendix A of the EET for Mining (EA, 2012) for overburden. These factors are:

- TSP: 0.025 kg/tonne
- PM_{10}: 0.012 kg/tonne

One of front-end loaders used to feed the primary crusher was assumed to operate at any time within the day but will only occur 75% of the time (18 hours). A second front-end loader will push the ore being delivered and will operate for 10 hours within the day.

Another front-end loader has been accounted for in the dispersion modelling. This has been modelled to operate conservatively in an emergency crushed ore stockpile at a capacity of 50 tph.

6.2.4 Crushing

Emissions for the crushers were based on the USEPA AP42 document, chapter 11.19.2 (USEPA, 2004). These factors are:

- TSP: 0.0027 kg/tonne
- PM_{10}: 0.0012 kg/tonne

The facility includes 1 primary, 1 secondary, and 2 tertiary crushers. It is assumed that the secondary screen will allow 30% of the processed ore to bypass the secondary crusher. The two tertiary crushers are assumed to have equal capacity.

6.2.5 Screening

Emissions for the screens were based on the USEPA AP42 document, chapter 11.19.2 (USEPA, 2004). These factors are:

- TSP: 0.0125kg/tonne
- PM_{10}: 0.0043 kg/tonne

6.2.6 Materials transfer

Emissions for materials transfer were calculated using the equation (Equation 2) for miscellaneous transfer (EA, 2012). This is consistent with the USEPA AP42 emission factors (USEPA,2016b).

Average wind speed for Southern Cross Aero AWS if 4.35 m/s. The average moisture content of ore is 5.2%.

Equation 2: $$\boldsymbol{EF_{(kg/t)} = k \times 0.0016 \times \frac{\left(\frac{U}{2.2}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}}}$$

Where: k = constant (TSP = 0.74, PM_{10} = 0.35)
M = moisture content (%) of the material
U = mean wind speed (m/s)

6.2.7 Wind erosion

The default emission factor for wind erosion in the EET for Mining is a constant emission of 0.2 kg/ha/hr which, while potentially suitable for the calculation of annual emissions, is not suitable for inclusion in atmospheric modelling due to the constant nature of the emission. This assessment used the modified Shao equation to estimate hourly varying emissions due to wind erosion based on the equation outlined in SKM (2005) which is represented as Equation 2

Equation 3: $$\boldsymbol{PM_{10_{(g/m^2/s)}} = k \times \left\{WS^3 \times \left(1 - \left(WS_0{}^2/WS^2\right)\right)\right\}} \quad WS > WS_O$$

$$\boldsymbol{PM_{10_{(g/m^2/s)}} = 0} \quad WS < WS_O$$

Where:
WS = wind speed
WS_0 = wind speed threshold for particulate matter lift off (m/s)
k = constant

For this assessment the following parameters were used, resulting in an overall PM_{10} emission rate of 0.4 kg/ha/hr for open areas within the mining areas:

WS_0 = 6 m/s
K = 2.88 x 10^{-7}

The emission factor for TSP is taken as twice that of the PM_{10} emissions while $PM_{2.5}$ emissions are taken as 30% of the PM_{10} emissions.

Wind erosion from the ROM stockpile have been accounted for.

6.3 Emission Controls

Emissions controls (for dust abatement) were included in the emissions estimation, based on information provided and assumptions based on standard operating practices. These controls are summarised in Table 6-2, along with the percentage reduction applied to each source type.

Table 6-2 Project dust abatement in place (included in model)

Location	Dust abatement description	Emission reduction	Activity
Haul roads	Level 1 watering using saline water	75%	Wheel-generated dust
ROM PAD	Water spray	50%	Wind erosion from stockpile
			Unloading ore from truck
			FEL – push ore delivered/feed crusher
Crushers	Water spray	50%	Primary crusher
			Secondary crusher
			Tertiary crusher (1 and 2)
Stacker	Water spray (50%) Luffing stacker (25%)	62.5%	Stacker
Transfer station	Water spray	50%	Material transfer
Ore stockpile	Water spray	50%	FEL – back up stockpile
Open areas	Water spray	50%	Wind erosion from exposed area
Haul roads	Level 1 watering using saline water	75%	Wheel-generated dust

6.4 Emission Rates

A summary of the estimated annual emissions is shown in Table 6-3. The statistics of the variable emission files, for all sources, are presented in Appendix B.

Table 6-3 Estimate of TSP, PM_{10}, and $PM_{2.5}$ emissions from Marvel Loch Crushing Circuit (kg/yr)

Project Activity		TSP	PM_{10}	$PM_{2.5}$
Wheel-generated from ore transport	Transport Corridor	9,717	2,868	860
	Haul Road 1	78,142	23,064	6,919
	Haul Road 2	55,186	16,289	4,887
Truck unloading		13,140	4,709	1,413
Front end loader	push ore being delivered	15,208	7,300	2,190
	feed primary crusher	27,375	13,140	3,942
	back up ore stockpile	4,106	1,971	591
Crushing	Primary Crusher	2,957	1,314	394
	Secondary Crusher	2,070	920	276
	Tertiary Crusher 1	1,478	657	197
	Tertiary Crusher 2	1,478	657	197
Screening	Secondary screening	27,375	9,417	2,825
	Tertiary product screen	27,375	9,417	2,825
Stacker	Luft stacker	4,106	1,971	591
Transfer station	Transfer station	3,285	1,396	419
Wind erosion	ROM stockpile	67	34	10
	TOTAL	269,785	95,014	28,504

7 Predicted air quality impact

Comparison of the modelled results to the assessment criteria is intended to provide an objective evaluation of the potential impact of the operations at the nearest sensitive receptors. Modelled ground-level concentrations for key air pollutants have been compared to ambient air quality assessment criteria to determine the potential impacts.

To assess the potential air quality impact, ground-level concentrations of TSP, PM_{10}, and $PM_{2.5}$ are compared to the following criteria:

- Kwinana EPP for TSP of 90 µg/m³
- NEPM 24-hour average of 50 µg/m³ for PM_{10}
- NEPM annual average of 25 µg/m³ for PM_{10}
- NEPM 24-hour average of 25 µg/m³ for $PM_{2.5}$
- NEPM annual average of 8 µg/m³ for $PM_{2.5}$

In addition, the amenity guideline of 2 g/m²/month for dust deposition rate has also been adopted in this assessment.

The predicted ground level concentrations of particles as TSP, PM_{10}, and $PM_{2.5}$ at key sensitive receptor locations are presented. The modelled concentration statistics (i.e. maximum, 99th percentile, 95th percentile, 90th percentile and 70th percentile) are tabulated. Background air quality have also been accounted for.

Contour plots showing the spatial distribution of TSP, PM_{10}, and $PM_{2.5}$ concentrations predicted across the modelling domain, with and without the inclusion of background concentrations, are also presented.

7.1 TSP

The model results for TSP, with and without background concentrations, are summarised in Table 7-2. The predicted concentrations indicate that maximum and percentile (99^{th}, 95^{th}, 90^{th} and 70^{th}) 24-hour average ground-level TSP concentrations predicted due to the proposed operations, with and without background concentrations, **comply** with the air quality assessment criteria of 90 µg/m³ at all sensitive receptors.

Contour plots of the maximum 24-hour TSP concentrations predicted across the modelling domain due to the proposed operations, with and without background concentrations, are presented in Figure 7-1 and Figure 7-2, respectively. The red line represents the air quality assessment criteria of 90 µg/m³.

Table 7-1 Statistics for predicted TSP concentrations

Id	Without background					With background (24-hour: 30.6 µg/m³)				
	Maximum	Percentile				Maximum	Percentile			
		99th	95th	90th	70th		99th	95th	90th	70th
R1	7.3	5.0	2.8	2.0	1.0	37.9	35.6	33.4	32.6	31.6
R2	9.7	8.0	4.1	3.1	1.5	40.3	38.6	34.7	33.7	32.1
R3	25.8	23.7	10.6	7.2	4.1	56.4	54.3	41.2	37.8	34.7
R4	30.4	27.3	12.3	8.5	4.7	61.0	57.9	42.9	39.1	35.3
R5	27.3	24.1	11.7	8.6	4.6	57.9	54.7	42.3	39.2	35.2
R6	34.3	29.4	12.8	9.1	5.1	64.9	60.0	43.4	39.7	35.7
R7	34.0	29.9	13.9	9.4	5.3	64.6	60.5	44.5	40.0	35.9
R8	37.0	32.1	15.0	10.2	5.9	67.6	62.7	45.6	40.8	36.5
R9	31.8	25.4	12.9	10.1	5.1	62.4	56.0	43.5	40.7	35.7
R10	34.7	27.7	14.0	10.9	5.7	65.3	58.3	44.6	41.5	36.3
R11	24.8	20.5	10.5	8.0	4.1	55.4	51.1	41.1	38.6	34.7
R12	27.8	23.0	11.7	8.9	4.6	58.4	53.6	42.3	39.5	35.2
R13	28.8	23.9	12.1	9.3	4.8	59.4	54.5	42.7	39.9	35.4
R14	32.5	27.0	13.6	10.5	5.4	63.1	57.6	44.2	41.1	36.0
R15	29.6	24.4	12.2	8.9	4.7	60.2	55.0	42.8	39.5	35.3
R16	39.7	29.4	14.4	10.6	5.5	70.3	60.0	45.0	41.2	36.1
R17	41.6	30.4	14.9	11.0	5.8	72.2	61.0	45.5	41.6	36.4
R18	48.7	34.6	17.4	12.9	6.5	79.3	65.2	48.0	43.5	37.1
R19	41.1	33.5	16.2	11.6	5.8	71.7	64.1	46.8	42.2	36.4
R20	43.0	35.4	16.7	12.0	5.9	73.6	66.0	47.3	42.6	36.5
R21	50.9	29.8	16.5	12.5	5.4	81.5	60.4	47.1	43.1	36.0
R22	39.3	26.3	11.6	9.8	4.6	69.9	56.9	42.2	40.4	35.2

Id	Without background					With background (24-hour: 30.6 µg/m³)				
	Maximum	Percentile				Maximum	Percentile			
		99th	95th	90th	70th		99th	95th	90th	70th
R23	45.4	28.3	13.0	10.3	4.8	76.0	58.9	43.6	40.9	35.4
R24	43.5	24.1	13.7	9.6	4.5	74.1	54.7	44.3	40.2	35.1
R25	39.4	23.1	12.3	8.5	4.0	70.0	53.7	42.9	39.1	34.6
R26	38.6	21.8	12.6	8.8	4.1	69.2	52.4	43.2	39.4	34.7
R27	33.9	21.1	12.1	9.1	4.1	64.5	51.7	42.7	39.7	34.7

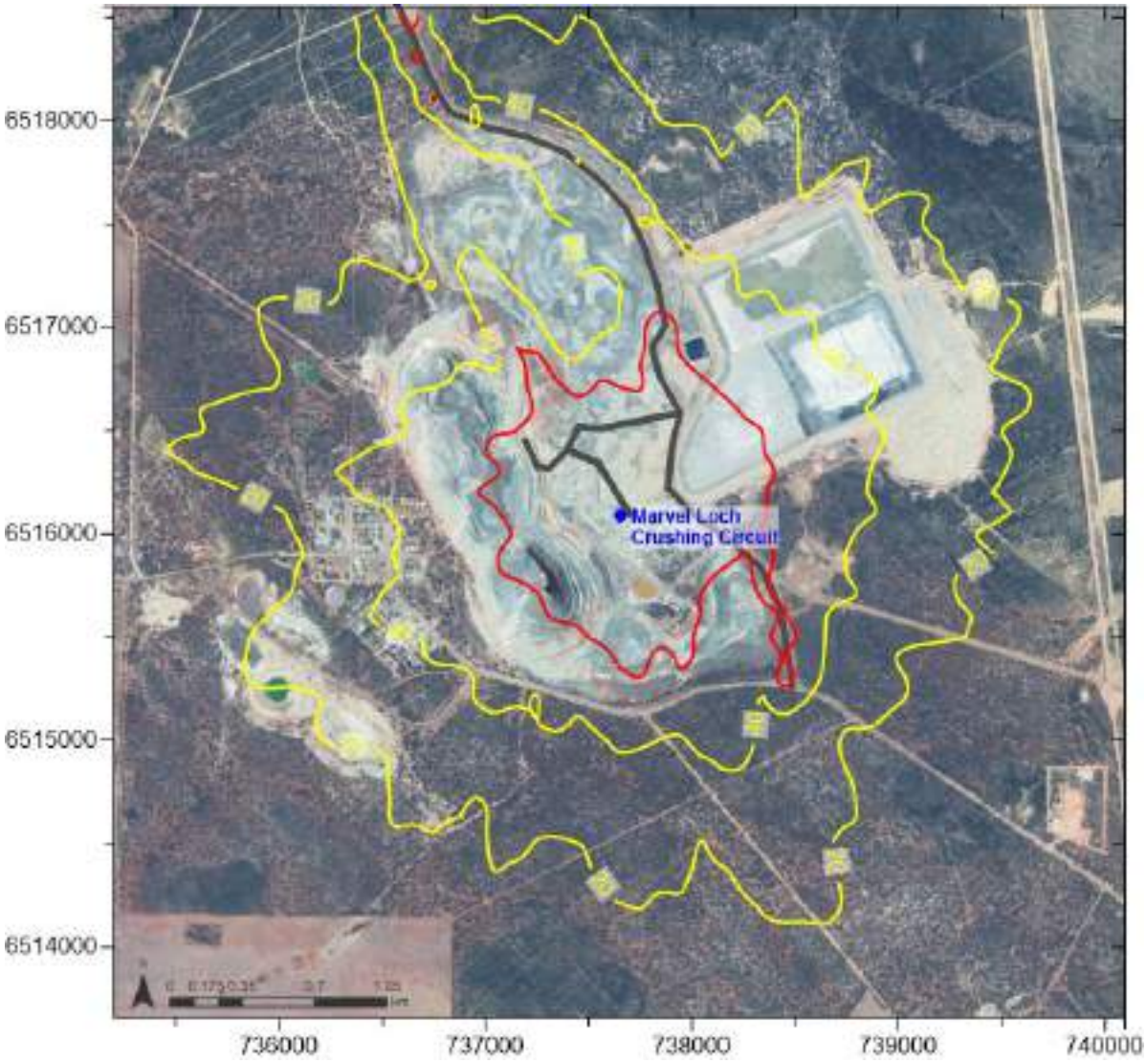

Figure 7-1 Predicted maximum 24-hour average ground-level TSP concentration contours (µg/m³) – the Project in isolation. Red line represents air quality assessment criteria of 90 µg/m³.

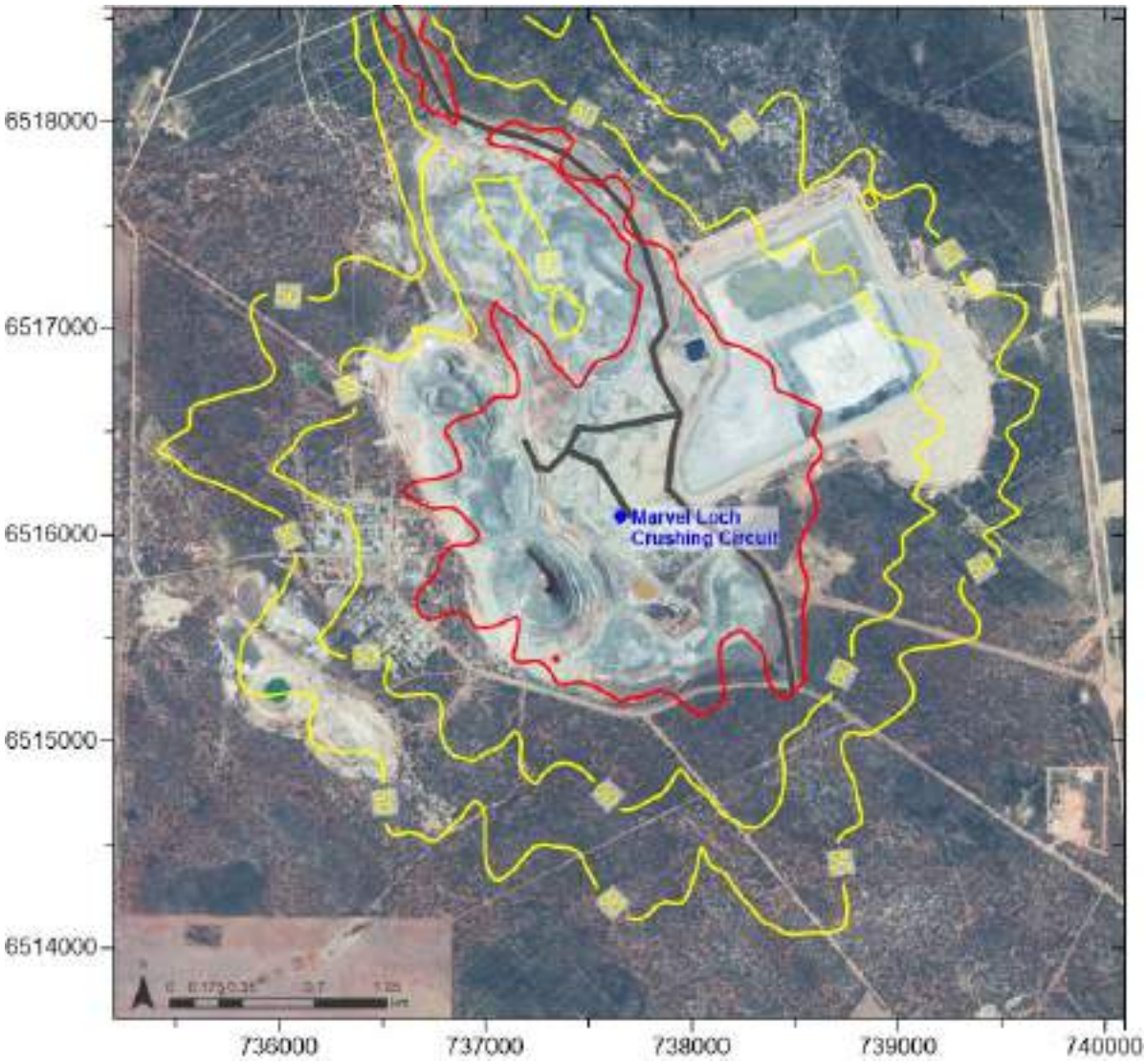

Figure 7-2 Predicted maximum 24-hour average ground-level TSP concentration contours (µg/m³) – the Project and background concentration of 30.6 µg/m³. Red line represents air quality assessment criteria of 90 µg/m³.

7.2 PM_{10}

The model results for PM_{10}, with and without background concentrations, are summarised in Table 7-2. The predicted concentrations indicate that:

- Maximum and percentile (99th, 95th, 90th and 70th) 24-hour average ground-level PM_{10} concentrations predicted due to the proposed operations, with and without background concentrations, **comply** with the air quality assessment criteria of 50 µg/m³ at all sensitive receptors.
- Annual average ground-level PM_{10} concentrations predicted due to the proposed operations, with and without background concentrations, **comply** with the air quality assessment criteria of 25 µg/m³ at all sensitive receptors.

Contour plots of the maximum 24-hour average PM_{10} concentrations predicted across the modelling domain due to the proposed operations, with and without background concentrations, are presented in Figure 7-3 and Figure 7-4, respectively. The red line represents the air quality assessment criteria of 50 µg/m³.

Contour plots of the annual average PM_{10} concentrations predicted across the modelling domain due to the proposed operations, with and without background concentrations, are presented in in Figure 7-5 and Figure 7-6, respectively. The red line represents the air quality assessment criteria of 25 µg/m³.

Table 7-2 Statistics for predicted PM_{10} concentrations

Id	Without background						With background (24-hour: 15.3 µg/m³ / annual: 12.8 µg/m³)					
	Maximum	Percentile				Annual Average	Maximum	Percentile				Annual Average
		99th	95th	90th	70th			99th	95th	90th	70th	
R1	4.9	3.4	1.8	1.3	0.7	0.6	20.2	18.7	17.1	16.6	16.0	13.4
R2	6.3	5.3	2.8	2.1	1.0	0.9	21.6	20.6	18.1	17.4	16.3	13.7
R3	16.3	14.6	6.5	4.9	2.6	2.2	31.6	29.9	21.8	20.2	17.9	15.0
R4	18.8	16.9	7.5	5.8	3.0	2.5	34.1	32.2	22.8	21.1	18.3	15.3
R5	17.0	14.7	7.7	5.5	3.0	2.5	32.3	30.0	23.0	20.8	18.3	15.3
R6	20.3	18.2	8.0	6.2	3.2	2.7	35.6	33.5	23.3	21.5	18.5	15.5
R7	20.8	18.6	8.4	6.4	3.3	2.8	36.1	33.9	23.7	21.7	18.6	15.6
R8	22.4	19.9	9.0	7.0	3.6	3.1	37.7	35.2	24.3	22.3	18.9	15.9
R9	20.1	16.3	8.6	6.8	3.3	2.8	35.4	31.6	23.9	22.1	18.6	15.6
R10	21.8	17.8	9.3	7.5	3.6	3.0	37.1	33.1	24.6	22.8	18.9	15.8
R11	16.0	12.8	6.7	5.5	2.7	2.2	31.3	28.1	22.0	20.8	18.0	15.0
R12	17.9	14.2	7.4	6.2	3.0	2.5	33.2	29.5	22.7	21.5	18.3	15.3
R13	18.5	14.7	7.8	6.4	3.1	2.6	33.8	30.0	23.1	21.7	18.4	15.4
R14	20.7	16.5	8.6	7.2	3.4	2.9	36.0	31.8	23.9	22.5	18.7	15.7
R15	19.6	15.2	8.0	5.9	3.1	2.6	34.9	30.5	23.3	21.2	18.4	15.4
R16	25.9	17.7	9.3	7.1	3.6	3.0	41.2	33.0	24.6	22.4	18.9	15.8
R17	26.9	18.3	9.6	7.3	3.7	3.1	42.2	33.6	24.9	22.6	19.0	15.9
R18	30.8	20.6	11.0	8.7	4.4	3.6	46.1	35.9	26.3	24.0	19.7	16.4
R19	26.1	18.8	9.9	7.9	3.9	3.2	41.4	34.1	25.2	23.2	19.2	16.0
R20	26.4	19.9	10.1	8.1	4.1	3.3	41.7	35.2	25.4	23.4	19.4	16.1
R21	33.9	18.8	11.1	8.1	3.6	3.1	49.2	34.1	26.4	23.4	18.9	15.9
R22	25.4	16.8	8.0	6.4	3.0	2.6	40.7	32.1	23.3	21.7	18.3	15.4

Id	Without background						With background (24-hour: 15.3 µg/m³ / annual: 12.8 µg/m³)					
	Maximum	Percentile				Annual Average	Maximum	Percentile				Annual Average
		99th	95th	90th	70th			99th	95th	90th	70th	
R23	29.5	17.9	8.7	6.9	3.2	2.8	44.8	33.2	24.0	22.2	18.5	15.6
R24	28.9	15.1	8.8	6.6	3.1	2.6	44.2	30.4	24.1	21.9	18.4	15.4
R25	26.3	14.0	8.0	5.9	2.8	2.3	41.6	29.3	23.3	21.2	18.1	15.1
R26	25.9	13.2	8.1	6.1	2.8	2.3	41.2	28.5	23.4	21.4	18.1	15.1
R27	23.1	13.6	8.2	6.1	2.8	2.3	38.4	28.9	23.5	21.4	18.1	15.1

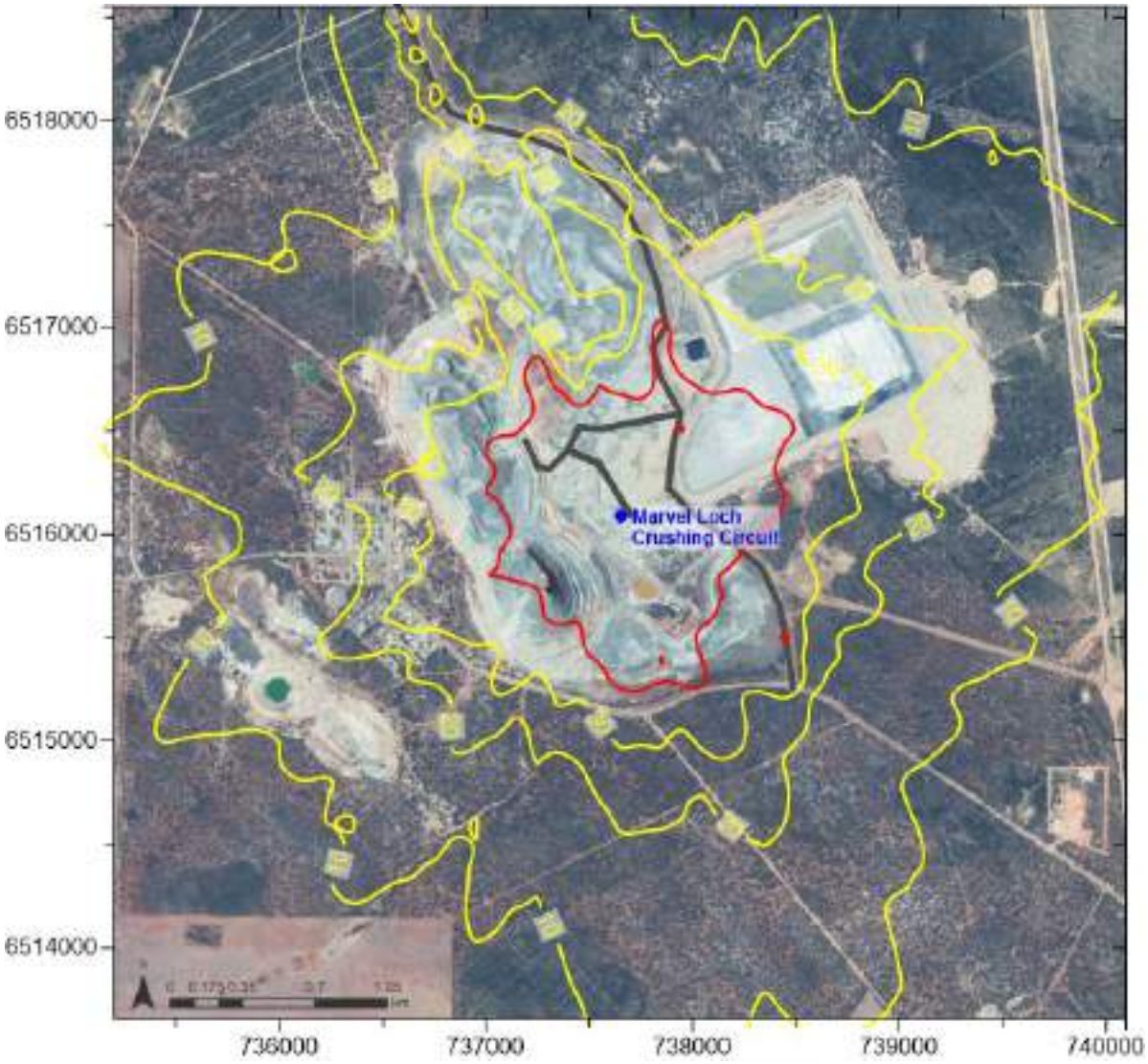

Figure 7-3 Predicted maximum 24-hour average ground-level PM_{10} concentration contours (µg/m³) – the Project in isolation. Red line represents air quality assessment criteria of 50 µg/m³.

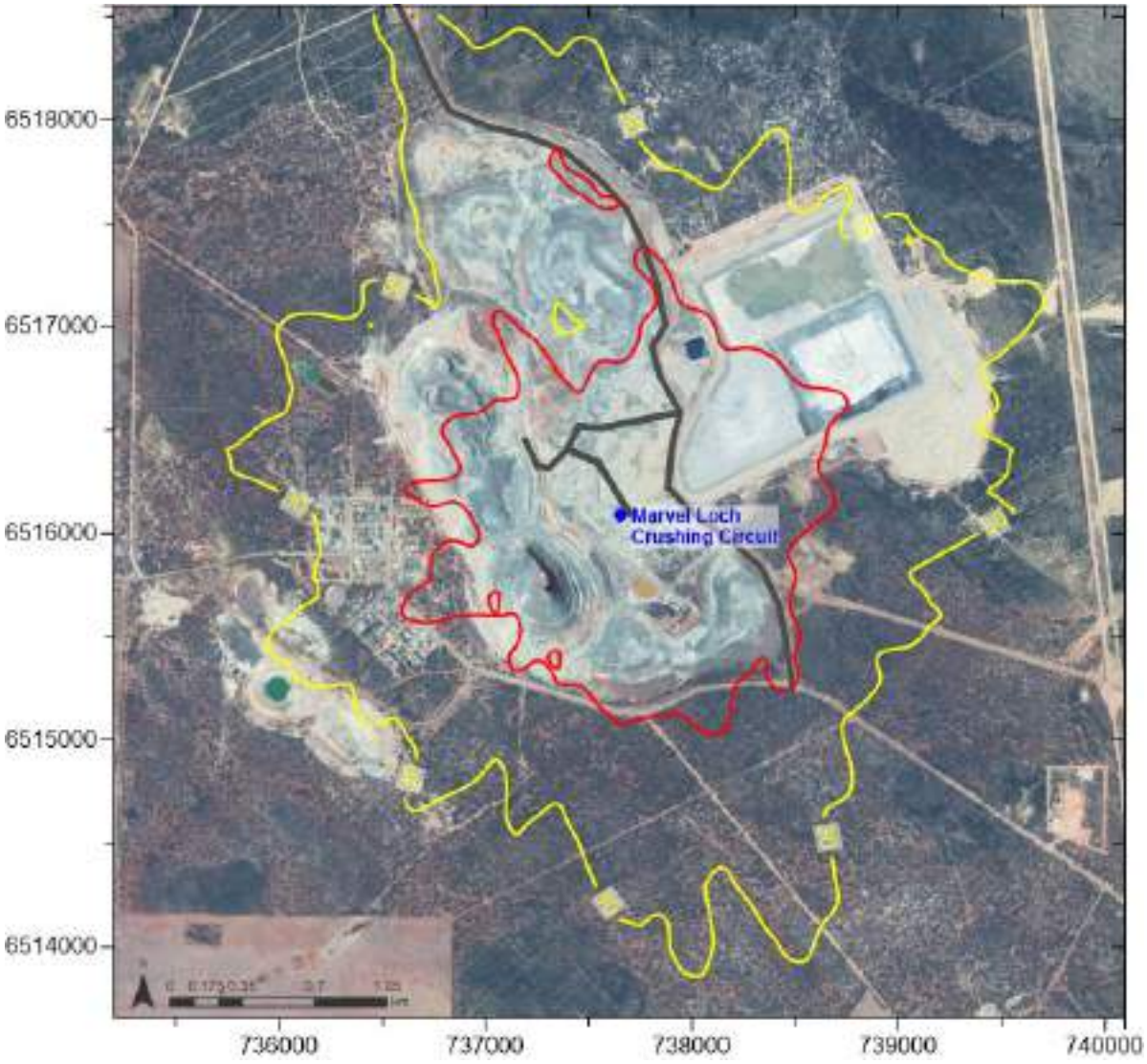

Figure 7-4 Predicted maximum 24-hour average ground-level PM_{10} concentration contours (µg/m³) – the Project and background concentration of 15.3 µg/m³. Red line represents air quality assessment criteria of 50 µg/m³.

Figure 7-5 Predicted annual average ground-level PM_{10} concentration contours (µg/m³) – the Project in isolation. Red line represents air quality assessment criteria of 25 µg/m³.

Figure 7-6 Predicted annual average ground-level PM_{10} concentration contours (µg/m³) – the Project and background concentration of 12.8 µg/m³. Red line represents air quality assessment criteria of 25 µg/m³.

7.3 $PM_{2.5}$

The model results for $PM_{2.5}$, both with and without background concentrations, are summarised in Table 7-3 The predicted concentrations indicate that:

- Maximum and percentile (99th, 95th, 90th and 70th) 24-hour average ground-level $PM_{2.5}$ concentrations predicted due to the proposed operations, with and without background concentrations, **comply** with the air quality assessment criteria of 25 µg/m³ at all sensitive receptors.
- Annual average ground-level $PM_{2.5}$ concentrations predicted due to the proposed operations, with and without background concentrations, **comply** with the air quality assessment criteria of 8 µg/m³ at all sensitive receptors.

Contour plots of the maximum 24-hour average $PM_{2.5}$ concentrations predicted across the modelling domain due to the proposed operations, with and without background concentrations, are presented in Figure 7-7 and Figure 7-8, respectively. The red line represents the air quality assessment criteria of 25 µg/m³.

Contour plots of the annual average $PM_{2.5}$ concentrations predicted across the modelling domain due to the proposed operations, with and without background concentrations, are presented in Figure 7-9 and Figure 7-10, respectively. The red line represents the air quality assessment criteria of 8 µg/m³.

Table 7-3 Statistics for predicted $PM_{2.5}$ concentrations

Id	Without background						With background (24-hour: 5.8 µg/m³ / annual: 5.1 µg/m³)					
	Maximum	Percentile				Annual Average	Maximum	Percentile				Annual Average
		99th	95th	90th	70th			99th	95th	90th	70th	
R1	1.6	1.0	0.6	0.4	0.2	0.2	7.4	6.8	6.4	6.2	6.0	5.3
R2	2.0	1.6	0.9	0.7	0.3	0.3	7.8	7.4	6.7	6.5	6.1	5.4
R3	5.0	4.5	2.0	1.6	0.8	0.7	10.8	10.3	7.8	7.4	6.6	5.8
R4	5.8	5.2	2.3	1.8	0.9	0.8	11.6	11.0	8.1	7.6	6.7	5.9
R5	5.3	4.6	2.4	1.7	1.0	0.8	11.1	10.4	8.2	7.5	6.8	5.9
R6	6.3	5.6	2.5	1.9	1.0	0.9	12.1	11.4	8.3	7.7	6.8	6.0
R7	6.4	5.7	2.6	2.0	1.0	0.9	12.2	11.5	8.4	7.8	6.8	6.0
R8	6.9	6.1	2.8	2.2	1.1	1.0	12.7	11.9	8.6	8.0	6.9	6.1
R9	6.2	5.1	2.6	2.2	1.1	0.9	12.0	10.9	8.4	8.0	6.9	6.0
R10	6.7	5.5	2.9	2.4	1.2	1.0	12.5	11.3	8.7	8.2	7.0	6.1
R11	5.0	3.9	2.1	1.8	0.9	0.7	10.8	9.7	7.9	7.6	6.7	5.8
R12	5.5	4.3	2.4	2.0	0.9	0.8	11.3	10.1	8.2	7.8	6.7	5.9
R13	5.7	4.5	2.4	2.0	1.0	0.8	11.5	10.3	8.2	7.8	6.8	5.9
R14	6.4	5.0	2.7	2.3	1.1	0.9	12.2	10.8	8.5	8.1	6.9	6.0
R15	6.1	4.8	2.5	1.9	1.0	0.8	11.9	10.6	8.3	7.7	6.8	5.9
R16	8.1	5.5	3.0	2.3	1.1	0.9	13.9	11.3	8.8	8.1	6.9	6.0
R17	8.4	5.6	3.1	2.4	1.2	1.0	14.2	11.4	8.9	8.2	7.0	6.1
R18	9.5	6.3	3.6	2.7	1.4	1.1	15.3	12.1	9.4	8.5	7.2	6.2
R19	8.1	5.8	3.1	2.5	1.2	1.0	13.9	11.6	8.9	8.3	7.0	6.1
R20	8.2	6.1	3.2	2.5	1.3	1.0	14.0	11.9	9.0	8.3	7.1	6.1
R21	10.5	5.8	3.5	2.6	1.2	1.0	16.3	11.6	9.3	8.4	7.0	6.1
R22	7.9	5.2	2.6	2.0	1.0	0.8	13.7	11.0	8.4	7.8	6.8	5.9

Id	Without background						With background (24-hour: 5.8 µg/m³ / annual: 5.1 µg/m³)					
	Maximum	Percentile				Annual Average	Maximum	Percentile				Annual Average
		99th	95th	90th	70th			99th	95th	90th	70th	
R23	9.1	5.5	2.8	2.2	1.0	0.9	14.9	11.3	8.6	8.0	6.8	6.0
R24	9.0	4.7	2.8	2.1	1.0	0.8	14.8	10.5	8.6	7.9	6.8	5.9
R25	8.2	4.3	2.6	1.9	0.9	0.7	14.0	10.1	8.4	7.7	6.7	5.8
R26	8.1	4.1	2.6	1.9	0.9	0.7	13.9	9.9	8.4	7.7	6.7	5.8
R27	7.2	4.2	2.6	1.9	0.9	0.7	13.0	10.0	8.4	7.7	6.7	5.8

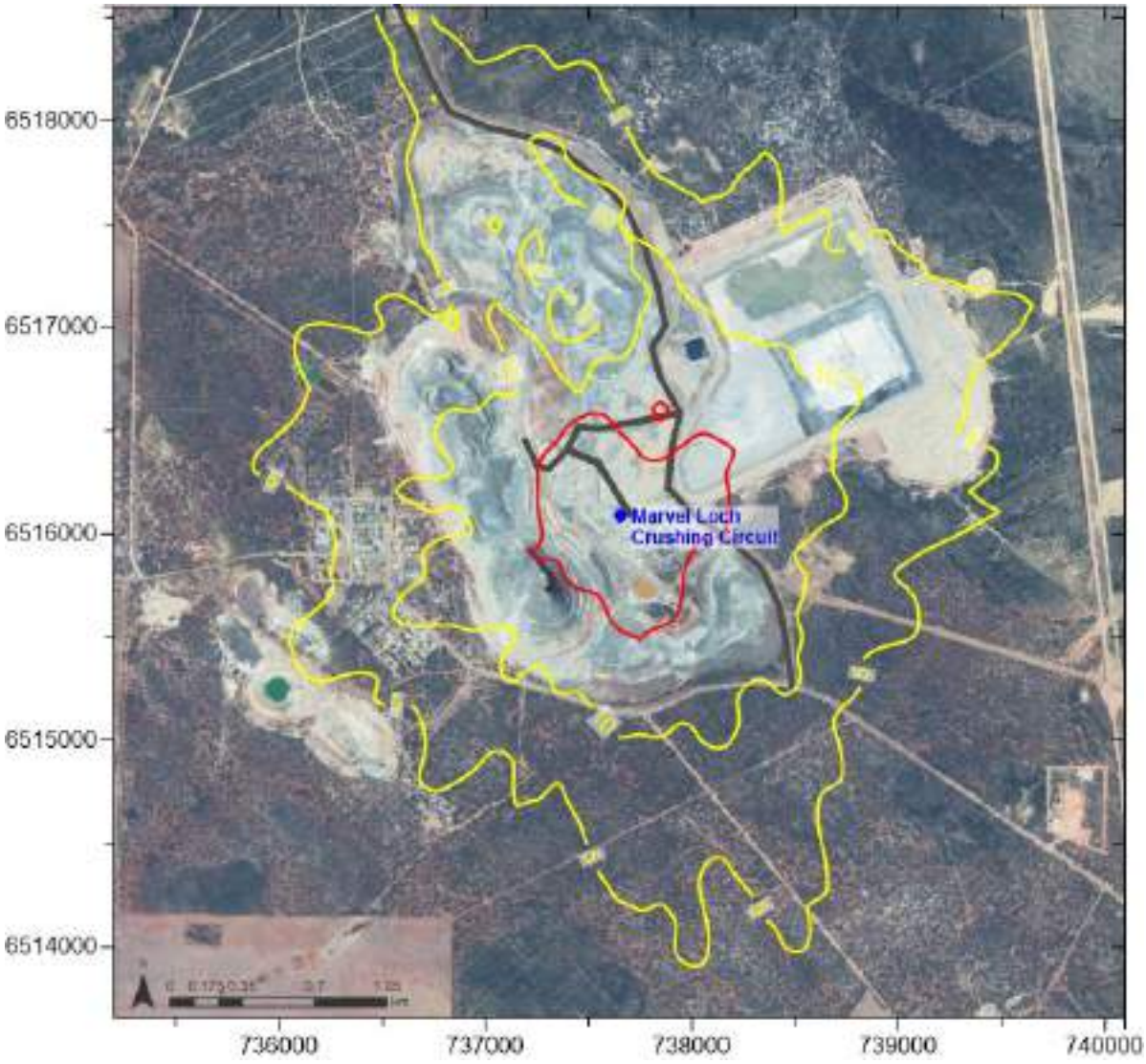

Figure 7-7 Predicted maximum 24-hour average ground-level $PM_{2.5}$ concentration contours (µg/m³) the Project in isolation. Red line represents air quality assessment criteria of 25 µg/m³.

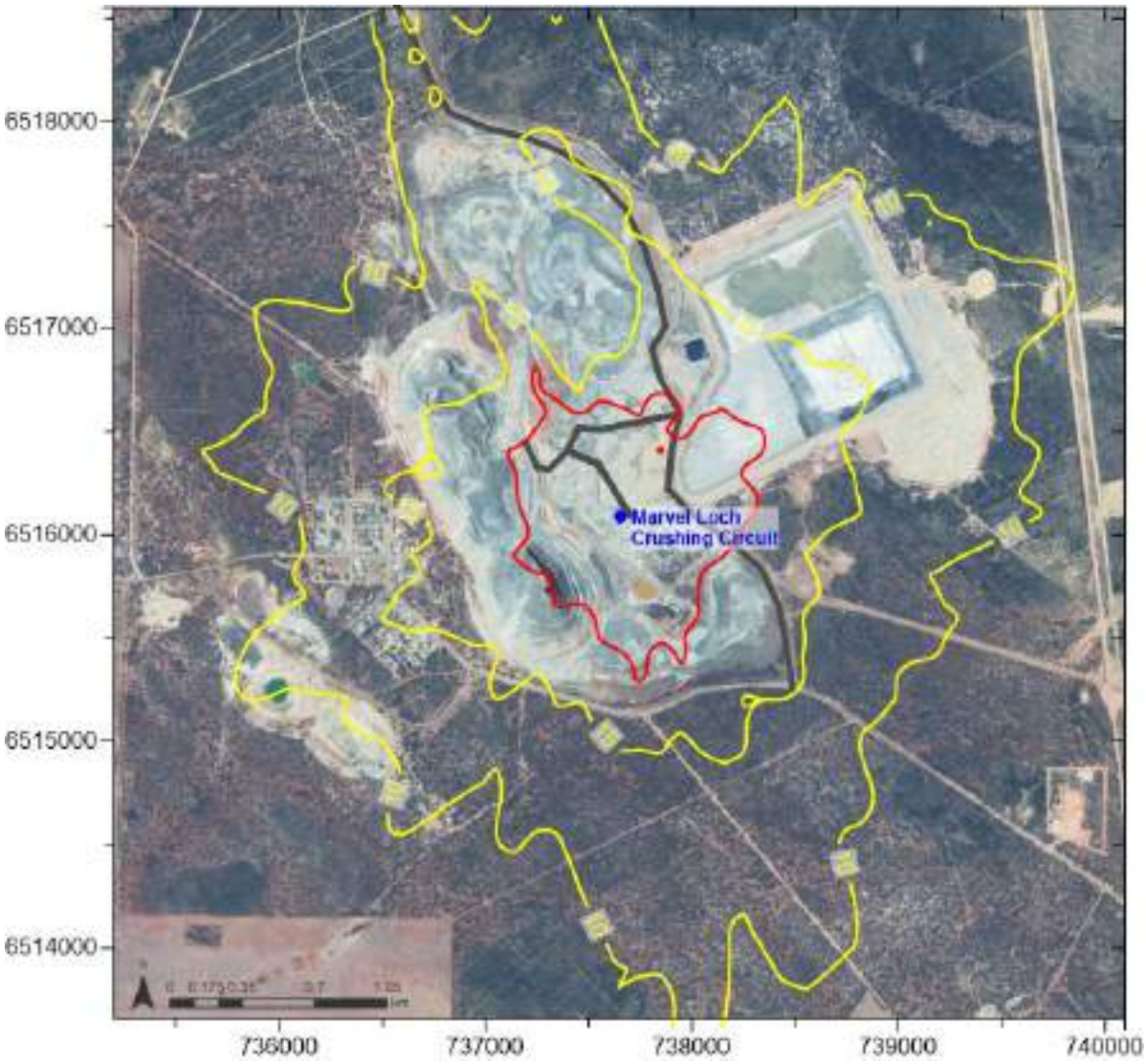

Figure 7-8 Predicted maximum 24-hour average ground-level $PM_{2.5}$ concentration contours (µg/m³) – the Project and background concentration of 5.8 µg/m³. Red line represents air quality assessment criteria of 25 µg/m³.

Figure 7-9 Predicted annual average ground-level $PM_{2.5}$ concentration contours (µg/m³) – the Project in isolation. Red line represents air quality assessment criteria of 8 µg/m³.

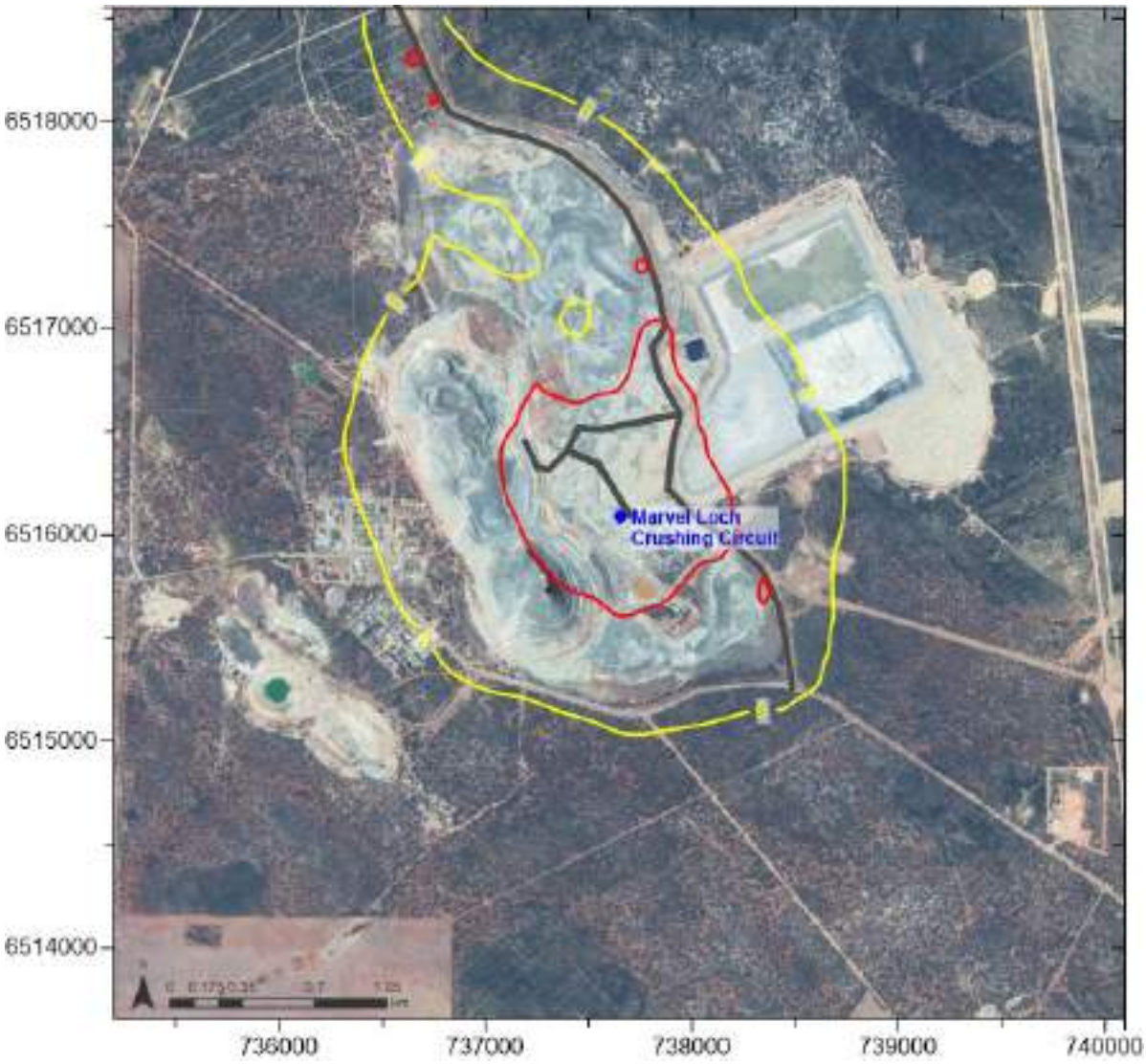

Figure 7-10 Predicted annual average ground-level $PM_{2.5}$ concentration contours (µg/m³) – the Project and background concentration of 5.1 µg/m³. Red line represents air quality assessment criteria of 8 µg/m³.

7.4 Dust deposition rate

The model results for dust deposition rates due to the proposed operations are summarised in Table 7-4. The predicted concentrations indicate that maximum dust deposition rates are well within the dust deposition rate guideline at all sensitive receptors.

Contour plot of the maximum monthly dust deposition rate predicted across the modelling domain due to the proposed operations is presented in Figure 7-11.

Table 7-4 Dust deposition rate (g/m²/month)

Id	Dust deposition rate
R1	0.05
R2	0.07
R3	0.21
R4	0.25
R5	0.24
R6	0.27
R7	0.29
R8	0.31
R9	0.28
R10	0.31
R11	0.22
R12	0.25
R13	0.26
R14	0.29
R15	0.26
R16	0.31
R17	0.33
R18	0.39
R19	0.34
R20	0.36
R21	0.31
R22	0.25
R23	0.28
R24	0.26
R25	0.23
R26	0.23
R27	0.22

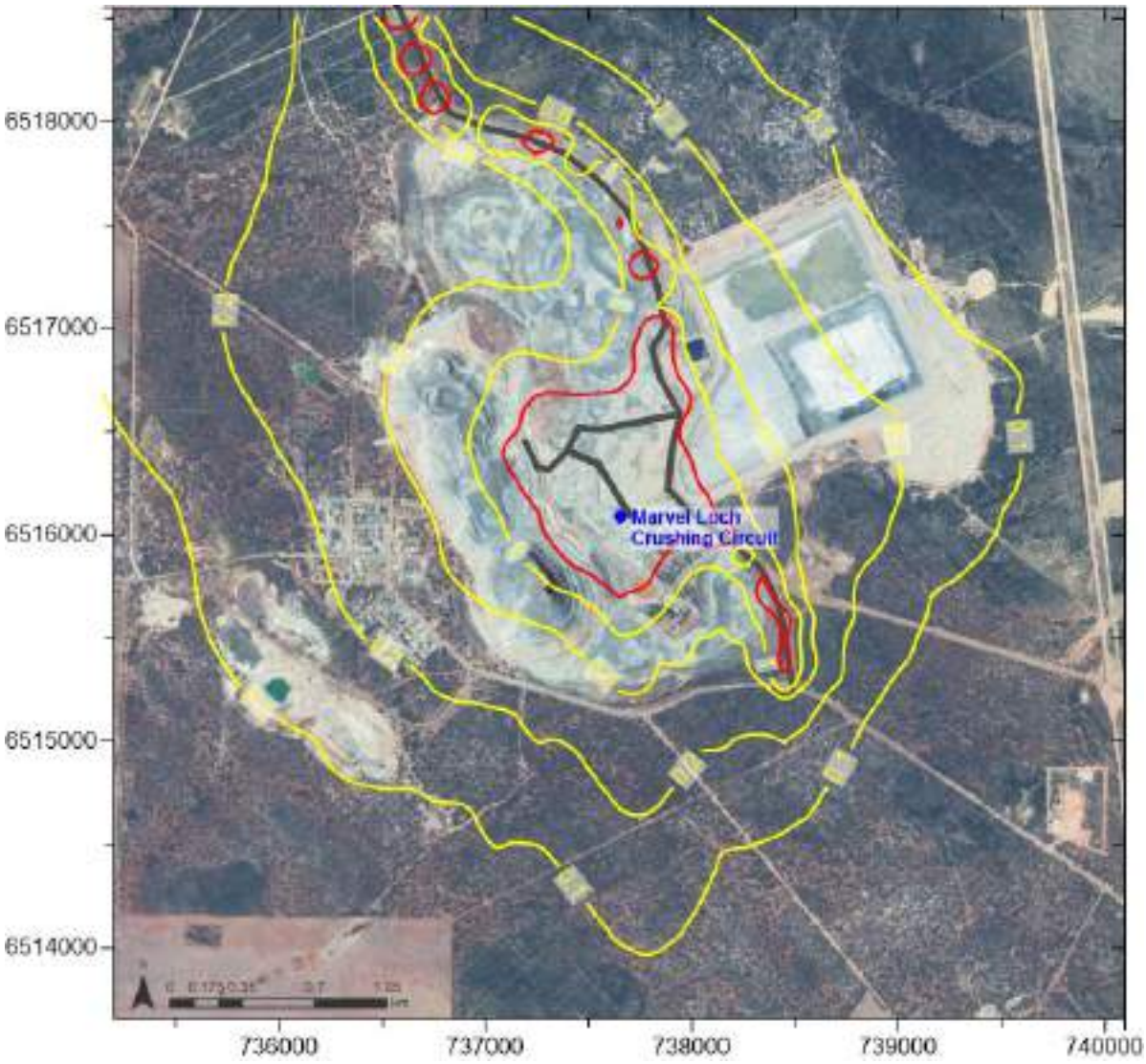

Figure 7-11 Predicted maximum monthly dust deposition rate contours (g/m²/month) – the Project in isolation. Red line represents dust deposition rate guideline of 2 g/m²/month.

8 Conclusions

An air quality assessment was conducted to determine potential impacts associated with proposed operations of the Marvel Loch Crushing Circuit, to be installed at the Marvel Loch Processing Plant. The crushing circuit aims to process 6,000 tonnes per day of ore, equivalent to 2.190 million tonnes per annum (Mtpa) sourced from local underground and open-cut mines. The ore will be transported from the underground mine using a transport corridor. Ore sourced from open-cut mines will be transported through two haul roads using road trains. Activities expected to generate dust emissions include wheel-generated dust from ore transport, front-end loaders, crushers, screens, and wind erosion from stockpiles. Ore transport and most equipment will operate 75% of the time.

The potential impacts were determined through a dispersion modelling study, which incorporated site-specific meteorological data, emissions information, source characteristics, and the location of model receptors. Emission rates were estimated using recognised and accepted methods of emissions estimation, which included published emission factors from the NPI Emission Estimation Technique Manual for Mining (EA, 2012) and USEPA AP42 documents.

A site-specific meteorological dataset was generated using the AERMET meteorological processor, which used a combination of observations at the Bureau of Meteorology (BoM) automated weather station (AWS) at Southern Cross (Station ID 12320) and meteorological data produced by the prognostic model TAPM. These were then used to drive the AERMOD dispersion model in order to predict ground-level concentrations of pollutants at identified sensitive receptors and the surrounding environment.

Ground-level TSP, PM_{10}, and $PM_{2.5}$ concentrations predicted at sensitive receptors and the surrounding environment were compared with the relevant air quality assessment criteria. These were presented in isolation, and with the inclusion of background concentrations including existing sources in the area.

The key findings of the assessment are:

- Ground-level TSP concentrations predicted due to Marvel Loch Crushing Circuit operations, with and without background concentrations, **comply** with the air quality assessment criteria at all sensitive receptors.
- Ground-level PM_{10} concentrations predicted due to Marvel Loch Crushing Circuit operations, with and without background concentrations, **comply** with the air quality assessment criteria at all sensitive receptors.
- Ground-level $PM_{2.5}$ concentrations predicted due to Marvel Loch Crushing Circuit operations, with and without background concentrations, **comply** with the air quality assessment criteria at all sensitive receptors.

Furthermore, dust deposition rates predicted at all sensitive receptors are well within the guideline for dust deposition.

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10 Glossary

Acronym	Meaning
BoM	Bureau of Meteorology
C	Degrees Celsius (temperature)
DWER	Department of Water and Environmental Regulation
EET	Emissions Estimation Technique
ETA	Environmental Technologies& Analytics Pty Ltd
FEL	Front end loader
GLC	Ground Level Concentration
h/yr	Hours per year
kg	kilogram
kg/t	kilogram per tonne
kg/yr	kilograms per year
kPa	kiloPascals
km	kilometre
m	metre
m/s	metres per second
mm	millimetre
Mt	Million tonnes
Mtpa	Million tonnes per annum
NEPC	National Environment Protection Council
NEPM	National Environmental Protection Measure
NPI	National Pollutant Inventory
PM	Particulate matter, small particles and liquid droplets that can remain suspended in air.
PM_{10}	Particulate matter with an aerodynamic diameter of 10 µm or less.
tpa	tonnes per annum
TSSC	Threatened Species Scientific Committee
t/h	tonnes per hour
USEPA	United States Environment Protection Agency
Vic EPA	Victorian Environment Protection Authority
$\mu g/m^3$	micro grams (one millionth of a gram) per cubic metre
µm	micrometre

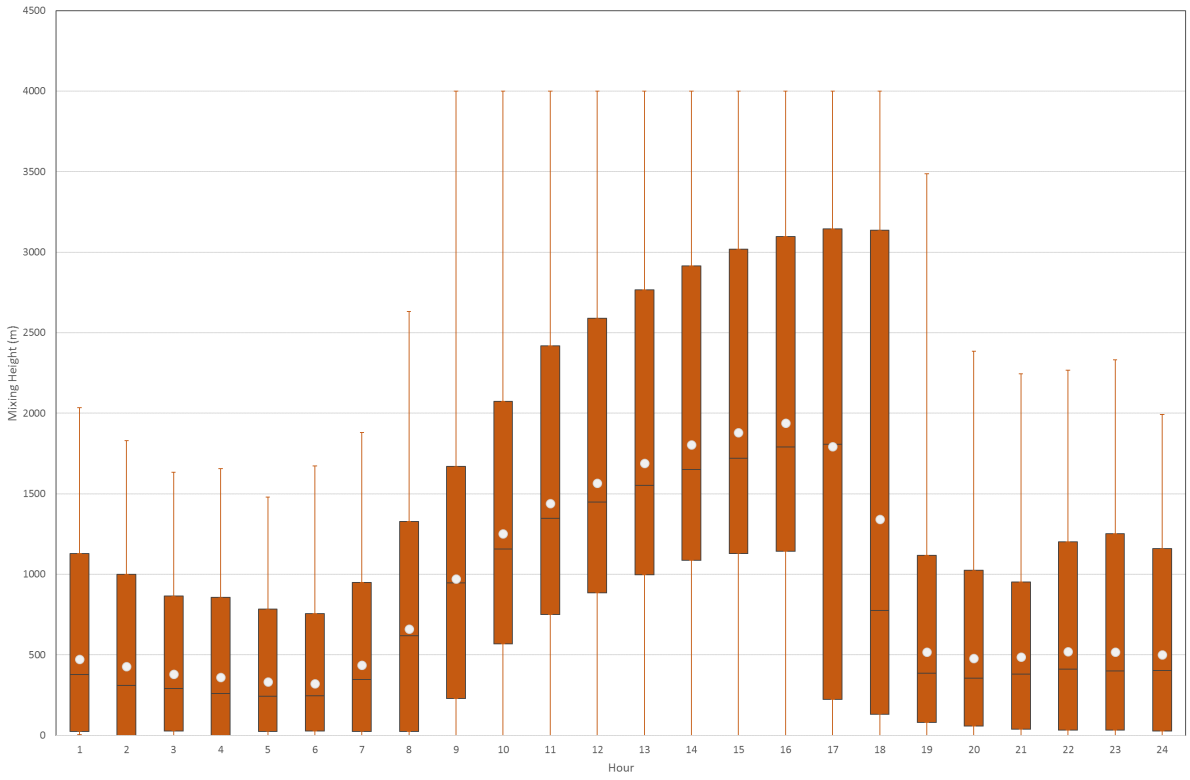
11 Appendices

Appendix A– Meteorology

A.1: Mixing Height

Mixing height is the depth of the atmospheric surface layer beneath an elevated temperature inversion. It is an important parameter within air pollution meteorology. Vertical diffusion or mixing of a plume is limited by the mixing height, as the air above this layer tends to be stable, with restricted vertical motion.

Within AERMET the mixing height is formed through mechanical means (wind speed) at night and through a mixture of mechanical and convective means (wind speed and solar radiation) during the day. During the night and early morning when the convective mixed layer is absent or small, the full depth of the planetary boundary layer (PBL) may be controlled by mechanical turbulence. During the day, the height of the PBL during convective conditions is then taken as the maximum of the estimated (or measured if available) convective boundary layer height and the estimated (or measured if available) mechanical mixing height.



Appendix Figure 1 Simulated annual statistics of hourly mixing heights

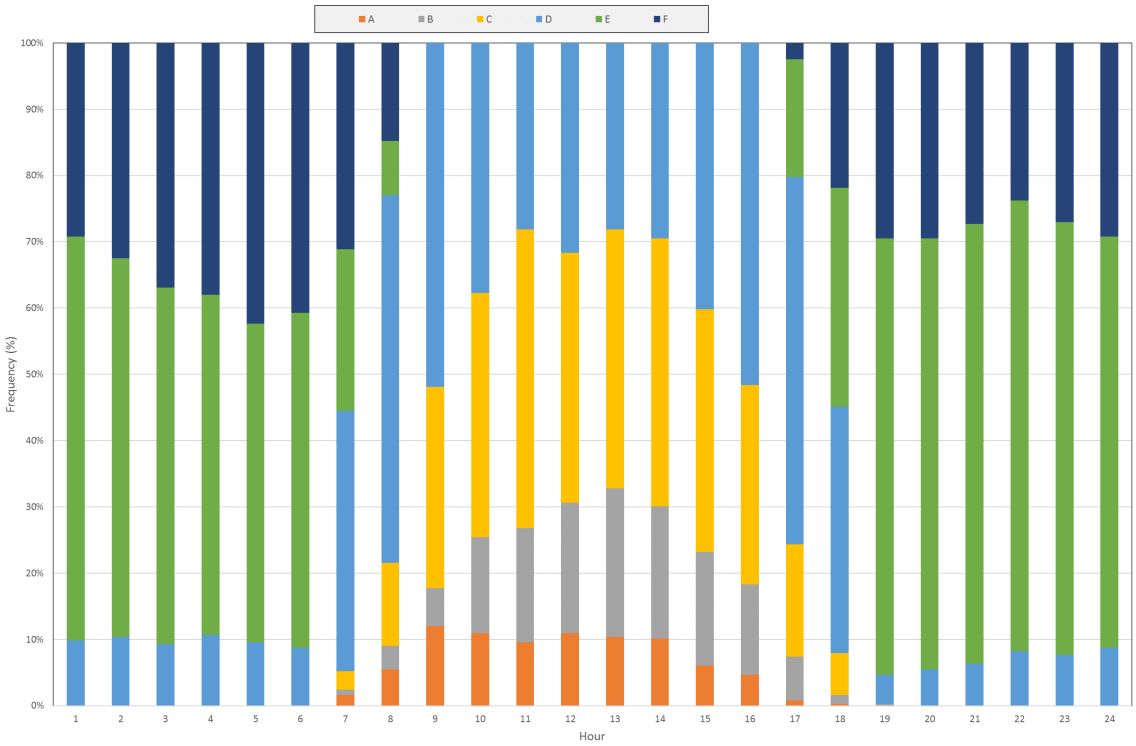
A.2: Stability

An important aspect of pollutant dispersion is the level of turbulence in the lowest 1 km or so of the atmosphere, known as the Planetary Boundary Layer (PBL). Turbulence controls how effectively a plume is diffused into the surrounding air and hence diluted. It acts by increasing the cross-sectional area of the plume due to random motions. With stronger turbulence, the rate of plume diffusion increases. Weak turbulence limits diffusion and contributes to high plume concentrations downwind of a source.

Turbulence is generated by both thermal and mechanical effects to varying degrees. Thermally driven turbulence occurs when the surface is being heated, in turn transferring heat to the air above by convection. Mechanical turbulence is caused by the frictional effects of wind moving over the earth's surface and depends on the roughness of the surface as well as the flow characteristics.

Turbulence in the boundary layer is influenced by the vertical temperature gradient, which is one of several indicators of stability. Plume models use indicators of atmospheric stability in conjunction with other meteorological data to estimate the dispersion conditions in the atmosphere.

Stability can be described across a spectrum ranging from highly unstable through neutral to highly stable. A highly unstable boundary layer is characterised by strong surface heating and relatively light winds, leading to intense convective turbulence and enhanced plume diffusion. At the other extreme, very stable conditions are often associated with strong temperature inversions and light winds, which commonly occur under clear skies at night and in the early morning. Under these conditions, plumes can remain relatively undiluted for considerable distances downwind. Neutral conditions are linked to windy and/or cloudy weather, and short periods around sunset and sunrise, when surface rates of heating or cooling are very low.



Appendix Figure 2 Simulated annual statistics of hourly stability

Appendix B – Emission Rates

B.1: Variable emissions file – wind erosion sources

Appendix Table 1 Statistical summary of hourly varying TSP, PM_{10}, and $PM_{2.5}$ emission rates (g/s) from wind erosion sources

	Pollutant	Maximum	99th Percentile	95th Percentile	90th Percentile	70th Percentile	Average
SP_ROM	TSP	0.1323	0.0349	0.0134	0.0065	0.0000	0.0021
	PM_{10}	0.0662	0.0174	0.0067	0.0032	0.0000	0.0011
	$PM_{2.5}$	0.0198	0.0052	0.0020	0.0010	0.0000	0.0003

Notes:

1. WD1 and WD2 refer to exposed areas used as waste dump for Jacoletti Underground Mine.

B.2: Variable emissions file – ore transport

Appendix Table 2 TSP, PM_{10}, and $PM_{2.5}$ emission rates (g/s) for wheel-generated dust from ore transport

Type	Source Id	Modelled				TSP (g/s)		PM_{10} (g/s)		$PM_{2.5}$ (g/s)	
		# sources	days/yr	hrs/day	hrs/yr	total [1]	per source	total [1]	per source	total [1]	per source
Transport corridor [2]	TC01 – TC05	5	365	18	6,570	0.41	8.22E-02	0.12	2.43E-02	0.04	7.28E-03
Haul Road 1 [2]	HRA01 – HRA21	21	365	18	6,570	3.30	1.57E-01	0.98	4.64E-02	0.29	1.39E-02
Haul Road 2 [2]	HRB01 – HRB15	15	365	18	6,570	2.33	1.56E-01	0.69	4.59E-02	0.21	1.38E-02

Notes:

1. Total emission rates refer to the emission rates for each hour modelled from entire section of unpaved roads modelled.
2. Modelled for a total of 18 hours per day (randomised) at any time.

B.3: Variable emissions file – crushing facility

Appendix Table 3 TSP, PM_{10}, and $PM_{2.5}$ emission rates (g/s) for wheel-generated dust from Marvel Loch Crushing Circuit

Type	Source Id	Modelled			Emission rate (g/s)		
		days/yr	hrs/day	hrs/yr	TSP	PM_{10}	$PM_{2.5}$
Truck unloading ore	BN01	365	18 [1]	6,570	5.56E-01	1.99E-01	5.97E-02
FEL – push ore being delivered	FEL01	365	10 [2]	3,650	1.16E+00	5.56E-01	1.67E-01
FEL – feed primary crusher	FEL02	365	18 [1]	6,570	1.16E+00	5.56E-01	1.67E-01
Primary crusher	CR01	365	18 [1]	6,570	1.25E-01	5.56E-02	1.67E-02
Secondary screen	SC02	365	18 [1]	6,570	1.16E+00	3.98E-01	1.19E-01
Secondary crusher	CR02	365	18 [1]	6,570	8.75E-02	3.89E-02	1.17E-02
Tertiary crusher 1	CR03	365	18 [1]	6,570	6.25E-02	2.78E-02	8.33E-03
Tertiary crusher 2	CR04	365	18 [1]	6,570	6.25E-02	2.78E-02	8.33E-03
Tertiary product screen	SC03	365	18 [1]	6,570	1.16E+00	3.98E-01	1.19E-01
FEL – backup ore stockpile	FEL03	365	18 [1]	6,570	1.74E-01	8.33E-02	2.50E-02
Stacker	STK01	365	18 [1]	6,570	1.39E-01	5.90E-02	1.77E-02
Transfer station	TS01	365	18 [1]	6,570	3.49E-02	7.87E-02	2.36E-02

Notes:

1. Modelled for a total of 18 hours per day (randomised) at any time.
2. Modelled for a total of 10 hours per day (randomised) at any time.

Appendix C – Emission Parameters

Appendix Table 4 Emission parameters for each volume source

Type	Source Id	# of Sources	Release height (m)	Sigma Y (m)	Sigma Z (m)
Wheel-generated dust from ore transport	TC01 – TC05	5	4.1	16.7	3.8
	HRA01 – HRA21	21	4.1	16.7	3.8
	HRB01 – HRB15	15	4.1	16.7	3.8
Truck unloading ore	BN01	1	3	30	1.4
FEL – push ore being delivered	FEL01	1	6	6.98	2.79
FEL – feed primary crusher	FEL02	1	6	6.98	2.79
FEL – backup ore stockpile	FEL03	1	6	6.98	2.79
Primary crusher	CR01	1	4	1.9	1.86
Secondary crusher	CR02	1	4	1.9	1.86
Tertiary crusher 1	CR03	1	4	1.9	1.86
Tertiary crusher 2	CR04	1	4	1.9	1.86
Secondary screen	SC02	1	4	1.9	1.86
Tertiary product screen	SC03	1	4	1.9	1.86
Stacker	STK01	1	8	4.7	3.7
Transfer station	TS01	1	6	6.98	2.79
Wind erosion – ROM stockpile	SP_ROM	1	1.5	3.23	0.7

Appendix Table 5 Source locations

Type	Source Id	Easting	Northing
Haul from underground mine (Transport Corridor)	TC01	737219.16	6516390.98
	TC02	737276.48	6516322.19
	TC03	737350.13	6516361.44
	TC04	737469.66	6516378.34
	TC05	737619.60	6516223.33
Haul from open-cut mine (Haul Road 1)	HRA01	736605.46	6518492.77
	HRA02	736688.72	6518311.19
	HRA03	736774.86	6518131.15
	HRA04	736916.38	6518006.19
	HRA05	737106.37	6517945.77
	HRA06	737295.71	6517883.77
	HRA07	737465.55	6517781.73
	HRA08	737611.97	6517646.19
	HRA09	737723.21	6517482.95
	HRA10	737798.24	6517297.89
	HRA11	737850.56	6517105.28
	HRA12	737837.33	6516956.04
	HRA13	737891.52	6516674.06
	HRA14	737823.55	6516833.14
	HRA15	737842.13	6516566.29
	HRA16	737645.95	6516527.42
	HRA17	737500.39	6516514.93
	HRA18	737424.32	6516464.14
	HRA19	737469.66	6516373.52
	HRA20	737597.44	6516255.35
	HRA21	737673.27	6516134.13
Haul from open-cut mine (Haul Road 2)	HRB01	738470.68	6515354.88
	HRB02	738439.84	6515552.39
	HRB03	738379.48	6515741.48
	HRB04	738263.37	6515899.29
	HRB05	738106.37	6516022.41
	HRB06	737953.38	6516149.74
	HRB07	737892.05	6516320.53
	HRB08	737920.49	6516503.37

Type	Source Id	Easting	Northing
Haul from open-cut mine (Haul Road 2)	HRB09	737842.13	6516566.29
	HRB10	737645.95	6516527.42
	HRB11	737500.39	6516514.93
	HRB12	737424.32	6516464.14
	HRB13	737469.66	6516373.52
	HRB14	737597.44	6516255.35
	HRB15	737673.27	6516134.13
Trucking unloading	BN01	737675.32	6516118.77
FEL – push ore being delivered	FEL01	737679.14	6516119.94
FEL – feed primary crusher	FEL02	737672.61	6516113.50
Primary crusher	CR01	737667.38	6516106.95
Secondary screen	SC02	737644.45	6516071.85
Secondary crusher	CR02	737666.67	6516058.09
Tertiary crusher 1	SC03	737636.69	6516076.31
Tertiary crusher 2	CR03	737613.14	6516096.24
Tertiary product screen	CR04	737606.79	6516087.25
FEL – backup ore stockpile	FEL03	737668.09	6515992.54
Stacker	STK01	737683.26	6515973.68
Transfer station	TS01	737722.33	6516004.07
ROM stockpile	SP_ROM	737677.26	6516117.73

Appendix D – Model input file

```
CO STARTING
   TITLEONE Marvel Loch Crushing Circuit
   MODELOPT CONC DDEP ALPHA
   AVERTIME 24 MONTH ANNUAL
   POLLUTID TSP
   RUNORNOT RUN
   ERRORFIL SensRec.LST
   LOW_WIND 0.4 0.5 1.0
CO FINISHED

SO STARTING

   LOCATION TC01   VOLUME 737219.16 6516390.98 369.78
   LOCATION TC02   VOLUME 737276.48 6516322.19 388.52
   LOCATION TC03   VOLUME 737350.13 6516361.44 425.59
   LOCATION TC04   VOLUME 737469.66 6516378.34 444.45
   LOCATION TC05   VOLUME 737619.60 6516223.33 447.94
   LOCATION HRA01   VOLUME 736605.46 6518492.77 429.11
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   LOCATION HRB01   VOLUME 738470.68 6515354.88 443.26
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   LOCATION CR03   VOLUME 737613.14 6516096.24 432.76
   LOCATION CR04   VOLUME 737606.79 6516087.25 430.64
   LOCATION FEL03   VOLUME 737668.09 6515992.54 430.34
   LOCATION STK01   VOLUME 737683.26 6515973.68 431.59
   LOCATION TS01   VOLUME 737722.33 6516004.07 437.66
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SRCPARAM TC05     0.00 4.10 16.70 3.80
SRCPARAM HRA01     0.00 4.10 16.70 3.80
SRCPARAM HRA02     0.00 4.10 16.70 3.80
SRCPARAM HRA03     0.00 4.10 16.70 3.80
SRCPARAM HRA04     0.00 4.10 16.70 3.80
SRCPARAM HRA05     0.00 4.10 16.70 3.80
SRCPARAM HRA06     0.00 4.10 16.70 3.80
SRCPARAM HRA07     0.00 4.10 16.70 3.80
SRCPARAM HRA08     0.00 4.10 16.70 3.80
SRCPARAM HRA09     0.00 4.10 16.70 3.80
SRCPARAM HRA10     0.00 4.10 16.70 3.80
SRCPARAM HRA11     0.00 4.10 16.70 3.80
SRCPARAM HRA12     0.00 4.10 16.70 3.80
SRCPARAM HRA13     0.00 4.10 16.70 3.80
SRCPARAM HRA14     0.00 4.10 16.70 3.80
SRCPARAM HRA15     0.00 4.10 16.70 3.80
SRCPARAM HRA16     0.00 4.10 16.70 3.80
SRCPARAM HRA17     0.00 4.10 16.70 3.80
SRCPARAM HRA18     0.00 4.10 16.70 3.80
SRCPARAM HRA19     0.00 4.10 16.70 3.80
SRCPARAM HRA20     0.00 4.10 16.70 3.80
SRCPARAM HRA21     0.00 4.10 16.70 3.80
SRCPARAM HRB01     0.00 4.10 16.70 3.80
SRCPARAM HRB02     0.00 4.10 16.70 3.80
SRCPARAM HRB03     0.00 4.10 16.70 3.80
SRCPARAM HRB04     0.00 4.10 16.70 3.80
SRCPARAM HRB05     0.00 4.10 16.70 3.80
SRCPARAM HRB06     0.00 4.10 16.70 3.80
SRCPARAM HRB07     0.00 4.10 16.70 3.80
SRCPARAM HRB08     0.00 4.10 16.70 3.80
SRCPARAM HRB09     0.00 4.10 16.70 3.80
SRCPARAM HRB10     0.00 4.10 16.70 3.80
SRCPARAM HRB11     0.00 4.10 16.70 3.80
SRCPARAM HRB12     0.00 4.10 16.70 3.80
SRCPARAM HRB13     0.00 4.10 16.70 3.80
SRCPARAM HRB14     0.00 4.10 16.70 3.80
SRCPARAM HRB15     0.00 4.10 16.70 3.80
SRCPARAM FEL01     0.00 6.00 6.98 2.79
SRCPARAM BN01     0.00 3.00 30.00 1.40
SRCPARAM FEL02     0.00 6.00 6.98 2.79
SRCPARAM CR01     0.00 4.00 1.90 1.86
SRCPARAM SC02     0.00 4.00 1.90 1.86
SRCPARAM CR02     0.00 4.00 1.90 1.86
SRCPARAM SC03     0.00 4.00 1.90 1.86
SRCPARAM CR03     0.00 4.00 1.90 1.86
SRCPARAM CR04     0.00 4.00 1.90 1.86
SRCPARAM FEL03     0.00 6.00 6.98 2.79
SRCPARAM STK01     0.00 8.00 4.70 3.70
SRCPARAM TS01     0.00 6.00 6.98 2.79
SRCPARAM SP_ROM     0.00 1.50 3.23 0.70

HOUREMIS  ..\Emissions_TSP.dat  TC01 TC02 TC03 TC04 TC05
HOUREMIS  ..\Emissions_TSP.dat  HRA01 HRA02 HRA03 HRA04 HRA05
HOUREMIS  ..\Emissions_TSP.dat  HRA06 HRA07 HRA08 HRA09 HRA10
HOUREMIS  ..\Emissions_TSP.dat  HRA11 HRA12 HRA13 HRA14 HRA15
HOUREMIS  ..\Emissions_TSP.dat  HRA16 HRA17 HRA18 HRA19 HRA20
HOUREMIS  ..\Emissions_TSP.dat  HRA21
HOUREMIS  ..\Emissions_TSP.dat  HRB01 HRB02 HRB03 HRB04 HRB05
HOUREMIS  ..\Emissions_TSP.dat  HRB06 HRB07 HRB08 HRB09 HRB10
HOUREMIS  ..\Emissions_TSP.dat  HRB11 HRB12 HRB13 HRB14 HRB15
HOUREMIS  ..\Emissions_TSP.dat  FEL01 BN01 FEL02 CR01 SC02
HOUREMIS  ..\Emissions_TSP.dat  CR02 SC03 CR03 CR04 FEL03
HOUREMIS  ..\Emissions_TSP.dat  STK01 TS01 SP_ROM

PARTDIAM TC01  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM TC02  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM TC03  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM TC04  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM TC05  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA01  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA02  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA03  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA04  1.3  3.8  6.3  8.7  12.5  19  26  35  45
```

```
PARTDIAM HRA05  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA06  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA07  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA08  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA09  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA10  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA11  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA12  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA13  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA14  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA15  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA16  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA17  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA18  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA19  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA20  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRA21  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRB01  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRB02  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRB03  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRB04  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRB05  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRB06  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRB07  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRB08  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRB09  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRB10  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRB11  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRB12  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRB13  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRB14  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM HRB15  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM FEL01  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM BN01  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM FEL02  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM CR01  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM SC02  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM CR02  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM SC03  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM CR03  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM CR04  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM FEL03  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM STK01  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM TS01  1.3  3.8  6.3  8.7  12.5  19  26  35  45
PARTDIAM SP_ROM  1.3  3.8  6.3  8.7  12.5  19  26  35  45

MASSFRAX TC01  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX TC02  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX TC03  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX TC04  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX TC05  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA01  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA02  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA03  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA04  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA05  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA06  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA07  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA08  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA09  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA10  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA11  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA12  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA13  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA14  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA15  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA16  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA17  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA18  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA19  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA20  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRA21  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRB01  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRB02  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
```

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MASSFRAX HRB03  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRB04  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRB05  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRB06  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRB07  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRB08  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRB09  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRB10  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRB11  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRB12  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRB13  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRB14  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX HRB15  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX FEL01  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX BN01  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX FEL02  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX CR01  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX SC02  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX CR02  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX SC03  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX CR03  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX CR04  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX FEL03  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX STK01  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX TS01  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11
MASSFRAX SP_ROM  0.09  0.08  0.07  0.06  0.14  0.15  0.15  0.15  0.11

PARTDENS TC01  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS TC02  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS TC03  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS TC04  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS TC05  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA01  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA02  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA03  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA04  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA05  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA06  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA07  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA08  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA09  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA10  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA11  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA12  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA13  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA14  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA15  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA16  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA17  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA18  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA19  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA20  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRA21  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRB01  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRB02  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRB03  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRB04  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRB05  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRB06  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRB07  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRB08  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRB09  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRB10  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRB11  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRB12  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRB13  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRB14  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS HRB15  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS FEL01  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS BN01  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS FEL02  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS CR01  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS SC02  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
PARTDENS CR02  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
```

```
   PARTDENS SC03  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
   PARTDENS CR03  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
   PARTDENS CR04  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
   PARTDENS FEL03  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
   PARTDENS STK01  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
   PARTDENS TS01  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
   PARTDENS SP_ROM  1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0

   SRCGROUP ALL
SO FINISHED

RE STARTING
   INCLUDED ..\SensRec.rou
RE FINISHED

ME STARTING
   SURFFILE ..\SOUTHCROSS.SFC
   PROFFILE ..\SOUTHCROSS.PFL
   SURFDATA 0 2018
   UAIRDATA 54321 2018
   SITEDATA 54321 2018
   PROFBASE 355.0 METERS
ME FINISHED

OU STARTING
   RECTABLE ALLAVE 1ST
   DAYTABLE 24

   PLOTFILE 24 ALL 1ST TSP_Max_24H_SensRec.DAT 31
   PLOTFILE MONTH ALL 1ST TSP_Max_MONTH_SensRec.DAT 32
   PLOTFILE ANNUAL ALL TSP_Avg_Annual_SensRec.DAT 33

OU FINISHED
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