

Agenda

Ordinary Council Meeting

Thursday 28 March 2024
At 5.30pm

Council Chambers, 39 Bannister Road, Boddington

A vibrant and connected community with excellent lifestyle and employment opportunities in a beautiful natural environment.

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1. **DECLARATION OF OPENING**

I would like to begin by acknowledging the Traditional Owners of the land on which we meet today. I would also like to pay my respects to Elders past and present and emerging.

Councilors, to ensure clarity and effective communication during this Council Meeting, I kindly remind you to switch on your microphones when called upon to speak.

2. **ATTENDANCE/APOLOGIES/LEAVE OF ABSENCE**

2.1 **Attendance**

2.2 **Apologies**

2.3 **Leave of Absence**

Cr Paul Carrotts has requested leave of absence from 23 March 2024 to 31 March 2024.
Cr Garry Ventris has requested leave of absence from 15 June 2024 until 12 July 2024.

Recommendation

That Council approves the requested leave of absence from Cr Carrotts and Cr Ventris.

3. **DISCLOSURES OF INTEREST**

4. **PUBLIC QUESTION TIME**

Public question time is limited to a total of fifteen minutes of duration, except by consent of the person presiding. Each speaker is limited to three minutes duration to speak, except by consent of the person presiding.

5. **PETITIONS/DEPUTATIONS/PRESENTATIONS/SUBMISSIONS**

6. **CONFIRMATION OF MINUTES**

That the minutes of the Ordinary Council Meeting held on Thursday 15 February 2024 be confirmed as a true record of proceedings.

7. **ANNOUNCEMENTS BY PRESIDING MEMBER WITHOUT DISCUSSION**

8. RECEPTION OF MINUTES AND RECOMMENDATIONS OF COMMITTEES

8.1 Local Emergency Committee Meeting | 26 February 2024

Attachment: 8.1A Minutes | Local Emergency Committee Meeting 26 February 2024

That the minutes of the Local Emergency Committee Meeting held on Monday 26 February 2024 be received.

8.2 Audit Committee Meeting | 14 March 2024

Attachment: 8.2A Minutes | Audit Committee Meeting 14 March 2024

That the minutes of the Audit Committee Meeting held on Thursday 14 March 2024 be received.

8.3 Audit Committee Meeting 14 March 2024 | Compliance Audit Return 2023

File Reference:	2.048
Applicant:	Not applicable
Previous Item:	Nil
Author:	Chief Executive Officer
Disclosure of Interest:	Nil
Voting Requirements:	Simple Majority
Attachments:	8.3A Compliance Audit Return

Summary

The Department of Local Government, Sport and Cultural Industries require the Compliance Audit Return for the period 1 January 2023 to 31 December 2023 to be endorsed by the Audit Committee, prior to being considered by full Council.

Audit Committee Recommendation

That Council adopt the 2023 Compliance Audit Return, included at Attachment 8.3A.



Minutes

Local Emergency Committee Meeting

Monday 26 February 2024
At 10.00am

Council Chambers, 39 Bannister Road, Boddington

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1. **DECLARATION OF OPENING**

James Wickens, Executive Manager Development Services declared the meeting open at 10am.

I would like to begin by acknowledging the Traditional Owners of the land on which we meet today. I would also like to pay my respects to Elders past and present and emerging.

2. **ATTENDANCE/APOLOGIES/LEAVE OF ABSENCE**

2.1 **Attendance**

James Wickens	Shire of Boddington
Kevin Petch	Shire of Boddington
Jackie Stewart	Shire of Boddington
Robert Jones	Chief Bush Fire Control Officer
Wayne English	State Emergency Services - Boddington
Joshua Egan-Reid	WA Police – Boddington
Anna Erickson	Dept. of Primary Industries & Regional Development
Renee Flaxman	Dept. of Communities
Cr. Andrew Ryley	Shire of Boddington
Ryan Clarke	Newmont
Charlotte Powis	Dept. Fire and Emergency Services
Rhonda Cunnington	Boddington District High School
Blake Halford	Dept. Fire and Emergency Services
Brant Lehmann	Deputy Chief Bushfire Control Officer

2.2 **Apologies**

Cr. Lee Lewis	Shire of Boddington – Chair
Michael Pasotti	Dept. of Biodiversity, Conservation & Attractions
Ben Gartner	WA Police – Boddington
Corrie Lokan	Dept. of Health
Ronan Blaney	St John WA Community Paramedic
Karl Mickle	Shire of Wandering
Javier Brodalka	Newmont
Daniel Marsh	Newmont
Simon Smith	South32
Jayden Vitler	Dept. of Biodiversity, Conservation & Attractions
Lynda Elms	Dept. of Fire and Emergency Services
Kim Reader	Dept. of Communities

2.3 **Leave of Absence**

Nil

3. **DISCLOSURES OF INTEREST**

Nil

4. GUEST PRESENTATIONS

Renee Flaxman from Dept. Communities presented an informative speech on the Departments role of emergency relief and support.

4.1A Stream 1 presentation – Dept. of Communities

4.1B Department of Communities - 3rd Quarter Agency Update

5. CONFIRMATION OF MINUTES

Moved: Joshua Egan-Reid

Seconded: Wayne English

That the minutes of the Local Emergency Committee Meeting held on Monday 27 November 2023 be confirmed as a true record of proceedings.

Carried: [14/0]

6. REVIEW ACTION LIST AND BUSINESS ARISING

6.1 Action and Progression

Action	Responsible Person	Progress
Discuss Starlink (Comms with heavy vehicles)	Ryan Clarke	Newmont Boddington Gold Support the Shire of Boddington and LEMC with a Starlink truck. Response time would be within an hour.
Newmont Emergency Exercise	Daniel Marsh (Update Ryan Clarke)	Ryan: Dynamic did a report on the performance of the Newmont LEMC exercise. Ryan would like to bring the report to the next meet and share the outcome and learnings gained from the exercise.
DBCA Gate	Kevin Petch	Kevin has emailed DBCA and was forwarded on to district manager but has had no response yet.

7. **CORRESPONDANCE**

7.1 **Correspondence In**

Applicant Attachments Description	Office of the Hon. Stephen Dawson MLA 7.1A – Email Attachment Successful funding of AWARE 2023-2024
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Applicant Attachments Description	Charlotte Powis – DEMA 7.2A – Email Attachment New LEMC Handbook, Great Southern District Advisor Report
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7.2 **Correspondence Out**

Nil

7.3 **Information Tabled**

Nil

8. **REVIEW OF LEMC MEMBERSHIP & CONTACT LIST UPDATES**

8.1 **Review Membership and Contact List**

Attachment: 8.1A: Local Emergency Committee Meeting Contact List

9. **AGENDA ITEMS**

Nil

10. **LOCAL EMERGENCY MANAGEMENT (Standing Items)**

10.1 **Post Incident Reports**

Update:

- Kevin Petch (Ranger) is not receiving as many reports as he should.
- Robert Jones to chase up.

11. AGENCY/MEMBER REPORTS

11.1 Local Bush Fire Brigades Report

Update:

- Christmas day fire at Suez refuse was well underway before Boddington Bushfire brigade attended. Very bad situation. Attended by Hazmat pump 1 of Armadale, Adam Whitford of Narrogin attended. Fire was 90% plastic and 10% Bio waste. Very toxic. Used an Aircraft from DEFS to get control and Suez took over control. Highlighted emergency response procedures by Suez needs attention and needs to look at when it comes up for renewal with Shire of Boddington.
- Lightning Strikes in January caused 13 fires in the district. Lightning took out the Telstra repeater station for 18 days. This was only addressed by Telstra once local Government stepped in.
- Safety issues highlighted by fires on Albany Highway and Pinjarra-Williams Rd. With high traffic and smoke over the roads, cars are not slowing down and farm units have no emergency lights and the situation becomes dangerous. More emergency beacons needed.
- 2 light tankers received but did not arrive until the end of the fire season. These are also used in emergency callouts, SES and road crashes.
- Southwest Fire will be sent our appliances for routine services. Quindanning 44 has never had a service since being purchased 2012 so that will be the first to go after the financial year.

11.2 State Emergency Services Report

Update:

- 4 Medivacs have landed on the oval during school hours. We need to ensure the school advises kids to stay away.
- Wayne now has the key to the control box and time settings for the sprinkler system at the oval so the sprinklers can be turned off in needed.
- 3 Road crashes since November – 2 closed off Albany Highway.
- 3 call outs for fallen trees, 1x house, 1x school and 1x road. Trees were ghost gums and no weather conditions contributed to fall.
- Semi-trailer stock on 3 Mile Hill, SES assisted in traffic management.

11.3 St Johns WA Report

No reports tabled

11.4 Boddington Hospital Report

No reports tabled

11.5 Boddington District High School Report

No reports tabled

11.6 Newmont Boddington Gold Report

Update:

- Newmont Gold with the assistance of Boddington Bushfire brigade burnt 332 acres of bushfire mitigation work, it was a priority burn with a 30 year fuel loading to protect the town and buffer zone.
- More burn offs are scheduled for August
- Newmont have acquired a new light tanker for \$310,000. They will receive it by the end of year. Possibly loan the old tanker to Bushfire Brigade if required during an emergency.
- Renewal of DEFS MOU.

11.7 South 32 Report

No reports tabled

11.8 Boddington Police Report

Update:

- Sharp increase in Road crashes, after assessing all aspects of crashes, no common causes have been identified.
- Hours after closing a road Police are getting no response from Main Roads. Hoping for a better response in the future.

11.9 Department of Fire and Emergency Services (DEFS) Report

Update:

- Soil moisture count is very low, need significant rain to change.
- Northern fire season has not slowed down resulting in delay of light tankers to Boddington.
- Charlotte Powis introduced herself, Charlotte is the District Emergency Management Advisor. Charlotte has worked for Department of Fire and Emergency Services (DEFS) for 7 years and works with 28 local governments. Charlotte can help in Emergency Management advice and support.
- Charlotte advised of a Disaster ready grant available. Closed 20 March. 3 more rounds available also. Expression of interest can be submitted and then a consultant will be available to assist with writing the grant.

11.10 Department of Biodiversity Conservation & Attractions Report

No reports tabled

11.11 Department of Communities Agency Report

Update:

- Just had a capability audit and identified the gaps across the state.
- Completing our evacuation audit and filling the gaps
- Training with Shires available

11.12 Department of Primary Industries and Regional Development Report

No reports tabled

11.13 Shire of Boddington Report

Update:

- Kevin: Almost finished Fire Break Inspections. 96% Compliant, all but 0.8% Compliant on 2nd Inspection. Those still non-compliant live Eastern States and working with them to fix problems.
- Annual LGGGS application - funding for next year
- James: LEMA review. Draft arrangements and recovery plan received Friday 23rd February. These will be circulated to the subcommittee. Subcommittee meet again 11th March and address any comments we have on the draft also Key LEMC/community presentation meeting for the arrangement on 25th March.

12. GENERAL BUSINESS

12.1 Robert Jones: The old light tanker at the rubbish tip that was disposed of, what are the details please?

James Wickens: It was sold.

Robert Jones: Where, Who?

James Wickens: Who bought it? I'm not sure but it would have gone through our normal disposal of assets and auctioned off.

Robert Jones: So it was all above board?

James Wickens: Yes, It was before my time here but as far as I'm aware it had been at the waste facility for a long time and like any asset, once they reach end of life they get disposed of, it would have gone through public notice of disposal of vehicle for comment, it also went through a budget process.

Robert Jones: It has been proposed we make the office facilities at the Bush fire shed into a training room for all brigades. However the facility needs to be updated with an air conditioner and a smart board. This will elevate a lot of problems and help keep training on track.

Robert Jones: What would be the possibility of Newmont sponsoring a Starlink unit for a fire command vehicle?

Ryan Clark: I will ask the question. Great idea. Also LTE WIFI might be a possibility as well.

Blake Halford: We need to raise awareness in the community of deliberately lit fires. The Shire of Narrigan and Cuballing have seen an increase in fires.

James Wickens: As part of the aware funding we are required to test the new arrangements. As part of the package we need to test our recovery plan and how we deal with the recovery. Second week on June. More information to follow

13. NEXT MEETING

13.1 Approve Meeting dates for 2024

Moved: Joshua Egan-Reid

Seconded: Wayne English

The committee approve the next meeting date on Monday 27 May 2024 at 10.am.

Carried: [14/0]

14. CLOSURE OF MEETING

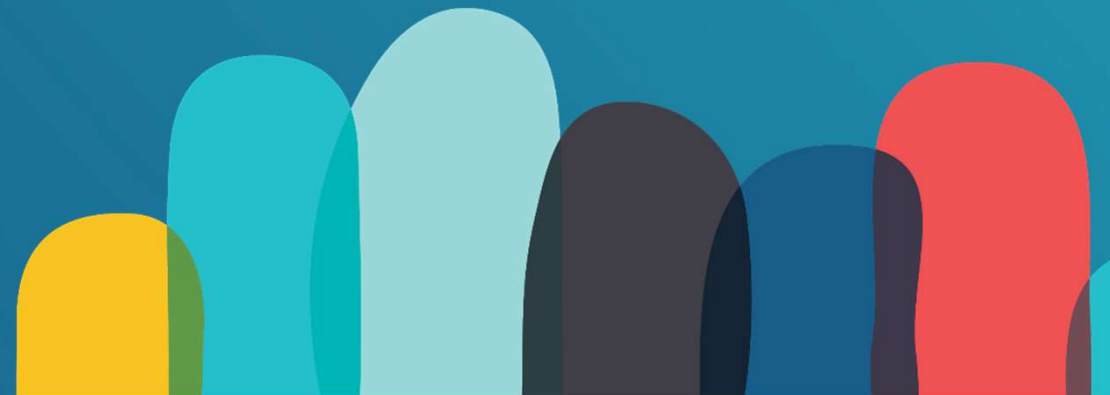
There being no further business, James Wickens, Executive Manager Development Services, declared the meeting closed at 11.15am.



Government of **Western Australia**
Department of **Communities**

Department of Communities

Emergency Relief and Support



Our Role

Department of Communities coordinates the provision of Emergency Relief and Support (ERS) services as outlined in the **State Support Plan- Emergency Relief and Support**.

ERS services focus on the 'people-element' of emergency management, across 6 functional domains:

- emergency **accommodation**
- emergency **food provision**
- emergency **clothing and personal requisites**
- **personal support**
- **registration and reunification**
- **financial assistance**




























Communities also:

- coordinates Reception Services for overseas evacuees under the Australian Reception Plan
- establishes Disaster Information Support and Care Centre (DISCC) in major emergencies
- supports Disaster Victim Identification processes in mass fatalities
- provides ERS services under the Perth Airport Aerodrome Emergency Plan



Role in emergencies

Communities is a 'Prescribed **Support Organisation**' and provides ERS services for any of the 28 hazards prescribed in legislation.

 <p>DFES Department of Fire & Emergency Services</p> <ul style="list-style-type: none">  Collapse  Cyclone  Earthquake  Fire  Flood  Chemical  Radiological  Storm  Tsunami 	 <p>POLICE</p> <ul style="list-style-type: none">  Air Crash  Hostile Act  Land Search  Marine Search  Nuclear warships  Road crash  Space debris  Terrorism 	 <p>Government of Western Australia Department of Health</p> <ul style="list-style-type: none">  Heatwave  HAZMAT Bio  Pandemic 	 <p>Public Transport Authority <small>WAPO, or DPTG by agreement</small></p> <ul style="list-style-type: none">  Rail crash passenger
		 <p>Government of Western Australia Department of Transport</p> <ul style="list-style-type: none">  Marine emergency  Oil spill 	 <p>Government of Western Australia Energy Policy WA</p> <ul style="list-style-type: none">  Fuel disruption  Gas disruption  Power disruption
		 <p>ARC infrastructure <small>WAPO, or DPTG by agreement</small></p> <ul style="list-style-type: none">  Rail crash freight 	 <p>Government of Western Australia Department of Primary Industries and Regional Development</p> <ul style="list-style-type: none">  Bio security



Communities' ERS Directorate

Purpose: To reduce the immediate and long-term impact of emergencies on people and communities

Our Focus Areas:

Prevention & Preparedness

Supporting the strength and resilience of people and communities by working in partnership to plan and prepare for emergencies.

Response & Recovery

Coordinating immediate and long-term support for people and communities impacted by emergencies.

Effective Governance, People and Leadership

Nurturing a culture of support, leadership and effective governance.

A key part of our preparedness is developing and maintaining **local emergency relief and support plans** for each local government area in WA.



Enhanced Service Delivery Model

- 2022 funding approved to enhance Communities' Emergency Relief and Support Directorate's resource capacity to additional 36 full time equivalents (FTE).
- Change process commenced Aug 2023 to establish permanent structure finalised mid 2024
- Enable Communities to further meet its legislated responsibilities under the Emergency Management Act 2005
- Increase operational capacity and stability in the regions, leading to enhanced service delivery of emergency response and recovery (including increased resourcing)
- Increase capacity to respond to and influence State and National Policy.



Enhanced Service Delivery Model

Vision: Empowered People, Partners and Communities

Purpose: To reduce the immediate and long-term impact of emergencies on people and communities

Stream 1 – Regional Coordination and Preparedness (17 FTE)

Responsible for Immediate Response, Metropolitan and Regional Preparedness, Regional Training and Local level Recovery.

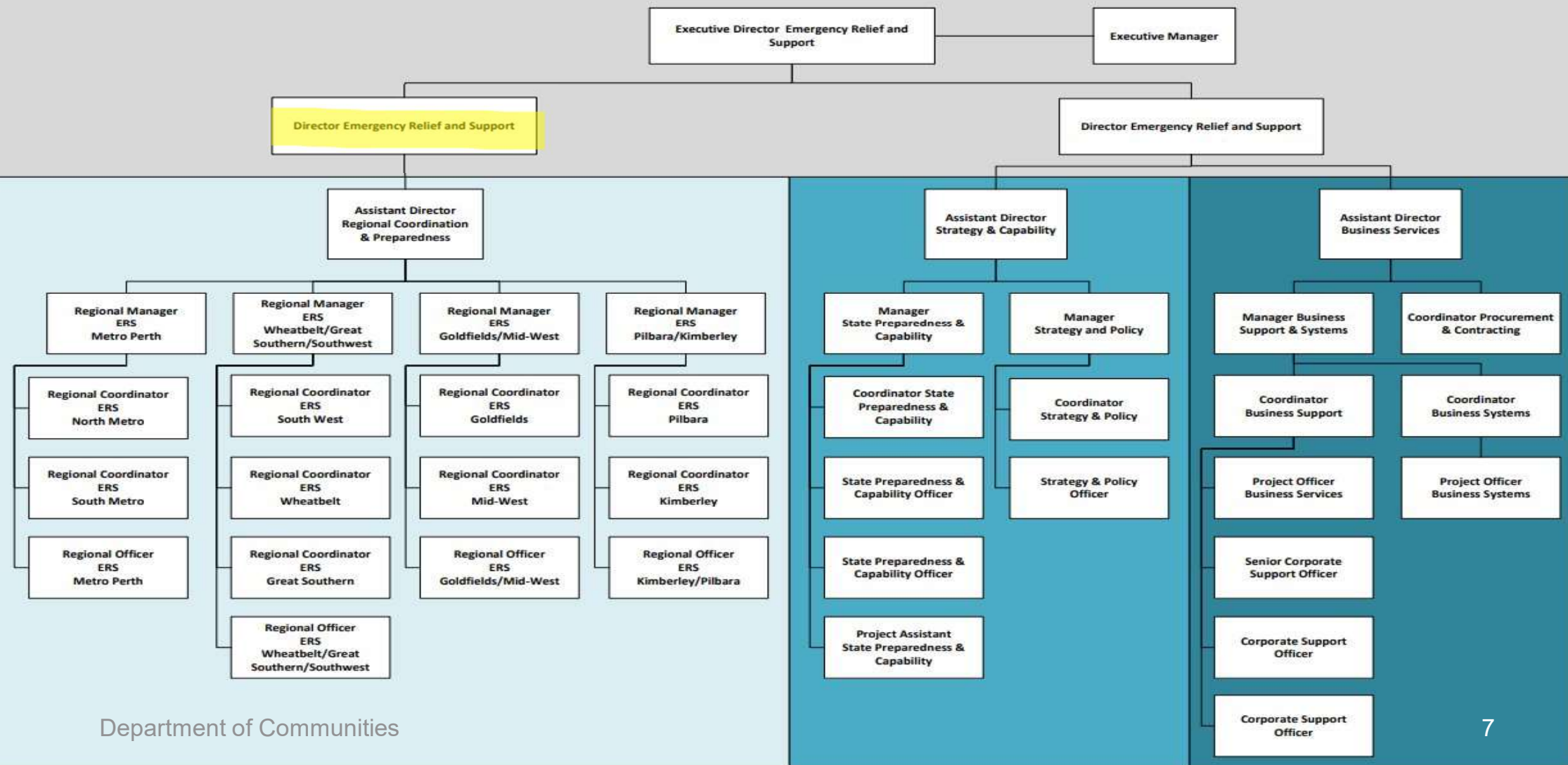
Stream 2 – Strategy and Capability (9 FTE)

Responsible for Strategy, Policy, Preparedness, Capability Mapping / Intelligence / Reporting, Monitoring and Evaluation, Stakeholder Engagement / Specialist Practice, Training and Development, Recovery, National and State Level Committees, DRFA and Special Projects.

Stream 3 – Business Services (10 FTE)

Responsible for Business Support functions, Systems, Reporting, Procurement, Grants and Contracting, Logistics, DRFA Acquittals and coordinating Emergency Response Teams / Surge Workforce personnel.





Department of Communities

7

Stream 1 – Regional Coordination and Preparedness

- 4 Regional Clusters:
 - Metropolitan Perth - North and South
 - Wheatbelt/Great Southern/South-West
 - Goldfields/Mid-West
 - Pilbara/Kimberley
- Responsible for:
 - Training
 - Preparedness
 - Immediate response
 - Local level recovery
- Ensure effective planning and preparedness strategies are implemented to effectively respond to community needs before, during and after emergency events.
- Work collaboratively across the State in the delivery of emergency relief and support services.



What does this look like for the community in emergency response and recovery?

Response	Recovery
<ul style="list-style-type: none">• Coordinating ERS services to provide immediate relief to impacted community members:<ul style="list-style-type: none">○ Managing evacuation centres○ Information and support through the Disaster Response Hotline○ Coordinating ERS partner agencies○ Emergency food○ Emergency accommodation○ Emergency clothing and personal requisites○ Financial assistance○ Register.Find.Reunite.○ Psychological first aid	<ul style="list-style-type: none">• Coordinating ERS services to support the longer-term recovery of impacted communities:<ul style="list-style-type: none">○ Supporting the local government, LRCG and Recovery Hubs○ Disaster Response Hotline○ Conducting community needs assessment○ Coordinating outreach, home visits○ Coordinating enhanced service provision such as financial counselling and wellbeing supports○ Case coordination of impacted people○ Financial assistance○ Advocacy, practical assistance○ Supporting community events



Terminology Changes

Previous Terminology	Updated Terminology (approved as of 4 October 2023)
Welfare	Emergency Relief and Support
Welfare functional areas <ul style="list-style-type: none"> • emergency accommodation • emergency catering • emergency clothing and personal requisites • personal services • registration and reunification • financial assistance. 	Functional domains <ul style="list-style-type: none"> • emergency accommodation • emergency food • emergency clothing and personal requisites • personal support services • registration and reunification • financial assistance.
Welfare Centre/Local Welfare Emergency Coordination Centre	Evacuation Centre
State Welfare Emergency Committee	State Emergency Relief and Support Committee
State Welfare Emergency Committee - Operations	State Emergency Relief and Support Committee - Operations
Emergency Welfare Coordination Groups	Emergency Relief and Support Coordination Groups
Local Emergency Welfare Plan	Local Emergency Relief and Support Plan
Local Welfare Emergency Committee	Local Emergency Relief and Support Coordination Group
Local Welfare Emergency Coordination Centre	Evacuation Centre

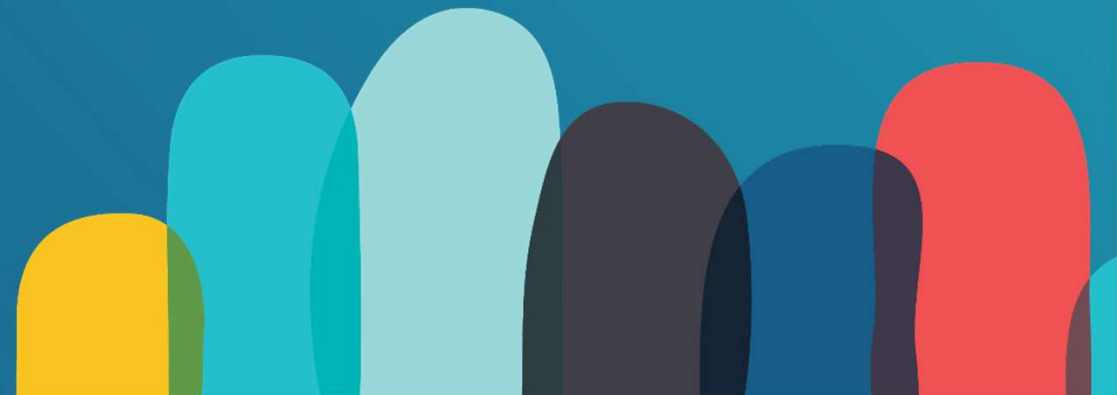
Previous Terminology	Updated Terminology (approved as of 4 October 2023)
State Welfare Incident Coordination Centres	State Emergency Relief and Support Incident Coordination Centres
State Welfare Coordinator	State Relief and Support Coordinator
State Welfare Centre	State Evacuation Centre
Welfare Emergency Controller	Emergency Relief and Support Coordinator
State Welfare Centre Database	State Evacuation Centre Database
Local Welfare Coordinator	Evacuation Centre Coordinator
Welfare agencies	Partner agencies
Welfare Coordinator (SHP – Crash Emergency)	Airport Emergency Relief and Support Coordinator
Support Agency Welfare Liaison Officer	Liaison Officers
Local Welfare Liaison Officer	Local Government Liaison Officer





Government of **Western Australia**
Department of **Communities**

Questions?



**LOCAL EMERGENCY MANAGEMENT COMMITTEE
REPORTING**

Agency Update:
3rd Quarter 2023-2024

**Department of Communities
(Communities)**

Date: February 2024

EXERCISES AND TRAINING:
Please see notes below.

Date:	Title	Objectives	Location

Department of Communities – Emergency Relief and Support Update

ERS Capability Audit:

- Communities commissioned Nous Group to conduct an audit to establish the baseline capability of the Emergency Relief and Support sector in WA, with a view to identifying critical capability gaps across the state.
- The project focused on establishing a baseline of how well equipped the State is to prepare for, respond to, and recovery from emergencies and critical events in the six functional areas of ERS that Communities is responsible for.
- The findings have presented valuable insights and opportunities to increase the current emergency relief and support services to respond during an emergency event more effectively.
- A new internal capability framework is being developed to assist with bridging some of the gaps identified from the audit.

ERS New Structure:

- In late 2022, the Department of Treasury sanctioned additional funding to bolster the resource capacity of the ERS to 36 full-time equivalents (FTE).
- Stream 1 is responsible for Regional Response and Coordination
 - Immediate Response
 - Metropolitan and Regional Preparedness
 - Stakeholder engagement
 - Regional Training
 - Locally led Recovery
 - Special Projects
- Stream 2 is responsible for Strategy and Capability
 - Capability Mapping, Intelligence and Reporting
 - Monitoring and Evaluation
 - Stakeholder Engagement and Specialist Practice
 - Training and Development
 - Recovery
 - National and State Level Committees
 - DRFA and Special Projects
- Stream 3 is responsible for Business Services
 - Human Resources including the coordination of Emergency Response Teams and Surge Workforce personnel

- Finance
- Business Support and Administration
- ERS Systems
- Procurements, Grants, and Contracting
- Logistics
- Disaster Response Hotline
- DRFA Acquittals

Emergency Management Preparedness:

- **Evacuation Centre Audits:**
 - In collaboration with Local Governments and emergency management agencies, Communities continues to identify and assess suitable evacuation centres state-wide.
 - We have enhanced our evacuation centre risk assessment process and commenced a state-wide audit of these centres for better-informed risk assessment during emergency incidents.
- **Exercises, Training, and Partner Engagement:**
 - ERS Regional Coordinators are continuing Evacuation Centre Training and Desktop Exercises across the state, focusing on effective response and support during regional emergency events.
- **State Support Plan:**
 - Based on feedback received, the plan has been renamed to 'State Support Plan – Emergency Relief and Support'.
 - The State EM Policy Branch at DFES has updated the State EM Framework documents, including revisions to welfare references and other consequential amendments.
 - Local Emergency Relief and Support Plans (formerly Local Emergency Welfare Plans) are being updated to reflect the new terminology.

Recovery Update

- **Kimberley Floods**
 - The Department of Communities (Communities’) continues to provide emergency relief and support services to residents impacted by the Kimberley Floods.
- **Mariginiup Bushfire**
 - The Department of Communities (Communities’) continues to provide emergency relief and support services to residents impacted by the fire.
 - A Local Recovery Hub has been established by the City of Wanneroo at the Wanneroo Civic Centre



**Minister for Emergency Services; Innovation and the Digital Economy; Science;
Medical Research; Minister Assisting the Minister for State and Industry
Development, Jobs and Trade
Deputy Leader of the Government in the Legislative Council**

Our Ref: 62-35602

Mr James Wickens
Project Manager
Shire of Boddington
PO Box 4
BODDINGTON WA 6390

james.wickens@boddington.wa.gov.au

Dear Mr Wickens

**ALL WEST AUSTRALIANS REDUCING EMERGENCIES (AWARE) 2023-24
GRANT ROUND**

Thank you for your submission to the AWARE 2023-2024 competitive grant program.

I am pleased to inform you that your application for the Review and Development of Local Emergency Management Arrangements Project has been successful and will receive the requested funding amount of \$9,050 (ex GST).

The Department of Fire and Emergency Services will soon provide you with a draft Grant Funding Agreement and an outline of the next steps required. If you have any questions in the interim, please email semc.grants@dfes.wa.gov.au.

I look forward to the successful delivery of this project that will benefit the community and reduce disaster risk for the State.

Yours sincerely

A handwritten signature in blue ink, appearing to be 'S Dawson', written over a large blue circular scribble.

Hon Stephen Dawson MLC
MINISTER FOR EMERGENCY SERVICES

18 DEC 2023

Hi All,

Happy New Year, a distant memory I'm sure for many of you! Hopefully you have been able to enjoy some of the summer and have settled back in if you had time off over the holidays.

I have recently started in the role as District Emergency Management Advisor (DEMA), taking over from the long standing DEMA Adam Smith who I'm sure you all knew very well!

I have been transitioning from my previous role as Great Southern Community Preparedness Advisor for DFES into the DEMA position and as such, have been undertaking key priorities for both positions.

I'm mindful the DEMA role has been vacant for a substantial period. If there is anything urgent you need to discuss, please reach out and I will do my best to assist.

I have attached a report highlighting some key points and opportunities that may be of interest to you. Some key points of interest are:

- [Disaster Ready Fund](#) is now open until the 20th March;
- [New LEMC handbook](#) now available to assist local governments in the management of their LEMCs and to assist them as they work to meet their legislative requirements. It also includes some useful templates;
- Release of [Emergency Management Sector Adaptation Plan Discussion Paper](#)- consultation period open until 29th March 2024; and
- The [LEMA Improvement Program](#) has been finalised and the implementation approach endorsed by SEMC in December 2023. Given the timeframes of the program **please don't delay in preparing any LEMA that are due or nearly due for their 5 year review.**

If you have your LEMC dates scheduled for 2024 or any planned exercises please let me know the dates as I am scheduling my availability for regional commitments for both the Upper Great Southern and Great Southern regions.

I am very much looking forward to meeting those I haven't already and working with you all.

Kind regards
Charlotte

Charlotte Powis

**District Emergency Management Advisor
Great Southern Region | Operations**

Department of Fire and Emergency Services | 5 Hercules Crescent, Albany WA 6330

P: 08 9845 5007 | **M:** 0429 104 007 | **F:** 08 9841 6719 | **E:** charlotte.powis@dfes.wa.gov.au



Government of Western Australia
Department of Fire & Emergency Services



Local Emergency Management Committee Contact List

(As at November 2023)

NAME	EMAIL	CONTACT #	DEPARTMENT
Adam Whitford	[REDACTED]	[REDACTED]	Dept. Fire And Emergency Services
Lynda Elms	[REDACTED]	[REDACTED]	District Officer Natural Hazards Dept. Fire And Emergency Services
Anna Erickson	[REDACTED]	[REDACTED]	Dept. of Primary Industries and Regional Development Senior Vet Officer
Ben Gartner	[REDACTED]	[REDACTED]	WA Police
Corrie Lokan	[REDACTED]	[REDACTED]	Dept. Of Health
Cr. Andrew Ryley	[REDACTED]	[REDACTED]	Shire Of Boddington
Cr. Lee Lewis (Chair)	[REDACTED]	[REDACTED]	Shire Of Boddington
Daniel Marsh	[REDACTED]	[REDACTED]	Newmont
Charlotte Powis	[REDACTED]	[REDACTED]	District Emergency Management Advisor
Jackie Stewart	[REDACTED]	[REDACTED]	Sob Administration Officer P&D
James Wickens	[REDACTED]	[REDACTED]	Sob Exec Manager Of P&D
Javier Brodalka	[REDACTED]	[REDACTED]	Newmont
Jayden Vitler	[REDACTED]	0197 700 000	Dept. Biodiversity, Conservation & Attractions
Karl Mickle	[REDACTED]	[REDACTED]	Shire Of Wandering
Kevin Petch	[REDACTED]	[REDACTED]	Shire Of Boddington Ranger
Kim Reader	[REDACTED]	[REDACTED]	Communities
Michael Pasotti	[REDACTED]	0197 700 100	Dept. Biodiversity, Conservation And Attractions
Naomi Jory	[REDACTED]	[REDACTED]	Communities
Robert Jones	[REDACTED]	[REDACTED]	Chief Bushfire Control Officer
Ronan Blaney	[REDACTED]	[REDACTED]	St John WA Community Paramedic Southern Wheatbelt Wbt55
Joshua Egan-Reid	[REDACTED]	[REDACTED]	WA Police
Ryan Clarke	[REDACTED]	[REDACTED]	Newmont
Simon Smith	[REDACTED]	[REDACTED]	South32
Wayne English	[REDACTED]	[REDACTED]	SES Manager
Rhonda Cunningham	[REDACTED]	[REDACTED]	Boddington District Senior High School



Minutes

Audit Committee Meeting

Thursday 14 March 2024
At 5.00pm

Council Chambers, 39 Bannister Road, Boddington

A vibrant and connected community with excellent lifestyle and employment opportunities in a beautiful natural environment.

DISCLAIMER

No responsibility whatsoever is implied or accepted by the Shire of Boddington for any act, omission or statement or intimation occurring during Council/Committee meetings or during formal/informal conversations with staff. The Shire of Boddington disclaims any liability for any loss whatsoever and howsoever caused arising out of reliance by any person or legal entity on any such act, omission or statement or intimation occurring during Council/Committee meetings or discussions. Any person or legal entity who acts or fails to act in reliance upon any statement does so at that person's or legal entity's own risk.

In particular and with derogating in any way from the broad disclaimer above, in any discussion regarding any planning application or application for a licence, any statement or limitation of approval made by a member or officer of the Shire of Boddington during the course of any meeting is not intended to be and is not taken as notice or approval from the Shire of Boddington. The Shire of Boddington warns that anyone who has an application lodged with the Shire of Boddington must obtain and only should rely on WRITTEN CONFIRMATION of the outcome of that application and any conditions attaching to the decision made by the Shire of Boddington in respect of the application.

AGENDA

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1. DECLARATION OF OPENING

The Shire President declared the meeting open at 5.01 pm.

I would like to begin by acknowledging the Traditional Owners of the land on which we meet today. I would also like to pay my respects to Elders past and present and emerging.

Members, to ensure clarity and effective communication during this meeting, I kindly remind you to switch on your microphones when called upon to speak.

2. ATTENDANCE/APOLOGIES/LEAVE OF ABSENCE

2.1 Attendance

Cr Garry Ventris	Shire President
Cr Eugene Smalberger	Deputy Shire President
Cr Andrew Ryley	Councillor
Cr Lee Lewis	Councillor
Cr Paul Carrotts	Councillor
Cr Johan Van Heerden	Councillor
Cr Hans Prandl	Councillor
Mrs Julie Burton	Chief Executive Officer
Mrs Cara Ryan	Executive Manager Corporate Services
Mr James Wickens	Executive Manager Development Services
Mr Fabian Houbrechts	Executive Manager Infrastructure Services
Mrs Thalia Douglas	Executive Assistant (minutes)

Visitors: 0

2.2 Apologies

Nil

2.3 Leave of Absence

Nil

3. DISCLOSURES OF INTEREST

Nil

4. CONFIRMATION OF MINUTES

Officer Recommendation and Committee Decision

COMMITTEE RESOLUTION: 4/24

Moved: Cr L Lewis

Seconded: Cr A Ryley

That the minutes of the Audit Committee Meeting held on Thursday 18 January 2024 be confirmed as a true record of proceedings.

Carried: 7-0

For: Cr G Ventris, Cr E Smalberger, Cr L Lewis, Cr A Ryley, Cr P Carrotts, Cr J Van Heerden, Cr H Prandl

Against: Nil

5. REPORTS BY OFFICERS

5.1 Compliance Audit Return 2023

File Reference:	3.0043
Applicant:	Nil
Previous Item:	Nil
Voting Requirements:	Simple Majority
Disclosure of Interest:	Nil
Author:	Chief Executive Officer
Attachments:	5.1A Compliance Audit Return 2023

Summary

The Department of Local Government, Sport and Cultural Industries require the Compliance Audit Return for the period 1 January 2023 to 31 December 2023 to be endorsed by the Audit Committee, prior to being endorsed by full Council.

Background

The Compliance Audit Return (CAR) is a Department of Local Government, Sport and Cultural Industries prepared checklist of some of the statutory requirements for Local Governments in the twelve months to 31 December 2023.

The Statutory Compliance Audit Return is to be:

1. presented to the Audit Committee
2. recommended for Adoption by Council at an Audit Committee Meeting
3. presented to the Council at a meeting of Council
4. adopted by the Council
5. the adoption recorded in the minutes of the meeting at which it is adopted.

After the Compliance Audit Return has been presented to Council, a certified copy of the return, along with the relevant section of the minutes and any additional information explaining or qualifying the compliance audit is to be submitted to the Director General, Department of Local Government, Sport and Cultural Industries by 31 March 2024.

Comment

The Compliance Audit Return has been completed for the 2023 calendar year and is provided to the Audit Committee for review. There are no noted items that signify non-compliance.

As per the Local Government (Audit) Regulations, this item is presented to the Audit Committee to make an appropriate recommendation to Council.

Strategic Implications

Aspiration	Performance
Outcome 12	Visionary Leadership and Responsible Governance
Objective 12.1	Maintain a high standard of leadership, corporate governance and customer service

Statutory Environment

Local Government (Audit) Regulations – Regulation 14 – Compliance audit return to be

reviewed by the Audit Committee and report made to Council.

Local Government (Audit) Regulations – Regulation 15 – once considered by Council, the return is to be signed by President and CEO and lodged with the Department by 31 March.

Policy Implications

Nil

Financial Implications

Nil

Economic Implications

Nil

Social Implications

Nil

Environmental Considerations

Nil

Consultation

Nil

Officer Recommendation and Committee Decision

COMMITTEE RESOLUTION: 5/24

Moved: Cr H Prandl

Seconded: Cr L Lewis

That the Audit Committee recommend to Council that the 2023 Compliance Audit Return, included at Attachment 5.1A, be endorsed.

Carried: 7-0

For: Cr G Ventris, Cr E Smalberger, Cr L Lewis, Cr A Ryley, Cr P Carrotts, Cr J Van Heerden, Cr H Prandl

Against: Nil



Boddington – Compliance Audit Return

Commercial Enterprises by Local Governments				
No	Reference	Question	Response	Comments
1	s3.59(2)(a) F&G Regs 7,9,10	Has the local government prepared a business plan for each major trading undertaking that was not exempt in 2023?	N/A	
2	s3.59(2)(b) F&G Regs 7,8A, 8, 10	Has the local government prepared a business plan for each major land transaction that was not exempt in 2023?	N/A	
3	s3.59(2)(c) F&G Regs 7,8A, 8,10	Has the local government prepared a business plan before entering into each land transaction that was preparatory to entry into a major land transaction in 2023?	N/A	
4	s3.59(4)	Has the local government complied with public notice and publishing requirements for each proposal to commence a major trading undertaking or enter into a major land transaction or a land transaction that is preparatory to a major land transaction for 2023?	N/A	
5	s3.59(5)	During 2022, did the council resolve to proceed with each major land transaction or trading undertaking by absolute majority?	N/A	

Delegation of Power/Duty				
No	Reference	Question	Response	Comments
1	s5.16 (1)	Were all delegations to committees resolved by absolute majority?	N/A	
2	s5.16 (2)	Were all delegations to committees in writing?	N/A	
3	s5.17	Were all delegations to committees within the limits specified in section 5.17 of the Local Government Act 1995?	N/A	
4	s5.18	Were all delegations to committees recorded in a register of delegations?	N/A	
5	s5.18	Has council reviewed delegations to its committees in the 2022/2023 financial year?	N/A	
6	s5.42(1) & s5.43 Admin Reg 18G	Did the powers and duties delegated to the CEO exclude those listed in section 5.43 of the Local Government Act 1995?	Yes	



7	s5.42(1)	Were all delegations to the CEO resolved by an absolute majority?	Yes	
8	s5.42(2)	Were all delegations to the CEO in writing?	Yes	
9	s5.44(2)	Were all delegations by the CEO to any employee in writing?	Yes	
10	s5.16(3)(b) & s5.45(1)(b)	Were all decisions by the Council to amend or revoke a delegation made by absolute majority?	Yes	
11	s5.46(1)	Has the CEO kept a register of all delegations made under Division 4 of the Act to the CEO and to employees?	Yes	
12	s5.46(2)	Were all delegations made under Division 4 of the Act reviewed by the delegator at least once during the 2022/2023 financial year?	Yes	
13	s5.46(3) Admin Reg 19	Did all persons exercising a delegated power or duty under the Act keep, on all occasions, a written record in accordance with Local Government (Administration) Regulations 1996, regulation 19?	Yes	

Disclosure of Interest				
No	Reference	Question	Response	Comments
1	s5.67	Where a council member disclosed an interest in a matter and did not have participation approval under sections 5.68 or 5.69 of the Local Government Act 1995, did the council member ensure that they did not remain present to participate in discussion or decision making relating to the matter?	N/A	
2	s5.68(2) & s5.69(5) Admin Reg 21A	Were all decisions regarding participation approval, including the extent of participation allowed and, where relevant, the information required by the Local Government (Administration) Regulations 1996 regulation 21A, recorded in the minutes of the relevant council or committee meeting?	N/A	
3	s5.73	Were disclosures under sections 5.65, 5.70 or 5.71A(3) of the Local Government Act 1995 recorded in the minutes of the meeting at which the disclosures were made?	Yes	
4	s5.75 Admin Reg 22, Form 2	Was a primary return in the prescribed form lodged by all relevant persons within three months of their start day?	Yes	
5	s5.76 Admin Reg 23, Form 3	Was an annual return in the prescribed form lodged by all relevant persons by 31 August 2022?	Yes	



6	s5.77	On receipt of a primary or annual return, did the CEO, or the Mayor/President, give written acknowledgment of having received the return?	Yes	
7	s5.88(1) & (2)(a)	Did the CEO keep a register of financial interests which contained the returns lodged under sections 5.75 and 5.76 of the Local Government Act 1995?	Yes	
8	s5.88(1) & (2)(b) Admin Reg 28	Did the CEO keep a register of financial interests which contained a record of disclosures made under sections 5.65, 5.70, 5.71 and 5.71A of the Local Government Act 1995, in the form prescribed in the Local Government (Administration) Regulations 1996, regulation 28?	Yes	
9	s5.88(3)	When a person ceased to be a person required to lodge a return under sections 5.75 and 5.76 of the Local Government Act 1995, did the CEO remove from the register all returns relating to that person?	Yes	
10	s5.88(4)	Have all returns removed from the register in accordance with section 5.88(3) of the Local Government Act 1995 been kept for a period of at least five years after the person who lodged the return(s) ceased to be a person required to lodge a return?	Yes	
11	s5.89A(1), (2) & (3) Admin Reg 28A	Did the CEO keep a register of gifts which contained a record of disclosures made under sections 5.87A and 5.87B of the Local Government Act 1995, in the form prescribed in the Local Government (Administration) Regulations 1996, regulation 28A?	Yes	
12	s5.89A(5) & (5A)	Did the CEO publish an up-to-date version of the gift register on the local government's website?	Yes	
13	s5.89A(6)	When people cease to be a person who is required to make a disclosure under section 5.87A or 5.87B of the Local Government Act 1995, did the CEO remove from the register all records relating to those people?	Yes	
14	s5.89A(7)	Have copies of all records removed from the register under section 5.89A(6) of the Local Government Act 1995 been kept for a period of at least five years after the person ceases to be a person required to make a disclosure?	Yes	
15	s5.70(2) & (3)	Where an employee had an interest in any matter in respect of which the employee provided advice or a report directly to council or a committee, did that person disclose the nature and extent of that interest when giving the advice or report?	Yes	



16	s5.71A & s5.71B(5)	Where council applied to the Minister to allow the CEO to provide advice or a report to which a disclosure under section 5.71A(1) of the Local Government Act 1995 relates, did the application include details of the nature of the interest disclosed and any other information required by the Minister for the purposes of the application?	N/A	
17	s5.71B(6) & s5.71B(7)	Was any decision made by the Minister under section 5.71B(6) of the Local Government Act 1995, recorded in the minutes of the council meeting at which the decision was considered?	N/A	
18	s5.104(1)	Did the local government prepare and adopt, by absolute majority, a code of conduct to be observed by council members, committee members candidates that incorporates the model code of conduct?	Yes	
19	s5.104(3) & (4)	Did the local government adopt additional requirements in addition to the model code of conduct? If yes, does it comply with section 5.104(3) and (4) of the Local Government Act 1995?	No	
20	s5.104(7)	Has the CEO published an up-to-date version of the code of conduct for council members, committee members and candidates on the local government's website?	Yes	
21	s5.51A(1) & (3)	Has the CEO prepared and implemented a code of conduct to be observed by employees of the local government? If yes, has the CEO published an up-to-date version of the code of conduct for employees on the local government's website?	Yes	

Disposal of Property				
No	Reference	Question	Response	Comments
1	s3.58(3)	Where the local government disposed of property other than by public auction or tender, did it dispose of the property in accordance with section 3.58(3) of the Local Government Act 1995 (unless section 3.58(5) applies)?	Yes	
2	s3.58(4)	Where the local government disposed of property under section 3.58(3) of the Local Government Act 1995, did it provide details, as prescribed by section 3.58(4), in the required local public notice for each disposal of property?	Yes	



Elections				
No	Reference	Question	Response	Comments
1	Elect Regs 30G(1) & (2)	Did the CEO establish and maintain an electoral gift register and ensure that all disclosure of gifts forms completed by candidates and donors and received by the CEO were placed on the electoral gift register at the time of receipt by the CEO and in a manner that clearly identifies and distinguishes the forms relating to each candidate in accordance with regulations 30G(1) and 30G(2) of the Local Government (Elections) Regulations 1997?	Yes	
2	Elect Regs 30G(3) & (4)	Did the CEO remove any disclosure of gifts forms relating to an unsuccessful candidate, or a successful candidate that completed their term of office, from the electoral gift register, and retain those forms separately for a period of at least two years in accordance with regulation 30G(4) of the Local Government (Elections) Regulations 1997?	N/A	
3	Elect Regs 30G(5) & (6)	Did the CEO publish an up-to-date version of the electoral gift register on the local government's official website in accordance with regulation 30G(5) of the Local Government (Elections) Regulations 1997?	Yes	

Finance				
No	Reference	Question	Response	Comments
1	s7.1A	Has the local government established an audit committee and appointed members by absolute majority in accordance with section 7.1A of the Local Government Act 1995?	Yes	
2	s7.1B	Where the council delegated to its audit committee any powers or duties under Part 7 of the Local Government Act 1995, did it do so by absolute majority?	N/A	



3	s7.9(1)	Was the auditor’s report for the financial year ended 30 June 2023 received by the local government by 31 December 2023?	Yes	
4	s7.12A(3)	Where the local government determined that matters raised in the auditor’s report prepared under section 7.9(1) of the Local Government Act 1995 required action to be taken, did the local government ensure that appropriate action was undertaken in respect of those matters?	N/A	
5	s7.12A(4)(a) & (4)(b)	Where matters identified as significant were reported in the auditor’s report, did the local government prepare a report that stated what action the local government had taken or intended to take with respect to each of those matters? Was a copy of the report given to the Minister within three months of the audit report being received by the local government?	N/A	
6	s7.12A(5)	Within 14 days after the local government gave a report to the Minister under section 7.12A(4)(b) of the Local Government Act 1995, did the CEO publish a copy of the report on the local government’s official website?	N/A	
7	Audit Reg 10(1)	Was the auditor’s report for the financial year ending 30 June 2023 received by the local government within 30 days of completion of the audit?	Yes	

Local Government Employees				
No	Reference	Question	Response	Comments
1	s5.36(4) & s5.37(3) Admin Reg 18A	Were all CEO and/or senior employee vacancies advertised in accordance with Local Government (Administration) Regulations 1996, regulation 18A?	N/A	
2	Admin Reg 18E	Was all information provided in applications for the position of CEO true and accurate?	N/A	
3	Admin Reg 18F	Was the remuneration and other benefits paid to a CEO on appointment the same remuneration and benefits advertised for the position under section 5.36(4) of the Local Government Act 1995?	N/A	
4	s5.37(2)	Did the CEO inform council of each proposal to employ or dismiss senior employee?	N/A	
5	s5.37(2)	Where council rejected a CEO’s recommendation to employ or dismiss a senior employee, did it inform the CEO of the reasons for doing so?	N/A	



Official Conduct				
No	Reference	Question	Response	Comments
1	s5.120	Has the local government designated an employee to be its complaints officer?	Yes	
2	s5.121(1) & (2)	Has the complaints officer for the local government maintained a register of complaints which records all complaints that resulted in a finding under section 5.110(2)(a) of the Local Government Act 1995?	Yes	
3	S5.121(2)	Does the complaints register include all information required by section 5.121(2) of the Local Government Act 1995?	Yes	
4	s5.121(3)	Has the CEO published an up-to-date version of the register of the complaints on the local government's official website?	Yes	

Tenders for Providing Goods and Services				
No	Reference	Question	Response	Comments
1	F&G Reg 11A(1) & (3)	Did the local government comply with its current purchasing policy, adopted under the Local Government (Functions and General) Regulations 1996, regulations 11A(1) and (3) in relation to the supply of goods or services where the consideration under the contract was, or was expected to be, \$250,000 or less or worth \$250,000 or less?	Yes	
2	s3.57 F&G Reg 11	Subject to Local Government (Functions and General) Regulations 1996, regulation 11(2), did the local government invite tenders for all contracts for the supply of goods or services where the consideration under the contract was, or was expected to be, worth more than the consideration stated in regulation 11(1) of the Regulations?	Yes	
3	F&G Regs 11(1), 12(2), 13, & 14(1), (3), and (4)	When regulations 11(1), 12(2) or 13 of the Local Government Functions and General) Regulations 1996, required tenders to be publicly invited, did the local government invite tenders via Statewide public notice in accordance with Regulation 14(3) and (4)?	Yes	



4	F&G Reg 12	Did the local government comply with Local Government (Functions and General) Regulations 1996, Regulation 12 when deciding to enter into multiple contracts rather than a single contract?	Yes	
5	F&G Reg 14(5)	If the local government sought to vary the information supplied to tenderers, was every reasonable step taken to give each person who sought copies of the tender documents, or each acceptable tenderer notice of the variation?	Yes	
6	F&G Regs 15 & 16	Did the local government's procedure for receiving and opening tenders comply with the requirements of Local Government (Functions and General) Regulations 1996, Regulation 15 and 16?	Yes	
7	F&G Reg 17	Did the information recorded in the local government's tender register comply with the requirements of the Local Government (Functions and General) Regulations 1996, Regulation 17 and did the CEO make the tenders register available for public inspection and publish it on the local government's official website?	Yes	
8	F&G Reg 18(1)	Did the local government reject any tenders that were not submitted at the place, and within the time, specified in the invitation to tender?	N/A	
9	F&G Reg 18(4)	Were all tenders that were not rejected assessed by the local government via a written evaluation of the extent to which each tender satisfies the criteria for deciding which tender to accept?	N/A	
10	F&G Reg 19	Did the CEO give each tenderer written notice containing particulars of the successful tender or advising that no tender was accepted?	Yes	
11	F&G Regs 21 & 22	Did the local government's advertising and expression of interest processes comply with the requirements of the Local Government (Functions and General) Regulations 1996, Regulations 21 and 22?	Yes	
12	F&G Reg 23(1) & (2)	Did the local government reject any expressions of interest that were not submitted at the place, and within the time, specified in the notice or that failed to comply with any other requirement specified in the notice?	Yes	
13	F&G Reg 23(3) & (4)	Were all expressions of interest that were not rejected under the Local Government (Functions and General) Regulations 1996, Regulation 23(1) & (2) assessed by the local government? Did the CEO list each person as an acceptable tenderer?	Yes	



14	F&G Reg 24	Did the CEO give each person who submitted an expression of interest a notice in writing of the outcome in accordance with Local Government (Functions and General) Regulations 1996, Regulation 24?	Yes	
15	F&G Regs 24AD(2) & (4) and 24AE	Did the local government invite applicants for a panel of pre-qualified suppliers via Statewide public notice in accordance with Local Government (Functions & General) Regulations 1996 regulations 24AD(4) and 24AE?	N/A	
16	F&G Reg 24AD(6)	If the local government sought to vary the information supplied to the panel, was every reasonable step taken to give each person who sought detailed information about the proposed panel or each person who submitted an application notice of the variation?	N/A	
17	F&G Reg 24AF	Did the local government's procedure for receiving and opening applications to join a panel of pre-qualified suppliers comply with the requirements of Local Government (Functions and General) Regulations 1996, Regulation 16, as if the reference in that regulation to a tender were a reference to a pre-qualified supplier panel application?	N/A	
18	F&G Reg 24AG	Did the information recorded in the local government's tender register about panels of pre-qualified suppliers comply with the requirements of Local Government (Functions and General) Regulations 1996, Regulation 24AG?	N/A	
19	F&G Reg 24AH(1)	Did the local government reject any applications to join a panel of pre-qualified suppliers that were not submitted at the place, and within the time, specified in the invitation for applications?	N/A	
20	F&G Reg 24AH(3)	Were all applications that were not rejected assessed by the local government via a written evaluation of the extent to which each application satisfies the criteria for deciding which application to accept?	N/A	
21	F&G Reg 24AI	Did the CEO send each applicant written notice advising them of the outcome of their application?	N/A	
22	F&G Regs 24E & 24F	Where the local government gave regional price preference, did the local government comply with the requirements of Local Government (Functions and General) Regulations 1996, Regulation 24E and 24F?	N/A	



Integrated Planning and Reporting				
No	Reference	Question	Response	Comments
1	Admin Reg 19C	Has the local government adopted by absolute majority a strategic community plan? If Yes, please provide the adoption date or the date of the most recent review in the Comments section?	Yes	27/07/2023
2	Admin Reg 19DA(1) & (4)	Has the local government adopted by absolute majority a corporate business plan? If Yes, please provide the adoption date or the date of the most recent review in the Comments section?	Yes	27/07/2023
3	Admin Reg 19DA(2) & (3)	Does the corporate business plan comply with the requirements of Local Government (Administration) Regulations 1996 19DA(2) & (3)?	Yes	

Optional Questions				
No	Reference	Question	Response	Comments
1	Financial Management Reg 5(2)(c)	Did the CEO review the appropriateness and effectiveness of the local government's financial management systems and procedures in accordance with the Local Government (Financial Management) Regulations 1996 regulations 5(2)(c) within the three financial years prior to 31 December 2023? If yes, please provide the date of council's resolution to accept the report.	Yes	18/08/2022
2	Audit Reg 17	Did the CEO review the appropriateness and effectiveness of the local government's systems and procedures in relation to risk management, internal control and legislative compliance in accordance with Local Government (Audit) Regulations 1996 regulation 17 within the three financial years prior to 31 December 2023? If yes, please provide date of council's resolution to accept the report.	Yes	18/08/2022
3	s5.87C	Where a disclosure was made under sections 5.87A or 5.87B of the Local Government Act 1995, were the disclosures made within 10 days after receipt	N/A	



		of the gift? Did the disclosure include the information required by section 5.87C of the Act?		
4	s5.90A(2) & (5)	Did the local government prepare, adopt by absolute majority and publish an up-to-date version on the local government’s website, a policy dealing with the attendance of council members and the CEO at events?	Yes	
5	s5.96A(1), (2), (3) & (4)	Did the CEO publish information on the local government’s website in accordance with sections 5.96A(1), (2), (3), and (4) of the Local Government Act 1995?	Yes	
6	s5.128(1)	Did the local government prepare and adopt (by absolute majority) a policy in relation to the continuing professional development of council members?	Yes	
7	s5.127	Did the local government prepare a report on the training completed by council members in the 2022/2023 financial year and publish it on the local government’s official website by 31 July 2023?	Yes	
8	s6.4(3)	By 30 September 2023, did the local government submit to its auditor the balanced accounts and annual financial report for the year ending 30 June 2023?	Yes	
9	s.6.2(3)	When adopting the annual budget, did the local government take into account all its expenditure, revenue and income?	Yes	

Chief Executive Officer

Date

President

Date



Department of
**Local Government, Sport
and Cultural Industries**

6. CLOSURE OF MEETING

There being no further business, Cr Garry Ventris, Shire President, declared the meeting closed at 5.04pm.

These minutes were confirmed by the Committee as a true and accurate record at the Ordinary Council Meeting on [date, month, year].

Shire President Full Name

Shire President Signature

Date



Boddington – Compliance Audit Return

Commercial Enterprises by Local Governments				
No	Reference	Question	Response	Comments
1	s3.59(2)(a) F&G Regs 7,9,10	Has the local government prepared a business plan for each major trading undertaking that was not exempt in 2023?	N/A	
2	s3.59(2)(b) F&G Regs 7,8A, 8, 10	Has the local government prepared a business plan for each major land transaction that was not exempt in 2023?	N/A	
3	s3.59(2)(c) F&G Regs 7,8A, 8,10	Has the local government prepared a business plan before entering into each land transaction that was preparatory to entry into a major land transaction in 2023?	N/A	
4	s3.59(4)	Has the local government complied with public notice and publishing requirements for each proposal to commence a major trading undertaking or enter into a major land transaction or a land transaction that is preparatory to a major land transaction for 2023?	N/A	
5	s3.59(5)	During 2022, did the council resolve to proceed with each major land transaction or trading undertaking by absolute majority?	N/A	

Delegation of Power/Duty				
No	Reference	Question	Response	Comments
1	s5.16 (1)	Were all delegations to committees resolved by absolute majority?	N/A	
2	s5.16 (2)	Were all delegations to committees in writing?	N/A	
3	s5.17	Were all delegations to committees within the limits specified in section 5.17 of the Local Government Act 1995?	N/A	
4	s5.18	Were all delegations to committees recorded in a register of delegations?	N/A	
5	s5.18	Has council reviewed delegations to its committees in the 2022/2023 financial year?	N/A	
6	s5.42(1) & s5.43 Admin Reg 18G	Did the powers and duties delegated to the CEO exclude those listed in section 5.43 of the Local Government Act 1995?	Yes	



7	s5.42(1)	Were all delegations to the CEO resolved by an absolute majority?	Yes	
8	s5.42(2)	Were all delegations to the CEO in writing?	Yes	
9	s5.44(2)	Were all delegations by the CEO to any employee in writing?	Yes	
10	s5.16(3)(b) & s5.45(1)(b)	Were all decisions by the Council to amend or revoke a delegation made by absolute majority?	Yes	
11	s5.46(1)	Has the CEO kept a register of all delegations made under Division 4 of the Act to the CEO and to employees?	Yes	
12	s5.46(2)	Were all delegations made under Division 4 of the Act reviewed by the delegator at least once during the 2022/2023 financial year?	Yes	
13	s5.46(3) Admin Reg 19	Did all persons exercising a delegated power or duty under the Act keep, on all occasions, a written record in accordance with Local Government (Administration) Regulations 1996, regulation 19?	Yes	

Disclosure of Interest				
No	Reference	Question	Response	Comments
1	s5.67	Where a council member disclosed an interest in a matter and did not have participation approval under sections 5.68 or 5.69 of the Local Government Act 1995, did the council member ensure that they did not remain present to participate in discussion or decision making relating to the matter?	N/A	
2	s5.68(2) & s5.69(5) Admin Reg 21A	Were all decisions regarding participation approval, including the extent of participation allowed and, where relevant, the information required by the Local Government (Administration) Regulations 1996 regulation 21A, recorded in the minutes of the relevant council or committee meeting?	N/A	
3	s5.73	Were disclosures under sections 5.65, 5.70 or 5.71A(3) of the Local Government Act 1995 recorded in the minutes of the meeting at which the disclosures were made?	Yes	
4	s5.75 Admin Reg 22, Form 2	Was a primary return in the prescribed form lodged by all relevant persons within three months of their start day?	Yes	
5	s5.76 Admin Reg 23, Form 3	Was an annual return in the prescribed form lodged by all relevant persons by 31 August 2022?	Yes	



6	s5.77	On receipt of a primary or annual return, did the CEO, or the Mayor/President, give written acknowledgment of having received the return?	Yes	
7	s5.88(1) & (2)(a)	Did the CEO keep a register of financial interests which contained the returns lodged under sections 5.75 and 5.76 of the Local Government Act 1995?	Yes	
8	s5.88(1) & (2)(b) Admin Reg 28	Did the CEO keep a register of financial interests which contained a record of disclosures made under sections 5.65, 5.70, 5.71 and 5.71A of the Local Government Act 1995, in the form prescribed in the Local Government (Administration) Regulations 1996, regulation 28?	Yes	
9	s5.88(3)	When a person ceased to be a person required to lodge a return under sections 5.75 and 5.76 of the Local Government Act 1995, did the CEO remove from the register all returns relating to that person?	Yes	
10	s5.88(4)	Have all returns removed from the register in accordance with section 5.88(3) of the Local Government Act 1995 been kept for a period of at least five years after the person who lodged the return(s) ceased to be a person required to lodge a return?	Yes	
11	s5.89A(1), (2) & (3) Admin Reg 28A	Did the CEO keep a register of gifts which contained a record of disclosures made under sections 5.87A and 5.87B of the Local Government Act 1995, in the form prescribed in the Local Government (Administration) Regulations 1996, regulation 28A?	Yes	
12	s5.89A(5) & (5A)	Did the CEO publish an up-to-date version of the gift register on the local government's website?	Yes	
13	s5.89A(6)	When people cease to be a person who is required to make a disclosure under section 5.87A or 5.87B of the Local Government Act 1995, did the CEO remove from the register all records relating to those people?	Yes	
14	s5.89A(7)	Have copies of all records removed from the register under section 5.89A(6) of the Local Government Act 1995 been kept for a period of at least five years after the person ceases to be a person required to make a disclosure?	Yes	
15	s5.70(2) & (3)	Where an employee had an interest in any matter in respect of which the employee provided advice or a report directly to council or a committee, did that person disclose the nature and extent of that interest when giving the advice or report?	Yes	



16	s5.71A & s5.71B(5)	Where council applied to the Minister to allow the CEO to provide advice or a report to which a disclosure under section 5.71A(1) of the Local Government Act 1995 relates, did the application include details of the nature of the interest disclosed and any other information required by the Minister for the purposes of the application?	N/A	
17	s5.71B(6) & s5.71B(7)	Was any decision made by the Minister under section 5.71B(6) of the Local Government Act 1995, recorded in the minutes of the council meeting at which the decision was considered?	N/A	
18	s5.104(1)	Did the local government prepare and adopt, by absolute majority, a code of conduct to be observed by council members, committee members candidates that incorporates the model code of conduct?	Yes	
19	s5.104(3) & (4)	Did the local government adopt additional requirements in addition to the model code of conduct? If yes, does it comply with section 5.104(3) and (4) of the Local Government Act 1995?	No	
20	s5.104(7)	Has the CEO published an up-to-date version of the code of conduct for council members, committee members and candidates on the local government's website?	Yes	
21	s5.51A(1) & (3)	Has the CEO prepared and implemented a code of conduct to be observed by employees of the local government? If yes, has the CEO published an up-to-date version of the code of conduct for employees on the local government's website?	Yes	

Disposal of Property				
No	Reference	Question	Response	Comments
1	s3.58(3)	Where the local government disposed of property other than by public auction or tender, did it dispose of the property in accordance with section 3.58(3) of the Local Government Act 1995 (unless section 3.58(5) applies)?	Yes	
2	s3.58(4)	Where the local government disposed of property under section 3.58(3) of the Local Government Act 1995, did it provide details, as prescribed by section 3.58(4), in the required local public notice for each disposal of property?	Yes	



Elections				
No	Reference	Question	Response	Comments
1	Elect Regs 30G(1) & (2)	Did the CEO establish and maintain an electoral gift register and ensure that all disclosure of gifts forms completed by candidates and donors and received by the CEO were placed on the electoral gift register at the time of receipt by the CEO and in a manner that clearly identifies and distinguishes the forms relating to each candidate in accordance with regulations 30G(1) and 30G(2) of the Local Government (Elections) Regulations 1997?	Yes	
2	Elect Regs 30G(3) & (4)	Did the CEO remove any disclosure of gifts forms relating to an unsuccessful candidate, or a successful candidate that completed their term of office, from the electoral gift register, and retain those forms separately for a period of at least two years in accordance with regulation 30G(4) of the Local Government (Elections) Regulations 1997?	N/A	
3	Elect Regs 30G(5) & (6)	Did the CEO publish an up-to-date version of the electoral gift register on the local government's official website in accordance with regulation 30G(5) of the Local Government (Elections) Regulations 1997?	Yes	

Finance				
No	Reference	Question	Response	Comments
1	s7.1A	Has the local government established an audit committee and appointed members by absolute majority in accordance with section 7.1A of the Local Government Act 1995?	Yes	
2	s7.1B	Where the council delegated to its audit committee any powers or duties under Part 7 of the Local Government Act 1995, did it do so by absolute majority?	N/A	



3	s7.9(1)	Was the auditor's report for the financial year ended 30 June 2023 received by the local government by 31 December 2023?	Yes	
4	s7.12A(3)	Where the local government determined that matters raised in the auditor's report prepared under section 7.9(1) of the Local Government Act 1995 required action to be taken, did the local government ensure that appropriate action was undertaken in respect of those matters?	N/A	
5	s7.12A(4)(a) & (4)(b)	Where matters identified as significant were reported in the auditor's report, did the local government prepare a report that stated what action the local government had taken or intended to take with respect to each of those matters? Was a copy of the report given to the Minister within three months of the audit report being received by the local government?	N/A	
6	s7.12A(5)	Within 14 days after the local government gave a report to the Minister under section 7.12A(4)(b) of the Local Government Act 1995, did the CEO publish a copy of the report on the local government's official website?	N/A	
7	Audit Reg 10(1)	Was the auditor's report for the financial year ending 30 June 2023 received by the local government within 30 days of completion of the audit?	Yes	

Local Government Employees

No	Reference	Question	Response	Comments
1	s5.36(4) & s5.37(3) Admin Reg 18A	Were all CEO and/or senior employee vacancies advertised in accordance with Local Government (Administration) Regulations 1996, regulation 18A?	N/A	
2	Admin Reg 18E	Was all information provided in applications for the position of CEO true and accurate?	N/A	
3	Admin Reg 18F	Was the remuneration and other benefits paid to a CEO on appointment the same remuneration and benefits advertised for the position under section 5.36(4) of the Local Government Act 1995?	N/A	
4	s5.37(2)	Did the CEO inform council of each proposal to employ or dismiss senior employee?	N/A	
5	s5.37(2)	Where council rejected a CEO's recommendation to employ or dismiss a senior employee, did it inform the CEO of the reasons for doing so?	N/A	



Official Conduct				
No	Reference	Question	Response	Comments
1	s5.120	Has the local government designated an employee to be its complaints officer?	Yes	
2	s5.121(1) & (2)	Has the complaints officer for the local government maintained a register of complaints which records all complaints that resulted in a finding under section 5.110(2)(a) of the Local Government Act 1995?	Yes	
3	S5.121(2)	Does the complaints register include all information required by section 5.121(2) of the Local Government Act 1995?	Yes	
4	s5.121(3)	Has the CEO published an up-to-date version of the register of the complaints on the local government's official website?	Yes	

Tenders for Providing Goods and Services				
No	Reference	Question	Response	Comments
1	F&G Reg 11A(1) & (3)	Did the local government comply with its current purchasing policy, adopted under the Local Government (Functions and General) Regulations 1996, regulations 11A(1) and (3) in relation to the supply of goods or services where the consideration under the contract was, or was expected to be, \$250,000 or less or worth \$250,000 or less?	Yes	
2	s3.57 F&G Reg 11	Subject to Local Government (Functions and General) Regulations 1996, regulation 11(2), did the local government invite tenders for all contracts for the supply of goods or services where the consideration under the contract was, or was expected to be, worth more than the consideration stated in regulation 11(1) of the Regulations?	Yes	
3	F&G Regs 11(1), 12(2), 13, & 14(1), (3), and (4)	When regulations 11(1), 12(2) or 13 of the Local Government Functions and General) Regulations 1996, required tenders to be publicly invited, did the local government invite tenders via Statewide public notice in accordance with Regulation 14(3) and (4)?	Yes	



4	F&G Reg 12	Did the local government comply with Local Government (Functions and General) Regulations 1996, Regulation 12 when deciding to enter into multiple contracts rather than a single contract?	Yes	
5	F&G Reg 14(5)	If the local government sought to vary the information supplied to tenderers, was every reasonable step taken to give each person who sought copies of the tender documents, or each acceptable tenderer notice of the variation?	Yes	
6	F&G Regs 15 & 16	Did the local government's procedure for receiving and opening tenders comply with the requirements of Local Government (Functions and General) Regulations 1996, Regulation 15 and 16?	Yes	
7	F&G Reg 17	Did the information recorded in the local government's tender register comply with the requirements of the Local Government (Functions and General) Regulations 1996, Regulation 17 and did the CEO make the tenders register available for public inspection and publish it on the local government's official website?	Yes	
8	F&G Reg 18(1)	Did the local government reject any tenders that were not submitted at the place, and within the time, specified in the invitation to tender?	N/A	
9	F&G Reg 18(4)	Were all tenders that were not rejected assessed by the local government via a written evaluation of the extent to which each tender satisfies the criteria for deciding which tender to accept?	N/A	
10	F&G Reg 19	Did the CEO give each tenderer written notice containing particulars of the successful tender or advising that no tender was accepted?	Yes	
11	F&G Regs 21 & 22	Did the local government's advertising and expression of interest processes comply with the requirements of the Local Government (Functions and General) Regulations 1996, Regulations 21 and 22?	Yes	
12	F&G Reg 23(1) & (2)	Did the local government reject any expressions of interest that were not submitted at the place, and within the time, specified in the notice or that failed to comply with any other requirement specified in the notice?	Yes	
13	F&G Reg 23(3) & (4)	Were all expressions of interest that were not rejected under the Local Government (Functions and General) Regulations 1996, Regulation 23(1) & (2) assessed by the local government? Did the CEO list each person as an acceptable tenderer?	Yes	



14	F&G Reg 24	Did the CEO give each person who submitted an expression of interest a notice in writing of the outcome in accordance with Local Government (Functions and General) Regulations 1996, Regulation 24?	Yes	
15	F&G Regs 24AD(2) & (4) and 24AE	Did the local government invite applicants for a panel of pre-qualified suppliers via Statewide public notice in accordance with Local Government (Functions & General) Regulations 1996 regulations 24AD(4) and 24AE?	N/A	
16	F&G Reg 24AD(6)	If the local government sought to vary the information supplied to the panel, was every reasonable step taken to give each person who sought detailed information about the proposed panel or each person who submitted an application notice of the variation?	N/A	
17	F&G Reg 24AF	Did the local government's procedure for receiving and opening applications to join a panel of pre-qualified suppliers comply with the requirements of Local Government (Functions and General) Regulations 1996, Regulation 16, as if the reference in that regulation to a tender were a reference to a pre-qualified supplier panel application?	N/A	
18	F&G Reg 24AG	Did the information recorded in the local government's tender register about panels of pre-qualified suppliers comply with the requirements of Local Government (Functions and General) Regulations 1996, Regulation 24AG?	N/A	
19	F&G Reg 24AH(1)	Did the local government reject any applications to join a panel of pre-qualified suppliers that were not submitted at the place, and within the time, specified in the invitation for applications?	N/A	
20	F&G Reg 24AH(3)	Were all applications that were not rejected assessed by the local government via a written evaluation of the extent to which each application satisfies the criteria for deciding which application to accept?	N/A	
21	F&G Reg 24AI	Did the CEO send each applicant written notice advising them of the outcome of their application?	N/A	
22	F&G Regs 24E & 24F	Where the local government gave regional price preference, did the local government comply with the requirements of Local Government (Functions and General) Regulations 1996, Regulation 24E and 24F?	N/A	



Integrated Planning and Reporting				
No	Reference	Question	Response	Comments
1	Admin Reg 19C	Has the local government adopted by absolute majority a strategic community plan? If Yes, please provide the adoption date or the date of the most recent review in the Comments section?	Yes	27/07/2023
2	Admin Reg 19DA(1) & (4)	Has the local government adopted by absolute majority a corporate business plan? If Yes, please provide the adoption date or the date of the most recent review in the Comments section?	Yes	27/07/2023
3	Admin Reg 19DA(2) & (3)	Does the corporate business plan comply with the requirements of Local Government (Administration) Regulations 1996 19DA(2) & (3)?	Yes	

Optional Questions				
No	Reference	Question	Response	Comments
1	Financial Management Reg 5(2)(c)	Did the CEO review the appropriateness and effectiveness of the local government's financial management systems and procedures in accordance with the Local Government (Financial Management) Regulations 1996 regulations 5(2)(c) within the three financial years prior to 31 December 2023? If yes, please provide the date of council's resolution to accept the report.	Yes	18/08/2022
2	Audit Reg 17	Did the CEO review the appropriateness and effectiveness of the local government's systems and procedures in relation to risk management, internal control and legislative compliance in accordance with Local Government (Audit) Regulations 1996 regulation 17 within the three financial years prior to 31 December 2023? If yes, please provide date of council's resolution to accept the report.	Yes	18/08/2022
3	s5.87C	Where a disclosure was made under sections 5.87A or 5.87B of the Local Government Act 1995, were the disclosures made within 10 days after receipt	N/A	



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		of the gift? Did the disclosure include the information required by section 5.87C of the Act?		
4	s5.90A(2) & (5)	Did the local government prepare, adopt by absolute majority and publish an up-to-date version on the local government’s website, a policy dealing with the attendance of council members and the CEO at events?	Yes	
5	s5.96A(1), (2), (3) & (4)	Did the CEO publish information on the local government’s website in accordance with sections 5.96A(1), (2), (3), and (4) of the Local Government Act 1995?	Yes	
6	s5.128(1)	Did the local government prepare and adopt (by absolute majority) a policy in relation to the continuing professional development of council members?	Yes	
7	s5.127	Did the local government prepare a report on the training completed by council members in the 2022/2023 financial year and publish it on the local government’s official website by 31 July 2023?	Yes	
8	s6.4(3)	By 30 September 2023, did the local government submit to its auditor the balanced accounts and annual financial report for the year ending 30 June 2023?	Yes	
9	s.6.2(3)	When adopting the annual budget, did the local government take into account all its expenditure, revenue and income?	Yes	

Chief Executive Officer

Date

President

Date



Department of
**Local Government, Sport
and Cultural Industries**

9. REPORTS OF OFFICERS

9.1 DEVELOPMENT SERVICES

9.1.1 Adoption of Amended Local Planning Policy No. 7 Outbuildings

File Reference:	1.016
Applicant:	Not applicable
Previous Item:	46/14 & 4/24
Author:	Executive Manager Development Services
Disclosure of Interest:	Nil
Voting Requirements:	Simple Majority
Attachments:	9.1.1A Amended Local Planning Policy 7, Outbuildings

Summary

For Council to consider adopting the amended Local Planning Policy No. 7 Outbuildings (Policy) (Attachment 9.1.1A).

Background

In July 2009, Council adopted a local planning policy to regulate outbuildings. An amended Policy was later adopted in May 2014. The Policy has assisted the Council and Shire administration in assessing development applications. The Shire has also received community requests for greater flexibility in regard to the siting of outbuildings on vacant lots, particularly in our rural-residential areas.

The review of the Policy has been undertaken with reference to the West Australian Local Government Association (WALGA) Model Local Planning Policy.

On 18 January 2024, Council resolved to advertise the amended Policy to the community. This advertising was undertaken from the 31 January 2024 to 23 February 2024, which included a Facebook post, Bodd News advertisement, and being available on the Shire's website. No submissions were received during this period.

Comment

The following policy modifications have been made:

- Restructure the policy to follow the WALGA model where relevant.
- Revise policy introduction and objectives accordingly.
- Ensure all references to Local Planning Scheme No.2 are removed and replaced with reference to Local Planning Scheme No.3.
- Update references to State Planning Policy 7.3 Residential Design Codes.
- Less prescriptive regarding colours.
- Modified requirements for outbuilding proposed on vacant lots.
- Revise appendix 1 to align with the amended Policy.

As no comments were received during the advertising period no changes have been made to the Policy that was presented to Council on 18 January 2024. It is recommended that Council adopt the amended Policy as presented in attachment 9.1.1A.

Consultation

The Policy was advertised as per Clause 4 & 5 of the *Planning and Development (Local Planning Schemes) Regulations 2015*.

Strategic Implications

Aspiration Place
 Outcome 12 Population growth through responsible development and affordable housing.
 Objective 12.1 Attractive and welcoming street and community spaces.

Legislative Implications

Planning and Development Act
 Planning and Development (Local Planning Schemes) Regulations 2015

Policy Implications

The amended Policy is aimed to improve procedural and governance aspects of the Shire’s development control responsibilities for outbuildings.

Financial Implications

No change to applicable application fee is proposed.

Economic Implications

The amended Policy is expected to have minimal economic impacts given the focus of controlling outbuildings (including size, height, and location etc.) is on residential zoned land rather on industrial or rural zone land.

Social Implications

The amended Policy supports proposals for outbuildings where relevant planning considerations are met. Finalisation of the modified policy is anticipated to result in various social implications with restrictions for some landowners. While noting this, the draft policy seeks to achieve a balance between providing for the legitimate garaging, storage and other domestic needs of residents and to minimise the adverse impacts that outbuildings may have on the amenity, appearance and character of neighbours.

Environmental Considerations

The draft policy does not raise key environmental issues, subject to proponents not proposing to locate outbuildings in areas containing remnant vegetation.

Risk Considerations

Risk Statement and Consequence	Failure to review and amend the Local Planning Policy may not align with current community expectations in regard to outbuildings.
Risk Rating (prior to treatment or control)	Moderate
Principal Risk Theme	Reputational
Risk Action Plan (controls or treatment proposed)	Continue to review Local Planning Polices and amend or revoke as required.

Officer Recommendation

That Council, pursuant to Clauses 4 and 5 of the Deemed Provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015*:

- 1. Adopts amended *Local Planning Policy No. 7 Outbuildings* as provided as an attachment to this report.**
- 2. Publish notice of the Council decision to adopt amended *Local Planning Policy 7 – Outbuildings* on the Shire’s website and in a newspaper circulating in the district.**

Local Planning Policy

No 7 - Outbuildings

1.0 Citation

This is a Local Planning Policy prepared under Schedule 2 of the Planning and Development (Local Planning Schemes) Regulations 2015. This Policy may be cited as Local Planning Policy 7 Outbuildings.

2.0 Introduction

It is Council's policy to achieve a balance between providing for the legitimate garaging, storage and other domestic needs of residents and to minimise the adverse impacts that outbuildings may have on neighbours and the amenity, appearance and character of neighbourhoods.

The Council recognises that households have varying needs for the garaging of vehicle, storage of boats, caravans and other items, domestic workshops etc. As a general rule, people expect to have larger outbuildings on larger lots. Inappropriately located and/or designed outbuildings can however create amenity and other impacts.

3.0 Objectives

The objectives of this Policy are to:

- Retain or enhance the visual amenity of neighbourhoods through outbuildings not detracting from the streetscape/landscape and the amenity of adjoining/nearby properties through controlling building bulk (size and height), appropriate sitting, colours and use;
- Provide further interpretation of State Planning Policy 7.3 – Residential Design Codes (SPP 7.3) and the *Shire of Boddington Local Planning Policy No. 3 (LPS3)* in the assessment of applications;
- Set out the limitations for proposed outbuildings;
- Promote the function and usability of residential yards;
- Ensure that outbuildings are not used for permanent habitation and set out where the Council will support or not support conversions of outbuildings to dwellings; and
- Provide increased certainty for landowners, the community and others to assist in providing greater consistency in decision making by the local government.

4.0 Applications subject of this policy

This Policy applies throughout the Shire.

This Policy does not apply to carports, studios, games rooms, patios, pergolas and verandas and the like that are substantially connected to or form part of the dwelling or the principle building on the



property. In these cases, applications are assessed against criteria including compliance with setbacks, site coverage, overshadowing, and related requirements of SPP7.3 and LPS3 along with the requirements of the Building Code of Australia (BCA). Where there is inconsistency between this Policy and SPP 7.3, the SPP 7.3 prevails to the extent of the inconsistency. Where there is an inconsistency between this Policy and LPS3, then LPS3 prevails to the extent of such inconsistency.

Appendix 1 sets out in general terms, when a Development Application is and is not required, along with other key considerations.

5.0 Application Requirements

Proponents are encouraged to discuss proposals that seek to vary Policy requirements with the Shire administration early on in the planning process and prior to lodging an application.

Development Applications are to include the following:

- Completed Development Application Form
- A site plan (including highlighting existing outbuildings) and setting out the location of any easements;
- Floor plan/s and elevations detailing the area, wall and ridge heights and the external materials and colours to be used; and
- Details of intended uses/s of the outbuildings.

Subject to the proposed location and the scale of the proposed outbuilding, the Shire may also require the applicant to provide;

- Detailed contour information from a licensed surveyor;
- Cross sections showing the extent of cut and fill;
- Written information setting out why Policy requirements should be varied; and
- Any other plan or information that the Shire may reasonably require to enable the application to be determined.

Applications will be assessed on a case by case basis subject to this Policy, LPS3, SPP 7.3, information provided by the applicant and any submissions received.

Should an application for an outbuilding not comply with requirements of this Policy, the application may be referred to Council for determination. The Council will however consider applications that:

- Exceed the maximum permissible floor area for a single or aggregate outbuilding on a lot as set out in Appendix 1;
- Propose an outbuilding on a vacant lot in the Residential Zone unless a Development Application and/or Building Permit has been issued for a dwelling on the lot; and
- Are located within areas designed as floodway's in the *Shire of Boddington Floodplain Management Study*.



Where objections are received and the objections are not able to be adequately dealt with through conditions of approval, the application will be referred to Council for determination.

A Development Application may be refused where it is inconsistent with this Policy, LPS3 or SPP 7.3, based on the information provided by the applicant, or based on information set out in any submission.

Should Development Approval be issued, it will also be necessary for the proponent to submit a Building Permit application (which gains necessary approvals) prior to undertaking construction. There is also a requirement that outbuildings are developed in accordance with sections 82 and 90 of the *Water Services Act 2012*.

6.0 Policy Statement

6.1 General

Most outbuildings in the municipality do not require the submission of a Development Application to the Shire and accordingly in these instances no development approval is required. In particular this is where the outbuilding's location, size, height, design and use complies with LPS 3, SPP 7.3 and this Policy (Appendix 1).

A Development Application for an outbuilding is required where:

- It necessitates the exercise of discretion by the local government including to vary SPP 7.3, LPS 3 or this Policy;
- The outbuilding is outside a designated/approved building envelope;
- The outbuilding is within a designated building exclusion area;
- The outbuilding is proposed on flood prone land;
- The outbuilding comprises a relocated second hand building or part thereof;
- The outbuilding is proposed on a lot or location which does not have access to a dedicated and constructed public road;
- The outbuilding is located in a Heritage Area or Special Control Area;
- The outbuilding is located within a drainage / stormwater easement; or
- The outbuilding is inconsistent with a Local Planning Policy relating to development, design or related matter (which includes this Policy). In relation to this Policy, this includes that outbuildings which are oversized or over height (as set out in Appendix 1) or are proposed on a vacant lot within a residential zone.

Various matters will be considered in assessing outbuilding applications including:

- The zoning of the lot;
- Lot size, shape and features, including the extent of existing screening;
- The existing level of development, including outbuildings, on the site;



- Floor area of the proposed outbuilding and maintaining existing and generally accepted overall outbuilding floor area standards for the locality;
- Ensuring that the outbuilding remains an ancillary use to the main dwelling or the principle land use on the property;
- Setbacks and location of the proposed outbuilding;
- Height of the proposed outbuilding, including impact, amenity and overshadowing on adjoining/nearby properties;
- The effect on the streetscape and visibility from nearby public places;
- The level of cut and fill;
- Construction materials and proposed colour/s;
- The intended use of the outbuilding;
- Provisions and requirements set out in LPS3 and SPP 7.3.;
- Relevant State and Local Planning Policies;
- Other planning considerations including Structure Plans and Local Development Plans;
- Written comments from affected landowners; and
- Any other circumstance and factor affecting the application in the opinion of Council.

The “onus of proof” rests with the applicant to justify their application and variations to this Policy.

6.2 Floor Area

The floor area will be determined as the total gross area of all outbuildings (existing and proposed) on the site. This excludes carports, studios, games rooms, patios, pergolas, verandahs and the like that are substantially connected or form part of the dwelling or the principle building on the property.

A proposed outbuilding that would result in a total combined outbuilding area greater than set out in Appendix 1 is defined as an “oversized” outbuilding for the purposes of this policy.

The maximum permissible floor area for a single or aggregate outbuilding on a lot is outlined in Appendix 1.

Applications for outbuildings that propose a mezzanine or a second story will be considered on their merits. The floor area of the mezzanine/second story will not be included in the calculation of gross floor area. However, the Council will consider potential impacts on privacy from the mezzanine/second story especially in residential areas.

6.3 Height

The height of the proposed outbuilding is measured from natural ground level.



An outbuilding that proposes a height greater than set out in Appendix 1 is defined as an “over height” outbuilding for the purposes of this Policy.

6.4 Setbacks/Location

Boundary setbacks for outbuildings are set out in SPP 7.3 for residential areas, Appendix 1 of this policy and table 5 of LPS3. Outbuildings are to be located within the approved building envelope for the site or outside of building exclusions areas where relevant.

The Council may approve outbuildings with walls or supporting columns that are setback less than 1.0 metre from side and rear boundaries on residential lots, subject to compliance with the fire separation requirements of the BCA and consultation with adjoining landowners.

6.5 Colours

The Council supports colours that retain or enhance the area’s amenity. The Council encourages outbuilding walls and roofs to be constructed of non-reflective colours that are essentially natural and earthy, rather than colours such as white or silver.

6.6 Habitable Use and Conversion of Outbuildings to Dwellings

Outbuildings shall not be used for habitable purposes unless they gain Shire approval and comply with LPS3, SPP 7.3 and the BCA as a habitable unit. The Council does not support ablution facilities within outbuildings unless appropriately justified by the applicant to the satisfaction of the local government.

6.7 Outbuildings on Vacant Lots

In residential areas an outbuilding may at the discretion of the Council be constructed on a vacant lot where the owner also owns the abutting lot and where the abutting lot contains a single house, provided the lots are amalgamated or the owner enters into an agreement with the Shire supported by absolute caveat over both lots precluding the sale of either lot unless the outbuilding is removed or a dwelling is constructed on the lot with the outbuilding.

Within all other zones unless supported by this Policy, the Council will consider on its merits approving an outbuilding on a vacant lot subject to the applicant providing appropriate written assurances that a dwelling will be applied for and substantially commenced within two years of the outbuilding receiving conditional development approval.

6.8 Land Uses

Outbuildings are not to be used for commercial, industrial, habitable or other non-domestic purposes. Outbuildings are to be used for low-key “domestic” uses, to the satisfaction of the Council, that do not create undesirable impacts on adjoining or nearby properties.

7 Consultation

The local government may consult with adjoining/nearby landowners where an application for an outbuilding is made that does not comply with the requirements of this policy or where a proposed outbuilding has the potential to adversely impact landowners in the opinion of the local government. Alternatively, the local government will require the applicant to supply written comments from adjoining and other affected landowners, with the process undertaken in



accordance with the consultation requirements of SPP 7.3.

8 Definitions

“Ancillary outbuilding” – an outbuilding which is incidental to the predominant use of the land and other buildings on the lot. In particular, this is an outbuilding which is not oversized or over height (as set out in appendix 1) or is proposed on a vacant lot.

“BCA” – Building Code of Australia

“Dwelling” – as defined in SPP 7.3, is a building or a portion of a building being used, adapted, or designed or intended to be used for the purpose of human habitation on a permanent basis by a single person, a single family or no more than six persons who do not compromise a single family.

“LPS 3” – Shire of Boddington Local Planning Scheme 3.

“Outbuildings” – are enclosed non-habitable Class 10a buildings, under the BCA, that are detached from a dwelling and which are not used for commercial or industrial purposes.

“Overheight outbuilding” – an outbuilding that proposes a height greater than set out in appendix 1 of this policy.

“Oversize outbuilding” - an outbuilding that would result in a total combined outbuilding area on the lot which is greater than that set out in appendix 1 of this policy.

“SPP 7.3” – State Planning Policy 7.3 Residential Design Codes

“Vacant Lot” – is a lot or property upon which no dwelling is constructed and includes a lot created pursuant to the *Strata Titles Act 1985 (as amended)*.

Policy Number / Name	No 7 – outbuildings
Adopted by Council	20 May 2014
Amended	



Appendix 1
Shire of Boddington – Local Planning Policy No. 7 – Outbuildings

Note 1: The Council will determine outbuilding floor areas based on the total combined gross floor area of outbuildings on the lot, which will include existing outbuildings proposed to be retained by the applicant along with the proposed outbuilding/s.

Note 2: There are limits to the number of dwellings on properties in different zones as set out in LPS3, SPP 7.3 and other Local Planning Policies.

Note 3: Separate to Attachment 1, a Development Application is required as set out in section 6.1 of the Policy.

Zones	Floor Area ¹	Height	Setbacks/Location	Colours	Outbuildings on a vacant lot
Residential	<p>Outbuildings which individually or collectively do not exceed 60m² do not require a Development Application provided other considerations are met.</p> <p>Outbuildings above 60m² are classified as “oversize” and require a Development Application.</p> <p>Maximum floor area: 200m².</p>	<p>Outbuildings that have a wall height that does not exceed 2.4 metres and/or a ridge height that does not exceed 4.2 metres do not require a Development Application provided other considerations are met.</p> <p>Outbuildings that have a wall height above 2.4 metres and/or a ridge height above 4.2 metres are classified as “overheight” and require a Development Application.</p> <p>The maximum wall height is 4.0 metres and the maximum ridge height is 6.0 metres.</p>	<p>Outbuildings that comply with the setback requirements SPP 7.3 do not require a Development Application, provided other considerations are met.</p> <p>Outbuildings that do not comply with the setback requirements of SPP 7.3 require a Development Application</p>	<p>The Council supports colours that are compatible with the amenity of the area.</p>	<p>The Council does not support an outbuilding on a vacant lot, but will entertain applications in limited circumstances as set out in the Policy. Proposals for an outbuilding on a vacant lot will require a Development Application.</p> <p>No Development Application is required however where a Building Permit has been issued and is valid for a dwelling provided other considerations are met.</p>

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Note 2: There are limits to the number of dwellings on properties in different zones as set out in LPS3, SPP 7.3 and other Local Planning Policies.

Note 3: Separate to Attachment 1, a Development Application is required as set out in section 6.1 of the Policy.

Zones	Floor Area ¹	Height	Setbacks/Location	Colours	Outbuildings on a vacant lot
Rural Residential	<p>Outbuildings which individually or collectively do not exceed 80m² do not require a Development Application provided other considerations are met.</p> <p>Outbuildings above 80m² are classified as “oversize” and require a Development Application.</p> <p>Maximum floor area: 300m².</p>	<p>Outbuildings that have a wall height that does not exceed 5.0 metres and/or a ridge height that does not exceed 7.0 metres do not require a Development Application provided other considerations are met.</p> <p>Outbuildings that have a wall height above 5.0 metres and/or a ridge height above 7.0 metres are classified as “overheight” and require a Development Application.</p>	<p>Outbuildings that are located within approved building envelopes do not require a Development Application, provided other considerations are met.</p> <p>Outbuildings that are located outside of approved building envelopes require a Development Application and will generally be advertised for comment.</p>	<p>The Council supports colours that are compatible with the amenity of the area.</p>	<p>In rural residential areas outbuildings may be permitted where no dwelling exists on the property, however the outbuilding is only to be used for residential purposes such as storage of equipment associated with the maintenance of the lot and the land owner’s domestic storage.</p>

**Appendix 1
Shire of Boddington – Local Planning Policy No. 7 – Outbuildings**

Note 1: The Council will determine outbuilding floor areas based on the total combined gross floor area of outbuildings on the lot, which will include existing outbuildings proposed to be retained by the applicant along with the proposed outbuilding/s.

Note 2: There are limits to the number of dwellings on properties in different zones as set out in LPS3, SPP 7.3 and other Local Planning Policies.

Note 3: Separate to Attachment 1, a Development Application is required as set out in section 6.1 of the Policy.

Zones	Floor Area ¹	Height	Setbacks/Location	Colours	Outbuildings on a vacant lot
Rural Small Holding	<p>Outbuildings which individually or collectively do not exceed 100m² do not require a Development Application provided other considerations are met.</p> <p>Outbuildings above 100m² are classified as “oversize” and require a Development Application.</p> <p>Maximum floor area: No maximum limit provided the outbuilding is located in the building envelope.</p>	<p>Outbuildings that have a wall height that does not exceed 7.0 metres and/or a ridge height that does not exceed 9.0 metres do not require a Development Application provided other considerations are met.</p> <p>Outbuildings that have a wall height above 7.0 metres and/or a ridge height above 9.0 metres are classified as “overheight” and require a Development Application.</p>	<p>Outbuildings that are located within approved building envelopes do not require a Development Application, provided other considerations are met.</p> <p>Outbuildings that are located outside of approved building envelopes require a Development Application and will generally be advertised for comment.</p>	<p>The Council supports colours that are compatible with the amenity of the area.</p>	<p>In rural small holding areas outbuildings may be permitted where no dwelling exists on the property, however the outbuilding is only to be used for residential purposes such as storage of equipment associated with the maintenance of the lot and the land owner’s domestic storage.</p>

Appendix 1
Shire of Boddington – Local Planning Policy No. 7 – Outbuildings

Note 1: The Council will determine outbuilding floor areas based on the total combined gross floor area of outbuildings on the lot, which will include existing outbuildings proposed to be retained by the applicant along with the proposed outbuilding/s.

Note 2: There are limits to the number of dwellings on properties in different zones as set out in LPS3, SPP 7.3 and other Local Planning Policies.

Note 3: Separate to Attachment 1, a Development Application is required as set out in section 6.1 of the Policy.

Zones	Floor Area ¹	Height	Setbacks/Location	Colours	Outbuildings on a vacant lot
Rural	<p>Outbuildings which individually or collectively do not exceed 150m² do not require a Development Application provided other considerations are met.</p> <p>Outbuildings above 150m² are classified as “oversize” and require a Development Application.</p> <p>Maximum floor area: No maximum limit provided the outbuilding is located in the building envelope.</p>	<p>Outbuildings that have a wall height that does not exceed 9.0 metres and/or a ridge height that does not exceed 12.0 metres do not require a Development Application provided other considerations are met.</p> <p>Outbuildings that have a wall height above 9.0 metres and/or a ridge height above 12.0 metres are classified as “overheight” and require a Development Application.</p>	<p>Outbuildings that are located within approved building envelopes do not require a Development Application, provided other considerations are met.</p> <p>Outbuildings that are located outside of approved building envelopes require a Development Application and will generally be advertised for comment.</p>	<p>The Council supports colours that are compatible with the amenity of the area.</p>	<p>No Development Application is required provided the outbuilding is consistent with other considerations in this Policy.</p> <p>Where a Development Application is required the Council will consider each application on its merits.</p>

Appendix 1
Shire of Boddington – Local Planning Policy No. 7 – Outbuildings

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Note 2: There are limits to the number of dwellings on properties in different zones as set out in LPS3, SPP 7.3 and other Local Planning Policies.

Note 3: Separate to Attachment 1, a Development Application is required as set out in section 6.1 of the Policy.

Zones	Floor Area ¹	Height	Setbacks/Location	Colours	Outbuildings on a vacant lot
Special Use	For areas classified as Residential and Rural Residential on an endorsed Structure Plan, refer to relevant zones in Appendix 1 under the headings of “Residential” and “Rural Residential”. Maximum floor area: Refer to related “zones” in Appendix 1.	For areas classified as Residential and Rural Residential on an endorsed Structure Plan, refer to relevant zones in Appendix 1 under the headings of “Residential” and “Rural Residential”.	For areas classified as Residential and Rural Residential on an endorsed Structure Plan, refer to relevant zones in Appendix 1 under the headings of “Residential” and “Rural Residential”.	Unless set out in a Local Development Plan, for areas classified as Residential and Rural Residential on an endorsed Structure Plan, refer to relevant zones in Appendix 1 under the headings of “Residential” and “Rural Residential”.	For areas classified as Residential and Rural residential on an endorsed Structure Plan, refer to relevant zones in Appendix 1 under the headings of “Residential” and “Rural Residential”.

**Appendix 1
Shire of Boddington – Local Planning Policy No. 7 – Outbuildings**

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Note 2: There are limits to the number of dwellings on properties in different zones as set out in LPS3, SPP 7.3 and other Local Planning Policies.

Note 3: Separate to Attachment 1, a Development Application is required as set out in section 6.1 of the Policy.

Zones	Floor Area ¹	Height	Setbacks/Location	Colours	Outbuildings on a vacant lot
Commercial	<p>Outbuildings which do not exceed 12m² do not require a Development Application provided other considerations are met and there is no loss of car parking bays and/or vehicle maneuvering areas.</p> <p>Outbuildings above 12m² require a Development Application.</p> <p>Maximum floor area: No maximum limit.</p>	<p>Outbuildings that have a wall height that does not exceed 2.4 metres and/or a ridge height that does not exceed 4.2 metres do not require a development application provided other considerations are met.</p> <p>Outbuildings that have a wall height above 2.4 metres and/or a ridge height above 4.2 metres require a Development Application.</p>	<p>Outbuildings are to be located in accordance with the BCA and to take account of required car parking bays and/or vehicle maneuvering areas.</p>	<p>The Council supports colours that are compatible with the Town Centre Design Guidelines.</p>	<p>The Council will consider on its merits an outbuilding on a vacant lot provided relevant considerations, including the location/siting of development, have been appropriately addressed to the satisfaction of the Council. A Development Application is required.</p>

Appendix 1
Shire of Boddington – Local Planning Policy No. 7 – Outbuildings

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Note 2: There are limits to the number of dwellings on properties in different zones as set out in LPS3, SPP 7.3 and other Local Planning Policies.

Note 3: Separate to Attachment 1, a Development Application is required as set out in section 6.1 of the Policy.

Zones	Floor Area ¹	Height	Setbacks/Location	Colours	Outbuildings on a vacant lot
Tourism	<p>Outbuildings which do not exceed 12m² do not require a Development Application provided other considerations are met and there is no loss of car parking bays and/or vehicle maneuvering areas.</p> <p>Outbuildings above 12m² require a Development Application.</p> <p>Maximum floor area: No maximum limit.</p>	<p>Outbuildings that have a wall height that does not exceed 2.4 metres and/or a ridge height that does not exceed 4.2 metres do not require a development application provided other considerations are met.</p> <p>Outbuildings that have a wall height above 2.4 metres and/or a ridge height above 4.2 metres require a Development Application.</p>	<p>Outbuildings are to be located in accordance with LPS3 and the BCA.</p>	<p>The Council supports colours that are compatible with the Town Centre Design Guidelines.</p>	<p>The Council will consider on its merits an outbuilding on a vacant lot provided relevant considerations, including the location/siting of development, have been appropriately addressed to the satisfaction of the Council. A Development Application is required.</p>

Appendix 1
Shire of Boddington – Local Planning Policy No. 7 – Outbuildings

Note 1: The Council will determine outbuilding floor areas based on the total combined gross floor area of outbuildings on the lot, which will include existing outbuildings proposed to be retained by the applicant along with the proposed outbuilding/s.

Note 2: There are limits to the number of dwellings on properties in different zones as set out in LPS3, SPP 7.3 and other Local Planning Policies.

Note 3: Separate to Attachment 1, a Development Application is required as set out in section 6.1 of the Policy.

Zones	Floor Area ¹	Height	Setbacks/Location	Colours	Outbuildings on a vacant lot
General Industry	<p>Outbuildings which do not exceed 12m² do not require a Development Application provided other considerations are met and there is no loss of car parking bays and/or vehicle maneuvering areas.</p> <p>Outbuildings above 12m² require a Development Application.</p> <p>Maximum floor area: No maximum limit.</p>	<p>Outbuildings that have a wall height that does not exceed 2.4 metres and/or a ridge height that does not exceed 4.2 metres do not require a development application provided other considerations are met.</p> <p>Outbuildings that have a wall height above 2.4 metres and/or a ridge height above 4.2 metres require a Development Application.</p>	<p>Outbuildings are to be located in accordance with LPS3 and the BCA.</p>	<p>The Council supports colours that are compatible with the amenity of the area.</p>	<p>The Council will support outbuildings being located on vacant land provided other considerations, planning and servicing matters have been appropriately addressed to the satisfaction of Council. A Development Application is required.</p>

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Note 2: There are limits to the number of dwellings on properties in different zones as set out in LPS3, SPP 7.3 and other Local Planning Policies.

Note 3: Separate to Attachment 1, a Development Application is required as set out in section 6.1 of the Policy.

Zones	Floor Area ¹	Height	Setbacks/Location	Colours	Outbuildings on a vacant lot
Environmental Conservation	<p>Outbuildings which do not exceed 12m² do not require a Development Application provided other considerations are met and there is no loss of car parking bays and/or vehicle maneuvering areas.</p> <p>Outbuildings above 12m² require a Development Application.</p> <p>Maximum floor area: 300m².</p>	<p>Outbuildings that have a wall height that does not exceed 2.4 metres and/or a ridge height that does not exceed 4.2 metres do not require a development application provided other considerations are met.</p> <p>Outbuildings that have a wall height above 2.4 metres and/or a ridge height above 4.2 metres require a Development Application.</p>	<p>Outbuildings are to be located in accordance with LPS3 and the BCA.</p>	<p>The Council supports colours that are compatible with the amenity of the area.</p>	<p>In Environmental Conservation areas outbuildings may be permitted where no dwelling exists on the property, however the outbuilding is only to be used for residential purposes such as storage of equipment associated with the maintenance of the lot and the land owner's domestic storage</p>

9.1.2 Revocation of Local Planning Policy 4 – Rural Residential Lots and Water Supplies, Local Planning Policy 8 – Fire Protection & Local Planning Policy 12 – Multiple Dwellings on Rural Land.

File Reference:	1.016
Applicant:	Not applicable
Previous Item:	268/08, 123/09, 79/12
Author:	Executive Manager Development Services
Disclosure of Interest:	Nil
Voting Requirements:	Simple Majority
Attachments:	9.1.2A Local Planning Policy 4 – Rural Residential Lots and Water Supplies 9.1.2B Local Planning Policy 8 – Fire Protection 9.1.2C Local Planning Policy 12 – Multiple Dwellings on Rural Land

Summary

This report proposes to revoke the following Local Planning Policies:

- Local Planning Policy 4 – Rural Residential Lots and Water Supplies (LPP4)
- Local Planning Policy 8 – Fire Protection (LPP8)
- Local Planning Policy 12 – Multiple Dwellings on Rural Land (LPP12)

Background

These three policies are all greater than 10 years old with LPP 4 adopted in November 2008, LPP 8 in July 2009, and LPP 12 in January 2011 and later amended in June 2012.

Comment

These three policies are considered superfluous as they have been superseded by State Planning Policies and/or the Shire of Boddington Local Planning Scheme No.3 (LPS 3), and therefore should be revoked.

LPP 4 has been superseded by State Planning Policy 2.5 Rural Planning, and clause 53 of LPS3, *Dwellings without reticulated mains water supply*. Specifically, new dwellings which are not connected to the reticulated water system are required to provide a rainwater tank of at least 135,000 litres. If water is required for firefighting purposes, then an additional 10,000 litres is required. Dwellings shall be provided with sufficient roof catchment or have other methods acceptable for water capture.

LPP 8 has been superseded by State Planning Policy 3.7 Planning in Bushfire Prone Areas, and the Guidelines for Planning in Bushfire Prone Areas 2021.

LPP 12 has been superseded by LPS 3 Table 5 – *additional requirements that apply to land in the scheme area*. This clause allows the Shire to consider up to 3 dwellings on a lot where one of the dwellings forms part of a heritage protected place and where there is suitable agreement to conserve and appropriately maintain the heritage significance of the dwelling.

Consultation

In accordance with the *Planning and Development (Local Planning Schemes) Regulations 2015* a public notice is required to advertise a revocation of a local planning policy.

Strategic Implications

Aspiration Performance
Outcome 12 Visionary Leadership and Responsible Governance
Objective 12.1 Maintain a high standard of leadership, corporate governance and customer service.

Legislative Implications

Planning and Development (Local Planning Schemes) Regulations 2015, Schedule 2, Part 3, Clause 6, Revocation of Local Planning Policy.

Policy Implications

There are no policy implications given that these polices have been superseded by State Planning Polices and/or LPS 3.

Financial Implications

The revocation of these polices will occur within existing resources and will not require any changes to the adopted budget or long-term financial plan.

Economic Implications

There are no known significant economic implications relating to the report or officer recommendation.

Social Implications

There are no known significant social consideration relating to the report or officer recommendation.

Environmental Considerations

There are no known significant environmental consideration relating to the report or officer recommendation.

Risk Considerations

Risk Statement and Consequence	Failure to review and remove outdated local planning polices will result in polices that are inconsistent with State Planning Policies and or the Local Planning Scheme No 3.
Risk Rating (prior to treatment or control)	Moderate
Principal Risk Theme	Reputational
Risk Action Plan (controls or treatment proposed)	Continue to review Local Planning Polices and amend or revoke as required.

Officer Recommendation

That Council pursuant to Clause 6 of the Deemed Provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015*, resolves to:

1. Revoke *Local Planning Policy 4 – Rural Residential Lots and Water Supplies, Local Planning Policy 8 – Fire Protection and Local Planning Policy 12 – Multiple Dwellings on Rural Land*.
2. Publish notice of the Council decision to revoke *Local Planning Policy 4 – Rural Residential Lots and Water Supplies, Local Planning Policy 8 – Fire Protection and Local Planning Policy 12 – Multiple Dwellings on Rural Land* on the Shire's website and in a newspaper circulating in the district.

**SHIRE OF BODDINGTON
PLANNING POLICY NO. 4
RURAL RESIDENTIAL LOTS AND WATER SUPPLIES**

1. Policy Statement

It is Council's policy to require new rural residential lots to be connected to the reticulated water system, unless appropriately justified to meet criteria set out in this policy or unless there are existing provisions in the Shire of Boddington Town Planning Scheme No. 2 that clearly support on-site water provision.

2. Background and Issues

The Western Australian Planning Commission (WAPC) has recently changed Development Control Policy 3.4 "Subdivision of Rural Land" relating to water supply for rural residential lots between 1 hectare and 4 hectares in area. The relevant section of the policy is set out below:

"When approving lots for rural-residential development (1-4ha) the WAPC will generally require connection to a reticulated water supply where it is practical and reasonable to do so. Where it is not practical or reasonable for lots to connect to a reticulated water supply the WAPC may consider an alternative water supply. In determining whether provision of a reticulated water supply is reasonable, the WAPC may consider the cost differential between a reticulated and alternative water supply, and the reliability of an alternative water supply.

The reliability of alternative water supplies in different localities needs to be confirmed by available models."

The Council is aware that various government agencies and documents, including the State Water Plan (2007, page 15), highlight implications of climate change including:

"Climate modelling by CSIRO shows that average annual rainfalls are projected to decline in the South West of Western Australia by as much as 20% by 2030 and 60% by 2070, compared with average recorded rainfalls to 1990."

It is also questionable as to how reliable rainfall will be east of the Darling Range in this municipality in the coming years. Further, groundwater resources in identified rural residential areas have revealed limited quantity and lower quality. Based on the above, a precautionary approach to servicing is considered sound in addressing water supplies for rural residential lots in this municipality.

3. Objectives

The objectives of this policy are to:

- reinforce the Council’s approach, in the adopted Local Planning Strategy, to support new rural residential lots being connected to the reticulated water system;
- assist in minimising ongoing problems for residents running out of water, not meeting health requirements and having inadequate fire protection;
- promote well designed and located rural residential development, especially on sites that are on key roads, tourist routes and “gateways” to the Boddington/Ranford townsites;
- retain the character of the area for both residents and visitors;
- take a longer term strategic perspective relating to the servicing of rural residential lots and anticipated future impacts, demands and associated growth and servicing requirements for Boddington and Ranford;
- ensure that more intensive rural residential subdivision and development are located closer to the Boddington townsite in areas that can be effectively serviced in accordance with WAPC State Planning Policy 3 – Urban Growth and Settlement;
- not support “leap frog” subdivision unless appropriately serviced and coordinated with adjoining/nearby land. Progressive and planned expansion of rural residential areas is preferred to the establishment of adhoc and uncoordinated subdivision, as it assists to ensure that infrastructure (including reticulated water) is provided in an efficient manner; and
- provide increased certainty for developers/subdividers and greater consistency in decision making by Council.

4. Areas of Application

This policy applies to rural residential zones throughout the municipality.

5. Links to Town Planning Scheme and other documents

This policy relates to various requirements set out in the Shire of Boddington Town Planning Scheme No. 2, Council’s Local Planning Strategy, various WAPC policies and the State Water Plan.

6. Policy Provisions

- 6.1 It is the Council’s policy to require rural residential lots to be connected to the reticulated water system.

- 6.2 The Council will recommend to the WAPC that a subdivision condition be imposed on rural residential lots requiring connection to the reticulated water system in accordance with the Local Planning Strategy unless all matters set out in section 6.5 are appropriately addressed by the proponent.
- 6.3 In considering scheme amendment requests to create Rural Residential Zones or to increase the density (number of lots) in existing Rural Residential Zones, the Council will seek appropriate written assurances from the developer/s regarding their approach to the provision of water to the satisfaction of Council. Further, that supporting technical evidence is submitted from a competent professional addressing this Policy and the practicality and reasonableness of providing reticulated water to the subject land to the satisfaction of Council.
- 6.4 The Council will consider, on its merits, the provision of dormant reticulated water infrastructure being provided at the subdivider's cost. This is subject to appropriate legal protection for Council and (if necessary) to the relevant service provider for reticulated water.
- 6.5 The Council will only consider supporting on-site water provision where a proponent addresses the following to the satisfaction of Council:
- a) the site, including the majority of proposed lots, is located above the 265 metres contour;
 - b) demonstration that the provision of reticulated water is not practical and reasonable which includes a feasibility analysis;
 - c) the subject land and future house sites are well screened from Bannister-Marradong Road and/or Crossman Road;
 - d) the site is capable and suitable of accommodating the proposed density of subdivision/development including addressing relevant planning, environmental and servicing requirements;
 - e) the submission of a Fire Management Plan, prepared by a competent professional;
 - f) the proponent, or a competent professional, demonstrates to the satisfaction of the Council and relevant agencies in the opinion of Council, that future households will have sufficient potable and non-potable water. In particular, to confirm what minimum size roof catchment and minimum water storage capacity are required for an average household based on anticipated rainfall for Boddington; and
 - g) the proponent agrees to include a notification on each Certificate of Title advising landowners in perpetuity that reticulated water is not available to the lot and that a minimum roof catchment and water storage capacity (detailed as a result of investigations set out in "f") are required to be provided by the landowner prior to occupation.

- 6.6 In relation to section 6.3(f), the Council will require a minimum roof catchment of at least 150m² and a minimum water storage capacity of 135,000 litres. The Council may require a greater roof catchment or larger water storage capacity based on professional and/or agency advice.
- 6.7 Where on-site water is supported and/or approved, landowners should take all practical steps to address water quality risks and should refer to relevant State Government agency guidance.
- 6.8 For lots that are connected to the reticulated water system, the Council encourages landowners to also install rainwater tanks, of an appropriate size to their needs, given this has a range of benefits and compliments the provision of a sustainable and reliable water supply. Water from rainwater tanks should be fit for purpose.
- 6.9 In terms of existing Rural Residential zones, the Council will apply the requirements set out in Appendix 6 of the Shire of Boddington Town Planning Scheme No. 2 where there are specific provisions relating to on-site water provision. While noting this, the Council recommends that applicants consider the provision of roof catchment and installing water storage capacity that meets accepted best practice to cope with anticipated lower rainfall.

7. Approval Authorisation

Authority to implement the Policy will be delegated to the Chief Executive Officer.

8. Final Adoption

Final adoption of the Policy was resolved by Council on 11 November 2008.

SHIRE OF BODDINGTON
Planning Policy No. 8 - Fire Protection Measures for New
Development and Subdivisions

1. Policy Statement

To ensure that the impact of fires is significantly reduced and fire suppression is maximised through careful planning and the implementation of fire prevention measures for the safety of Shire of Boddington residents.

It is Council's policy to adopt a precautionary approach to fire risks. To achieve this, the Council will require proponents seeking planning (development), subdivision, scheme amendment, structure plan, and development guide plan approval and other works to take account of fire risk with their proposals.

2. Background and Issues

Bush fires and other fire events are inevitable. Appropriate planning can however reduce the potential for fires to occur and lessen their potentially devastating effects where they do occur.

The level of subdivision/development and associated population growth is expected to increase in the Shire of Boddington in both the shorter to longer term. All new subdivision/development increase fire risks and place demands on fire services to varying degrees. Further, a considerable portion of new subdivision/development will be on "lifestyle" lots i.e. rural residential and rural small holding lots.

Fire risk locally is also influenced by factors including:

- approximately 50% of the municipality is set aside as State Forest and conservation areas;
- much of the municipality is moderately to steeper sloping (especially relative to most of Western Australia);
- most experts predict rainfall will continue to reduce in the coming years/decades and this may be more acute east of the Darling Range than compared to the Swan Coastal Plain; and
- the availability of resources for fire management and responding to fires. As part of this, it is not known whether the State Government and/or the Commonwealth Government will provide the Shire of Boddington with additional resources to manage fire risks in the coming years.

The Council considers that the overall fire management situation within the Shire can be improved by preparing Fire Management Plans early in the planning process, with implementation prior to occupation and/or subdivision clearance.

3. Definitions

In this policy, Fire and Emergency Services Authority (FESA) means the State Government's lead agency that is responsible for fire management and includes any other agency should it be renamed.

Throughout this policy, "proponent" can refer to "developer" or "subdivider", while "proposal" can refer to "planning (development) application, subdivision application, scheme amendment request, structure plan request and development guide plan request or other works" where considered appropriate by Council.

4. Objectives

The objectives of this policy are to:

- minimise the risk from bush fire and other sources to life, property and community assets for new proposals and require proponents to suitably justify why there should be a departure from this policy;
- control the location of development and use of land to avoid placing inappropriate developments in areas that have higher fire risks;
- ensure the implementation of appropriate fire management measures to mitigate fire risks;
- ensure that buildings, by virtue of materials and design, are reasonably fire resistant;
- recognise that Council has endorsed the FESA and Western Australian Planning Commission (WAPC) document titled "Planning for Bush Fire Protection"; and
- provide guidance to developers, subdividers, landowners, the community, other stakeholders and the Shire administration to ensure new developments and subdivisions appropriately address fire risk.

5. Application of the Policy

This policy applies throughout the municipality. In particular, this policy applies to all proposals within the municipality in areas of fire risk and/or which contributes to fire risk as determined by the Council.

6. Links to Town Planning Scheme and other documents

This policy relates to various requirements set out in the Shire of Boddington Town Planning Scheme No. 2, Council's Local Planning Strategy, State Planning Policy 3.4 Natural Hazards and Disasters, *Planning for Bush Fire Protection*, the WAPC Policy DC3.7 Fire Planning and the Building Code of Australia.

7. Policy Provisions

7.1 Endorsement of the *Planning for Bush Fire Protection* document

Council endorses the WAPC and FESA *Planning for Bush Fire Protection* (December 2001) document along with any amendments or updates. Accordingly, the Council will require proponents to ensure compliance with the document. Further, the Council will have due regard to *Planning for Bush Fire Protection*.

7.2 General

The Council will adopt a precautionary approach to fire risk.

The Council will consider fire risk in planning decisions to avoid increasing the risk through inappropriately located or designed land use and development.

More intensive land use and development should only take place in areas where the performance criteria and acceptable solutions set out in *Planning for Bush Fire Protection* can be achieved.

The Council will consider fire hazard in the context of other considerations such as landscape protection and vegetation retention.

The Council will have regard to the objectives and provisions of this policy in determining proposals in areas where there is fire risk as determined by Council.

Council reserves the right to vary this policy where, after consideration of all matters, it is deemed appropriate relevant to the circumstance and is consistent with the spirit and intent of the policy.

7.3 Fire Management Plans

All Fire Management Plans are to be prepared in accordance with the *Planning for Bush Fire Protection* document. Fire Management Plans are to address, to the satisfaction of Council, issues including:

- assessing the fire hazard and risk level;
- subdivision and development design to address the hazard;
- siting of buildings;
- access;
- firebreaks and/or strategic firebreak systems;
- water supply, stand pipes, tanks, fire hydrants and water conservation;
- fuel reduction management;
- fire suppression response;
- access reservations and easements maintenance requirements;
- required building design standards to account for fire risk;
- other relevant performance criteria; and
- the anticipated impact on environmental assets (especially reporting on rare flora, fauna and/or threatened ecological communities) on the application site, through implementing the Fire Management Plan.

Other than for minor proposals and/or where fire risks are low in the opinion of Council, the Council expects that Fire Management Plans will be prepared by a suitably qualified professional. This professional is required to hold appropriate professional indemnity insurance to the satisfaction of Council.

7.4 Fire Risks

The Council does not support more intensive development and subdivisions, such as residential, rural-residential, rural small holdings, tourist and industrial developments in extreme fire hazard areas.

The Council will not approve development, nor support proposals in areas classified as “extreme” fire risk without permanent and realistic hazard level reduction measures being implemented, that can be sustained in the opinion of Council to reduce the hazard level to high, medium or low.

In high and medium fire hazard areas, the use and development of land for more intensive purposes will not be approved or supported without assessment of the bush fire risk and compliance with the performance criteria and acceptable solutions set out in *Planning for Bush Fire Protection*. The Council will only support proposals in areas classified as high and medium fire risk following the receipt of a Fire Management Plan from a suitably qualified professional confirming that the proposal, design, facilities and management are appropriate to address fire risk to the satisfaction of Council.

7.5 Strategic Firebreaks

Where strategic firebreaks are required as part of an approved Fire Management Plan, the Council will require the subdivider to install the strategic firebreaks, gates and other required measures to the satisfaction of Council. In particular, the strategic firebreak is to be to an all weather standard that can be accessed by two wheel drive vehicles. Where the strategic firebreak is also used for pedestrian/cyclist access, the Council may require the access to be sealed, concreted or constructed to an appropriate standard to the satisfaction of Council.

The Council’s preference is that the on-going management and maintenance of strategic firebreaks (not firebreaks around each property) rests with the Council for:

- larger rural residential and rural small holding subdivisions;
- residential, tourism or industrial subdivisions adjoining river foreshores and/or public land; and
- other subdivisions as determined appropriate by Council.

The strategic firebreak is to be protected through an easement, inclusion in a Public Access Way or through other measures to the satisfaction of Council.

The Council does not support taking over on-going management and maintenance of strategic firebreaks in the Rural Zone.

7.6 Signage

Planning for Bush Fire Protection sets out requirements for signage where fire service access and emergency access adjoin public roads. Where set out in an approved Fire Management Plan, the Council will require the subdivider to install appropriate signage prior to the clearance of the Deposited Plan.

7.7 Reticulated Water

The Council's priority is seeking to minimise fire risks and the provision of reticulated (scheme) water, with associated hydrants and storages tanks, is an important component to achieve this.

The Council will require urban development and will seek to ensure that urban subdivisions are connected to the reticulated water system. The Council will seek to ensure that rural residential subdivision is connected to the reticulated water system in accordance with *Council Policy No. 4 Rural Residential Lots and Water Supplies*.

While noting the above, the Council is mindful of the need to conserve water and that water should be fit for purpose. The Council will require that proponents consider appropriate water sources and an appropriate range of fire management measures in preparing Fire Management Plans.

7.8 Fire Hydrants

In areas served by reticulated water, the Council will require fire hydrants to be provided in accordance with FESA and Water Corporation standards, including design, spacing and water pressure. The Council will require the subdivider's consulting engineer to provide sufficient details in order for the Council to make its assessment.

The Council may also require the subdivider to install a reserve storage tank, in an appropriate location, to compliment the reticulated water system to assist in maintaining continuity of supply.

7.9 Scheme Amendment and Structure Plan Requests

Any scheme amendment request, where there is a potential for fire risk in the opinion of Council, must be accompanied by a statement or report which demonstrates that all fire protection requirements contained in *Planning for Bush Fire Protection* can be achieved to the satisfaction of the Council.

The Council will require a suitable professional to prepare a Fire Management Plan for scheme amendment requests prior to adoption of the scheme amendment.

The Council will not adopt scheme amendment requests on land having medium, high or extreme risk where the performance criteria and acceptable solutions contained in *Planning for Bush Fire Protection* can not be met.

Council will require a Fire Management Plan to be provided with structure plan requests.

7.10 Subdivision Applications

The Council will only support subdivision in areas classified as "high" fire risk following the receipt of a Fire Management Plan from a suitably qualified professional confirming that the proposal, design, facilities and management are appropriate to address fire risk to the satisfaction of Council.

For Subdivision Applications, as determined by Council, the Council may request the WAPC impose conditions to address on-the-ground fire protection issues including, but not limited to the following:

- requiring the preparation and implementation of Fire Management Plans in accordance with the *Planning for Bush Fire Protection* document to the satisfaction of the Council;
- the provision of fire fighting water supply and fire hydrants;
- the provision of fire services access;
- to ensure that adequate fire prevention and suppression measures are implemented;
- the allocation of a site for the location of a fire fighting facility; and
- to ensure that prospective purchasers are aware of relevant scheme provisions and publications addressing bush fire safety.

7.11 Planning Applications

For developments that are in areas of medium, high or extreme fire risk (in the opinion of Council) and for where there is no existing and contemporary Fire Management Plan covering the area subject to the application, the Council may require the submission of a Fire Management Plan with the Planning Application to assess development risks.

The Council may impose a condition requiring either the preparation and/or implementation of a Fire Management Plan in accordance with the *Planning for Bush Fire Protection* document to the satisfaction of the Council.

7.12 Bushfire Hazard Mapping

Following bushfire hazard mapping being undertaken for all or part of the municipality, the Council will give this due consideration in determining proposals.

7.13 Fire Equipment Strategy

Following a Fire Equipment Strategy being prepared for all or part of the municipality, the Council will give this due consideration in determining proposals. Subject to the recommendations of the Fire Equipment Strategy, the Council may require developers/subdividers to contribute to upgraded fire management equipment in order to reduce fire risks for future residents and/or visitors.

7.14 Obtaining Advice

The Council will seek advice from the local volunteer Bush Fire Brigades, FESA and/or other agencies as appropriate on proposals.

7.15 Landowner Responsibilities

Landowners should take all practical steps to address fire risks subject to gaining necessary approvals.

8. Approval Authorisation

Authority to implement the policy will be delegated to the Chief Executive Officer, other than as outlined in this policy.

9. Final Adoption

Final adoption of the policy was resolved by Council on 21 July 2009.

SHIRE OF BODDINGTON
Planning Policy No. 8 - Fire Protection Measures for New
Development and Subdivisions

1. Policy Statement

To ensure that the impact of fires is significantly reduced and fire suppression is maximised through careful planning and the implementation of fire prevention measures for the safety of Shire of Boddington residents.

It is Council's policy to adopt a precautionary approach to fire risks. To achieve this, the Council will require proponents seeking planning (development), subdivision, scheme amendment, structure plan, and development guide plan approval and other works to take account of fire risk with their proposals.

2. Background and Issues

Bush fires and other fire events are inevitable. Appropriate planning can however reduce the potential for fires to occur and lessen their potentially devastating effects where they do occur.

The level of subdivision/development and associated population growth is expected to increase in the Shire of Boddington in both the shorter to longer term. All new subdivision/development increase fire risks and place demands on fire services to varying degrees. Further, a considerable portion of new subdivision/development will be on "lifestyle" lots i.e. rural residential and rural small holding lots.

Fire risk locally is also influenced by factors including:

- approximately 50% of the municipality is set aside as State Forest and conservation areas;
- much of the municipality is moderately to steeper sloping (especially relative to most of Western Australia);
- most experts predict rainfall will continue to reduce in the coming years/decades and this may be more acute east of the Darling Range than compared to the Swan Coastal Plain; and
- the availability of resources for fire management and responding to fires. As part of this, it is not known whether the State Government and/or the Commonwealth Government will provide the Shire of Boddington with additional resources to manage fire risks in the coming years.

The Council considers that the overall fire management situation within the Shire can be improved by preparing Fire Management Plans early in the planning process, with implementation prior to occupation and/or subdivision clearance.

3. Definitions

In this policy, Fire and Emergency Services Authority (FESA) means the State Government's lead agency that is responsible for fire management and includes any other agency should it be renamed.

Throughout this policy, "proponent" can refer to "developer" or "subdivider", while "proposal" can refer to "planning (development) application, subdivision application, scheme amendment request, structure plan request and development guide plan request or other works" where considered appropriate by Council.

4. Objectives

The objectives of this policy are to:

- minimise the risk from bush fire and other sources to life, property and community assets for new proposals and require proponents to suitably justify why there should be a departure from this policy;
- control the location of development and use of land to avoid placing inappropriate developments in areas that have higher fire risks;
- ensure the implementation of appropriate fire management measures to mitigate fire risks;
- ensure that buildings, by virtue of materials and design, are reasonably fire resistant;
- recognise that Council has endorsed the FESA and Western Australian Planning Commission (WAPC) document titled "Planning for Bush Fire Protection"; and
- provide guidance to developers, subdividers, landowners, the community, other stakeholders and the Shire administration to ensure new developments and subdivisions appropriately address fire risk.

5. Application of the Policy

This policy applies throughout the municipality. In particular, this policy applies to all proposals within the municipality in areas of fire risk and/or which contributes to fire risk as determined by the Council.

6. Links to Town Planning Scheme and other documents

This policy relates to various requirements set out in the Shire of Boddington Town Planning Scheme No. 2, Council's Local Planning Strategy, State Planning Policy 3.4 Natural Hazards and Disasters, *Planning for Bush Fire Protection*, the WAPC Policy DC3.7 Fire Planning and the Building Code of Australia.

7. Policy Provisions

7.1 Endorsement of the *Planning for Bush Fire Protection* document

Council endorses the WAPC and FESA *Planning for Bush Fire Protection* (December 2001) document along with any amendments or updates. Accordingly, the Council will require proponents to ensure compliance with the document. Further, the Council will have due regard to *Planning for Bush Fire Protection*.

7.2 General

The Council will adopt a precautionary approach to fire risk.

The Council will consider fire risk in planning decisions to avoid increasing the risk through inappropriately located or designed land use and development.

More intensive land use and development should only take place in areas where the performance criteria and acceptable solutions set out in *Planning for Bush Fire Protection* can be achieved.

The Council will consider fire hazard in the context of other considerations such as landscape protection and vegetation retention.

The Council will have regard to the objectives and provisions of this policy in determining proposals in areas where there is fire risk as determined by Council.

Council reserves the right to vary this policy where, after consideration of all matters, it is deemed appropriate relevant to the circumstance and is consistent with the spirit and intent of the policy.

7.3 Fire Management Plans

All Fire Management Plans are to be prepared in accordance with the *Planning for Bush Fire Protection* document. Fire Management Plans are to address, to the satisfaction of Council, issues including:

- assessing the fire hazard and risk level;
- subdivision and development design to address the hazard;
- siting of buildings;
- access;
- firebreaks and/or strategic firebreak systems;
- water supply, stand pipes, tanks, fire hydrants and water conservation;
- fuel reduction management;
- fire suppression response;
- access reservations and easements maintenance requirements;
- required building design standards to account for fire risk;
- other relevant performance criteria; and
- the anticipated impact on environmental assets (especially reporting on rare flora, fauna and/or threatened ecological communities) on the application site, through implementing the Fire Management Plan.

Other than for minor proposals and/or where fire risks are low in the opinion of Council, the Council expects that Fire Management Plans will be prepared by a suitably qualified professional. This professional is required to hold appropriate professional indemnity insurance to the satisfaction of Council.

7.4 Fire Risks

The Council does not support more intensive development and subdivisions, such as residential, rural-residential, rural small holdings, tourist and industrial developments in extreme fire hazard areas.

The Council will not approve development, nor support proposals in areas classified as “extreme” fire risk without permanent and realistic hazard level reduction measures being implemented, that can be sustained in the opinion of Council to reduce the hazard level to high, medium or low.

In high and medium fire hazard areas, the use and development of land for more intensive purposes will not be approved or supported without assessment of the bush fire risk and compliance with the performance criteria and acceptable solutions set out in *Planning for Bush Fire Protection*. The Council will only support proposals in areas classified as high and medium fire risk following the receipt of a Fire Management Plan from a suitably qualified professional confirming that the proposal, design, facilities and management are appropriate to address fire risk to the satisfaction of Council.

7.5 Strategic Firebreaks

Where strategic firebreaks are required as part of an approved Fire Management Plan, the Council will require the subdivider to install the strategic firebreaks, gates and other required measures to the satisfaction of Council. In particular, the strategic firebreak is to be to an all weather standard that can be accessed by two wheel drive vehicles. Where the strategic firebreak is also used for pedestrian/cyclist access, the Council may require the access to be sealed, concreted or constructed to an appropriate standard to the satisfaction of Council.

The Council’s preference is that the on-going management and maintenance of strategic firebreaks (not firebreaks around each property) rests with the Council for:

- larger rural residential and rural small holding subdivisions;
- residential, tourism or industrial subdivisions adjoining river foreshores and/or public land; and
- other subdivisions as determined appropriate by Council.

The strategic firebreak is to be protected through an easement, inclusion in a Public Access Way or through other measures to the satisfaction of Council.

The Council does not support taking over on-going management and maintenance of strategic firebreaks in the Rural Zone.

7.6 Signage

Planning for Bush Fire Protection sets out requirements for signage where fire service access and emergency access adjoin public roads. Where set out in an approved Fire Management Plan, the Council will require the subdivider to install appropriate signage prior to the clearance of the Deposited Plan.

7.7 Reticulated Water

The Council's priority is seeking to minimise fire risks and the provision of reticulated (scheme) water, with associated hydrants and storages tanks, is an important component to achieve this.

The Council will require urban development and will seek to ensure that urban subdivisions are connected to the reticulated water system. The Council will seek to ensure that rural residential subdivision is connected to the reticulated water system in accordance with *Council Policy No. 4 Rural Residential Lots and Water Supplies*.

While noting the above, the Council is mindful of the need to conserve water and that water should be fit for purpose. The Council will require that proponents consider appropriate water sources and an appropriate range of fire management measures in preparing Fire Management Plans.

7.8 Fire Hydrants

In areas served by reticulated water, the Council will require fire hydrants to be provided in accordance with FESA and Water Corporation standards, including design, spacing and water pressure. The Council will require the subdivider's consulting engineer to provide sufficient details in order for the Council to make its assessment.

The Council may also require the subdivider to install a reserve storage tank, in an appropriate location, to compliment the reticulated water system to assist in maintaining continuity of supply.

7.9 Scheme Amendment and Structure Plan Requests

Any scheme amendment request, where there is a potential for fire risk in the opinion of Council, must be accompanied by a statement or report which demonstrates that all fire protection requirements contained in *Planning for Bush Fire Protection* can be achieved to the satisfaction of the Council.

The Council will require a suitable professional to prepare a Fire Management Plan for scheme amendment requests prior to adoption of the scheme amendment.

The Council will not adopt scheme amendment requests on land having medium, high or extreme risk where the performance criteria and acceptable solutions contained in *Planning for Bush Fire Protection* can not be met.

Council will require a Fire Management Plan to be provided with structure plan requests.

7.10 Subdivision Applications

The Council will only support subdivision in areas classified as "high" fire risk following the receipt of a Fire Management Plan from a suitably qualified professional confirming that the proposal, design, facilities and management are appropriate to address fire risk to the satisfaction of Council.

For Subdivision Applications, as determined by Council, the Council may request the WAPC impose conditions to address on-the-ground fire protection issues including, but not limited to the following:

- requiring the preparation and implementation of Fire Management Plans in accordance with the *Planning for Bush Fire Protection* document to the satisfaction of the Council;
- the provision of fire fighting water supply and fire hydrants;
- the provision of fire services access;
- to ensure that adequate fire prevention and suppression measures are implemented;
- the allocation of a site for the location of a fire fighting facility; and
- to ensure that prospective purchasers are aware of relevant scheme provisions and publications addressing bush fire safety.

7.11 Planning Applications

For developments that are in areas of medium, high or extreme fire risk (in the opinion of Council) and for where there is no existing and contemporary Fire Management Plan covering the area subject to the application, the Council may require the submission of a Fire Management Plan with the Planning Application to assess development risks.

The Council may impose a condition requiring either the preparation and/or implementation of a Fire Management Plan in accordance with the *Planning for Bush Fire Protection* document to the satisfaction of the Council.

7.12 Bushfire Hazard Mapping

Following bushfire hazard mapping being undertaken for all or part of the municipality, the Council will give this due consideration in determining proposals.

7.13 Fire Equipment Strategy

Following a Fire Equipment Strategy being prepared for all or part of the municipality, the Council will give this due consideration in determining proposals. Subject to the recommendations of the Fire Equipment Strategy, the Council may require developers/subdividers to contribute to upgraded fire management equipment in order to reduce fire risks for future residents and/or visitors.

7.14 Obtaining Advice

The Council will seek advice from the local volunteer Bush Fire Brigades, FESA and/or other agencies as appropriate on proposals.

7.15 Landowner Responsibilities

Landowners should take all practical steps to address fire risks subject to gaining necessary approvals.

8. Approval Authorisation

Authority to implement the policy will be delegated to the Chief Executive Officer, other than as outlined in this policy.

9. Final Adoption

Final adoption of the policy was resolved by Council on 21 July 2009.

SHIRE OF BODDINGTON
Planning Policy No. 8 - Fire Protection Measures for New
Development and Subdivisions

1. Policy Statement

To ensure that the impact of fires is significantly reduced and fire suppression is maximised through careful planning and the implementation of fire prevention measures for the safety of Shire of Boddington residents.

It is Council's policy to adopt a precautionary approach to fire risks. To achieve this, the Council will require proponents seeking planning (development), subdivision, scheme amendment, structure plan, and development guide plan approval and other works to take account of fire risk with their proposals.

2. Background and Issues

Bush fires and other fire events are inevitable. Appropriate planning can however reduce the potential for fires to occur and lessen their potentially devastating effects where they do occur.

The level of subdivision/development and associated population growth is expected to increase in the Shire of Boddington in both the shorter to longer term. All new subdivision/development increase fire risks and place demands on fire services to varying degrees. Further, a considerable portion of new subdivision/development will be on "lifestyle" lots i.e. rural residential and rural small holding lots.

Fire risk locally is also influenced by factors including:

- approximately 50% of the municipality is set aside as State Forest and conservation areas;
- much of the municipality is moderately to steeper sloping (especially relative to most of Western Australia);
- most experts predict rainfall will continue to reduce in the coming years/decades and this may be more acute east of the Darling Range than compared to the Swan Coastal Plain; and
- the availability of resources for fire management and responding to fires. As part of this, it is not known whether the State Government and/or the Commonwealth Government will provide the Shire of Boddington with additional resources to manage fire risks in the coming years.

The Council considers that the overall fire management situation within the Shire can be improved by preparing Fire Management Plans early in the planning process, with implementation prior to occupation and/or subdivision clearance.

3. Definitions

In this policy, Fire and Emergency Services Authority (FESA) means the State Government's lead agency that is responsible for fire management and includes any other agency should it be renamed.

Throughout this policy, "proponent" can refer to "developer" or "subdivider", while "proposal" can refer to "planning (development) application, subdivision application, scheme amendment request, structure plan request and development guide plan request or other works" where considered appropriate by Council.

4. Objectives

The objectives of this policy are to:

- minimise the risk from bush fire and other sources to life, property and community assets for new proposals and require proponents to suitably justify why there should be a departure from this policy;
- control the location of development and use of land to avoid placing inappropriate developments in areas that have higher fire risks;
- ensure the implementation of appropriate fire management measures to mitigate fire risks;
- ensure that buildings, by virtue of materials and design, are reasonably fire resistant;
- recognise that Council has endorsed the FESA and Western Australian Planning Commission (WAPC) document titled "Planning for Bush Fire Protection"; and
- provide guidance to developers, subdividers, landowners, the community, other stakeholders and the Shire administration to ensure new developments and subdivisions appropriately address fire risk.

5. Application of the Policy

This policy applies throughout the municipality. In particular, this policy applies to all proposals within the municipality in areas of fire risk and/or which contributes to fire risk as determined by the Council.

6. Links to Town Planning Scheme and other documents

This policy relates to various requirements set out in the Shire of Boddington Town Planning Scheme No. 2, Council's Local Planning Strategy, State Planning Policy 3.4 Natural Hazards and Disasters, *Planning for Bush Fire Protection*, the WAPC Policy DC3.7 Fire Planning and the Building Code of Australia.

7. Policy Provisions

7.1 Endorsement of the *Planning for Bush Fire Protection* document

Council endorses the WAPC and FESA *Planning for Bush Fire Protection* (December 2001) document along with any amendments or updates. Accordingly, the Council will require proponents to ensure compliance with the document. Further, the Council will have due regard to *Planning for Bush Fire Protection*.

7.2 General

The Council will adopt a precautionary approach to fire risk.

The Council will consider fire risk in planning decisions to avoid increasing the risk through inappropriately located or designed land use and development.

More intensive land use and development should only take place in areas where the performance criteria and acceptable solutions set out in *Planning for Bush Fire Protection* can be achieved.

The Council will consider fire hazard in the context of other considerations such as landscape protection and vegetation retention.

The Council will have regard to the objectives and provisions of this policy in determining proposals in areas where there is fire risk as determined by Council.

Council reserves the right to vary this policy where, after consideration of all matters, it is deemed appropriate relevant to the circumstance and is consistent with the spirit and intent of the policy.

7.3 Fire Management Plans

All Fire Management Plans are to be prepared in accordance with the *Planning for Bush Fire Protection* document. Fire Management Plans are to address, to the satisfaction of Council, issues including:

- assessing the fire hazard and risk level;
- subdivision and development design to address the hazard;
- siting of buildings;
- access;
- firebreaks and/or strategic firebreak systems;
- water supply, stand pipes, tanks, fire hydrants and water conservation;
- fuel reduction management;
- fire suppression response;
- access reservations and easements maintenance requirements;
- required building design standards to account for fire risk;
- other relevant performance criteria; and
- the anticipated impact on environmental assets (especially reporting on rare flora, fauna and/or threatened ecological communities) on the application site, through implementing the Fire Management Plan.

Other than for minor proposals and/or where fire risks are low in the opinion of Council, the Council expects that Fire Management Plans will be prepared by a suitably qualified professional. This professional is required to hold appropriate professional indemnity insurance to the satisfaction of Council.

7.4 Fire Risks

The Council does not support more intensive development and subdivisions, such as residential, rural-residential, rural small holdings, tourist and industrial developments in extreme fire hazard areas.

The Council will not approve development, nor support proposals in areas classified as “extreme” fire risk without permanent and realistic hazard level reduction measures being implemented, that can be sustained in the opinion of Council to reduce the hazard level to high, medium or low.

In high and medium fire hazard areas, the use and development of land for more intensive purposes will not be approved or supported without assessment of the bush fire risk and compliance with the performance criteria and acceptable solutions set out in *Planning for Bush Fire Protection*. The Council will only support proposals in areas classified as high and medium fire risk following the receipt of a Fire Management Plan from a suitably qualified professional confirming that the proposal, design, facilities and management are appropriate to address fire risk to the satisfaction of Council.

7.5 Strategic Firebreaks

Where strategic firebreaks are required as part of an approved Fire Management Plan, the Council will require the subdivider to install the strategic firebreaks, gates and other required measures to the satisfaction of Council. In particular, the strategic firebreak is to be to an all weather standard that can be accessed by two wheel drive vehicles. Where the strategic firebreak is also used for pedestrian/cyclist access, the Council may require the access to be sealed, concreted or constructed to an appropriate standard to the satisfaction of Council.

The Council’s preference is that the on-going management and maintenance of strategic firebreaks (not firebreaks around each property) rests with the Council for:

- larger rural residential and rural small holding subdivisions;
- residential, tourism or industrial subdivisions adjoining river foreshores and/or public land; and
- other subdivisions as determined appropriate by Council.

The strategic firebreak is to be protected through an easement, inclusion in a Public Access Way or through other measures to the satisfaction of Council.

The Council does not support taking over on-going management and maintenance of strategic firebreaks in the Rural Zone.

7.6 Signage

Planning for Bush Fire Protection sets out requirements for signage where fire service access and emergency access adjoin public roads. Where set out in an approved Fire Management Plan, the Council will require the subdivider to install appropriate signage prior to the clearance of the Deposited Plan.

7.7 Reticulated Water

The Council's priority is seeking to minimise fire risks and the provision of reticulated (scheme) water, with associated hydrants and storages tanks, is an important component to achieve this.

The Council will require urban development and will seek to ensure that urban subdivisions are connected to the reticulated water system. The Council will seek to ensure that rural residential subdivision is connected to the reticulated water system in accordance with *Council Policy No. 4 Rural Residential Lots and Water Supplies*.

While noting the above, the Council is mindful of the need to conserve water and that water should be fit for purpose. The Council will require that proponents consider appropriate water sources and an appropriate range of fire management measures in preparing Fire Management Plans.

7.8 Fire Hydrants

In areas served by reticulated water, the Council will require fire hydrants to be provided in accordance with FESA and Water Corporation standards, including design, spacing and water pressure. The Council will require the subdivider's consulting engineer to provide sufficient details in order for the Council to make its assessment.

The Council may also require the subdivider to install a reserve storage tank, in an appropriate location, to compliment the reticulated water system to assist in maintaining continuity of supply.

7.9 Scheme Amendment and Structure Plan Requests

Any scheme amendment request, where there is a potential for fire risk in the opinion of Council, must be accompanied by a statement or report which demonstrates that all fire protection requirements contained in *Planning for Bush Fire Protection* can be achieved to the satisfaction of the Council.

The Council will require a suitable professional to prepare a Fire Management Plan for scheme amendment requests prior to adoption of the scheme amendment.

The Council will not adopt scheme amendment requests on land having medium, high or extreme risk where the performance criteria and acceptable solutions contained in *Planning for Bush Fire Protection* can not be met.

Council will require a Fire Management Plan to be provided with structure plan requests.

7.10 Subdivision Applications

The Council will only support subdivision in areas classified as "high" fire risk following the receipt of a Fire Management Plan from a suitably qualified professional confirming that the proposal, design, facilities and management are appropriate to address fire risk to the satisfaction of Council.

For Subdivision Applications, as determined by Council, the Council may request the WAPC impose conditions to address on-the-ground fire protection issues including, but not limited to the following:

- requiring the preparation and implementation of Fire Management Plans in accordance with the *Planning for Bush Fire Protection* document to the satisfaction of the Council;
- the provision of fire fighting water supply and fire hydrants;
- the provision of fire services access;
- to ensure that adequate fire prevention and suppression measures are implemented;
- the allocation of a site for the location of a fire fighting facility; and
- to ensure that prospective purchasers are aware of relevant scheme provisions and publications addressing bush fire safety.

7.11 Planning Applications

For developments that are in areas of medium, high or extreme fire risk (in the opinion of Council) and for where there is no existing and contemporary Fire Management Plan covering the area subject to the application, the Council may require the submission of a Fire Management Plan with the Planning Application to assess development risks.

The Council may impose a condition requiring either the preparation and/or implementation of a Fire Management Plan in accordance with the *Planning for Bush Fire Protection* document to the satisfaction of the Council.

7.12 Bushfire Hazard Mapping

Following bushfire hazard mapping being undertaken for all or part of the municipality, the Council will give this due consideration in determining proposals.

7.13 Fire Equipment Strategy

Following a Fire Equipment Strategy being prepared for all or part of the municipality, the Council will give this due consideration in determining proposals. Subject to the recommendations of the Fire Equipment Strategy, the Council may require developers/subdividers to contribute to upgraded fire management equipment in order to reduce fire risks for future residents and/or visitors.

7.14 Obtaining Advice

The Council will seek advice from the local volunteer Bush Fire Brigades, FESA and/or other agencies as appropriate on proposals.

7.15 Landowner Responsibilities

Landowners should take all practical steps to address fire risks subject to gaining necessary approvals.

8. Approval Authorisation

Authority to implement the policy will be delegated to the Chief Executive Officer, other than as outlined in this policy.

9. Final Adoption

Final adoption of the policy was resolved by Council on 21 July 2009.

SHIRE OF BODDINGTON

LOCAL PLANNING POLICY No. 12 – MULTIPLE DWELLINGS ON RURAL LAND

1. Policy Statement

The intention of this Policy is to provide guidelines for the establishment of a second dwelling and multiple dwellings on Rural zoned land within the Shire of Boddington.

2. Background and Issues

Rural production is a key part of the district's economy. The Council considers the support and protection of rural production is critical to the sustainable future of the community. Many farms run as family businesses and/or require permanent or seasonal workers in order to function competitively and effectively. These additional family members or other workers require accommodation. However, living in town and commuting daily are not always an appropriate option for some agricultural operations. Allowing for limited additional on site housing can be a beneficial contribution to viable farming.

There are other circumstances in rural areas (e.g. tourism) where there could be a need for more than one dwelling on a title.

An allowance for an additional dwelling on a Rural zoned lot is a concession that should be respected. In the past, it has sometimes been considered as an automatic right for a second dwelling, regardless of any justification or rural activities generating a need. In other local government authorities, it has been used as a basis to support an application to subdivide the lot. Another difficulty that can arise from indiscriminate development of additional houses on rural zoned lots, is the introduction of people seeking a "lifestyle" residence, but having no direct involvement in agricultural production. This can create land use conflicts and impact on agricultural production.

The Council understands that the need for more than one dwelling on a title can arise in situations where a family is operating a large farming activity when accommodation may need to be provided for farm employees or for other legitimate purposes. In such cases, the Council can determine that an additional dwelling is complementary to the farming activity or other approved use.

3. Definitions

In this Policy, the following definitions apply:

"Ancillary Accommodation" – as defined in the Residential Design Codes of Western Australia is "Self contained living accommodation on the same site as a single house that may be attached or detached from the single house occupied by members of the same family as the occupiers of the main dwelling."

"Caretaker's Dwelling" – means a building used as a dwelling by a person having the care of the building, plant, equipment or grounds associated with an industry, business, office or recreation area carried in or existing on the same site.

"Dwelling" - as defined in the Residential Design Codes of Western Australia, is "A building or portion of a building being used, adapted, or designed or intended to be used for the purpose of human habitation on a permanent basis by a single person, a single family, or no more than six persons who do not comprise a single family."

“R Codes” - the Residential Design Codes of Western Australia, adopted by the Western Australian Planning Commission including any updates.

“Residential Building” – has the same meaning as is given to that term in the Residential Codes of Western Australia.

“Single House” – One (1) dwelling on a title.

“Second Dwelling” - Two (2) dwellings on a title which can include a combination of a Single House with either a Caretaker’s Dwelling, or Ancillary Accommodation or a Residential Building.

“Multiple Dwelling” - Three (3) dwellings on a title which can include a combination of a Single House with two additional dwellings comprising either a Caretaker’s Dwelling, Ancillary Accommodation or a Residential Building.

4. Objectives

The objectives of this Policy are to:

- support sustainable agricultural production as a key component of the district economy;
- protect productive agricultural land from conflicting land uses;
- set out the opportunities and restrictions associated with additional dwellings on rural lots;
- provide guidelines in relation to applications to construct a second/multiple dwelling on a lot in rural areas;
- retain the rural character of the district;
- provide further interpretation of LPS2 in the assessment of applications for dwellings within the Rural Zone;
- provide increased certainty for landowners, the community and others by providing greater consistency in decision making by the Council;
- facilitate the effective and timely processing of applications where in accordance with this Policy;
- ensure that the overall amenity of the district is retained and enhanced for the benefit of residents and in the interests of the district’s tourist potential; and
- ensure key landscape values are maintained.

5. Application of the Policy

This Policy applies to the Rural Zone.

6. Links to Local Planning Scheme and Other Documents

This Policy relates to various requirements set out in LPS2 and the Local Planning Strategy.

Clause 4.5 of LPS2 titled “Residential Development in the Rural Zone” states the following:

“4.5.1 Regardless of other provisions in the Scheme, including the Zoning Table, the Council will not support more than three dwellings on any title/lot regardless of the dwelling type (dwelling, ancillary accommodation, caretaker’s dwelling).

4.5.2 No more than one dwelling may be developed on a lot zoned Rural, except where the Council is satisfied that the accommodation is -

- (a) for ancillary accommodation; or
- (b) required for a caretaker's dwelling or workers accommodation which is necessary for the continuation of an agricultural, rural or other permitted use."

7. Policy Provisions

7.1 General

No more than one dwelling may be developed on a lot zoned Rural, except where the Council is satisfied that the accommodation is:

- for ancillary accommodation; or
- required for a caretaker's dwelling or worker's accommodation which is necessary for the continuation of an established significant agricultural/rural activity. The agricultural/rural activity is of a scale or type to justify the full time employment of an additional full time worker to ensure a viable operation, and the lot (or farm) shall have an existing suitable dam and/or another legitimate alternative water supply to support the agricultural/rural activity; or
- required for a caretaker's dwelling or worker's accommodation which is necessary to support the operation of an approved and substantial tourism or commercial development; or
- for a valid reason to support a residential building in a rural setting.

The Council will only consider 3 dwellings on any title/lot in exceptional circumstances and where appropriately justified by the proponent.

The Council will not support more than 3 dwellings on any title/lot in the Rural Zone regardless of the dwelling type (dwelling, ancillary accommodation, caretaker's dwelling, residential building). Four (4) dwellings and above is not supported.

The Council will require applicants to demonstrate that the additional dwelling is required to accommodate persons who need to live on the lot to assist in the management of the farming unit or the tourist/commercial operation. The "onus of proof" rests with the applicant to justify their application and variations to this Policy.

7.2 Matters to Consider

The Council requires that applications for a second or multiple dwelling on a lot in a Rural Zone shall be treated on its merits.

The Council will have regard to matters including the following in assessing applications:

- Policy objectives and Policy provisions;
- lot size, shape and features;
- land use;
- setbacks and location of the proposed dwelling;
- generally seek to "cluster" the proposed dwelling/s adjacent to the existing dwelling to minimise off-site land use impacts;
- impact and amenity on adjoining/nearby properties and agricultural areas;
- visibility from nearby vantage points (especially public roads);
- the extent of existing screening including vegetation;
- construction materials and proposed colour/s;

- provisions and requirements set out in LPS2;
- development statements set out in the Local Planning Strategy;
- relevant State Planning Policies;
- written comments from affected landowners and other stakeholders; and
- any other circumstance and factor affecting the application in the opinion of Council.

The Council will have regard to other relevant Local Planning Policies including *Local Planning Policy 6 – Development in Flood Affected Areas* and *Local Planning Policy 8 – Fire Protection Measures for New Development and Subdivisions*.

The Council will favourably consider an application where:

- it is consistent with the Local Planning Strategy;
- it is satisfied that the additional dwelling is necessary or desirable for continuation of bona fide rural activity or for any other approved use; and
- the proposed dwelling location appropriately addresses fire management, environmental considerations, servicing, land use compatibility with adjoining/nearby properties and visual impact from regional and key tourist roads.

The Council will not support additional dwellings in the mining buffer, on flood impacted land, in extreme fire risk areas, where there is unacceptable visual impact or where the location will detrimentally impact adjoining farming operations.

7.3 Size of Property

The minimum lot size for consideration of a second dwelling is 40 hectares.

The minimum lot size for consideration of a multiple (3rd) dwelling is 100 hectares.

7.4 Dwelling Location/Setbacks

The Council shall ensure that the additional dwelling is so positioned on the lot to avoid land use conflicts or potential restrictions on productive agricultural activities on adjoining lots or farms. Subject to adjoining/nearby land uses, the Council will have regard to the Environmental Protection Authority (EPA) guidelines *Separation Distances between Industrial and Sensitive Land Uses* (or any updates). The Council will consider variations to the EPA guidelines subject to suitable justification from the applicant (or their consultant/s), site/environmental conditions or subject to the advice received through advertising the planning application.

The minimum boundary setbacks for development in the Rural Zone is 20 metres in LPS2. Unless the Council approves otherwise, and subject to adjoining uses, the Council will generally require a minimum 100 metre building setback from a property boundary for an additional dwelling.

Unless justified by the applicant and agreed to by the Council, the additional dwelling should be located within 100 metres of the existing dwelling. The Council will only be prepared to support a separation of greater than 100 metres where the need for such a separation can be demonstrated (i.e. the site characteristics may prevent establishment in close proximity or where the proposed dwelling location will not create detrimental off-site impacts in the opinion of the Council).

In considering an application for an additional dwelling, the Council will have regard for the maintenance and enhancement of the rural landscape and shall take into consideration:

- the location of the additional dwelling the lot;
- the type and colour of exterior building materials;
- the requirement for the dwelling to be appropriately located and/or screened from regional roads and tourist routes; and
- such other matters as considered appropriate by the Council in the circumstances of the case.

7.5 Servicing

The Council will require that legal and practical access to the lot is appropriate to the satisfaction of the Council.

The Council will require the proponent to seal the crossover, if accessed from a sealed public road.

The Council will need to be satisfied that on-site wastewater can be satisfactorily addressed.

A potable water supply is required to be provided to the dwelling prior to occupation.

Water Corporation advise the following in relation to reticulated water:

- construction of an additional dwelling, on a lot that has an existing reticulated water supply connection, should not be taken as approval to obtain an additional water connection to service a new dwelling;
- an additional water allocation should not be assumed to the site; and
- there may be a requirement to upgrade Water Corporation infrastructure and/or install new works to meet the additional water demand.

7.6 Development Requirements

In terms of an agricultural/rural operation, the additional dwelling shall only be occupied by a member of the farm owner's family or a farm worker employed on that lot or farm.

In terms of an approved tourism or commercial use, the dwelling is to be occupied by a person or persons involved in the management/running of the tourism/commercial development.

Applications for Planning Consent for a new dwelling on a Rural zoned lot, where an existing dwelling/s exists, may require:

- appropriate documentation to remove or render the existing dwelling unusable for habitation to the satisfaction of the Council at the time of the new dwelling being completed; and
- the applicant to provide an undertaking by way of Statutory Declaration.

7.7 Subdivision

The grant of consent by Council for an additional dwelling does not, in any way, indicate that Council considers or will consider the subject land to be suitable for future subdivision. The Council is not supportive of subdivisions on this basis and such an application is unlikely to receive approval from the Western Australian Planning Commission. In any case, the Council will generally not support the subdivision of a lot where any of the resultant lots will

generally have an area of less than 40 hectares or as set out in the endorsed Local Planning Strategy.

When persons are contemplating the construction of a second or multiple dwelling, the Council advises that every consideration should be given to the possibility of it being located on another lot or location owned by them or acquiring an additional lot/s. This will assist to avoid future problems of over capitalisation on a particular lot, finance and ownership complications for family members and difficulties associated with obtaining approval to subdivide Rural land.

8. Administration

8.1 Matters to be Addressed Prior to Formally Lodging the Application

Applicants are encouraged to discuss proposals that seek to vary Policy requirements with the Shire administration early on in the planning process and prior to the formal lodgement of any application.

8.2 Application Requirements

An applicant seeking the consent of Council shall submit such plans and documentation as shall be necessary, in the opinion of Council, to demonstrate that the application accords with the provisions of this Policy.

Planning Applications are to include the following:

- the requirements set out in sections 6.2.1 and 6.2.2 of LPS2 which includes a site plan (including highlighting any existing dwelling/s);
- floor plans and elevations; and
- clearly explain the existing and proposed future productive agricultural uses or approved tourist/commercial uses on the lot and justify the requirement for an additional dwelling for a family member or another worker to assist in the running of the agricultural/rural operation or tourist/commercial uses.

8.3 Consultation With Affected Stakeholders

The Council may refer the application to the Department of Agriculture and Food (or its successors) or other agencies for advice.

Where an application for a dwelling is made that does not comply with the requirements as set out in this Policy, the application may be referred to adjoining/nearby landowners, State Government agencies or other stakeholders for comment.

In assessing the capability of the land for rural pursuits, the Council may seek advice from appropriate authorities and may have regard to land capability studies prepared by such authorities.

8.4 Assessing the Application

Applications will be assessed on a case by case basis subject to this Policy (including details in sections 4 and 7.2), LPS2, the Local Planning Strategy, State Planning Policies, information provided by the applicant and any submissions received.

Should an application for a dwelling not comply with requirements of this Policy, the application will be referred to Council for consideration.

Where objections are received and the objections are not able to be adequately dealt with through conditions of approval, the application will be referred to Council for determination.

The Council may refuse its consent or grant its consent with or without conditions.

The Council may refuse a Planning Application where the application is inconsistent with this Policy, LPS2, the Local Planning Strategy, State Planning Policies, or be based on information provided by the applicant, or be based on information set out in any submissions received.

The Council may require a planning condition (or modified as required) addressing the following:

A notification pursuant to Section 70A of the Transfer of Land Act must be registered against the Certificate of Title to the land the subject of the proposed development advising the owners and subsequent owners of the land that the dwelling is to be occupied by person or persons involved in the management/running of the agricultural property. Such notification is required to be placed on the title prior to the issue of a Building Licence.

Should Planning Approval be issued, it will also be necessary for the proponent to submit a Building Licence Application (which gains a necessary approval) prior to undertaking construction.

9. Approval Authorisation

Authority to implement the Policy will be delegated to the Chief Executive Officer, other than as outlined in this Policy.

10. Final Adoption

Final adoption of the Policy was originally resolved by Council on 11 January 2011 and amended by the Council on 19 June 2012.

9.1.3 South 32 Worsley Alumina: Works Approval Application – Nullaga Mine Expansion.

File Reference:	3.0053
Applicant:	Not applicable
Previous Item:	85/22
Author:	Executive Manager Development Services
Disclosure of Interest:	N/A
Voting Requirements:	Simple Majority
Attachments:	9.1.3A Draft Submission 9.1.3B Letter from Department of Water and Environmental Regulation 9.13C Works Approval application and supporting documents.

Summary

Council is requested to endorse the submission to the Department of Water and Environmental Regulation (DWER) in regard to the South32 Worsley Alumina Work approval application – Nullaga project as per attachment 9.1.3A.

Background

South32 Worsley Alumina Pty Ltd (South32) currently operates the Boddington Bauxite Mine (located approximately 5km south west of Boddington), Worsley Refinery (located approximately 15 km north-west of Collie) and port operations at the Bunbury Port. South32 propose to expand their mining operations northwards and Council previously made a submission to the Environmental Protection Authority (EPA) regarding the Environmental Review Document (ERD) prepared as part of their environmental approvals.

The Shire of Boddington has received a referral in regards to a works approval application submitted to Department of Water and Environment Regulation (DWER) submitted by South32 for:

- 2 mobile crushing and screening plants which will be used to prepare material including road base for the construction of the haul road;
- an oily water separator to be located within the non-process infrastructure facility; and
- a temporary on-site concrete batching plant for construction of a bridge and NPI facility

The outcome of this process is to seek to ensure DWER develop set suitable conditions that will be applied should it proceed, and those conditions will adequately minimise any adverse impact on the environment, public health and amenity of the locality.

Comment

The Department of Water and Environmental Regulation wrote to the Shire on 27 February 2024 as per attachment 9.1.3B inviting comment on a works approval application submitted by South32 for the construction and time limited operation of two crushing and screening plants to produce material for the construction of a haul road for the Nullaga Mine Expansion Project.

The documents as provided in attachment 9.1.3C include:

- Works Approval Application – Nullaga Project with attachments
- Framework Construction Environmental Management Plan (FCEMP)
- Acid Sulfate Soil Management Plan
- Environment Standard

The submission prepared acknowledges and appends the submission provided by Council in August 2022 to the EPA. Furthermore the submission has specific reference to the documents provided as part of this referral.

The three priority impacts of concern continue to be impacts on tourism, clearing of native vegetation and impacts on matters of environmental significance. Impacts on amenity are also a concern, however, it is considered that DWER is the appropriately tasked and resourced body to assess the environmental impacts associated with the proposal. Some suggestions have been provided in the submission which intend to further enhance any proposed mitigation measures.

The proposal provides little to no information on the rail trail underpass, except for one of the figures with the FCEMP. Given the significance of this heritage rail asset to the Shire, further information should be made available within the documents on how this underpass is to be documented and assurances sought from South32 that the rail trail will continue to be accessible to walkers, mountain bikers and equestrian riders.

Impacts on native vegetation and matters of environmental significance appear to have been acknowledged, and it is noted the documents refer to a revised proposal which includes less clearing than what was previously understood, reducing from 4,339 ha to 3,855 ha. Clearing of 3,855 ha of native vegetation will still have a significant environmental impact.

As stated above, DWER are consider best placed to assess environmental impacts, however, air quality impacts such as dust are still a concern and the mitigation measures to monitor dust within the FCEMP appear inadequate for a proposal of this scale. It is recommend that real time monitoring of dust is implemented rather than purely relying on visual monitoring of airborne dust as stated in the FCEMP.

The draft submission, contained at attachment 9.1.3A is proposed to be submitted to DWER.

Consultation

The closing date for submissions was 21 March 2024 however the Shire has obtained an extension from DWER until 2 April 2024.

Strategic Implications

Aspiration Outcome 4	Planet The natural environment is preserved for the benefit of current and future generations.
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Legislative Implications

Part V of the *Environmental Protection Act 1986*.

Policy Implications

Nil

Financial Implications

Nil

Economic Implications

Impacts on the mining operations on the local economy are focused around the loss of diversity of economic activity through the lack of ability to access trails that provide a link to Boddington and neighbouring towns.

Social Implications

The impact of mining operations on the community include excessive vehicle movement, dust and noise.

Environmental Considerations

The forest and waterways of the Region are environmentally, culturally, economically and socially significant.

Risk Considerations

Risk Statement and Consequence	The DWER will undertake a comprehensive assessment of the Works Approval application and therefore the key risk from this submission is failure to meet the expectations of the community by providing a submission in relation to the proposal.
Risk Rating (prior to treatment or control)	Moderate
Principal Risk Theme	Reputational
Risk Action Plan (controls or treatment proposed)	No further action proposed.

Officer Recommendation

That Council authorise the submission contained in Attachment 9.1.3A to be provided to the Department of Water and Environment Regulation, in relation to South32 Worsley Alumina’s works approval application – Nullaga mine expansion.

Christine Pustkuchen
 A/Manager Resources Industries
 Regulatory Services
 Department of Water and Environmental Regulation

Email – info@dwer.wa.gov.au

**SUBMISSION – W6887/2024/1 – South32 Worsley Alumina: Works Approval
 Application – Nullaga Project**

I refer to your invitation to comment on the above mentioned works approval application submitted by South32 Worsley Alumina for the Nullaga Mine expansion Project.

The Shire of Boddington is generally supportive of projects which benefit the region's economy. This support however is contingent on the environmental and social impacts on these projects being fully understood and minimised.

Council has previously made a submission to the Environmental Protection Authority (EPA) in 2022 regarding the Environmental Review Document (ERD) released by South32 Worsley Alumina as part of their proposed mining expansion. A copy of that submission is attached to this correspondence.

It is acknowledged that this Works application is limited to 2 x mobile crushing and screening plants which will be used to prepare material including road base for the construction of a haul road. It is also understood the proposal will consist of an oily water separator to be located within the non-process infrastructure (NPI) facility and a temporary on-site concrete batching plant for construction of a bridge and NPI facility.

The Shire has undertaken a review of the documents and have the following comments

1) Impacts on tourism

The submission to the EPA clearly articulated the Shire's position in regards to tourism and specifically trails such as the Dwellingup to Boddington Rail Trail Stage 1 and 2. This project is a key action of the Shire's Council Plan.

The Shire has had numerous discussions with South32 Worsley Alumina regarding the heritage trail underpass and it is noted the only reference to this is shown on Figure 6 on page 24 of the Framework Construction Environmental Management Plan (FCEMP).

Nowhere else in the documents provided is this crossing or underpass identified or mentioned. It is noted that crossings are discussed in regards to the Hotham River, Thirty-Four Mile Brook, Wattle Hollow Brook and other minor drainage lines but not the rail reserve.

This is unacceptable to the Shire. Documents should state that South32 Worsley Alumina will commit to ensuring the access between Boddington Town site and Tullis Bridge, and between Tullis Bridge and Etmilyn (Dwellingup) will be at all times granted and publically available for pedestrians, bicycles and equestrian access.



It is also noted that no reference has been made to a possible spur trail between Boddington and the Bibbulmun track which was also identified in the EPA ERD submission.

2) Impacts on native vegetation and matters of national environmental significance.

The Shire's position on the clearing of the norther jarrah forests and the impacts on matters of national environmental significance has remain unchanged and I refer to the submission that was provided to the EPA as part of the ERD attached.

It is acknowledged however, that the amount of proposed clearing has reduced from 4,399 ha of native vegetation to 3,855 ha, which is an improved outcome.

3) Amenity Impacts.

South32 have provided a variety of mitigation measure to address amenity impacts such as noise, vibration and dust. It is noted that these measure have been listed within the FCEMP. It is acknowledged that project construction activities will be required outside of standard operating hours and that this will be conducted in accordance with a Noise Management Plan (NMP). It states however, the NMP will be submitted at a later date. The NMP should be available as part of this application so an assessment of the impacts can be full assessed.

It is also noted that many of the measures particularly for dust is based on visual monitoring. Given the scale of the project and likelihood for dust impacts it is recommended that air monitoring equipment is also a mitigation measure with real time monitoring of dust levels. This also applies to noise and any exceedance of relevant criteria should trigger an action and response which is detailed within the management plans.

Thanks you for providing the opportunity for the Shire to comment on this proposal. Should you wish to discuss any aspect of the Shire's submission, please do not hesitate to contact James Wickens, Executive Manager Development Services at james.wickens@boddington.wa.gov.au or 9883 4999.

Yours sincerely

Julie Burton
Chief Executive Officer



Government of Western Australia
Department of Water and Environmental Regulation

Your ref: W6887/2024/1
Our ref: DER2024/000040
Enquiries: [REDACTED]
Phone: [REDACTED]
Email: info@dwer.wa.gov.au

Julie Burton
Chief Executive Officer
Shire of Boddington

via email: shire@boddington.wa.gov.au

Dear Ms Burton

REFERRAL OF AN APPLICATION FOR A WORKS APPROVAL UNDER THE ENVIRONMENTAL PROTECTION ACT 1986 - INVITATION TO COMMENT

The Department of Water and Environmental Regulation (DWER) has recently received an application from South32 Worsley Alumina Pty Ltd for a works approval (W6887/2024/1) for the construction and time limited operation of two crushing and screening plants to produce material for the construction of a haul road for the Nullaga Mine Expansion Project. The proposed works will occur within mining tenements M70/25, M70/564, L70/223, P70/1762 and M258SA, located in Boddington.

In accordance with section 54 of the Environmental Protection Act 1986 (EP Act), the Chief Executive Officer (CEO) of DWER considers that you may have a direct interest in the subject matter of the application, and invites your comment on the proposal.

The CEO will, after having taken into account any comments received and subject to section 60 of the EP Act, either grant a works approval (including any specified conditions) or refuse the works approval.

Please find enclosed an excerpt of the application form and supporting documentation provided by the applicant. This information and supporting documentation provided by the applicant is available online at <https://www.der.wa.gov.au/our-work/licences-and-works-approvals/lwa-applications> under_W6887/2024/1.

Please forward your submission to the address below or forward via email to info@dwer.wa.gov.au within 21 days from the date of this letter and please quote W6887/2024/1 on future correspondence and enquiries.

If you have any queries regarding the above information, please contact the Environmental Officer listed above.

Yours sincerely

[REDACTED]
[REDACTED]
[REDACTED]

Officer delegated under section 20 of the Environmental Protection Act 1986

27 February 2024

Attached: Application form and Supporting information

Prime House, 8 Davidson Terrace Joondalup Western Australia 6027
Locked Bag 10 Joondalup DC WA 6919
Telephone: 08 6364 7000 Facsimile: 08 6364 7001

www.dwer.wa.gov.au

south32.net



15 December 2023

Department of Environmental Regulation
 Prime House
 8 Davidson Terrace
 JOONDALUP 6027

WORSLEY ALUMINA: WORKS APPROVAL APPLICATION – NULLAGA PROJECT

Background Information

South32 Worsley Alumina Pty Ltd (Worsley Alumina) operates and manages the Worsley Bauxite-Alumina Project on behalf of the Worsley Joint Venture – Bauxite Alumina Operations. The Worsley operation is located in the Peel and Southwest regions of Western Australia, in the Shires of Boddington, Collie and Harvey, approximately 200 km southeast of Perth. The operation involves mining and crushing of ore at the Boddington Bauxite Mine (BBM), transportation of crushed ore from BBM to the Worsley Refinery (the Refinery) by the Overland Bauxite Conveyor (OBC), processing and refining of ore to produce alumina at the refinery, and transportation of alumina by rail to the Bunbury port for export.

Worsley Alumina proposes to continue operations with the next phase of bauxite mining, providing access to future bauxite reserves and resources to sustain production at the Refinery near Collie. This is referred to as the Worsley Alumina Mine Expansion Revised Proposal (the Revised Proposal) and is currently under assessment by the Environmental Protection Authority (EPA).

BBM is operated under Licence L5960/1983/11 which authorises Worsley Alumina to undertake prescribed activities under Category 5 for the processing or beneficiation of metallic or non-metallic ore.

Works Approval Application

The Nullaga Mine Development Project (the Project), which is the subject of this application, is a critical project supporting the overall operation. To support ongoing operations, Worsley Alumina is planning to continue mining operations into the Nullaga area and to transport Nullaga ore to the existing Marradong facility via a haul road where the ore will be crushed and subsequently transported to the Refinery by the OBC. The Project will comprise:

- The construction of a haul road including a bridge over the Hotham River
- Services such as water, power and communications
- Non-process infrastructure (NPI) facility
- Other supporting infrastructure such as crib facilities, site offices, borrow pits and laydowns

To support the construction of the haul road, Worsley Alumina is applying for a Works Approval to construct and commission two mobile crushing and screening plants. The mobile crushers will prepare material including road base for the construction of the haul road.

In addition, Worsley Alumina is seeking approval to construct an oily water separator (OWS) that will be located within the NPI facility. Whilst the OWS does not trigger any prescribed premise categories, it has been included at the request of DWER.

Worsley Alumina anticipate utilising a temporary on-site concrete batching plant for the construction of the bridge and the NPI Facility. This activity does not meet the definition of the prescribed premises Category 77: Concrete batching or cement products manufacturing as the material will be utilised on the premises. Worsley Alumina commits to managing the activities in accordance with the Environmental Protection (Concrete Batching and Cement Product Manufacturing) Regulations 1998.

Additional Approvals

Worsley Alumina has submitted the following applications directly relevant to this Works Approval Application:

- Referral of the Worsley Mine Expansion (Revised Proposal) (EPA Assessment Number 2216)
- EPBC Number 2019/8437 (Accredited Assessment)

In addition, the following applications have been identified and are currently being prepared:

- Mining Lease - Conversion of two Prospecting Licenses (P70/1762 and P70/1763) into one Mining Lease
- Mining Proposal for Miscellaneous Licence L70/223

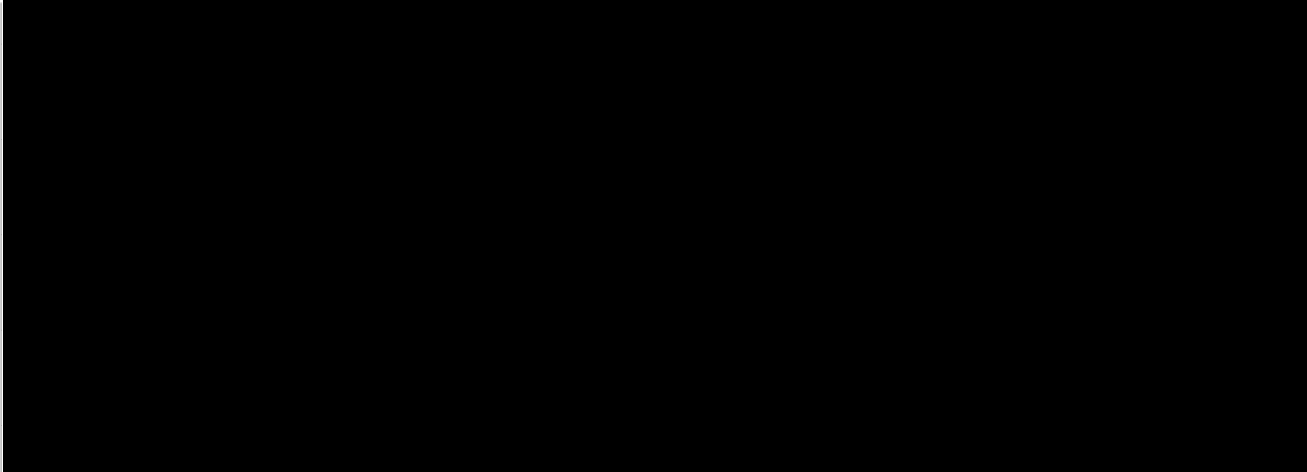
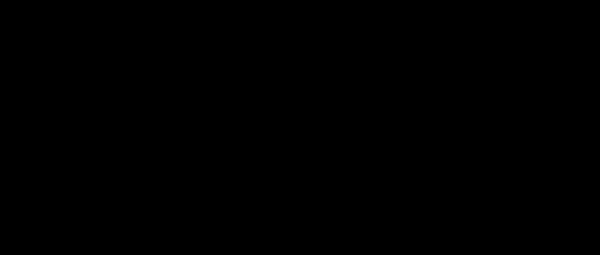
Worsley Alumina respectfully request that DWER commences immediate assessment of this Works Approval application to mitigate delays to the commencement of this critical Project. Worsley Alumina will notify DWER once the approvals listed above have been granted so that the Works Approval can be finalised.

Staged Compliance

Worsley Alumina is requesting staged compliance as per the stages listed below. Expected completion dates will be dependent on the issue date of the Revised Proposal. Worsley Alumina will advise DWER of the expected completion dates once the approvals listed above have been granted so that the Works Approval can be finalised.

- Stage 1 - Mobile Crusher 1
- Stage 2 - Mobile Crusher 2
- Stage 3 - OWS/NPI

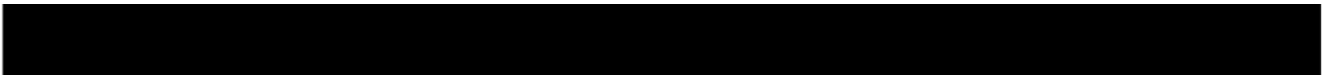
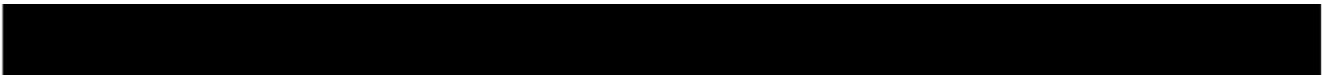
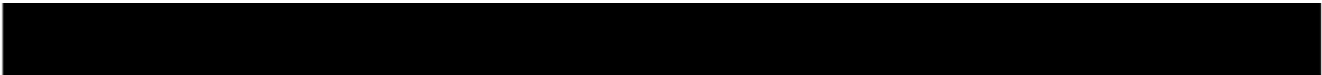
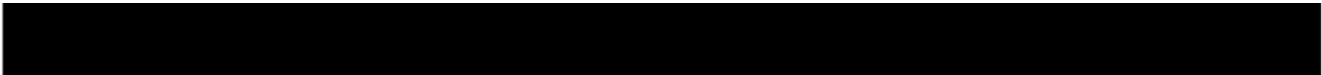
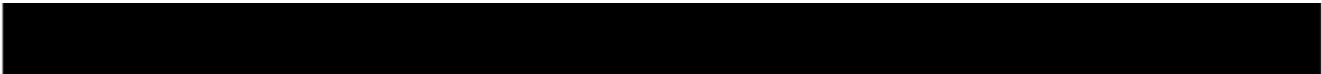
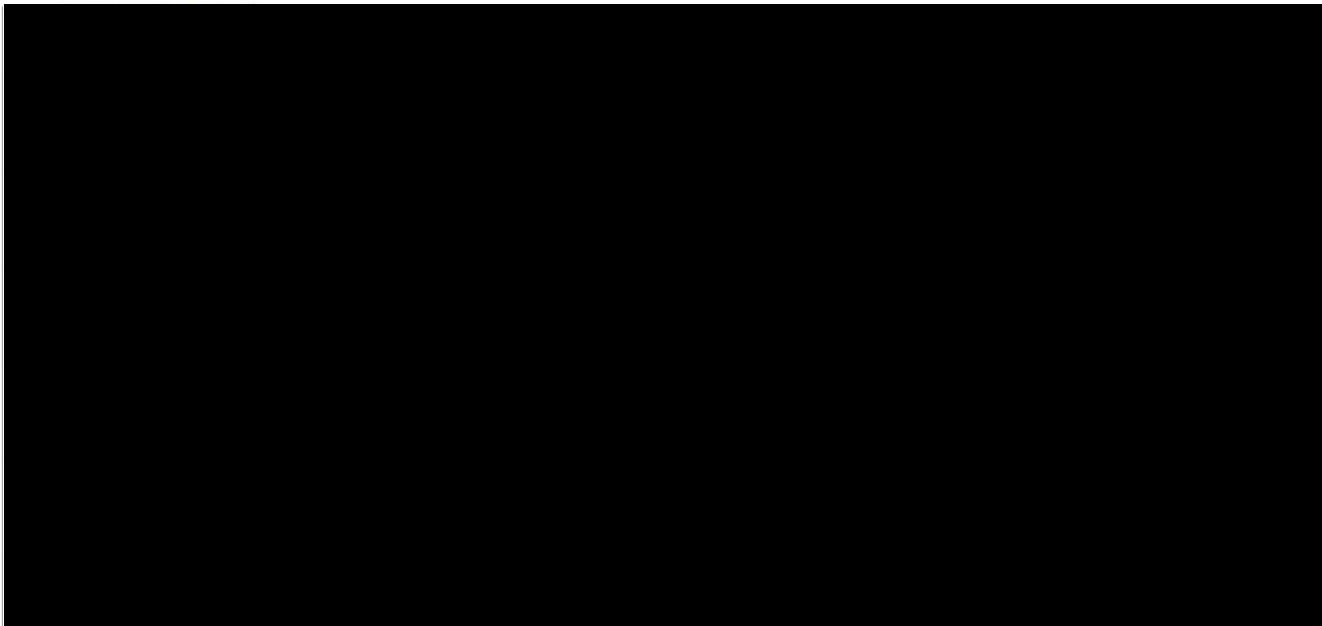
Please contact Renae Srdarev on 0401 720 249 or renae.srdarev@south32.net should you have any queries or require any further information to enable DWER to assess this works approval application.

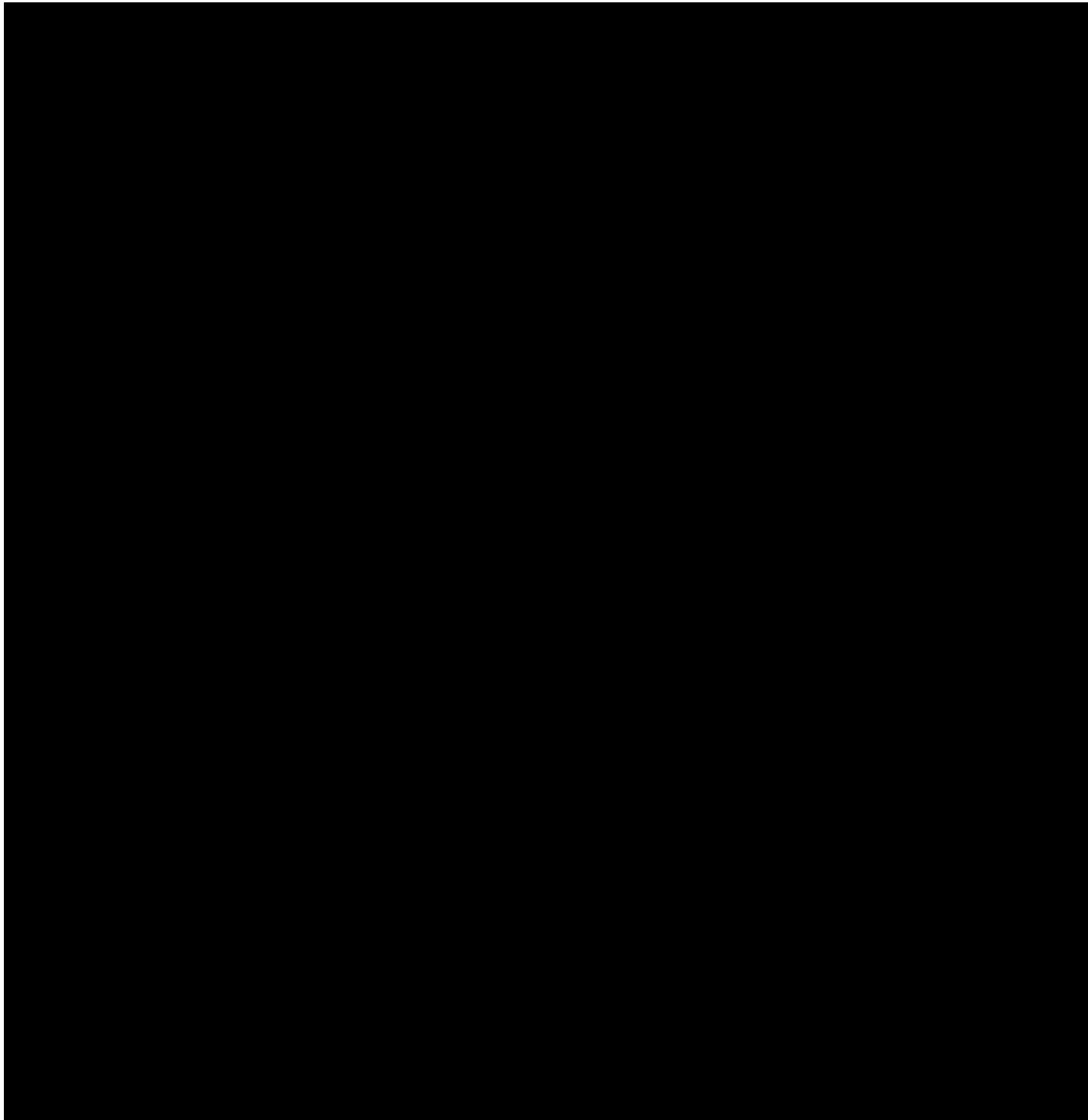




WOR-71183-FS-DWER-APL-0003 - Nullaga Mine Development Mobile Crusher Works Approval Application

Operation:	South32 Worsley Alumina Boddington Bauxite Mine
Project Number:	A700.C.71183
Document Number:	WOR-71183-FS-DWER-APL-0003
Document title:	Nullaga Mine Development Mobile Crusher Works Approval Application





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Abbreviations and Acronyms

Acronym	Definition
ACHIS	Aboriginal Cultural Heritage Inquiry System
AEP	Annual Exceedance Probability
AH Act	<i>Aboriginal Heritage Act 1972</i>
ASS	Acid Sulfate Soils
BBM	Boddington Bauxite Mine
BoM	Bureau of Meteorology
CEMP	Construction Environmental Management Plan
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety
DPLH	Department of Planning, Lands and Heritage
DWER	Department of Water and Environmental Regulation
EP Act	<i>Environmental Protection Act 1986</i>
EPA	Environmental Protection Authority
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
ERD	Environmental Review Document
ESA	Environmentally Sensitive Area
GDE	Groundwater Dependant Ecosystem
GKB	Gnaala Karla Booja
HDPE	High density polyethylene
HV	Heavy Vehicle
IBRA	Interim Biogeographic Regionalisation for Australia
kL	Kilolitre
LV	Light Vehicle
Mtpa	Million tonnes per annum
NPI	Non-Process Infrastructure
NVCP	Native Vegetation Clearing Permit
OWS	Oily Water Separator
PDWSA	Public Drinking Water Supply Area

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PEC	Priority Ecological Community
RIWI Act	<i>Rights in Water Irrigation Act 1914</i>
Storage and Handling Regulations	Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007
TDS	Total Dissolved Solids
TEC	Threatened Ecological Community
The Project	Nullaga Mine Development Project
Tph	Tonnes per hour
TLWO	Time Limited Operations
Worsley Alumina	South32 Worsley Alumina Pty Ltd

Summary

Background Information

South32 Worsley Alumina Pty Ltd (Worsley Alumina) operates and manages the Worsley Bauxite-Alumina Project on behalf of the Worsley Joint Venture – Bauxite Alumina Operations. The Worsley operation is located in the Peel and Southwest regions of Western Australia, in the Shires of Boddington, Collie and Harvey, approximately 200 km southeast of Perth. The operation involves mining and crushing of ore at the Boddington Bauxite Mine (BBM), transportation of crushed ore from BBM to the Worsley Refinery (the Refinery) by the Overland Bauxite Conveyor (OBC), processing and refining of ore to produce alumina at the refinery, and transportation of alumina by rail to the Bunbury port for export.

Worsley Alumina proposes to continue operations with the next phase of bauxite mining, providing access to future bauxite reserves and resources to sustain production at the Refinery near Collie. This is referred to as the Worsley Alumina Mine Expansion Revised Proposal (the Revised Proposal) and is currently under assessment by the Environmental Protection Authority (EPA).

BBM is operated under Licence L5960/1983/11 which authorises Worsley Alumina to undertake prescribed activities under Category 5 for the processing or beneficiation of metallic or non-metallic ore.

Works Approval Application

The Nullaga Mine Development Project (the Project), which is the subject of this application, is a critical project supporting the overall operation. To support ongoing operations, Worsley is planning to continue mining operations into the Nullaga area and to transport Nullaga ore to the existing Marradong facility via a haul road where the ore will be crushed and subsequently transported to the Refinery by the OBC. The Project will comprise:

- The construction of a haul road including a bridge over the Hotham River
- Services such as water, power and communications
- Non-process infrastructure (NPI) facility
- Other supporting infrastructure such as crib facilities, site offices, borrow pits and laydowns

To support the construction of the haul road, Worsley Alumina is applying for a Works Approval to construct and commission two mobile crushing and screening plants. The mobile crushers will prepare material including road base for the construction of the haul road.

In addition, Worsley Alumina is seeking approval to construct an oily water separator (OWS) that will be located within the NPI facility. Whilst the OWS does not trigger any prescribed premise categories, it has been included at the request of DWER.

Worsley Alumina anticipate utilising a temporary on-site concrete batching plant for the construction of the bridge and the NPI Facility. This activity does not meet the definition of the prescribed premises Category 77: Concrete batching or cement products manufacturing as the material will be utilised on the premises. Worsley Alumina commits to managing the activities in accordance with the Environmental Protection (Concrete Batching and Cement Product Manufacturing) Regulations 1998.

Additional Approvals

Worsley Alumina has submitted the following applications directly relevant to this Works Approval Application:

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In addition, the following applications have been identified and are currently being prepared:

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- Mining Proposal for Miscellaneous Licence L70/223

Construction and Staged Compliance

Construction of the mobile crusher includes the mobilisation of equipment to site and establishment of the mobile crusher and associated infrastructure. This stage is expected to take a total of seven days. The OWS will be installed during the construction of the NPI facility.

Worsley Alumina propose to construct the crushers and OWS in stages as listed below. Expected construction and completion dates will be dependent on the issue date of the Revised Proposal Ministerial Statement.

- Stage 1 - Mobile Crusher 1
- Stage 2 - Mobile Crusher 2
- Stage 3 - OWS/NPI

Commissioning

Mechanical commissioning of the mobile crusher is estimated to take two days. Mechanical commissioning will include the following activities:

- Dry commission - dry run of the plant (no feed material) by using the start and stop method to make sure all connections are operational
- Wet commission - feeding process materials through the crusher and screener to ensure all parts are operating correctly
- Ramp up by increasing the throughput of feed material to the nominated design capacity

OWS commissioning activities will be conducted prior to filling the bulk fuel tank. This will involve filling the OWS with water to ensure the minimum water level is obtained within the triple interceptor.

Time Limited Operations

Worsley Alumina will require a period of Time Limited Operations (TLO) for each stage of construction to enable completion of the commissioning activities as well as the time required for assessment and approval of the licence amendment.

Expected Emissions and Environmental Management

Emissions are expected to be limited to dust, noise and the discharge of treated water to the environment for use in dust suppression. The Project construction activities will be required outside of standard operating hours and will be conducted in accordance with the supporting Noise Management Plan, to be submitted at a later date. All emissions will be managed in accordance with the Construction Environmental Management Plan (WOR-71183-FS-PM-PLN0004) (Attachment 8B).

Attachment 1

DWER Works Approval Application Form



Part 1: Application type

INSTRUCTIONS:

- Completion of this form is a statutory requirement under s.54(1)(a) of the *Environmental Protection Act 1986 (WA) (EP Act)* for works approval applications; s.57(1)(a) for licence and licence renewal applications; s.59B(1)(a) for applications for an amendment; and under r.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 15 of the form.

1.1	<p>This is an application for: <i>[Select one option only. Your application may be returned if multiple options are selected.]</i></p> <p>under Part V, Division 3 of the EP Act.</p> <p>Please see the:</p> <ul style="list-style-type: none"> • Guideline: Industry Regulation Guide to Licensing • Procedure: Prescribed premises works approvals and licences <p>for more information to assist in understanding DWER's regulatory regime for prescribed premises.</p>	<p><input checked="" type="checkbox"/> Works approval</p> <p><input type="checkbox"/> Licence Existing registration number(s): [] Existing works approval number(s): []</p> <p><input type="checkbox"/> Renewal Existing licence number: []</p> <p><input type="checkbox"/> Amendment Number of the existing licence or works approval to be amended: []</p> <p><input type="checkbox"/> Registration (works approval already obtained) Existing works approval number(s): []</p>
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1.2	<p>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.</p>	<p>Yes</p> <p><input type="checkbox"/></p>
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1.3	<p>This application is for the following categories of prescribed premises: <i>(specify all prescribed premises category numbers)</i></p>	<p>Category 12: Screening etc. of material: premises (other than premises within category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated.</p> <p>An oily water separator (OWS) will be constructed within the NPI facility. Whilst the OWS does not trigger any prescribed premise categories, it has been included at the request of DWER.</p>
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Part 1: Application type	
	<input checked="" type="checkbox"/> 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	•	•	△
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	•	•	△
Part 9: Emissions, discharges, and waste	•	•	△
Part 10: Siting and location	•	•	△
Part 11: Submission of any other relevant information	•	•	If required.
Part 12: Category checklist(s)	•	•	•
Part 13: Proposed fee calculation	•	•	•
Part 14: Commercially sensitive or confidential information	•	•	•
Part 15: Submission of application	•	•	•
Part 16: 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	•	•	•
Attachment 2: Premises map/s	•	•	△
Attachment 3A: Environmental commissioning plan	If required.	N/A	If required
Attachment 3B: Proposed activities	•	•	△
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	•	•	△
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	•	•	△
Attachment 8: Additional information submitted	If required.	If required.	If required.
Attachment 9: Category-specific checklist(s)	•	If required.	If required.
Attachment 10: Proposed fee calculation	•	•	•
Attachment 11: Request for exemption from publication	If required.	If required.	If required.

Key:

•	Must be completed / submitted.
⚠	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 provided.
- 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 must be submitted with the application (see Section 2.10). If you are applying as an individual, you are the representative.
- 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.	South32 Worsley Alumina Pty Ltd
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	ACN (if applicable):	008 905 155
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2.2	Trading as (if applicable):	
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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.	
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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.	
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Part 2: Applicant details				
2.5	Postal address for all other correspondence: If different from Section 2.4.	As per Section 2.4		
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.			
2.7	Occupier status: Occupier is defined in s.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.	<input type="checkbox"/>	
		Lease holder (please specify, including date of expiry of lease).	<input checked="" type="checkbox"/>	
		The proposed Prescribed Premises Boundary Expansion area intersects the following tenure: <ul style="list-style-type: none"> Part of M 258SA Part of M 70/25 – Expires 08/04/2028 Part of M 70/564 – Expires 26/04/2032 L 70/223 – Expires 07/04/2042. Part of P 70/1762 – Expires 05/09/2027 – Pending conversion to Mining Lease. Attachment 7 – Siting and Location provides further details regarding land tenure and ownership. Please note P70/1762 has been included as a placeholder. It is in the process of being converted to a combined Mining Lease with P70/1763 prior to the grant of this works approval. South32 will notify DWER once the conversion has been granted.		
		Public authority that has care, control, or management of the land.	<input type="checkbox"/>	
		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).	<input type="checkbox"/>	
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Part 3: Premises details				
3.1	<p>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.</p>	<ul style="list-style-type: none"> Part of M 258SA Part of M 70/25 Part of M 70/564 L 70/223 Part of P 70/1762 – Pending conversion to Mining Lease. 		
	<p>Premises street address Include the suburb.</p>	The project has no street address. Boddington WA 6390		
	<p>Premises name (if applicable):</p>	Nullaga Mine Expansion Project		
3.2	<p>Local Government Authority area: City, Town, or Shire.</p>	Shire of Boddington		
3.3	<p>GPS (latitude and longitude) coordinates: GPS coordinates determined using the GDA 2020 (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.</p>	Please refer to the proposed Prescribed Premises Boundary Extension Coordinates provided in Attachment 7 – Siting and Location.		
Attachments			N/A	Yes
3.4	<p>Attachment 2: Premises map(s)</p> <p>You must provide as an attachment to this application form, labelled Attachment 2, either:</p> <ol style="list-style-type: none"> an aerial photograph, map, and site plan of sufficient scale showing the proposed prescribed premises boundary or where available, a map of the proposed premises boundary and site plan as an ESRI shapefile (accepted file types include .dbf, .shp, .prj, and .shx) with the following properties (provided on a suitable portable digital storage device, if submitting application in hard copy form): <ul style="list-style-type: none"> Geometry type: Polygon Shape Coordinate system: GDA 2020 (Geographic latitude / longitude) Datum: GDA 2020 (Geocentric Datum of Australia 2020). <p>You must also provide a map or maps of the prescribed premises, clearly identifying and labelling:</p> <ul style="list-style-type: none"> 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 all areas proposed to be cleared (if applicable). <p>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.</p>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 r.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.	Mobile Crushing Operations (Crushing and Screening area - two 250 tph (tons per hour) mobile crushers)	12	See Figure 3	<input type="checkbox"/>	<input type="checkbox"/>
2.	Oily Water Separator (OWS)	N/A	See Figure 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.				<input type="checkbox"/>	<input type="checkbox"/>
4.				<input type="checkbox"/>	<input type="checkbox"/>
5.				<input type="checkbox"/>	<input type="checkbox"/>
6.				<input type="checkbox"/>	<input type="checkbox"/>
7.				<input type="checkbox"/>	<input type="checkbox"/>
8.				<input type="checkbox"/>	<input type="checkbox"/>
9.				<input type="checkbox"/>	<input type="checkbox"/>
10.				<input type="checkbox"/>	<input type="checkbox"/>

Part 4: Proposed activities	
4.2	<p>Detailed description of proposed activities or proposed changes (if an amendment): You must provide details of proposed activities relevant to this application within the boundary of the prescribed premises, identifying:</p> <ul style="list-style-type: none"> • 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 • activities occurring during construction, environmental commissioning, and operation (if applicable). <p>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).</p> <p>Construction activities (if applicable): Please refer to Attachment 3B (Proposed Activities)</p> <p>Environmental commissioning activities (if applicable): Refer to the Guideline: Industry Regulation Guide to Licensing for further guidance. N/A</p> <p>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. Please refer to Attachment 3B (Proposed Activities)</p> <p>Operations activities (for a licence): N/A.</p>
4.3	<p>Estimated operating period of the project / premises (e.g. based on estimated infrastructure life): Estimate mine life 30 years.</p>
4.4	<p>Proposed date(s) for commencement of works (if applicable): On grant of the works approval</p>
4.5	<p>Proposed date(s) for conclusion of works construction (if applicable): Dates to be provided on grant of the revised Ministerial Statement</p> <p>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.</p> <p>Staged compliance is requested:</p> <ul style="list-style-type: none"> • Mobile Crusher 1 • Mobile Crusher 2 • OWS
4.6	<p>Proposed date(s) for environmental commissioning of works (if applicable): N/A</p> <p>Refer to the Guideline: Industry Regulation Guide to Licensing.</p>
4.7	<p>Proposed date/s for commencement of time limited operations under works approval (if applicable): Dates to be provided if/when the current application under Part IV is approved.</p> <p>Refer to the Guideline: Industry Regulation Guide to Licensing.</p>
4.8	<p>Maximum production or design capacity for each category applied for (based on infrastructure operating 24 hours a day, 7 days a week): Category 12: Screening, etc. of material.</p> <p>Provide figures for all categories listed in Section 1.2. Two mobile crushers, approximately 250 tph each.</p>

Part 4: Proposed activities				
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.				
4.9	<p>Estimated / actual throughput for each category applied for:</p> <p>Provide figures for all categories listed in Section 1.2.</p> <p>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.</p>	<p>Category 12: Screening, etc. of material.</p> <p>Two mobile crushers (approximately 350 000 tonnes per annum each)</p>		
Attachments			N/A	Yes
4.10	<p>Attachment 2: Premises map</p>	Emission/discharge points are clearly labelled on the map/s required for Part 3.4 (Attachment 2).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.11	<p>Attachment 3A: Environmental commissioning plan</p>	<p>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.</p> <p>The environmental commissioning plan is expected to include, at minimum, identification of:</p> <ul style="list-style-type: none"> 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 how any of the above would differ from standard operations once commissioning is complete. <p>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.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.12	<p>Attachment 3B: Proposed activities</p>	Additional information relating to the proposed activities has been included in Attachment 3B (if required).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Clearing activities</p> <p>4.13 to 4.19 are only required if the application includes clearing of native vegetation.</p>				

Part 4: Proposed activities			
4.13	Proposed clearing area (hectares and/or number of individual trees to be removed):	The proposed locations for the crushing and screening areas occur in cleared farmland areas. Accordingly, no clearing of native vegetation will be required for the crushing and screening areas. The area proposed for the Non-process infrastructure facility, which includes the OWS, is within an area containing native vegetation. Clearing of native vegetation will be completed under a new Ministerial Statement upon the grant of the Revised Proposal (EPA Assessment Number 2216). On this basis, no Native Vegetation Clearing Permit is required.	
4.14	Details of any relevant exemptions: Refer to DWER's A guide to the exemptions and regulations for clearing native vegetation .	Schedule 6 Exemption: Clearing will be assessed under Part IV of the EP Act.	
4.15	Proposed method of clearing:	Mechanical Clearing	
4.16	Period within which clearing is proposed to be undertaken: For example, May 2020 – June 2020.	Dates to be provided on grant of the revised Ministerial Statement.	
4.17	Purpose of clearing: The clearing will be required for the location of the NPI facility that includes the OWS.		
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: <ul style="list-style-type: none"> Geometry type: Polygon Shape Coordinate system: GDA 2020 (Geographic latitude / longitude) Datum: 2020 1994 (Geocentric Datum of Australia 2020). 	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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).	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Part 5: Index of Biodiversity and Marine Surveys for Assessments (IBSA and IMSA)		
INSTRUCTIONS:		
<ul style="list-style-type: none"> Biodiversity surveys should be submitted through the IBSA Submissions Portal at ibasubmissions.dwer.wa.gov.au Biodiversity surveys submitted to support this application must meet the requirements of the EPA's <i>Instructions for the preparation of data packages for the Index of Biodiversity Surveys for Assessments (IBSA)</i>. Marine surveys submitted to support this application must meet the requirements of the EPA's <i>Instructions for the preparation of data packages for the Index of Marine Surveys for Assessments (IMSA)</i>. If these requirements are not met, DWER will decline to deal with the application. 		
Attachments	N/A	Yes

Part 5: Index of Biodiversity and Marine Surveys for Assessments (IBSA and IMSA)				
INSTRUCTIONS:				
<ul style="list-style-type: none"> Biodiversity surveys should be submitted through the IBSA Submissions Portal at ibasubmissions.dwer.wa.gov.au Biodiversity surveys submitted to support this application must meet the requirements of the EPA's <i>Instructions for the preparation of data packages for the Index of Biodiversity Surveys for Assessments (IBSA)</i>. Marine surveys submitted to support this application must meet the requirements of the EPA's <i>Instructions for the preparation of data packages for the Index of Marine Surveys for Assessments (IMSA)</i>. If these requirements are not met, DWER will decline to deal with the application. 				
5.1	<p>Biodiversity surveys</p> <p>Please provide the IBSA number(s) (or submission number(s) if IBSA number has not yet been issued) in the space provided.</p> <p>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.</p>	<p>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).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		Submission number(s)		
		IBSA number(s)		
5.2	<p>Attachment 4: Marine surveys</p>	<p>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).</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Part 6: Other DWER approvals	
INSTRUCTIONS:	
<ul style="list-style-type: none"> 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	
<p>6.1 Have you had any pre-application / pre-referral / scoping meetings with DWER regarding any planned applications?</p>	<p><input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Yes – provide details:</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>A pre-referral meeting was held between representatives from South32 and DWER on Friday 28 April 2023. Further correspondence was held on Friday 5 May 2023 via email. Please refer to Attachment 5 – Other Approvals and Consultation Documentation for further details.</p> </div>
Environmental impact assessment (Part IV of the EP Act)	
<p>6.2 Have you referred or do you intend to refer the proposal to the EPA?</p> <p>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".</p> <p>If DWER considers that the proposal in this application is likely to constitute a 'significant proposal', DWER is required under s.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.</p> <p>If a relevant Ministerial Statement already exists, please provide the MS number in the space provided.</p>	<p><input checked="" type="checkbox"/> Yes (referred) – reference (if known): [EPA Assessment Number 2216]</p> <p><input type="checkbox"/> Yes – intend to refer (proposal is a 'significant proposal')</p> <p><input type="checkbox"/> No – a valid Ministerial Statement applies:</p> <p><input type="checkbox"/> No – not a 'significant proposal'</p>
Clearing of native vegetation (Part V Division 2 of the EP Act and Country Area Water Supply Act 1947)	
<p>6.3 Have you applied or do you intend to apply for a native vegetation clearing permit?</p> <p>In accordance with the Guideline: Industry Regulation Guide to Licensing and Procedure: Native vegetation clearing permits, where clearing of native vegetation:</p> <ul style="list-style-type: none"> is exempt under Schedule 6 of the EP Act or the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (WA) (refer to A guide to the exemptions and regulations for clearing native vegetation) is being assessed by a relevant authority which would lead to an exemption under Schedule 6 of the EP Act, or has been referred under s.51DA of the EP Act and a determination made that a clearing permit is not required (refer to the Guideline: Native vegetation clearing referrals), <p>the clearing will not be reassessed by DWER or be subject to any additional controls by DWER.</p> <p>If the proposed clearing action is to be assessed in accordance with, or under, an <i>Environment Protection and Biodiversity Conservation Act</i> (Cth) (EPBC Act) accredited process, such as the assessment bilateral agreement, the clearing permit application Form Annex C7 – Assessment bilateral agreement must be completed and attached to your clearing permit application.</p>	<p><input type="checkbox"/> Yes – clearing application reference (if known): CPS []</p> <p><input type="checkbox"/> Yes – a valid EP Act clearing permit already applies: CPS []</p> <p><input type="checkbox"/> No – this application includes clearing (please complete Sections 4.13 to 4.19 above)</p> <p><input type="checkbox"/> No – permit not required (no clearing of native vegetation)</p> <p><input type="checkbox"/> No – permit not required (clearing referral decision): CPS []</p> <p><input checked="" type="checkbox"/> No – an exemption applies (explain why):</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Schedule 6 Exemption: Clearing will be assessed under Part IV of the EP Act.</p> </div>

Part 6: Other DWER approvals	
<p>6.4 Have you applied or do you intend to apply for a Country Area Water Supply Act 1947 licence?</p> <p>If a clearing exemption applies in a <i>Country Area Water Supply Act 1947</i> (CAWS Act) controlled catchment, or if compensation has previously been paid to retain the subject vegetation, a CAWS Act clearing licence is required.</p> <p>If yes, contact the relevant DWER regional office for a Form 1 <i>Application for licence</i>.</p> <p>Map of CAWS Act controlled catchments</p>	<p><input type="checkbox"/> Yes – application reference (if known): []</p> <p><input type="checkbox"/> No – a valid licence applies: []</p> <p><input checked="" type="checkbox"/> No – licence not required</p>
Water licences and permits (<i>Rights in Water and Irrigation Act 1914</i>)	
<p>6.5 Have you applied, or do you intend to apply for:</p> <ol style="list-style-type: none"> 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? <p>For further guidance on water licences and permits under the <i>Rights in Water and Irrigation Act 1914</i>, refer to the Procedure: Water licences and permits.</p>	<p><input checked="" type="checkbox"/> Yes –application reference (if known): Two permits to interfere with the bed and banks of a watercourse will be submitted</p> <p><input type="checkbox"/> No – a valid licence / permit applies: []</p> <p><input type="checkbox"/> No – an exemption applies (explain why):</p> <div style="border: 1px solid black; height: 40px; width: 100%;"></div> <p><input type="checkbox"/> No – licence / permit not required</p>

Part 7: Other approvals and consultation			
INSTRUCTIONS:			
<ul style="list-style-type: none"> • Please provide copies of all relevant documentation indicated below, including any conditions, exclusions, or expiry dates. • “Major Project” means: <ul style="list-style-type: none"> ➢ 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7.2	Is the proposal subject to a State Agreement Act?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	If yes, specify which Act:	<i>Alumina Refinery (Worsley) Agreement Act 1973</i>	
7.3	Has the proposal been allocated to a “Lead Agency” (as defined in the Lead Agency Framework)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	If yes, specify Lead Agency contact details:		
7.4	Has the proposal been referred and/or assessed under the EPBC Act (Commonwealth)?	<input type="checkbox"/>	<input type="checkbox"/>
	If yes, please specify referral, assessment and/or approval number:	EPBC Number 2019/8437	
7.5	Has the proposal obtained all relevant planning approvals?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	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:		

Part 7: Other approvals and consultation					
Planning approval is not required on Mining Tenure.					
7.6	For renewals or amendment applications, are the relevant planning approvals still valid (that is, not expired)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7.7	Has the proposal obtained all other necessary statutory approvals (not including any other DWER approvals identified in Part 6 of this application)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
If no, please provide details of approvals already obtained, outstanding approvals, and expected dates for obtaining these outstanding approvals:					
Section 18 of the <i>Aboriginal Heritage Act 1972</i> for the Hotham River and Thirty-Four Mile Brook Crossing's – Expected following the Ministerial Statement approval					
Mining Proposal and Mine Closure Plan for L70/223 as per the <i>Mining Act 1978</i> – Expected following the Ministerial Statement approval					
Application for a Mining Lease over crown or freehold land (conversion of Prospecting Licences 70/1762 and 70/1763) as per Division 3 of the <i>Mining Act 1978</i> – Expected following the Ministerial Statement approval					
Mining Proposal and Mine Closure Plan for the above Mining Lease as per the <i>Mining Act 1978</i> – Expected following the Ministerial Statement approval					
		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 .	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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.		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Part 8: Applicant history				
Note:				
<ul style="list-style-type: none"> DWER will undertake an internal due diligence of the applicant's fitness and competency based on DWER's compliance records and the responses to Part 8 of the form. 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.3	If yes to 8.1 or 8.2 above, specify the name of company and/or licence or works approval number: South32 Worsley Alumina Pty Ltd is the Licensee for the Boddington Bauxite Mine, as authorised through the Licence L5960/1983/11 and the Worsley Alumina Refinery L4504/1981/17.			
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part 8: Applicant history				
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.6	If the applicant is a corporation, has any person concerned in the management of the corporation, as referred to in s.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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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: N/A.			

Part 9: Emissions, discharges, and waste		
INSTRUCTIONS:		
<ul style="list-style-type: none"> Please see Guideline: 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?	<input type="checkbox"/> <input checked="" type="checkbox"/>
If yes, identify all potential emissions and discharges arising from the proposed activities and complete Table 9.1: Emissions and discharges (below).		

Part 9: Emissions, discharges, and waste																																															
	<input type="checkbox"/> Gaseous and particulate emissions (e.g. emissions from stacks, chimneys or baghouses) <input checked="" type="checkbox"/> Wastewater discharges (e.g. treated sewage, wash water, or process water discharged to lands or waters) <input checked="" type="checkbox"/> Noise (e.g. from machinery operations and/or vehicle operations) <input checked="" type="checkbox"/> Contaminated or potentially contaminated stormwater (e.g. stormwater with the potential to come into contact with chemicals or waste materials, etc.) <input type="checkbox"/> Other (please specify):	<input checked="" type="checkbox"/> Dust (e.g. from equipment, unsealed roads and/or stockpiles, etc.) <input type="checkbox"/> Waste and leachate (e.g. emissions through seepage, leaks and spills of waste from storage, process and handling areas, etc.) <input type="checkbox"/> Odour (e.g. from wastes accepted at putrescible landfills, storage or processing of waste or other odorous materials, etc.) <input type="checkbox"/> Electromagnetic radiation ¹																																													
<p>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.</p>																																															
<p>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).</p>																																															
<p>Table 9.1: Emissions and discharges</p>																																															
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #D3D3D3;"> <th style="width: 5%;"></th> <th style="width: 15%;">Source of emission or discharge</th> <th style="width: 15%;">Emission or discharge type</th> <th style="width: 15%;">Volume and frequency</th> <th style="width: 20%;">Proposed controls (include in Attachment 6A if extensive or complex)</th> <th style="width: 20%;">Location (on site layout plan – see 3.4)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1.</td> <td>Mobile Crusher</td> <td>Dust</td> <td>Unknown</td> <td>Refer to Attachment 6A</td> <td>Mobile Crusher Locations shown in Figure 3</td> </tr> <tr> <td style="text-align: center;">2.</td> <td>Mobile Crusher</td> <td>Noise</td> <td>Estimated 100-110 dB</td> <td>Refer to Attachment 6A</td> <td>Mobile Crusher locations shown in Figure 3</td> </tr> <tr> <td style="text-align: center;">3.</td> <td>Refuelling Area</td> <td>Stormwater and hydrocarbon spills</td> <td>50 kL maximum capacity</td> <td>Refer to Attachment 6A</td> <td>NPI facility location shown in Figure 3</td> </tr> <tr> <td style="text-align: center;">4.</td> <td>Oily Water Separator</td> <td>Treated water</td> <td>50 kL maximum capacity</td> <td>Refer to Attachment 6A</td> <td>NPI Facility location shown in Figure 3</td> </tr> <tr> <td style="text-align: center;">5.</td> <td>Oily Water Separator</td> <td>Waste oil</td> <td>20 kL maximum capacity</td> <td>Refer to Attachment 6A</td> <td>NPI Facility location shown in Figure 3</td> </tr> <tr> <td style="text-align: center;">6.</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>							Source of emission or discharge	Emission or discharge type	Volume and frequency	Proposed controls (include in Attachment 6A if extensive or complex)	Location (on site layout plan – see 3.4)	1.	Mobile Crusher	Dust	Unknown	Refer to Attachment 6A	Mobile Crusher Locations shown in Figure 3	2.	Mobile Crusher	Noise	Estimated 100-110 dB	Refer to Attachment 6A	Mobile Crusher locations shown in Figure 3	3.	Refuelling Area	Stormwater and hydrocarbon spills	50 kL maximum capacity	Refer to Attachment 6A	NPI facility location shown in Figure 3	4.	Oily Water Separator	Treated water	50 kL maximum capacity	Refer to Attachment 6A	NPI Facility location shown in Figure 3	5.	Oily Water Separator	Waste oil	20 kL maximum capacity	Refer to Attachment 6A	NPI Facility location shown in Figure 3	6.					
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3.	Refuelling Area	Stormwater and hydrocarbon spills	50 kL maximum capacity	Refer to Attachment 6A	NPI facility location shown in Figure 3																																										
4.	Oily Water Separator	Treated water	50 kL maximum capacity	Refer to Attachment 6A	NPI Facility location shown in Figure 3																																										
5.	Oily Water Separator	Waste oil	20 kL maximum capacity	Refer to Attachment 6A	NPI Facility location shown in Figure 3																																										
6.																																															
9.2	<p>Waste-related activities at the premises² Answer "yes" or "no" for the following questions and complete Table 9.2 (below).</p>				No	Yes																																									
(a)	Is waste accepted at the premises?				<input checked="" type="checkbox"/>	<input type="checkbox"/>																																									
(b)	Is waste produced on the premises?				<input type="checkbox"/>	<input checked="" type="checkbox"/>																																									
(c)	Is waste processed on the premises?				<input checked="" type="checkbox"/>	<input type="checkbox"/>																																									

Part 9: Emissions, discharges, and waste																						
(d)	Is waste stored on the premises?	<input type="checkbox"/>	<input checked="" type="checkbox"/>																			
(e)	Is waste buried on the premises?	<input checked="" type="checkbox"/>	<input type="checkbox"/>																			
(f)	Is waste recycled on the premises?	<input type="checkbox"/>	<input checked="" type="checkbox"/>																			
(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	<input checked="" type="checkbox"/>	<input type="checkbox"/>																			
	Specify, if yes:																					
<p>² Copies / details of any other relevant approvals (e.g. from the Department of Health) must be provided where applicable.</p> <p>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 Department of Mines, Industry Regulation and Safety's Dangerous Goods Safety information sheet for more information.</p> <p>Solid waste types must be described with reference to <i>Landfill Waste Classification and Waste Definitions 1996</i> (as amended from time to time) and the Environmental Protection (Controlled Waste) Regulations 2004 (Controlled Waste Regulations).</p> <p>Liquid waste types must be described with reference to the Controlled Waste Regulations.</p> <p>For further guidance on the definition of waste, refer to Fact Sheet: Assessing whether material is waste.</p>																						
<p>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).</p> <p>Additional rows may be added as required and/or further information may be included as an attachment (see Section 9.4).</p>																						
<p>Table 9.2 Waste types</p> <table border="1"> <thead> <tr> <th></th> <th>Waste type</th> <th>Quantity (e.g. tonnes, litres, cubic metres)</th> <th>Waste activity infrastructure (including specifications)</th> <th>Monitoring (if applicable)</th> <th>Location (on site layout plan – see 3.4)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Wastewater - processed water discharged to lands (dust suppression)</td> <td>Ad-hoc basis dependant on a number of factors (rainfall, evaporation, frequency of water use)</td> <td>Oily Water Separator</td> <td> <p>The proposed sampling regime will include monthly in-situ sampling of the evaporation basin. In addition, further sampling will occur prior to any pumping of the water to the standpipe water storage facility.</p> <p>Samples will be tested to ensure it meets the correct standards prior to use. Any water that does not meet these will either remain in the evaporation pond or be disposed of as controlled waste at a licensed facility.</p> <p>Please see Attachment 6A – Emissions and Discharges for further details.</p> </td> <td>See location of the NPI facility on Figure 3</td> </tr> <tr> <td>2.</td> <td>Waste Oil</td> <td>20 kL maximum capacity</td> <td>Oily Water Separator</td> <td>N/A</td> <td>See location of the NPI facility on Figure 3</td> </tr> </tbody> </table>						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.	Wastewater - processed water discharged to lands (dust suppression)	Ad-hoc basis dependant on a number of factors (rainfall, evaporation, frequency of water use)	Oily Water Separator	<p>The proposed sampling regime will include monthly in-situ sampling of the evaporation basin. In addition, further sampling will occur prior to any pumping of the water to the standpipe water storage facility.</p> <p>Samples will be tested to ensure it meets the correct standards prior to use. Any water that does not meet these will either remain in the evaporation pond or be disposed of as controlled waste at a licensed facility.</p> <p>Please see Attachment 6A – Emissions and Discharges for further details.</p>	See location of the NPI facility on Figure 3	2.	Waste Oil	20 kL maximum capacity	Oily Water Separator	N/A	See location of the NPI facility on Figure 3
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Attachments			N/A	Yes																		
9.3	Attachment 6A: Emissions and discharges (if required)	If required, further information for Section 9.1 has been included as an attachment labelled Attachment 6A.	<input type="checkbox"/>	<input checked="" type="checkbox"/>																		

Part 9: Emissions, discharges, and waste			
9.4	Attachment 6B: Waste acceptance (if required)	If required, further information for Section 9.2 has been included as an attachment labelled Attachment 6B.	<input checked="" type="checkbox"/> <input type="checkbox"/>

Part 10: Siting and location																													
10.1	<p>Sensitive land uses</p> <p>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.</p> <p>The nearest residential property is located approximately 3 km to the South of the proposed Project area (Figure 4 of Attachment 2).</p> <p>The township of Boddington is located approximately 5.5 km to the East of the proposed Project area (Figure 4 of Attachment 2).</p>																												
10.2	<p>Nearby environmentally sensitive receptors and aspects</p> <p>Identify in Table 10.2 (below):</p> <ul style="list-style-type: none"> 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 or 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. <p>Refer to the Guideline: Environmental siting for further guidance.</p> <p>Table 10.2: Nearby environmentally sensitive receptors and aspects</p> <table border="1"> <thead> <tr> <th>Type / classification</th> <th>Description</th> <th>Distance + direction to premises boundary</th> <th>Proposed controls to prevent or mitigate adverse impacts (if applicable)</th> </tr> </thead> <tbody> <tr> <td>Environmentally Sensitive Areas ¹</td> <td>There are no environmentally sensitive areas in the vicinity of the project.</td> <td>>25 km</td> <td>N/A</td> </tr> <tr> <td>Public drinking water source areas ³</td> <td>The project area is located 10km away from the nearest public drinking water source area.</td> <td>10 km</td> <td>N/A</td> </tr> <tr> <td>Threatened Ecological Communities</td> <td>There is one threatened and ecological communities within close proximity to the project (Figure 5). Further information can be found in Attachment 7 – Siting and Location.</td> <td>0-1km</td> <td rowspan="7">Please refer to the following Attachments for details: Attachment 8A – Environmental Risk Assessment for details. Attachment 8B – Worsley Mine Expansion Construction Environmental Management Plan (CEMP) (WOR-71183-FS-PM-PLN0004)</td> </tr> <tr> <td>Threatened and/or priority fauna</td> <td>There are several recorded threatened and priority species within the project area (Figure 5). Further information can be found in Attachment 7 – Siting and Location.</td> <td>0-1km</td> </tr> <tr> <td>Threatened and/or priority flora</td> <td>There is one recorded Priority 1 flora species within the project area (Figure 5). Further information can be found in Attachment 7 – Siting and Location.</td> <td>0-1km</td> </tr> <tr> <td>Rivers, lakes, oceans, and other bodies of surface water, etc.</td> <td>The Hotham River transects the project area (Figure 6). Further information can be found in Attachment 7 – Siting and Location.</td> <td>0 km</td> </tr> <tr> <td>Aboriginal and other heritage sites</td> <td>There is 1 registered, 1 lodged and 5 historical heritage sites within the project area (Figure 7). Further information can be found in Attachment 7 – Siting and Location.</td> <td>0-1 km</td> </tr> </tbody> </table>	Type / classification	Description	Distance + direction to premises boundary	Proposed controls to prevent or mitigate adverse impacts (if applicable)	Environmentally Sensitive Areas ¹	There are no environmentally sensitive areas in the vicinity of the project.	>25 km	N/A	Public drinking water source areas ³	The project area is located 10km away from the nearest public drinking water source area.	10 km	N/A	Threatened Ecological Communities	There is one threatened and ecological communities within close proximity to the project (Figure 5). Further information can be found in Attachment 7 – Siting and Location.	0-1km	Please refer to the following Attachments for details: Attachment 8A – Environmental Risk Assessment for details. Attachment 8B – Worsley Mine Expansion Construction Environmental Management Plan (CEMP) (WOR-71183-FS-PM-PLN0004)	Threatened and/or priority fauna	There are several recorded threatened and priority species within the project area (Figure 5). Further information can be found in Attachment 7 – Siting and Location.	0-1km	Threatened and/or priority flora	There is one recorded Priority 1 flora species within the project area (Figure 5). Further information can be found in Attachment 7 – Siting and Location.	0-1km	Rivers, lakes, oceans, and other bodies of surface water, etc.	The Hotham River transects the project area (Figure 6). Further information can be found in Attachment 7 – Siting and Location.	0 km	Aboriginal and other heritage sites	There is 1 registered, 1 lodged and 5 historical heritage sites within the project area (Figure 7). Further information can be found in Attachment 7 – Siting and Location.	0-1 km
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Part 10: Siting and location				
Acid sulfate soils	The project area predominately has an extremely low risk of acid sulfate soil occurrence with the exception of the Hotham River area which has a high probability.	0 km	Please refer to Attachment 8B – Worsley Mine Expansion Construction Environmental Management Plan (CEMP) (WOR-71183-FS-PM-PLN0004)	
Other	N/A	N/A	N/A	
<p>¹ Environmentally Sensitive Areas are as declared under the <i>Environmental Protection (Environmentally Sensitive) Notice 2005</i>. Refer to DWER's website ("Environmentally Sensitive Areas") for further information.</p> <p>² Refer to the Department of Planning, Lands and Heritage website for further information about Aboriginal heritage and other heritage sites.</p> <p>³ Refer to Water Quality Protection Note No.25: Land use compatibility tables for public drinking water source areas for further information.</p>				
10.3	<p>Environmental siting context details Provide further information including details on topography, climate, geology, soil type, hydrology, and hydrogeology at the premises.</p> <p>Please refer to Attachment 7 – Siting and Location for details.</p>			
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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 additional documentation is submitted, please specify the name of documents below.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	List title of additional document(s) attached:	8A – Environmental Risk Assessment 8B – Worsley Mine Expansion Framework Construction and Environmental Management Plan (CEMP) (WOR-71183-FS-PM-PLN0004)		

Part 12: Category checklist(s)			
Attachments		N/A	Yes
12.1	<p>Attachment 9: Category checklist(s)</p> <p>DWER has developed category checklists to assist applicants with preparing their application. These checklists are available on DWER's website.</p> <p>The relevant category-specific checklist(s) must be completed and included with the application, labelled as Attachment 9. If attaching multiple category checklists, label them 9A, 9B, etc.</p> <p>Do not select "N/A" unless:</p> <ul style="list-style-type: none"> a relevant category checklist is not yet published on DWER's website, or the application is for an amendment that does not propose changes to the method of operation, or change the inputs, outputs, infrastructure, equipment, emissions, or discharges of / from the premises. <p>Note that that a category checklist(s) may still be required for renewal applications. You will be advised in your renewal notification letter (sent approximately twelve months before the licence expiry date) if you are required to provide the information identified in a category checklist.</p> <p>Where a category checklist is submitted, please specify which checklist(s) in the space below.</p>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
List title(s) of category checklists attached:			

Part 13: Proposed fee calculation			
<p>INSTRUCTIONS:</p> <p>Please calculate the prescribed fee using the relevant online fee calculator linked below.</p> <ul style="list-style-type: none"> Licence: www.der.wa.gov.au/LicenceFeeCalculator Works approval: www.der.wa.gov.au/WorksApprovalFeeCalculator Amendment: https://www.wa.gov.au/government/publications/works-approval-and-licence-amendment-fee-calculator <p>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.</p> <p>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.</p> <p>Further information on fees can be found in the Fact Sheet: Industry Regulation fees, and on DWER's website.</p>			
13.1	<p>Only the relevant fee calculations are to be completed as follows:</p> <p><i>[mark the box to indicate sections completed]</i></p>	<input checked="" type="checkbox"/> Section 13.3 for works approval applications <input type="checkbox"/> Section 13.4 for licence / renewal applications <input type="checkbox"/> Section 13.5 for registration applications <input type="checkbox"/> Section 13.6 for amendment applications <input type="checkbox"/> Section 13.7 for applications requiring clearing of native vegetation	
13.2	All information and data used for the calculation of proposed fees has been provided in accordance with Section 13.8.		<input checked="" type="checkbox"/>
13.3	Proposed works approval fee		

Part 13: Proposed fee calculation	
<p>Proposed works approval fee (see Schedule 3 of the EP Regulations)</p> <p>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.</p> <p>Costs exclude:</p> <ul style="list-style-type: none"> - 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 - consultancy fees relating to the works. 	
Fee component	Proposed fee

13.4 Proposed licence fee (new licences and licence renewals)		
Detailed licence fee calculations		
<p>Part 1 Premises component (see r.5D and Part 1 of Schedule 4 of the EP Regulations)</p> <p>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.</p> <p>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 r.5D(2) of the EP Regulations.</p> <p>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.</p>		
Category	Production or design capacity	Fee units
Using the higher or highest amount of fee units, Part 1 component subtotal		\$
<p>Part 2 Waste (see r.5D(1a)(b) and Part 2 of Schedule 4 of the EP Regulations)</p> <p>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 calculations.</p> <p>Categories: 5, 6, 7, 8, 9, 12, 14, 44, 46, 53, 54A, 70, 80, or 85B</p> <p>Part 2 waste means waste consisting of –</p> <ul style="list-style-type: none"> (a) tailings; or (b) bitterns; or (c) water to allow mining of ore; or (d) flyash; or (e) waste water from a desalination plant. <p>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.</p> <p>Insert additional rows as required. Sum all Part 2 waste fees to determine the sub total.</p>		
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. <i>E. coli</i> 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:		\$

13.5 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 r.5B(2)(c) of the EP Regulations.	<input type="checkbox"/> (Tick to acknowledge)

13.6 Amendment fee (works approval or licence)	
The fee prescribed for an application for an amendment to a works approval or licence is calculated in accordance with r.5BB(1)(a) of the EP Regulations:	
<ul style="list-style-type: none"> 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 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 design capacity threshold in Schedule 4 Part 1 of the EP Regulations. 	
Fee Units	Proposed fee
	\$

13.7 Prescribed fee for clearing permit	
In accordance with the Guideline: Industry Regulation Guide to Licensing and Procedure: Native vegetation clearing permits , where approval to clear native vegetation is sought 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 s.51E of the EP Act and processed accordingly. 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.	<input type="checkbox"/> (Tick to acknowledge)

13.8 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 10 , with an appropriate suffix (for example 10A, 10B 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 14: Commercially sensitive or confidential information
<p>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 11, and include a written statement of reasons why you request each item of information be kept confidential.</p> <p>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.</p> <p>DWER will take reasonable steps to protect genuinely confidential or commercially sensitive information. However, please note that DWER cannot commit to redacting all personal information from all supporting documents. You are advised to ensure that all personal information, including signatures, are removed from supporting documents prior to submitting them to the department. Please note that all submitted information may be the subject of an application for release under the <i>Freedom of Information Act 1992</i>.</p>

Part 14: Commercially sensitive or confidential information		
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 <i>Freedom of Information Act 1992</i> must be specified in Attachment 11 (located at the end of this form).	Attached	N/A
	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Part 15: Submission of application		
INSTRUCTIONS:		
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 ;		<input type="checkbox"/>
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;		<input checked="" type="checkbox"/>
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		<input type="checkbox"/>

Part 16: Declaration and signature

General

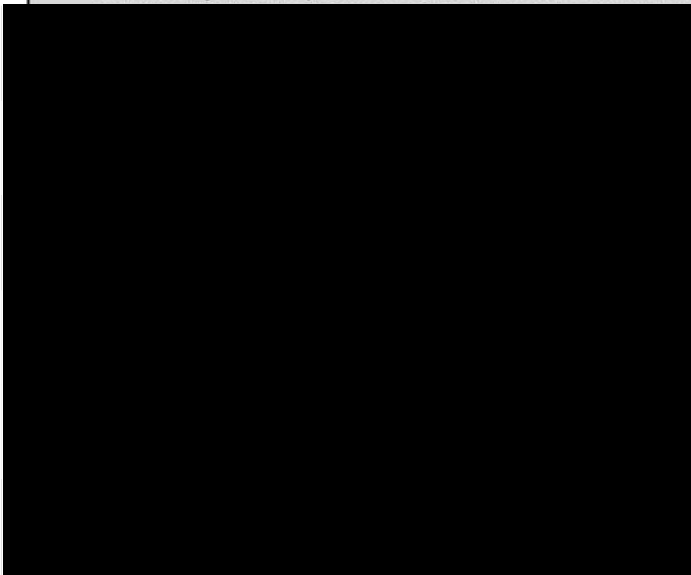
I / We confirm and acknowledge that:

- the information contained in this application is true and correct;
- 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 Section 2.3 for receipt of correspondence electronically via email from DWER in relation to this application;
- 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 Section 2.4 for the service of all Part V documents.
- giving or causing to be given information that to my knowledge is false or misleading is an offence under s.112 of the EP Act and may incur a penalty of up to \$100,000.

Publication

I / We confirm and acknowledge:

- this application (including all attachments apart from the sections identified in Attachment 11) 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 14), 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 11;
- 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, claim 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)*.



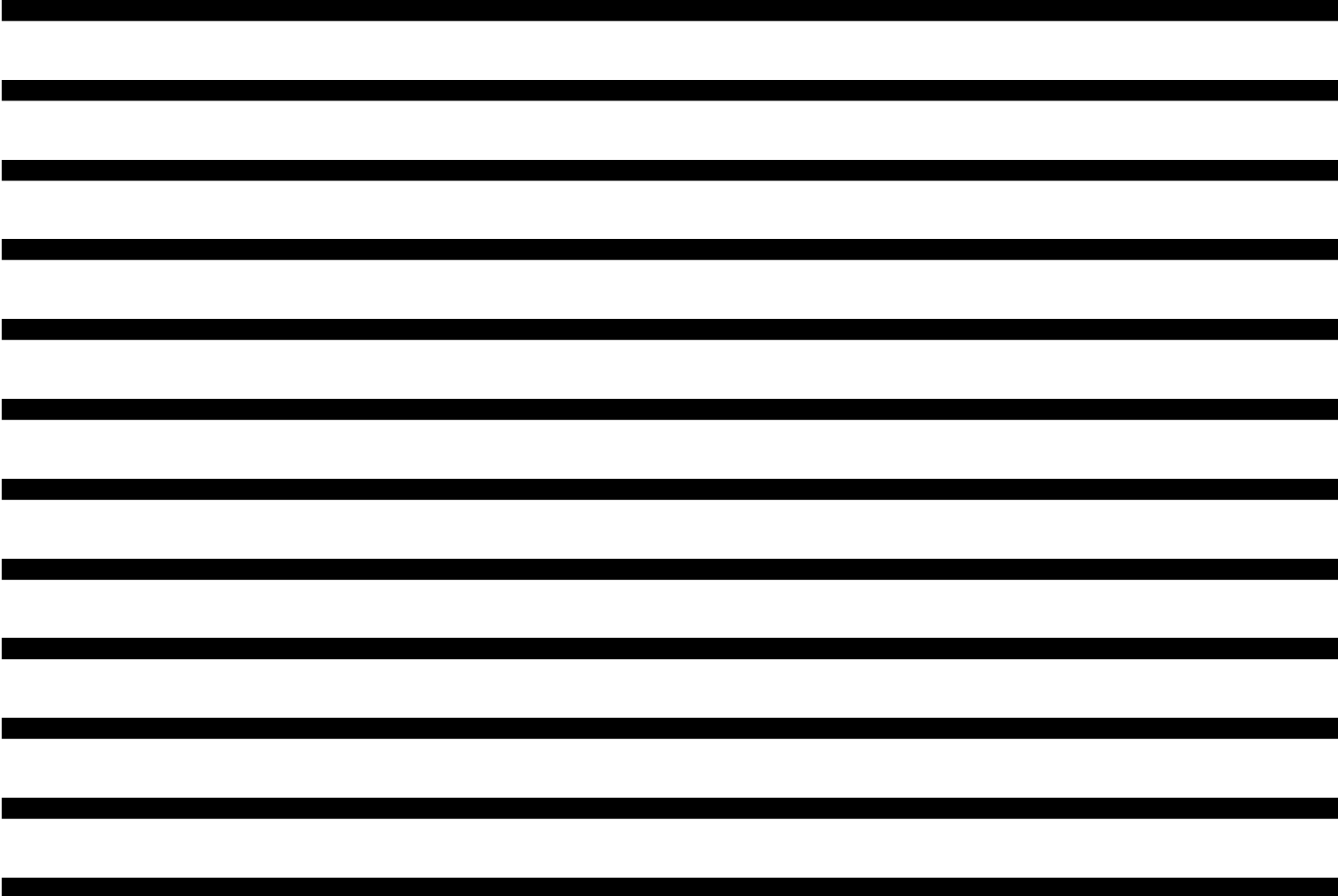
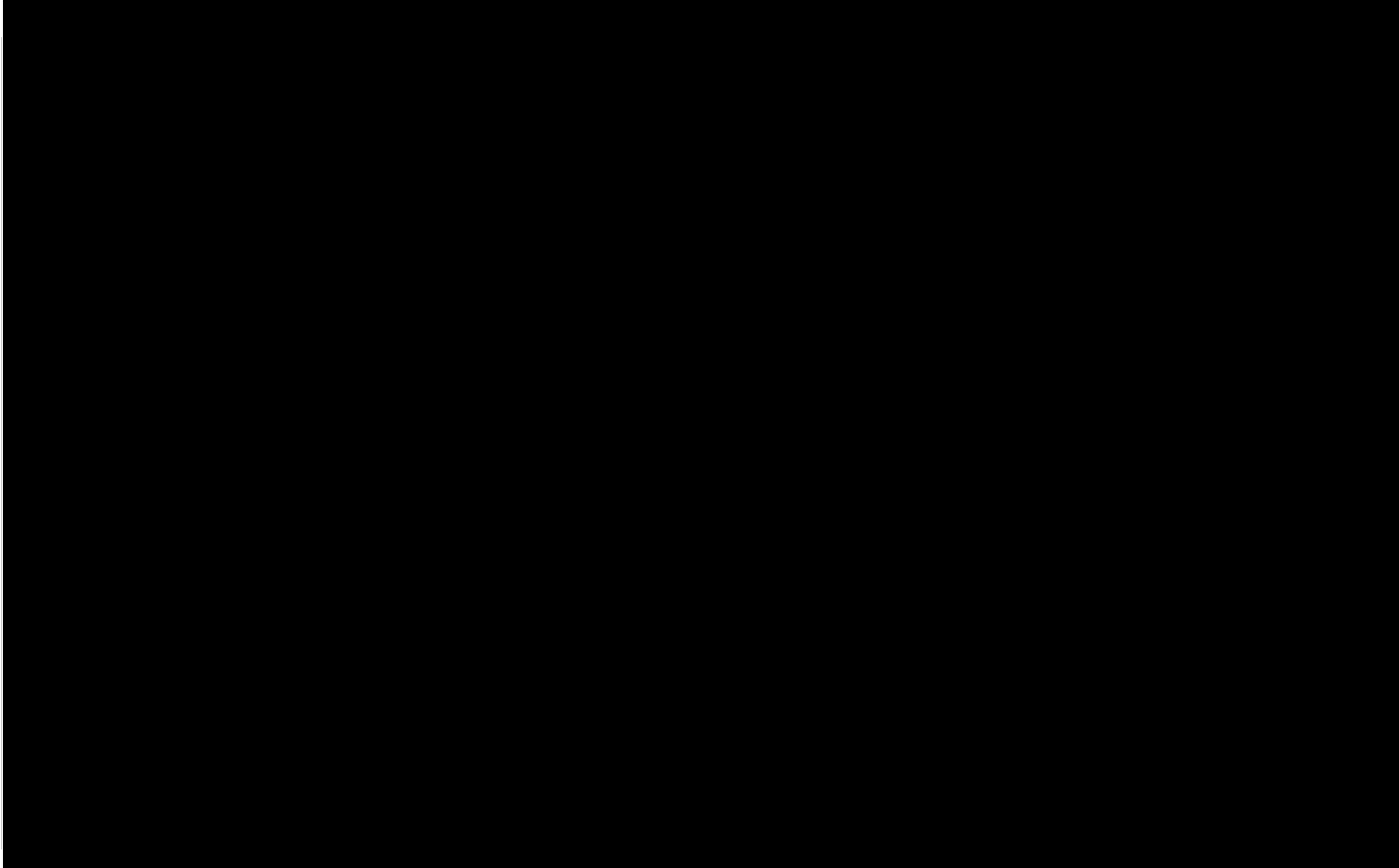
Date

Date

Position

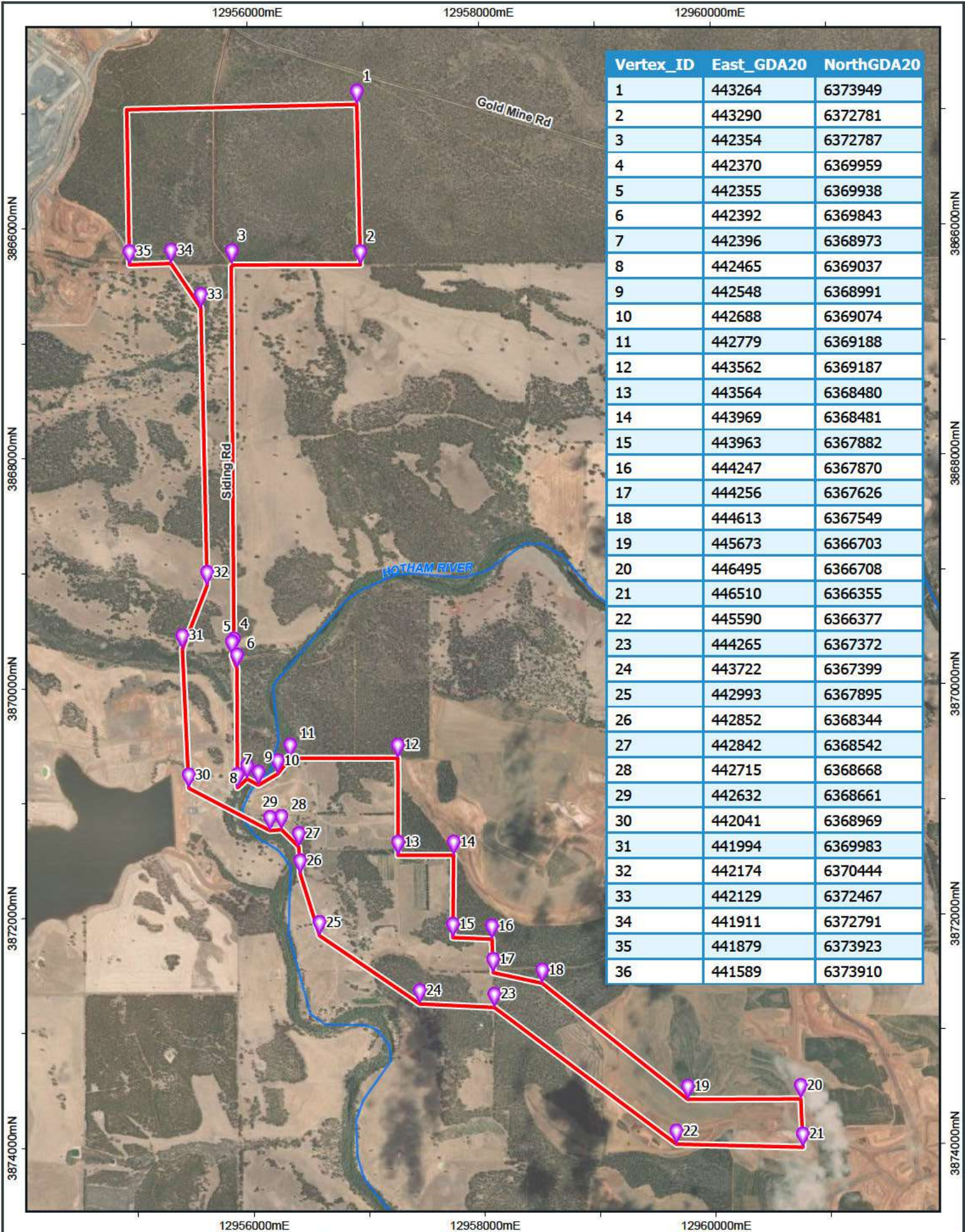
NOTE: This form may be signed:

- 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.

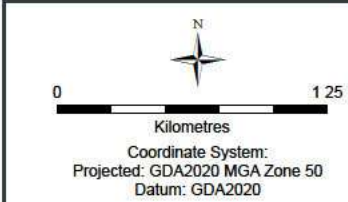


Attachment 2

Premises Maps



Vertex_ID	East_GDA20	NorthGDA20
1	443264	6373949
2	443290	6372781
3	442354	6372787
4	442370	6369959
5	442355	6369938
6	442392	6369843
7	442396	6368973
8	442465	6369037
9	442548	6368991
10	442688	6369074
11	442779	6369188
12	443562	6369187
13	443564	6368480
14	443969	6368481
15	443963	6367882
16	444247	6367870
17	444256	6367626
18	444613	6367549
19	445673	6366703
20	446495	6366708
21	446510	6366355
22	445590	6366377
23	444265	6367372
24	443722	6367399
25	442993	6367895
26	442852	6368344
27	442842	6368542
28	442715	6368668
29	442632	6368661
30	442041	6368969
31	441994	6369983
32	442174	6370444
33	442129	6372467
34	441911	6372791
35	441879	6373923
36	441589	6373910

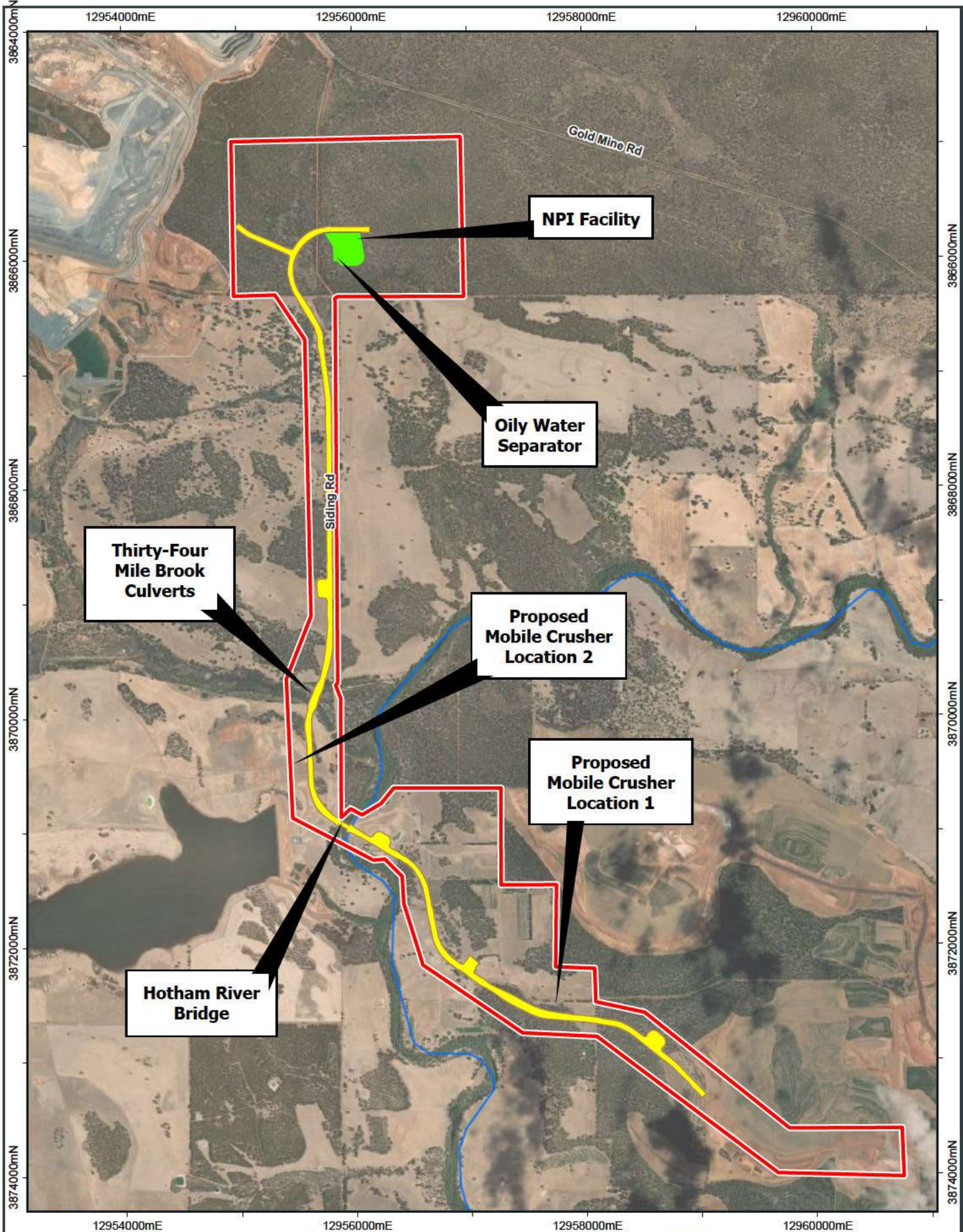


- Legend**
- PP vertices_GDA2020
 - Prescribed premise boundary

SOUTH32 Figure 2

Prescribed premise boundary
List of coordinates

Date: 17 November 2023	Author: tinlw1
Scale: 1:35,000 @ A4	Figure: 2



Thirty-Four Mile Brook Culverts

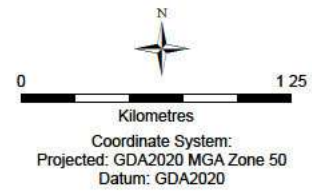
NPI Facility

Oily Water Separator

Proposed Mobile Crusher Location 2

Proposed Mobile Crusher Location 1

Hotham River Bridge



- Legend**
- NPI Facility
 - Haul Road
 - Prescribed premise boundary

Figure 3

Project Activities
Project Activity Locations

Date: 20 November 2023	Author: tinw1
Scale: 1:35,000 @ A4	Figure No: 3

12955000mE

12960000mE

Newmont
Operation

Res_ID	Distance
R1	4
R2	4.7
R3	5
R4	5
R5	3.5
R6	4.4
R7	3.4

NB. Distance is determined as the distance (in km) from the mid-point of the two proposed mobile crushers

3865000mN

3865000mN

3870000mN

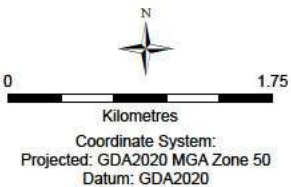
3870000mN

3875000mN

3875000mN

12955000mE

12960000mE



Legend

- Residential receptor
- Prescribed premise boundary

PP-outline

Agenda | Ordinary Council Meeting | 28 March 2024



Figure 4

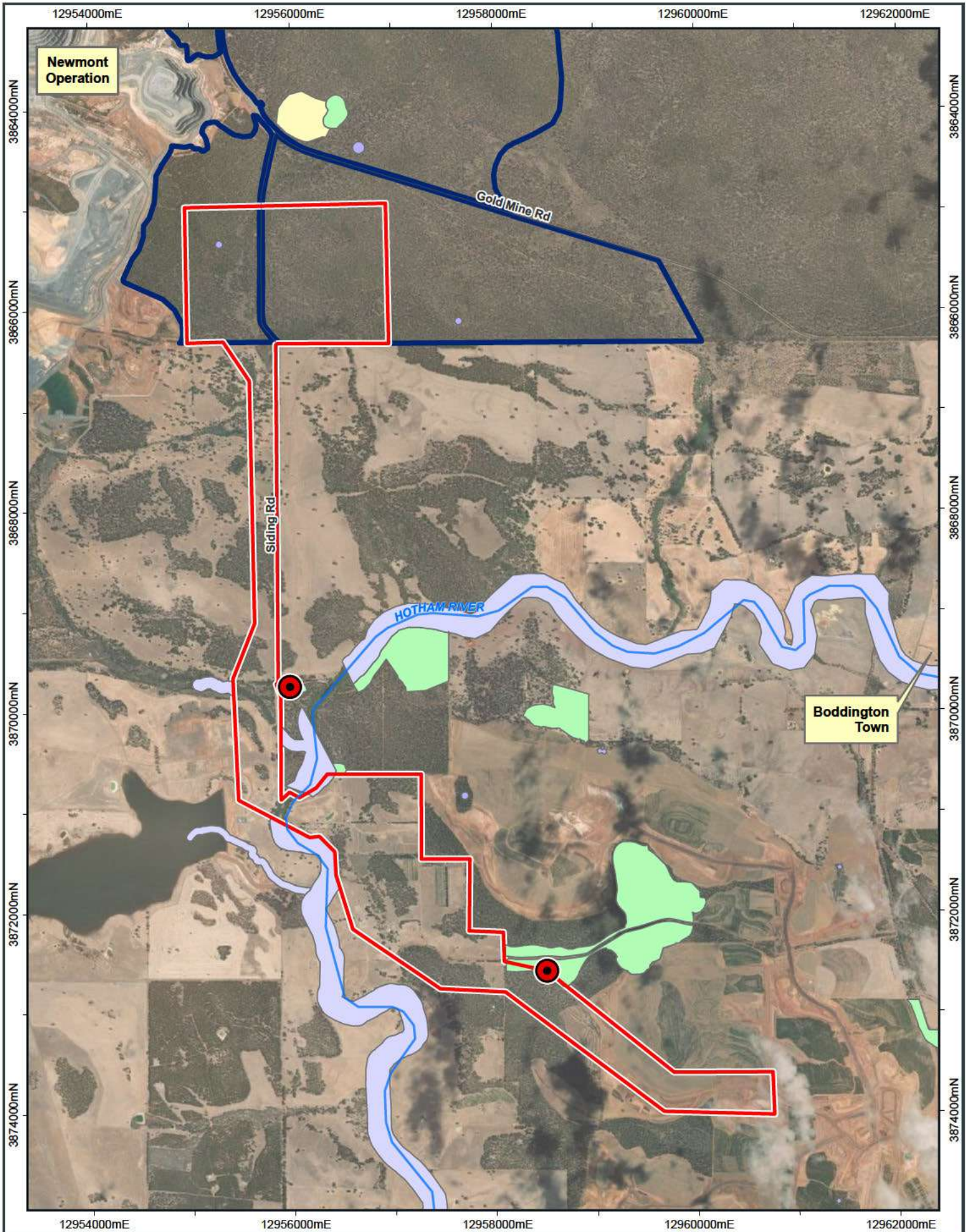
Residential
Sensitive Receptors

Date: 15 December 2023

Author: tinw1

Scale: 1 50,000 @ A4

Figure No: 4



0 1 25
Kilometres

Coordinate System:
Projected: GDA2020 MGA Zone 50
Datum: GDA2020

Legend

- Priority 1 Flora--Gastrobium
- Prescribed premise boundary
- Woylie habitat

Protected Areas

- Fauna
- Flora
- SRE
- Waterways

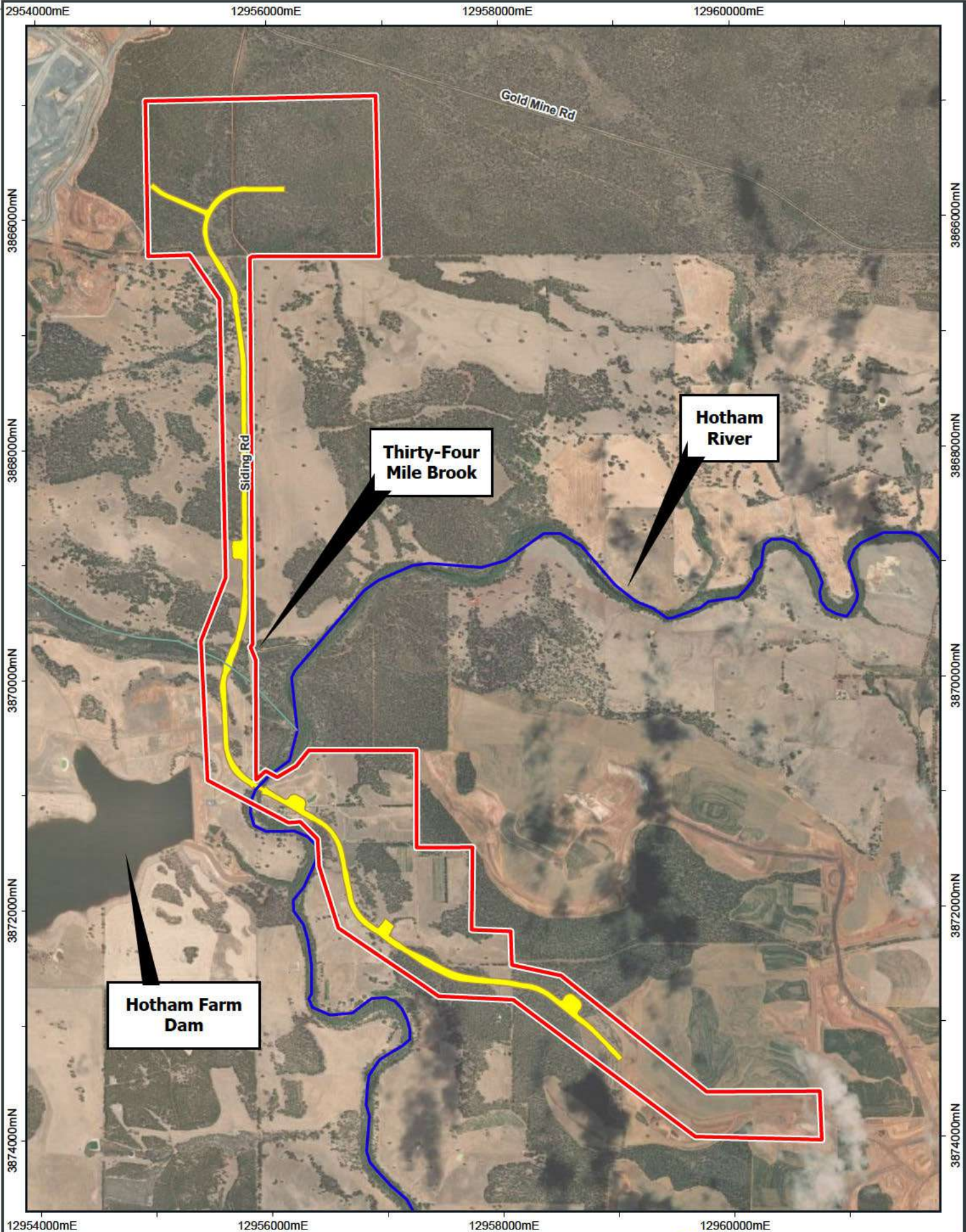
SOUTH32

Figure 5

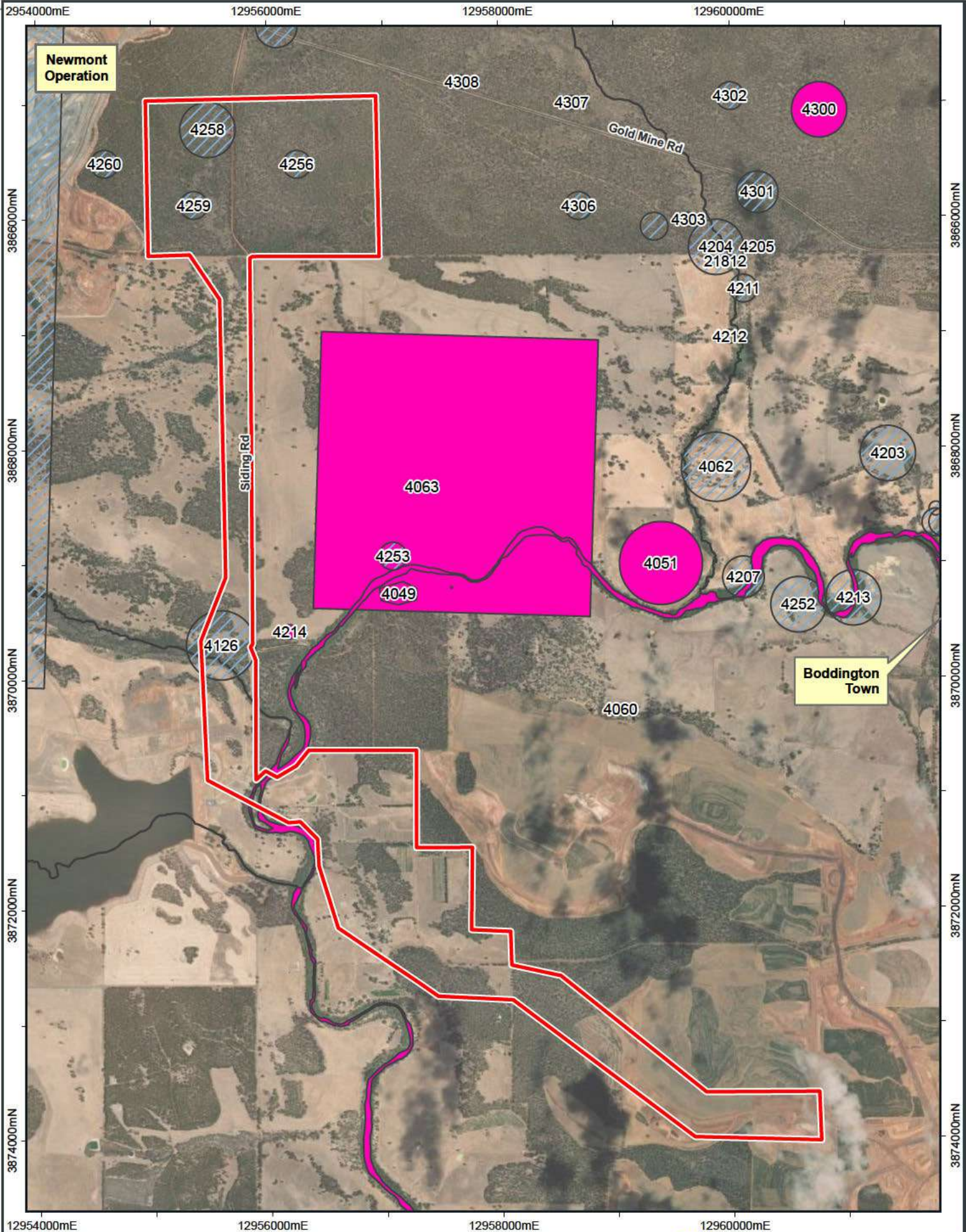
Environmental Sensitive Receptors

Date: 11 December 2023 Author: tinw1

Scale: 1:40,000 @ A4 Figure: 5



<p>Coordinate System: Projected: GDA2020 MGA Zone 50 Datum: GDA2020</p>	Legend		Figure 6
	Haul Road PP-outline Prescribed premise boundary	Surface Water Locations Sensitive Receptors	
Date: 20 November 2023 Author: tinw1 Scale: 1:35,000 @ A4 Figure: 6			



Coordinate System:
Projected: GDA2020 MGA Zone 50
Datum: GDA2020

Legend

- Aboriginal Heritage Places (DPLH-001)
- Lodged
- Registered Site
- Prescribed premise boundary
- Stored Data / Not a Site

SOUTH32

Figure 7

Heritage Sites
Sensitive Receptors

Date: 17 November 2023	Author: tinlw1
Scale: 1:35,000 @ A4	Figure No: 7

Attachment 3B

Proposed Activities

1.0 Introduction

South32 Worsley Alumina Pty Ltd (Worsley Alumina) operates and manages the Worsley Bauxite-Alumina Project on behalf of the Worsley Joint Venture – Bauxite Alumina Operations. This operation involves mining and crushing of ore at the Boddington Bauxite Mine (BBM) in Marradong, transportation of crushed ore from the BBM to the Worsley Refinery, processing and refining of ore to produce alumina at the refinery, and transportation of alumina by rail to the Bunbury port for exportation. To support the ongoing operations, Worsley is looking to extend its mining operations north of Marradong into the Nullaga area and transport the ore back to the Marradong facility via road transport as per Worsley Alumina's Worsley Mine Expansion proposal submitted to the Environmental Protection Agency (EPA Assessment Number 2216).

The Nullaga Mine Development Project (the Project) is a critical project supporting the overall operation that is expected to commence as soon as the Ministerial Approval is issued. It will consist of the construction of:

- The construction of a haul road including a bridge over the Hotham River;
- Services such as water, power and communications;
- Non-process infrastructure (NPI) facility, and
- Other supporting infrastructure such as crib facilities, site offices, borrow pits and laydowns.

The activities proposed as part of this Works Approval Application include:

- The construction of two mobile crushers to prepare material for use in the construction of the haul road.
- Installation of an oily water separator to treat hydrocarbon contaminated water created from washdown and stormwater runoff from the Project's bulk fuel storage area.

Due to variance between the construction schedules for the mobile crushers and the OWS, Worsley Alumina are requesting a provision for a staged construction and compliance schedule as per below:

- Stage 1 (Mobile Crusher 1)
- Stage 2 (Mobile Crusher 2)
- Stage 3 (OWS/NPI)

Provided below are the details on the construction, commissioning, and time limited operational activities for both activities. Further details for the potential emissions and discharges have been included in **Attachment 6A – Emissions and Discharges** and **Attachment 8A - Environmental Risk Assessment**.

2.0 Proposed Activity Details

2.1 Mobile Crushers

Two mobile crushers, each with a processing capacity of 250 tonnes per hour (tph), are proposed to be brought to site to support the Project. The mobile crushers will be located at two separate locations within the project area, as shown on **Attachment 2 - Figure 3**, although there is the potential that they may be relocated throughout the proposed boundaries, if required. These locations have been selected as they are within pastoral land and will require no clearing of native vegetation.

Each location will be approximately 200x150m and consist of the following as per **Figure 3B.1** of this document:

- Feed material and product stockpiles
- Crusher feed ramp

- Mobile crusher
- Container Dome Workshop area
- Parking area, with designated separate light and heavy vehicle parking area
- Ablution and crib facilities
- Diesel fuelled generators
- Fuel, potable and raw water tanks. The fuel storage tanks will be self-bunded

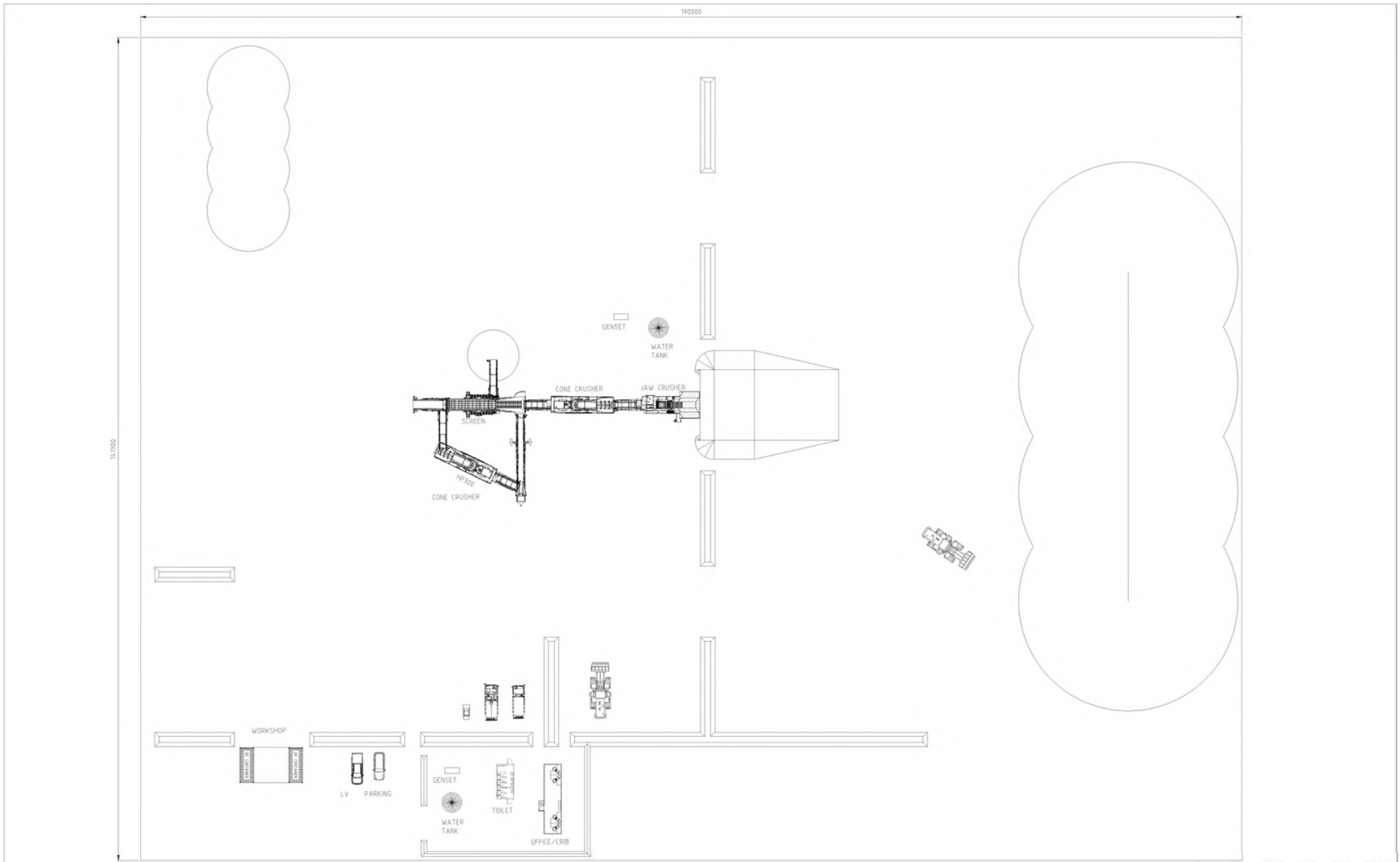


Figure 3B.1: Mobile Crusher Layout

REV	DATE	DESCRIPTION	BY	CHK	EN/STB	MDM	E/H	PROJES	DRAWING NUMBER	TITLE
A	17.08.23	ISSUE FOR INFORMATION	FR	ZR						

CONTRACT No.	MACA	COPYRIGHT © RESERVED	CLIENT	SOUTH 32
DRAWN BY	FR	17.08.23	WORSLEY NULLAGA HAUL ROAD CRUSHING AND SCREENING SERVICES GENERAL LAYOUT	
CHECKED BY			SCALE	1:300
DATE			DRAWING No.	MACA-WN-168-GA-001
REVISED BY			REV.	A



45 Division Street, Walshpool, WA 6106
Phone: 081 8263 7400

CONSTRUCTION AND COMMISSIONING

The first stage of the project is to mobilise equipment to site and establish the mobile crusher and associated infrastructure. This stage is expected to take a total of seven days.

This will be followed by mechanical commissioning of all mobile crusher. This stage is estimated to take two days. Activities during the commissioning phase will be as follows:

- Dry commission - dry run of the plant (no feed material) by using the start and stop method to make sure all connections are operational.
- Wet commission - feeding process materials through the crusher and screener to ensure all parts are operating correctly.
- Ramp up by increasing the throughput of feed material to the nominated design capacity.

TIME LIMITED OPERATION PHASES

Worsley Alumina request that a Time Limited Operations (TLO) period of six months is included in the Works Approval to allow for completion of the commissioning activities as well as the time required for assessment and approval of the licence amendment. The activities undertaken during the TLO phase will be similar to the Operational phase and area detailed in below.

OPERATIONS

It is expected that the mobile crusher will be required to operate out of hours. The mobile crushers will be required to be operational immediately after the Ministerial Statement is issued.

Material for the mobile crusher will be sourced from drill and blast waste from borrow pits and mining operations in the surrounding area. Crushed materials will be stockpiled adjacent to the mobile crusher and utilised in an as needed basis for the construction of the haul road.

A summary of the potential emissions and discharges resulting from the mobile crusher has been included below. Further details have been included in **Attachment 6A – Emissions and Discharges** and **Attachment 8A - Environmental Risk Assessment**.

DUST MANAGEMENT

Dust emissions have been identified as a potential environmental impact that will require management during the works. Dust has the potential to result from both construction and operational phases (site preparation, crushing of material and vehicles movements). To mitigate these risks, the following controls will be implemented:

- During site preparation, areas of vegetation and soil clearing will be minimised through the placement on already disturbed and cleared land; and during operations works will be limited during unfavourable wind conditions.
- Dust management control infrastructure will be installed at both crushing and screening areas. The mobile crusher will be reticulated with mist sprays, where appropriate.
- A watercart will be used to precondition feed materials to control the dust around the mobile crusher pad and during the crushing process. Water will be sourced from a 50 kL raw water tank specifically installed for dust suppression. Surface water pipes from the pump to the plant will be installed as per the relevant Australian Standards.
- Identified personnel involved will undergo dust management and awareness training.
- The mobile crushers have been located away from nearby sensitive receptors (> 2.5 km) to reduce the risk of potential impacts from dust emissions (**Attachment 2 - Figure 4**).

NOISE MANAGEMENT

Noise disturbance has been identified as a potential environmental impact that will require management during the works. Noise has the potential to result from both construction and operational activities (crushing and vehicle movements). To mitigate these risks, the following controls will be implemented:

- A noise management plan is being prepared to control noise outside of regular hours (before 07:00 Monday to Saturday and on Sundays)
- Worsley Alumina will ensure that the crushing and screening plant equipment will undergo regular and effective maintenance (in accordance with the manufacturer's specifications) to ensure applicable noise levels are maintained.
- Identified personnel will undergo noise management and awareness training.
- The mobile crushers have been located away from nearby sensitive receptors (> 2.5 km) to reduce the risk of potential impacts from noise (**Attachment 2 - Figure 4**).

2.2 Oily Water Separator

The details provided below are for the OWS that will be located within the bulk fuel storage area of the NPI facility (**Attachment 2 - Figure 3**). The fuel storage area does meet the licensing threshold and therefore has not been proposed as part of this Works Approval application. The bulk fuel storage will be licensed under a dangerous goods license as per the Dangerous Goods Safety (Storage and Handling of Non-Explosives) Regulations 2007 (Storage and Handling Regulations).

The system will comprise of the following as per **Figure 3B.2** below:

- Two concrete hardstands – one for loading fuel and one for refuelling of vehicles.
- Each concrete hardstand will have a drainage sump to collect potentially contaminated wastewater from the hardstands.
- Above ground pipes to transport the wastewater 30 m to the OWS
- An OWS in a triple interceptor arrangement.
- A HDPE lined evaporation basin to contain the treated water.
- Transfer pump to convey water from the evaporation basin to the standpipe facility.
- A 2,800 kL standpipe facility.

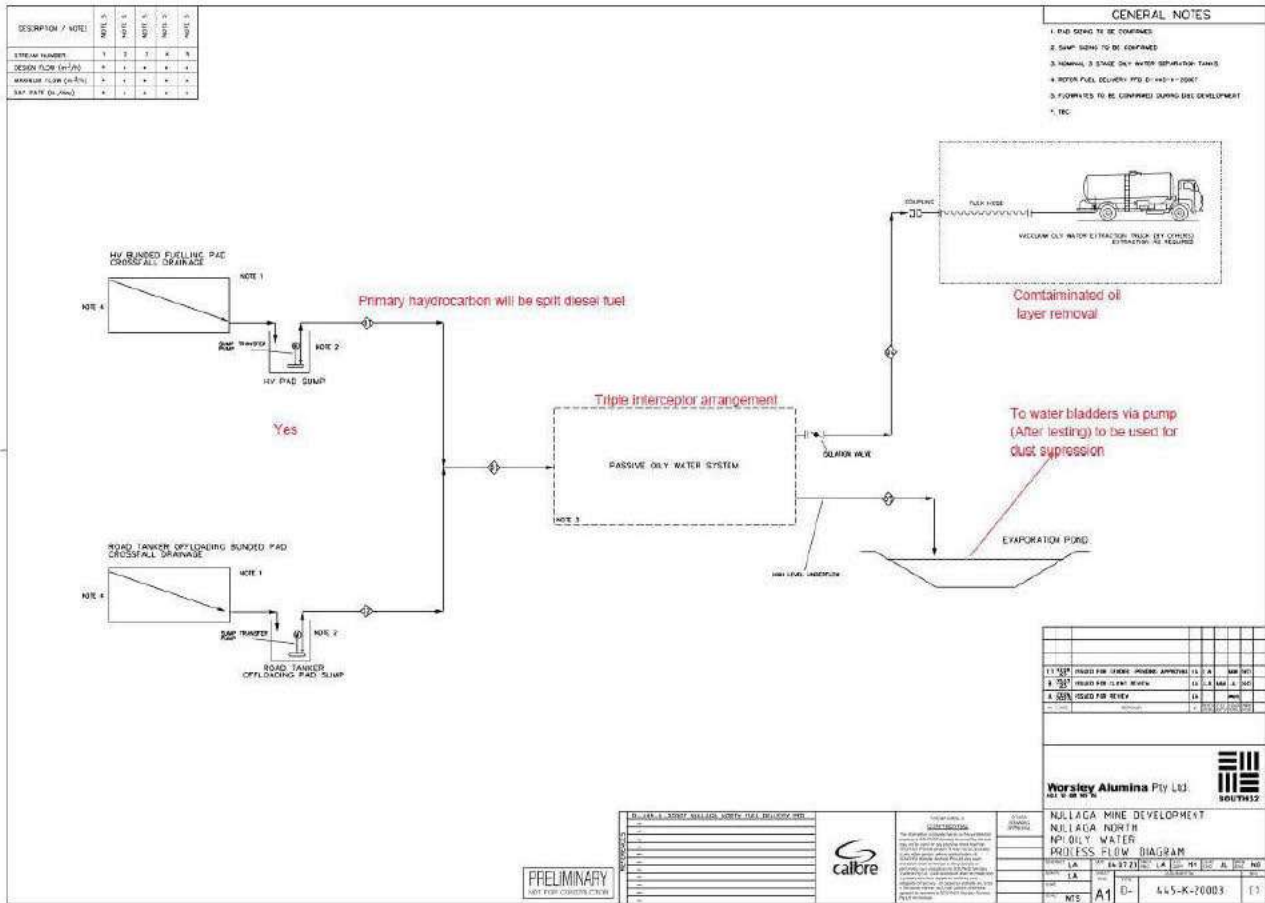


Figure 3B.2: OWS Flow Diagram

CONSTRUCTION AND COMMISSIONING

The OWS will be installed during the construction of the NPI facility. It is proposed that construction and commissioning works will commence after the Ministerial Statement is issued.

OWS commissioning activities will be conducted prior to filling the bulk fuel tank. This will involve filling the OWS with water to ensure the minimum water level is obtained within the triple interceptor.

TIME LIMITED OPERATIONS

Worsley Alumina request that a Time Limited Operations (TLO) period of six months is included in the Works Approval to allow for completion of the commissioning activities as well as assessment and approval of the licence amendment.

The activities undertaken during the TLO phase will be similar to the Operational phase and area detailed in below.

OPERATIONS

The bulk fuel storage area will consist of two suitably designed concrete hardstands, one for unloading fuel and the other for refuelling (suitable for heavy vehicles). These will be constructed to AS1940:2017 (The storage and handling of flammable and combustible liquids) specifications. These hardstands will be washed down after use or in the event of diesel spills or rain events. The contaminated water will drain to a local concrete sump with a 5 kL capacity. From the sumps, this water will be pumped through a 30 m above-ground pipe to the OWS. The OWS will be sized to retain a total of 50 kL of oily water between the three tanks, which is equivalent to more than three hours of containment during heavy rain events (2% annual exceedance probability (AEP)). The treated water (from which oils have been removed) will drain via gravity to a high-density polyethylene (HDPE) -lined evaporation pond. Water that does not evaporate will be tested and then pumped to the standpipe facility to be used on the gravel roads as dust suppression.

A summary of the potential emissions and discharges resulting from the mobile crusher has been included below. Further details have been included in **Attachment 6A – Emissions and Discharges** and **Attachment 8A - Environmental Risk Assessment**.

WASTEWATER MANAGEMENT

Wastewater discharges have been identified as a potential environmental impact that will require management during the works. Contaminated wastewater has the potential to result from operational activities and impact the environment through seepage. To mitigate these risks, the following controls will be implemented:

- Waste oil will be stored in the triple interceptor. The interceptor will be siphoned to remove any hydrocarbon build-up every three to four years. This material will be disposed of at an appropriately licensed waste facility.
- Visual inspections will be undertaken during rain events to ensure no overflow of the waste oil or treated water. If high levels are identified, a removal truck will be called in before they overflow.
- The pumps from the sump to the OWS have float valves installed to automatically pump water to the OWS once the water level in the sump reaches a certain level. This will prevent the contaminated water overflowing during rain events.
- The treated water in the evaporation pond will be tested in-situ on a monthly basis, in the pond, to confirm that it is below the relevant guideline thresholds for hydrocarbons (15 mg/L).
- Additional sampling will occur prior to any pumping of water to the standpipe.
- Prior to being used for dust suppression, the treated water will be diluted at the standpipe facility where it will be mixed with groundwater.

Attachment 3C

Area Proposed to be Cleared

ATTACHMENT 3C – AREA TO BE CLEARED



1.0 Introduction

The proposed locations for the mobile crusher areas occur in cleared pastoral areas. Accordingly, no clearing of native vegetation will be required specifically for the mobile crusher.

The area proposed for the non-process infrastructure (NPI) facility, which includes the oily water separator (OWS), is within an area containing dense native vegetation. The clearing of native vegetation is currently under assessment in the Revised Proposal (EPA Assessment Number 2216). The clearing falls under 'Schedule 6 Exemption - Clearing will be assessed under Part IV of the *Environmental Protection Act 1986*', and therefore does not require a Native Vegetation Clearing Permit (NVCP). This referral is also being assessed under the *Environmental Protection Biodiversity Conservation Act 1999* (EPBC Number 2019/8437).

Whilst not a direct result of the mobile crusher, clearing will also be required for sections along the haul road alignment prior to the crusher materials being laid. This clearing will also be approved under the new Ministerial Statement.

Table 3C.1 provides details for the proposed clearing.

Table 3C.1 Proposed Clearing for the Nullaga Part V Mobile Crusher Works Approval

Item	Details
Purpose	The proposed clearing directly related to the Works Approval is required for the construction of the Nullaga NPI facility. This facility includes the OWS and associated infrastructure.
Methodology	Mechanical Clearing – i.e., Bulldozer
Dates	On grant of the Ministerial Statement
Location	The NPI facility is located at the northern end of the haul road (Attachment 2 - Figure 10)
Other Details	Commercial trees in the NPI area will be harvested prior to commencement of the Project. The remaining stumps and plant material will be cleared as part of the Project.

2.0 Clearing Area Map

Figure 8 in Attachment 2 identifies all areas of native vegetation that will be cleared in the Project Area. This includes both the NPI facility and the haul road.

Attachment 5

Approvals and Consultation Documentation

ATTACHMENT 5: APPROVALS AND CONSULTATION

1.0 Other Approvals

1.1 Part IV of the Environmental Protection Act 1986 and Environmental Protection and Biodiversity Conservation Act 1999

In April 2006, Worsley Alumina was granted approval under Part IV of the *Environmental Protection Act 1986* via Ministerial Statement 719 for the “Worsley Alumina Production to Maximum Capacity of 4.4 million tonnes per annum (Mtpa) Alumina and Associated Mining”. Worsley Alumina operates the Boddington Bauxite Mine and Alumina Refinery in accordance with Part IV Ministerial Statement MS719.

In April 2019, Worsley Alumina submitted a referral to amend the Ministerial Statement for the Worley Mine Expansion to support the ongoing mining operations. This proposal includes the following activities:

- Amendment to the existing approved boundaries
- Development of a bauxite transport corridor
- Development of a contingency mining area and maintenance work at the Refinery
- Development of associated mine/support infrastructure.

The referral is also being assessed under the *Environmental Protection Biodiversity Conservation Act 1999* (EPBC) (EPBC Number 2019/8437) under the Accredited Assessment process.

This proposal is currently undergoing formal assessment. Worsley Alumina notes that as the application for the Works Approval is connected to the matters currently under assessment, and that the Works Approval can only be granted by Department of Water and Environmental Regulation (DWER) following approval of the Part IV assessment.

1.3 Division 3 of the Mining Act 1978

In September 2023, Department of Energy, Mines, Industry Regulation and Safety granted two Prospecting Licences (P70/1762 and P70/1763) to Worsley Alumina to explore the availability of bauxite in the Project area. An application under Division 3 of the Mining Act 1978 – Application for a Mining Lease over crown or freehold land is being prepared to convert the two Prospecting Licences (70/1762 and 70/1763) to one combined Mining Lease. P70/1762 is located east of L70/223, and P70/1763 is located to the south as per **Attachment 2 - Figure 1**. Once combined, the Mining Lease will connect the two Prospecting Licences, including the area of L70/223 in between.

Part of the activities proposed in this Works Approval application will be located within P70/1762. This will include one crusher location, as well as supporting infrastructure. Worsley Alumina notes that this Prospecting License is not authority to conduct the proposed activities in this Works Approval, and that the Works Approval will not be granted until the Mining Lease application has been approved.

A Mining Proposal will be submitted to DEMIRS to allow for the proposed works to be undertaken. This will be approved following the grant of the new Ministerial Statement.

Worsley Alumina commits to notifying DWER if the approvals are progressed, and a new Ministerial Statement is granted.

1.4 Section 21A of the Rights in Water and Irrigation Act 1914

Two river crossings (Dilyan's Crossing and Thirty-Four Mile Brook) have been proposed as part of the larger Nullaga Project. These river crossings will be located within the proposed prescribed premise boundary (**Attachment 2 - Figure 6**) and will form part of the haul road. Worsley Alumina has identified the requirement for a Section 21A permit to interfere with bed and banks for each crossing. These applications will be submitted to DWER separately as soon as practicable.

1.5 Section 18 of the Aboriginal Heritage Act 1972

Worsley Alumina has identified one registered heritage site (Hotham River, site ID 27935) that will be impacted as part of the larger Nullaga project. This impact will occur during the construction of the bridge over the Hotham River that forms part of the haul road. After a number of consultations with the traditional owner group Gnaala Karla Booja (GKB) and DWER, a Section 18 application was submitted on the 19 April 2023 (Reference number CLHW6378).

2.0 Consultation

Consultation has been undertaken between Worsley Alumina and key stakeholder groups. These include DWER, the local traditional owner group GKB, the Shire of Boddington and the local community. Details of recent engagements related to the Nullaga Mine Development Project (the Project) have been included in **Table 5.1** below.

Table 5.1 Stakeholder and Community Consultation Summary

Stakeholders	Date of Engagement	Description of Engagement	Summary of Engagement
DWER	28 April 2023	On-line Meeting	A presentation of the works proposed environmental management measures and planned approval strategy related to the Works Approval application
DWER	1 May 2023	Email Correspondence by Worsley Alumina	A summary of the agenda and actions from the scoping meeting
DWER	5 May 2023	Email Correspondence by DWER	Recommendations provided from DWER
DWER	15 June 2023	Email Correspondence by Worsley Alumina	Confirmation of the approval strategy to be followed by Worsley Alumina
DWER	20 June 2023	Email Correspondence by DWER	Acceptance of the approval strategy
GKB	9 June 2022	In-person Meeting	CHMP update, S18 application for geotechnical investigation update, approval update
GKB	2 March 2023	In-person Meeting	Site Visit to the Project locations
Shire of Boddington	23 June 2023	In-person Meeting	ERD public review update
Shire of Boddington	6 February 2023	In-person Meeting	General update on the Project
Shire of Boddington	30 May 2023	In-person Meeting	General update on the Project
Shire of Boddington	12 September 2023	In-person Meeting	General update on the Project
Shire of Boddington	10 October 2023	In-person Meeting	General update on the Project
Boddington	18 July 2022	Community Information	Community meeting to provide update to the

ATTACHMENT 5: APPROVALS AND CONSULTATION



Community		Session	Worsley Mining Proposal and Environmental Review Document (ERD)
Boddington Community	19 July 2022	Community Information Session	General update on the Project
Boddington Community	20 July 2023	Community Information Session	General update on the Project

Attachment 6A

Emissions and Discharges

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ATTACHMENT 6A: EMISSIONS AND DISCHARGES



1.0 Emissions and Discharges

A summary of the emissions and discharges resulting from the proposed activities are outlined in **Table 6A.1** below.

A risk assessment has been undertaken on the environmental impacts resulting from these emissions and discharges, and a number of controls have been proposed to mitigate the risks. This information can be found in **Attachment 8A – Environmental Risk Assessment**.

Table 6A.1 Emissions and Discharges

Stage	Source of Emission or Discharge	Emission or Discharge Type	Volume and Frequency	Location
Construction and Operation	Equipment and machinery Heavy vehicle (HV), Light vehicle (LV)	Fugitive dust Emissions	Unknown. Dust emissions are dependent on the following factors, which will vary: <ul style="list-style-type: none"> • Number of vehicles/equipment operating • Size and type of vehicles/equipment • Vehicle speed • Vehicle/equipment operation • Weather conditions (i.e., high winds) 	The proposed Project area as shown in Attachment 2 - Figure 3 .
		Noise Emissions	Unknown – it is expected that the works will be required out of hours. Noise emissions and the potential impacts are dependent on the following factors, which will vary: <ul style="list-style-type: none"> • Number of vehicles/equipment operating • Size and type of the vehicles/equipment • Vehicle speed • Vehicle/equipment operation • Weather conditions (i.e., high winds) 	The proposed Project area as shown in Attachment 2 - Figure 3 .
Operation	Crushing and screening, stockpiling of road material	Fugitive dust Emissions	Unknown. Dust emissions are dependent on the following factors, which will vary: <ul style="list-style-type: none"> • Number of vehicles/equipment operating • Size and type of vehicles/equipment • Vehicle speed • Vehicle/equipment operation • Weather conditions (i.e., high winds) 	Indicative crusher locations within the proposed Project area as shown in Attachment 2 - Figure 3 .
		Noise Emissions	Estimated 100-110 dB at the mobile crusher Noise emissions are dependent on the following factors, which will vary: <ul style="list-style-type: none"> • Number of vehicles/equipment operating • Size and type of the vehicles/equipment • Vehicle speed • Vehicle/equipment operation 	Indicative crusher locations within the proposed Project area as shown in Attachment 2 - Figure 3 .



Operation	Oily Water Separator	Potentially contaminated (hydrocarbon) stormwater runoff	<p>Unknown.</p> <p>Stormwater volume is dependent on:</p> <ul style="list-style-type: none"> • Storm/rainfall event and duration • Rainfall volume • Runoff/infiltration rate • Stormwater flow and direction <p>Stormwater frequency is dependent on:</p> <ul style="list-style-type: none"> • Seasons (rainfall events more likely to occur in winter and spring compared to summer and autumn) 	Indicative OWS location within the proposed Project area as shown in Attachment 2 - Figure 3.
		Discharge of treated wastewater to the environment (dust suppression)	<p>Unknown.</p> <p>The volume and frequency will be on an ad-hoc basis. This will be dependent on:</p> <ul style="list-style-type: none"> • Seasonal variability in rainfall • Wind speeds and strength • Rate of evaporation from the evaporation pond. 	Indicative OWS location within the proposed Project area as shown in Attachment - Figure 3.

Attachment 7

Siting and Location

ATTACHMENT 7: SITING AND LOCATION



1 Introduction

The Nullaga Mine Development Project (the Project) is located in the Shire of Boddington, approximately 100 km south-east of Perth and 5.5 km west of Boddington Town (**Attachment 2 - Figure 1**). The proposed prescribed premise boundary is located between Gold Mine Road, Boddington, and the Worsley Boddington Bauxite Mine (BBM) located in Marradong. **Attachment 2 - Figure 2** identifies the coordinates for each boundary proposed.

1.1 Land uses

The land uses within the prescribed premises boundary are identified in the Shire of Boddington Local Planning Scheme 03 as rural and State Forest. The activities proposed as part of this Works Approval application will be located within both land uses. The mobile crusher will be placed in pastoral land, and the non-process infrastructure (NPI) facility will be constructed in State Forest (**Attachment 2 - Figure 3**).

1.2 Tenure and Ownership

The proposed works are located on Worsley Alumina tenure authorised under the *Mining Act 1976*. These details are included in **Table 7.1** below. Mining tenement summary reports are provided in **Attachment 1A - Proof of Occupier Status**. These tenements are jointly managed by the following parties:

- Japan Alumina Associates (Australia) Pty Ltd - 56%
- Sojitz Alumina Pty Ltd – 30%
- South32 Aluminium (RAA) Pty Ltd – 10%
- South32 Aluminium (Worsley) Pty Ltd – 4%

Table 7.1 Land Tenure Details

Tenement	Expiry	Proposed Activities
M 70/258 SA	N/A	Mobile Crusher
M 70/25	08/04/2028	Oily Water Separator Mobile Crusher
M 70/564	26/04/2032	Oily Water Separator Mobile Crusher
L 70/223	07/04/2042	Mobile Crusher
P 70/1762	06/09/2027	Mobile Crusher

In September of 2023, the then Department of Mines Industry Regulation and Safety (DMIRS) granted Worsley Alumina with two prospecting licenses (P70/1762 and P70/1763) either side of L70/223 to investigate bauxite occurrences within these areas (**Attachment 2 - Figure 1**). P70/1762 is the proposed main location for one of the mobile crushers. Whilst this tenure does not permit the proposed activities, it has been included in this Works Approval application as a placeholder for a Mining Lease that is expected to be issued prior to the grant of the Works Approval. This Mining Lease will include both P70/1762 and P70/1763, as well as the area of land in between that is also covered by L70/223.

2.0 Siting

The environmental siting for the Project can be found below. **Table 7.2** provides a summary of the nearby sensitive receptors and their distance to the Project. A full environmental risk assessment including the proposed controls and residual risk can be found in **Attachment 8A – Environmental Risk Assessment**.

Table 7.2 Summary of Sensitive Receptors within the Project area and surrounds

Sensitive Receptor	Description	Distance from Prescribed Activities
Sensitive Residential Receptors	<p>No sensitive land uses/users are expected to be impacted by the proposed activities.</p> <p>The nearest sensitive land users to the proposed Project area are isolated residential properties, local agricultural operations and residents of the town of Boddington. These receptors are not expected to be impacted by the proposed activities due to the separation distance.</p>	<p>The nearest residential property is located approximately 2 km to the south of the Project boundary and will be further from the proposed activity locations, as shown on Attachment 2 - Figure 6.</p> <p>The township of Boddington is located >5 km to the east of the Project, as shown on Attachment 2 - Figure 4.</p>
Environmentally Sensitive Areas (ESAs)	There are no ESAs within, or in the vicinity of the proposed Project Area.	No ESA's have been identified with a 5 km radius of the Project.
Threatened Ecological Communities (TEC) and Priority Ecological Communities (PEC)	Two PEC <i>Eucalypt Woodlands of the Western Australian Wheatbelt</i> (DBCA-038) occurs within the Project Area.	There are two PEC's recorded to occur in the central portion of the Project Area as shown on Attachment 2 - Figure 5 .
Threatened and Priority Flora	<p>One DBCA classified 'priority' flora species has been identified by biological surveys to appear in the Project Area:</p> <ul style="list-style-type: none"> Gastrolobium sp. Prostrate Boddington (Priority 1) <p>No 'threatened' flora species listed and protected under the <i>Biodiversity Conservation Act 2016</i> (WA) have been recorded by biological surveys in the Project Area.</p>	<i>Gastrolobium sp</i> have been identified in the central and southern portions of the Project Area as shown on Attachment 2 - Figure 5 .
Threatened and priority fauna	<p>Multiple priority and endangered fauna species have been recorded in the Northern Jarrah Forest subregion. Surveys conducted by Worsley Alumina have identified potential habitat for the following species:</p> <ul style="list-style-type: none"> <i>Calyptorhynchus banksia naso</i> (Forest Red-tailed Black Cockatoo) <i>Zanda latirostris</i> (Carnaby's Cockatoo) <i>Zanda baudinii</i> (Baudin's Cockatoo) <i>Bettongia penicillate</i> (Woylie) <i>Myrmecobius fasciatus</i> (Numbat) <i>Dasyurus geoffroii</i> (Chuditch) 	<p>All Cockatoo Species have been observed west of the Project Area with breeding records occurring approximately 2 km to the east and northeast of the Project Area. Surveys have identified potential nesting trees within the Project Area, specifically in P70/1762 near the mobile crusher location.</p> <p>Surveys have identified Woylie habitat to be located within the Project Area, specifically in the vicinity of the NPI facility. This</p>

		<p>habitat is shown in Attachment 2 - Figure 5.</p> <p>The remaining areas within the prescribed premise boundary are cleared farmland that have been deemed as uncondusive habitat for the numbat, chuditch and woylie.</p>
<p>Groundwater Dependent Ecosystems (GDEs)</p> <p>And</p> <p>Rivers, lakes, oceans, and other bodies of surface water</p>	<p>The Hotham River and associated riparian vegetation has been identified as an ecosystem that is <i>potentially</i> dependent on shallow groundwater (South32, 2019).</p> <p>The Hotham River and Thirty-Four Mile Brook (a tributary of Hotham River) are the closest surface water bodies and are within the proposed Project area.</p>	<p>The Hotham River borders the Worsley operations on the North and West and intersects the proposed Project area. This is shown on Attachment 2 - Figure 6.</p> <p>Thirty-Four Mile Brook intersects the proposed Project area as shown on Attachment 2 - Figure 6.</p>
<p>Aboriginal and other heritage sites</p>	<p>A search of the Department of Planning, Lands and Heritage ACHIS database (DPLH, 2023) identified five sites within the proposed prescribed premise boundary (Attachment 2 - Figure 7).</p> <p>Four of the sites identified are listed as historical sites. These include:</p> <ul style="list-style-type: none"> • Boddington Forest 10 (Place ID 4356) • Boddington Forest 12 (Place ID 4258) • Boddington Forest 13 (Place ID 4259) • Worsley Timber 3 (Place ID 4126) <p>The remaining site is listed as a registered site.</p> <ul style="list-style-type: none"> • Hotham River (Place ID 27935) <p>The Project will be impacting the Hotham River registered site for the locations of the bridge and culvert crossings under a S18; however, the activities proposed in this Works Approval application will not be in the vicinity of the Hotham River.</p>	<p>Five sites are within the Project boundary:</p> <ul style="list-style-type: none"> • Boddington Forest 10 (Place ID 4356) • Boddington Forest 12 (Place ID 4258) • Boddington Forest 13 (Place ID 4259) • Worsley Timber 3 (Place ID 4126) • Hotham River (Place ID 27935) <p>Two additional registered sites are within 500m of the prescribed premises boundary. These are:</p> <ul style="list-style-type: none"> • Archer's Cave (Place ID 20216) • Siding Road (Place ID 4214)

2.1 Climate

The project location experiences a Mediterranean climate that includes warm and dry summer periods and cold winter periods. The Bureau of Meteorology (BoM) operates a network of monitoring stations in Western Australia. The nearest station is located approximately 30km north-east in Wandering (BoM weather station number 010917). Data has been recorded at this station for 25 years between 1998 to 2023 and includes temperature, rainfall, humidity, and wind.

2.2 Temperature

The mean daily maximum and minimum temperatures at the Wandering BoM monitoring station are presented for each month in **Table 7.3**. The highest mean daily maximum temperature recorded at the station is 32.2°C in January. The lowest mean daily minimum temperature recorded is 4.1°C in August.

Table 7.3 Mean Maximum and Minimum Temperatures at the Wandering Weather Station 1998-2023 (BoM, Sept 2023)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Maximum	32.2	31.7	28.9	24.4	20.0	16.9	15.8	16.6	18.5	22.3	27.2	30.6	23.8
Minimum	14.2	14.6	12.6	9.5	6.2	4.7	4.1	4.1	4.8	6.3	9.4	12.1	8.5

2.3 Rainfall

The mean and maximum rainfall at Wandering BoM Station is displayed in **Table 7.4**. This data shows an annual mean rainfall of 537.4mm, with 272.8mm recorded in the winter months of June to August. This is consistent with the climatic conditions in the South-West Region.

Table 7.4 Rainfall Statistics from the Wandering Weather Station 1998-2023 (BoM, Sept 2023)

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean (mm)	14.3	15.9	23.0	31.7	56.3	81.2	98.1	93.5	56.6	30.1	19.9	16.0	537.4
Median (mm)	4.8	2.4	10.4	21.2	60.4	75.4	95.0	97.2	51.4	25.5	15.0	5.6	514.4
Mean Days >1mm	1.8	1.5	2.5	4.4	6.7	9.3	11.4	11.0	9.5	5.1	3.0	2.1	68.3

2.4 Wind Speed

A summary of measurements of wind speed from the Wandering monitoring station are presented in **Table 7.5**. These monthly averages were recorded at 9am and 3pm for 12 years between 1998 to 2010. The data shows higher wind speeds in the afternoon all year round, and an increase in strength in the months of November to February each year.

Table 7.5 Average Wind Speed recorded at the Wandering Weather Station 1998 - 2010 (BoM, Sept 2023)

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
9am (km/h)	15.9	15.6	13.7	11.4	8.1	8.4	9.0	10.0	12.6	14.2	15.4	15.2	12.5
3pm (km/h)	15.9	16.0	15.1	13.9	13.0	13.4	13.6	13.8	15.0	15.1	15.4	15.6	14.6

2.5 Relative Humidity

Relative humidity is one of several measures used to describe the quantity of moisture in the atmosphere and is the ratio of the actual amount of moisture in the atmosphere to the maximum amount that could be held, at a given temperature. **Table 7.6** shows the long-term monthly averages taken between 1999 and 2010, based on daily measurements collected at 9am and 3pm. The data indicates that the relative humidity is always greater at 9am than 3pm, and that the winter months (May-August) have the highest averages.

Table 7.6 Average Annual Humidity Recorded at the Wandering Weather Station 1999-2010 (BoM, Sept 2023)

Parameter	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
9am (%)	53	55	59	69	82	87	88	85	78	67	53	49	69
3pm (%)	28	28	32	42	52	58	63	60	57	47	31	26	44

2.6 Biogeography

The proposed Project area is located in the Jarrah Forest bioregion and Northern Jarrah Forest subregion as described by the Interim Biogeographic Regionalisation for Australia. This subregion is characterised by Jarrah-Marri Forest on laterite gravels and woodlands of Wandoo-Marri on clayey soils. The lower portion of the proposed activity area consists of cleared farmland with riparian vegetation fringing the Hotham River and Thirty-Four Mile Brook.

2.7 Vegetation

Beard (1990) described the Jarrah Forest as one of the only two forest formations in Western Australia. Jarrah (*Eucalyptus marginata*) is the dominant tree species within this area and is commonly found in association with the Marri (*Corymbia calophylla*) in varying proportions (South32, 2019). The Worsley mine Development Area, which includes the Project boundary is entirely located within the Beard vegetation unit 17 – Eucalyptus woodland (Woodland; Jarrah, Forest; Jarrah) (South32, 2019).

2.8 Threatened and Priority Ecological Communities

Two PEC's has been identified within the proposed Project area (DBCA-038). Database searches indicate that the TEC – the *Eucalypt Woodlands of the Western Australian Wheatbelt*, has the potential to occur near the proposed Project area; ground truthing surveys have identified it is found to the east and northeast but not within this area (South32, 2019).

2.9 Environmentally Sensitive Areas

No Environmentally Sensitive Areas (ESAs) are located in the proposed Project Area.

2.10 Flora and Fauna

FLORA

Flora is typical for the bioregion and Northern Jarrah Forest subregion consisting of varying forms of forest and woodland communities. One species of priority flora have been recorded in the Project Area. *Gastrolobium sp.* Prostrate Boddington is a Priority One species that has been identified in surveys. **Attachment 2 - Figure 5** shows two occurrences of *Gastrolobium sp.*, one around the Hotham River, and one in the southern end of L70/223.

FAUNA

Fauna habitats present in the area are typical for the bioregion and Northern Jarrah Forest subregion, representing and dominated by varying forms of forest and woodland communities (South32, 2019). Previous surveys have noted several species that are listed as conservation significant species. Other threatened species not recorded to date may occur in low abundance in the Project Area and may be confirmed in further surveys. However, **Table 7.7** below lists significant terrestrial fauna species inferred as potentially present in the Project Area owing to identified preferred habitat within the area.

Table 7.7 Conservation significant fauna species within the Project Area and surrounds

Species	Commonwealth Listing (EPBC Act)	State Listing - WA Conservation Code (WA, 2018)	Occurrence
<i>Calyptorhynchus banksii naso</i> (Forest Red-tailed Black Cockatoo)	Vulnerable	Vulnerable	Identified in the surrounding area. Suitable habitat identified within the Project Area.
<i>Zanda latirostris</i> (Carnaby's Cockatoo)	Endangered	Endangered	Identified in the surrounding area. Suitable habitat identified within the Project Area.
<i>Zanda baudinnii</i> (Baudins Cockatoo)	Endangered	Endangered	Identified in the surrounding area. Suitable habitat identified within the Project Area.
<i>Bettongia penicillata ogilbyi</i> (Woylie)	Endangered	Endangered	Identified in the surrounding area. Suitable habitat identified within the Project Area.
<i>Myrmecobius fasciatus</i> (Numbat)	Endangered	Endangered	Potentially Present
<i>Dasyurus geoffroii</i> (Chuditch)	Vulnerable	Vulnerable	Potentially Present
<i>Isoodon obesulus fusciventer</i> (Southern Brown Bandicoot, Quenda)	N/A	Priority 4	Potentially present
<i>Oxyura australis</i> (Blue-billed duck)	N/A	Priority 4	Potentially present
<i>Falsistrellus mackenziei</i> (Western false pipistrelle)	N/A	Priority 4	Potentially present
<i>Ctenotus delli</i> (Dell's skink)	N/A	Priority 4	Potentially present

2.11 Geology and Soils

The proposed Project Area is located on the Darling Scarp, which is bounded to the west by the Swan Coastal Plain and to the east by the Collie Coal Basin (South32, 2019). Generally, the soils in the upslope areas of BBM are shallow with lateritic duricrust and granitic bedrock at or close to the surface (South32, 2019). The mid-slope regions are dominated by shallow soil with lateritic duricrust close to the surface, sandy piezolithic gravel dominates the upper strata (South32, 2019). Clayey sandy silt is deposited by alluvial processes in the low-lying areas of the catchment (South32, 2019).

- Soil-landscape mapping of Western Australia indicates that the proposed Project Area is primarily located within the following soil systems (South32, 2019);

- The Marradong Upland System, with soils described as sandy gravel, loamy gravel, grey deep sandy duplex and loamy duplex;
- Quindanning System, with soils described as deep sandy duplex soils, shallow sand, loamy duplex and bare rock; and
- Darling Plateau System, with soils described as duplex sandy gravels, loamy gravels, and wet soils.

2.12 Acid Sulphate Soils

A review of the Australian Soil Resource Information System indicates there is an extremely low probability of acid sulphate soils (ASS) within the proposed Project Area, with the exception of the banks of the Hotham River which have a high probability of occurrence (South32, 2019). No works proposed as part of this Works Approval Application are within the vicinity of the Hotham River, however the material from the mobile crusher will be used for construction of the haul road and bridge in that area. As part of those works, Worsley Alumina has undertaken ASS sampling and prepared an ASS Management Plan that can be found in **Attachment 3C**.

2.13 Hydrology

The proposed Project Area falls within the Murray River and Tributaries Surface Water Management Area; this area is also classified as a *Rights in Water and Irrigation Act 1914* (RIWI Act) Surface Water Area (Murray River System). The Worsley operations are currently bordered to the north and west by the Hotham River and to the South by the Williams River (**Attachment 2 - Figure 6**) (South32, 2019). To the east, tributaries of Marradong Brook border the existing BBM (South32, 2019).

Potential receiving environments for surface water quality in relation to this application are the Hotham River and associated tributaries (Thirty-Four Mile Brook and Marradong Brook), which fall within the Hotham River catchment (South32, 2019). These river catchments are brackish in salinity, with monthly sampling indicating electrical conductivity within the Hotham River ranges from 6,300 to 20,000 $\mu\text{S}/\text{cm}$ and 6,100 to 15,000 in the Williams River (South32, 2019). These high salinities are considered to be a result of land clearing and agricultural practices in the broader Hotham River catchment (South32, 2019).

The nearest surface water body to the proposed Project Area is the Hotham River and Thirty-Four Mile Brook which are both located within the proposed Project Area (**Attachment 2 - Figure 6**). Water quality investigations in the Hotham River upstream of its union with Thirty-Four Mile Brook indicated neutral pH (7.11 – 7.97) and generally low metal concentrations with all metals recorded below detection limits, with the exception of cadmium and lead (South32, 2019).

Crustaceans are known to be the dominant benthic fauna in the river systems within the vicinity of the proposed Project Area; the Hotham, Murray and Williams Rivers are also important ecosystems for freshwater fish migration (South32, 2019). However, the areas of the Hotham River within the vicinity of the proposed Project Area are generally above the upper salinity tolerance of freshwater fishes known to occur in the area, therefore it is unlikely that they would be present in large numbers (South32, 2019).

2.14 Hydrogeology

No groundwater areas proclaimed under the RIWI Act or Public Drinking Water Source Areas (PDWSA) are present within the vicinity of the proposed Project Area.

Site hydrogeology within the proposed Project Area consists of three main aquifers formed by the in-situ weathering of basement rocks, including a shallow aquifer (shallow weathered zone aquifer), lower saprolite (deep weathered zone aquifer) and fractured bedrock aquifer (fracturing within the bedrock)

(South32, 2019). The lower saprolite aquifer is the principal aquifer and is the dominant aquifer of the Darling Plateau. The aquifer rests above the bedrock, with a depth between 15 to 40m (South32, 2019). The thickness of this aquifer ranges from one to ten metres. The groundwater flow direction is variable due to a number of factors including the sub-surface geometry, hydraulic properties, and discharge locations (South32, 2019). Broadly, groundwater levels within all aquifers appear to follow topography (South32, 2019).

Groundwater monitoring undertaken since 1995 indicates variable levels of the total dissolved solids (TDS) ranging from 10mg/L to 12,000 mg/L (South32, 2019). Groundwater quality is variable around the existing mining areas of the BBM, ranging from fresh to around 15,000 mg/L (South32, 2019).

The Hotham River and associated riparian vegetation was identified as an ecosystem that is potentially dependent on shallow groundwater (South32, 2019). Winter flows are related to catchment-scale rainfall events, while summer flows are considered to result from groundwater baseflow throughout the catchment and leakage from Lions Weir in the Boddington town site (South32, 2019).

2.15 Aboriginal Cultural Heritage

A search of the Department of Planning, Lands and Heritage ACHIS database (DPLH, 2023) identified the presence of five heritage sites within the proposed Project Area. Two additional heritage sites have been identified within 500m of the Project boundary (**Attachment 2 – Figure 7**). These include the following sites:

Within the Project boundary

- Boddington Forest 10 (Place ID 4356) - Historical
- Boddington Forest 12 (Place ID 4258) - Historical
- Boddington Forest 13 (Place ID 4259) - Historical
- Worsley Timber 3 (Place ID 4126) - Historical
- Hotham River (Place ID 27935) – Registered

Outside the Project boundary

- Archer's Cave (Place ID 20216) - Registered
- Siding Road (Place ID 4214) - Registered

The proposed activities within this Works Approval will not have a direct impact on the registered sites listed above. There will be an indirect impact on Site 27935 (Hotham River), as the materials from the proposed mobile crusher will be used to create the haul road and bridge that will impact the site. Worsley Alumina has submitted a Section 18 application as per the *Aboriginal Heritage Act 1972* and the application is currently under assessment. It is expected that the approval will be granted following the grant of the Ministerial Statement.

Attachment 8A

Environmental Risk Assessment

1.0 Risk Assessment Matrix

A qualitative desktop risk assessment was conducted in accordance with the Department of Water and Environmental Regulation (DWER) Guidance Statement: Risk Assessments (DWER 2020). The aim of the risk assessment was to identify the potential emissions from the proposed activities and the potential sources, pathways, and receptors of those emissions. In addition, the proposed controls to manage potential emissions were included to determine a residual risk rating.

The risk rating matrix in **Table 8A.1**, the Likelihood Matrix **Table 8A.2**, and the consequence Matrix in **Table 8A.3** were all used to rate the potential risks prior to controls being implemented, and the residual risks post-controls.

Table 8A.1: Risk Rating Matrix (DWER 2020)

Likelihood	Consequence				
	Slight	Minor	Moderate	Major	Severe
Almost Certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	Extreme
Unlikely	Low	Medium	Medium	Medium	High
Rare	Low	Low	Medium	Medium	High

Table 8A.2: Likelihood Matrix (DWER 2020)

Likelihood	Likelihood description
Almost certain	The risk event is expected to occur in most circumstances
Likely	The risk event will probably occur in most circumstances
Possible	The risk event could occur at some time
Unlikely	The risk event will probably not occur in most circumstances
Rare	The risk event may only occur in exceptional circumstances

Table 8A.3: Consequence Matrix (DWER 2020)

Consequence	Consequence description	
	Environment	Health
Severe	On-site impacts: catastrophic Off-site impacts (local scale): high level Off-site impacts (wider scale): mid-level Mid to long term or permanent impact to an area of high conservation value or special significance	Loss of life Adverse health effects: high level or ongoing medical treatment Local scale impacts: permanent loss of amenity
Major	On-site impacts: high level Off-site impacts (local scale): mid-level Off-site impacts (wider scale): low level Short term impact to an area of high conservation value or special significance	Adverse health effects: mid-level or frequent medical treatment Local scale impacts: high level impact to amenity
Moderate	On-site impacts: mid-level Off-site impacts local scale: low-level Off-site impacts wider scale: minimal	Adverse health effects: low level or occasional medical treatment Local scale impacts: mid-level impact to amenity
Minor	On-site impacts: low level Off-site impacts (local scale): minimal Off-site impacts (wider scale): not detectable	Local scale impacts: low level impact to amenity
Slight	On-site impacts: minimal	Local scale impacts: minimal impacts to amenity

2.0 Environmental Risk Assessment

The potential emissions, sources, pathways, and receptors that are identified for the activities proposed in this Works Approval application have been outlined in **Table 8A.4**. It also identifies the potential impacts, proposed controls, and associated residual risk ratings for each activity. Controls included in the risk assessment are detailed in the Construction Environmental Management Plan (WOR-71183-FS-PM-PLN0004). The CEMP was submitted with the current environmental impact assessment and is expected to be approved on grant of the Ministerial Statement.

The assessment indicates a low level of risk is associated with each activity following implementation of the proposed controls and a detailed assessment is not required.

Table 8A.4: Environmental Risk Assessment

Source / Activities	Potential Emissions	Pathway	Potential Receptors	Potential Impacts	Assigned Risk Rating	Proposed Controls	Consequence	Likelihood	Residual Risk Rating	Detailed Assessment Required?
Operation of Heavy vehicle (HV), Light vehicle (LV), equipment and machinery	Fugitive Dust Emissions	Air: Windborne particulate matter generated during site mobilisation activities	Residential: The nearest residential property is located approximately 3 km to the South of the proposed Project Area. The township of Boddington is located approximately 5.5 km to the East of the proposed Project Area. Cultural: The Hotham River registered heritage site is within the Project Area.	Given the distance to the nearest residential receptors, impacts to public health or amenity from nuisance dust emissions are not expected. Potential impacts to the culturally significant Hotham River include reduced water quality from deposition of dust during strong weather events.	Medium	Dust emissions will be managed using the following controls: <ul style="list-style-type: none"> Maintain watercart, or similar, onsite to dampen roads and tracks during mobilisation to minimise dust lift off. Dampen stockpiles of materials. Implement traffic control measures (speed limits) on site to minimise dust generation from vehicle movements. Visually monitor the activities for dust emissions and temporarily cease works if high dust emissions observed. Dampening of cleared areas by water carts to occur prior to works recommencing.	Slight	Possible	Low	No
		Air: Transport through air then deposition	Native vegetation, Threatened or Priority Flora. Aquatic ecosystem of the Hotham River	Reduced vegetation health, smothering impacts from dust deposition. Cumulative effects on stressed plants. Reduced water quality from deposition with a run-on effect to the aquatic ecosystem. Dust deposition is expected to be minor in the forested area and will be contained to the immediate vicinity of operations and is therefore unlikely to impact threatened or priority species situated away from activities.	Medium					
	Noise Emissions	Air: Windblown noise generated through mobilisation activities	Residential: The nearest residential property is located approximately 3 km to the South of the proposed Project area. The township of Boddington is located approximately 5.5 km to the East of the proposed Project area	Given the distance to the nearest receptors, impacts to public health or amenity from nuisance noise emissions are not expected.	Low	Proposed controls include: <ul style="list-style-type: none"> Implement traffic control measures (speed limits) on site to minimise noise generation from vehicle movements. Vehicles, machinery, and equipment maintenance records will be maintained and up to date. All vehicles and machinery (where required) will be fitted with broadband reversing beepers. Out of hours noise emissions will be managed as per the Noise Management Plan being prepared for the Project. 	Slight	Possible	Low	No
Disturbance of Fauna in adjacent remnant vegetation	Dispersing fauna from remnant habitat in vicinity of operations. Studies completed for the operations to date have identified potential nesting sites in the Project Area approximately 800m from the proposed mobile crusher 1 location			Medium	Slight		Possible	Low	No	

	Exhaust emissions (i.e., CO ₂ , CO, NO _x , SO ₂ , hydrocarbons, particulates, etc.)	Air: Transport through air	Residential: The nearest residential property is located approximately 3 km to the South of the proposed Project area. The township of Boddington is located approximately 5.5 km to the East of the proposed Project area	Given the distance to the nearest receptors, impacts to public health or amenity from exhaust emissions are not expected.	Medium	Proposed controls include: <ul style="list-style-type: none"> In accordance with Worsley Alumina's existing procurement and operational controls, vehicles, machinery and equipment will be installed with standard emission control devices. Vehicles, machinery and equipment maintenance records will be maintained and up to date. All drivers and equipment/machinery operators will be advised to prevent unnecessary engine idling. 	Slight	Possible	Low	No
Crushing and screening, stockpiling of road material	Fugitive Dust Emissions	Air: Windborne particulate matter generated during crushing and screening activities	Residential: The nearest residential property is located approximately 3 km to the South of the proposed Project Area. The township of Boddington is located approximately 5.5 km to the East of the proposed Project Area. Cultural: The Hotham River registered heritage site is within the Project Area.	Given the distance to the nearest residential receptors, impacts to public health or amenity from nuisance dust emissions are not expected. Potential impacts to the culturally significant Hotham River include reduced water quality from deposition of dust during strong weather events.	Medium	Dust emissions will be managed using the following controls: <ul style="list-style-type: none"> Maintain watercart, or similar, onsite to dampen roads and tracks during mobilisation to minimise dust lift off. Dampen stockpiles of materials. Implement traffic control measures (speed limits) on site to minimise dust generation from vehicle movements. Visually monitor the activities for dust emissions and temporarily cease works if high dust emissions observed. Dampening of cleared areas by water carts to occur prior to works recommencing. Dust management control infrastructure will be installed with the mobile crushers. The Crushing plant is reticulated with dust suppression piping at each transfer point to allow the use of dust / mist sprays. 	Slight	Possible	Low	No
		Air: Transport through air then deposition	Native vegetation, Threatened or Priority Flora Aquatic ecosystem of the Hotham River	Reduced vegetation health, smothering impacts from dust deposition. Cumulative effects on stressed plants. Reduced water quality from deposition with a run-on effect to the aquatic ecosystem. Deposition is expected to occur in the forested area in the immediate vicinity of operations but is unlikely to impact threatened or priority species situated away from activities.	Medium					
Noise Emissions	Air: Noise generated from crushing and screening activities		Residential: The nearest residential property is located approximately 3 km to the South of the proposed Project Area. The township of Boddington is located approximately 5.5 km to the East of the proposed Project Area	Given the distance to the nearest receptors, impacts to public health or amenity from nuisance noise emissions are not expected.	Low	Proposed controls include: <ul style="list-style-type: none"> Implement traffic control measures (speed limits) on site to minimise noise generation from vehicle movements. Vehicles, machinery, and equipment maintenance records will be maintained and up to date. All vehicles and machinery (where required) will be fitted with broadband reversing beepers. Any out of hours work will be managed in accordance with a Noise Management plan that is being prepared. 	Slight	Possible	Low	No
			Disturbance of fauna in adjacent remnant vegetation	Dispersing fauna from remnant habitat in vicinity of operations from nesting or foraging sites	Medium		Slight	Possible	Low	No

Operation of Oily Water Separator (OWS)	Contaminated (hydrocarbon) stormwater runoff	Overland runoff	Surface water receptors: Thirty-Four Mile Brook Hotham River	Reduced surface water quality. Given the distance from the OWS to the nearest surface water bodies, potential overland runoff is not expected to reach surface waters (or significantly impact any terrestrial ecosystems).	Low	Proposed controls include: <ul style="list-style-type: none"> Stormwater will be managed in accordance with Worsley's existing standard operating procedures. Stormwater drainage around the refueling area and OWS will be designed to be captured and recovered for appropriate disposal. Site drainage/stormwater management will be inspected regularly to assess and maintain integrity and operation. Design of the refueling area and OWS to capture any stormwater runoff. Proposed monitoring and management of the OWS, including in-situ testing. 	Slight	Possible	Low	No
	Discharge of treated wastewater to the environment (dust suppression)	Discharge to land, infiltration to groundwater	Surface water receptors: Thirty-Four Mile Brook Hotham River	Reduced surface water quality. Given the distance from the OWS to the nearest surface water bodies, potential overland runoff is not expected to reach surface waters (or significantly impact any terrestrial ecosystems).	Low		Slight	Possible	Low	No
	Hydrocarbon spills	Discharge to land, infiltration to groundwater	Surrounding receiving environment Groundwater	Contamination of soil / land / groundwater	Medium		Slight	Possible	Low	No

Attachment 8B

Construction Environmental Management Plan (WOR-71183-FS-PM-PLN0004)

WOR-71183-FS-PM-PLN-0004 - FRAMEWORK CONSTRUCTION
ENVIRONMENTAL MANAGEMENT PLAN



Operation:	South32 Worsley Alumina Boddington Bauxite Mine
Project Number:	A700.C.71183
Document Number:	WOR-71183-FS-PM-PLN-0004
Document title:	Framework Construction Environmental Management Plan

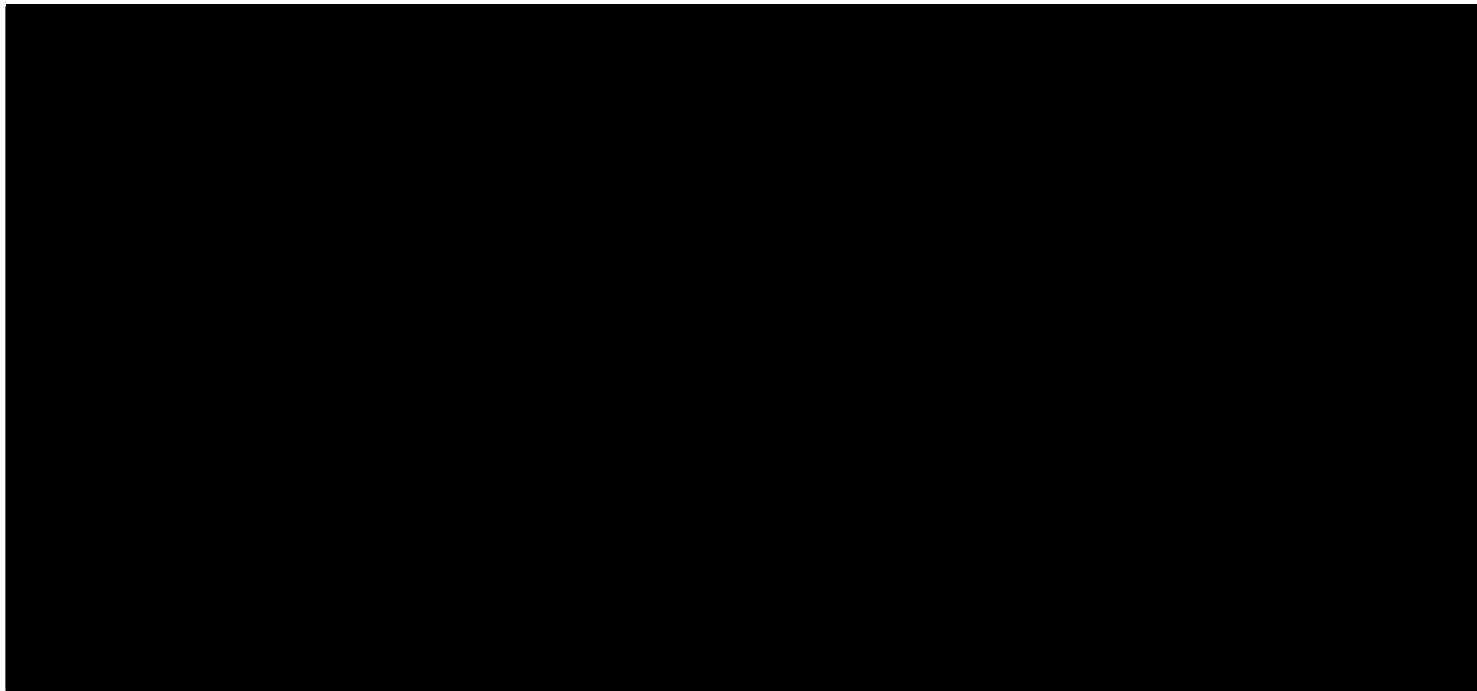


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1. EXECUTIVE SUMMARY

South32 Worsley Alumina Pty Ltd (Worsley Alumina) operates the Worsley Bauxite-Alumina Project (the Proposal; the Project) in the southwest of Western Australia (WA) under *Environmental Protection Act 1986* (EP Act) Part IV Ministerial Statement (MS) 719 and Part V of EP Act operating licences L4504/1981/17 (Worsley Alumina Refinery) and L5960/1983/11 (Boddington Bauxite Mine). The Project includes the Boddington Bauxite Mine (BBM), an existing conveyor, the Worsley Alumina Refinery (the Refinery) near Collie and port operations at Bunbury Port. The Project location is shown on Figure 1.

In April 2006, Worsley Alumina was granted approval under Part IV of the EP Act via MS719 for the “Worsley Alumina Production to Maximum Capacity of 4.4 million tonnes per annum (Mtpa) Alumina and Associated Mining” (the Proposal).

Worsley Alumina proposes to implement an expansion project to facilitate the ongoing operation of the Project. The expansion project is the Worsley Mine Expansion – Revised Proposal (Revised Proposal). The Revised Proposal includes the following:

- Extension of existing mining area and introduction of new mining areas
- Development of a bauxite transport corridor
- Development of a contingency mining area and maintenance work at the Worsley Alumina Refinery
- Development of associated mine and support infrastructure
- Clearing up to 3855 ha of native vegetation for the mine and mining related activities
- 1 river crossing over Hotham River and culverts over 34 Mile Brook

Worsley Alumina submitted a referral to the WA Environmental Protection Authority (EPA) in June 2019 as the first step in the environmental approvals process for the Revised Proposal. An Environmental Review Document (ERD) was submitted in June 2022 (Worsley Alumina, 2022) to support the EP Act Part IV referral assessment and approval process for the Revised Proposal.

This Framework Construction Environmental Management Plan (Framework CEMP) has been prepared for formal approval by the EPA to meet the Project construction environmental management commitments outlined in the ERD, as part of the EP Act Part IV assessment process.

The purpose of this Framework CEMP is to provide an overarching environmental management framework to adequately demonstrate and communicate how the environmental outcomes of the ERD can be monitored, managed and achieved, during the construction phase of the Revised Proposal. This document does not address the management or operating requirements for the Revised Proposal. The Framework CEMP outlines the environmental objectives, mitigation measures, and environmental outcomes set out in the ERD for the Revised Proposal (Worsley Alumina, 2022). It presents outcome based and objective based approaches to environmental management.

The Framework CEMP acceptance and approval by the EPA is in conjunction with the ERD (Worsley Alumina, 2022) which is currently under assessment by the EPA. It is anticipated that the Framework CEMP will be revised periodically (as required) to address the ministerial conditions of the approval (for the Revised Proposal), and any changes to environmental management requirements and commitments.

Key details of the Framework CEMP are summarised in Table 1.

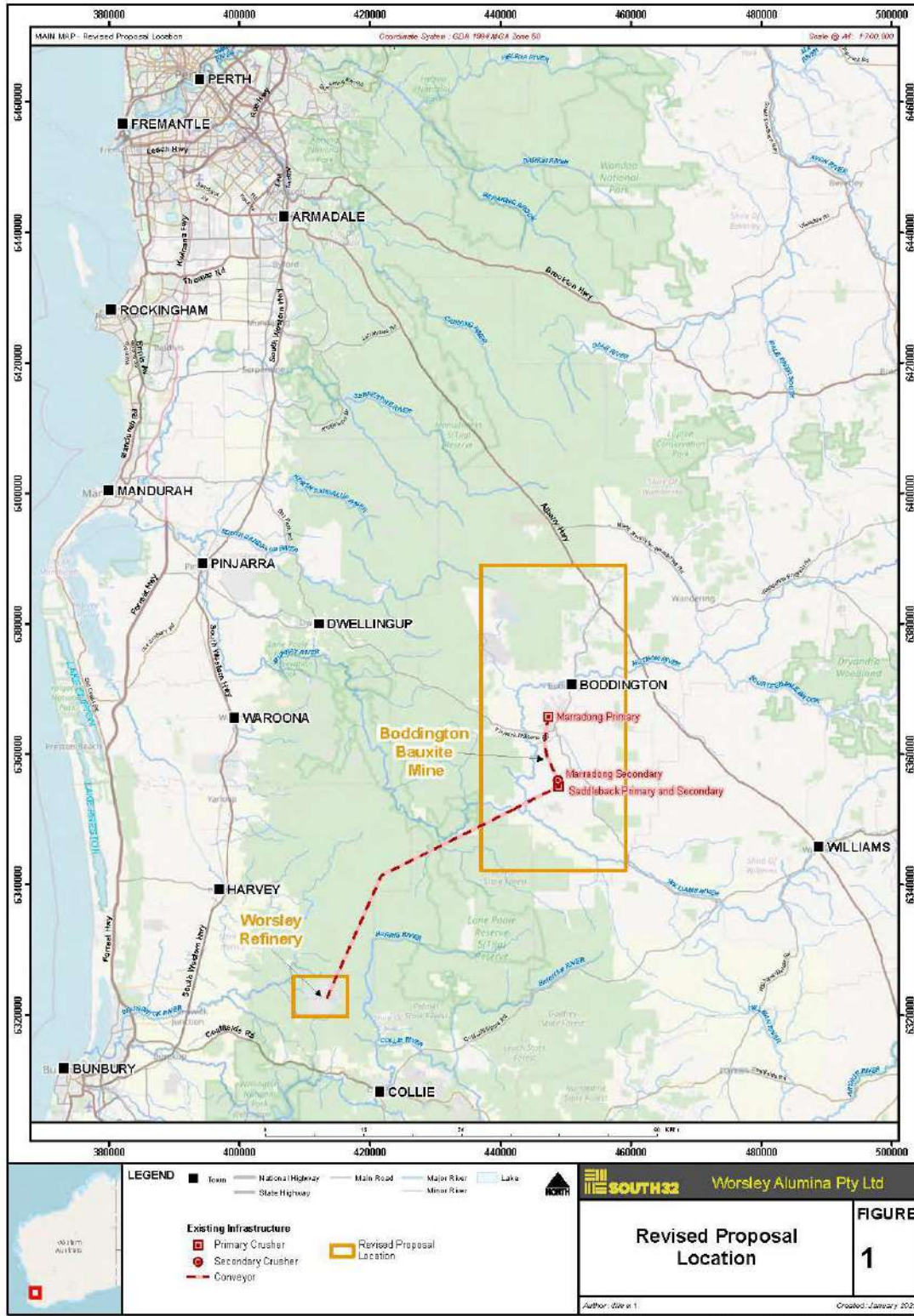


Figure 1: Location of the Revised Proposal Table 1: Framework CEMP summary information

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Table 1: Framework CEMP summary information

Proposal name	Worsley Mine Expansion – Revised Proposal
Proponent name	South32 Worsley Alumina Pty Ltd (ACN: 008 905 155) [REDACTED]
Ministerial Statement number	Ministerial Statement No.719 (As Amended 30 November 2016)
Purpose of the Framework CEMP	<p>The purpose of this Framework CEMP is to provide an overarching environmental management framework to adequately demonstrate and communicate how the environmental outcomes of the ERD can be monitored, managed, and achieved, during the construction phase of the Revised Proposal. This document does not address the environmental management requirements for operations in the Revised Proposal. The Framework CEMP outlines the environmental objectives, mitigation measures, and environmental outcomes set out in the ERD (Rev 3, Worsley Alumina, 2022) for the Revised Proposal (Worsley Alumina, 2022) and associated commitments restated in the Response to Submissions Document. It presents outcome based and objective based approaches to environmental management.</p> <p>The Framework CEMP acceptance and approval by the EPA is in conjunction with that of the ERD (Worsley Alumina, 2022) which is currently under assessment by the EPA. It is anticipated that the Framework CEMP will therefore be revised periodically (as required) to address the ministerial conditions of the revised MS719 (for the Revised Proposal), environmental management requirements, and commitments.</p>
Key environmental factors	<p>The key environmental factors for the Revised Proposal include:</p> <ul style="list-style-type: none"> • Flora and Vegetation • Terrestrial Environmental Quality • Terrestrial Fauna • Inland Waters • Air Quality • Social Surroundings • Greenhouse Gas Emissions
Key environmental objectives and outcomes – Flora and Vegetation	<p>The key environmental objectives for Flora and Vegetation include:</p> <ul style="list-style-type: none"> • To protect flora and vegetation so that biological diversity and ecological integrity are maintained. <p>After the mitigation hierarchy has been applied, including avoidance and minimisation impacts to key flora and vegetation values and progressive rehabilitation, Worsley Alumina considers that the Revised Proposal can be managed to meet the EPA's objective for Flora and Vegetation. The proposed loss of flora and vegetation associated with the Revised Proposal is not expected to cause a loss of biological diversity at the local or regional scale and the ecological integrity of the surrounding area is expected to be maintained.</p> <p>The key environmental outcomes for Flora and Vegetation include:</p> <ul style="list-style-type: none"> • No loss of any Threatened Ecological Community or Priority Ecological Community (PEC), specifically the Priority 1 PEC – Mount Saddleback Heath Communities. • No loss of any Threatened flora, specifically the <i>Caladenia hopperiana</i>. • There will be some loss of regionally and locally significant vegetation, with disturbance equating to approximately 32% of the remaining remnant vegetation within the PAA, when taking into account Pre-existing Approval Area. However, all vegetation complexes and site-vegetation types will continue to be represented within the Southwest Forest extent. The remnant vegetation cleared will also be progressively rehabilitated. • While some individuals of Priority flora will be cleared, individuals and populations are known to occur more widely in the broader PAA and/or surrounds and the conservation status of the species at a regional level is unlikely to change. • No significant risk of an increase in weeds. • No significant spread of dieback. • After the mitigation hierarchy has been applied, including avoidance and minimisation impacts to key flora and vegetation values and progressive rehabilitation, Worsley Alumina considers that the Revised Proposal can be managed to meet the EPA's objective for Flora and Vegetation. The proposed loss of flora and vegetation associated with the Revised Proposal is not expected to cause a loss of biological diversity at the local or regional scale and the ecological integrity of the surrounding area is expected to be maintained.

Key environmental objectives and outcomes – Terrestrial Fauna

The key environmental objectives for Terrestrial Fauna include:

- To protect terrestrial fauna so that biological diversity and ecological integrity are maintained. The

key environmental outcomes for Terrestrial Fauna include:

- While there will be a loss of fauna habitat, all fauna habitat types will continue to be represented within the PAA and broader region, including the neighbouring State Forest.
- Approximately 635 ha of SRE habitat rated as having a high potential will be lost as a result of the Revised Proposal. The clearing of high values SRE habitat associated with the Revised Proposal will be reduced to 1.9% of the current extent remaining for all SRE habitats in the wider mapped area. Therefore, a significant portion of this habitat will continue to be represented within the region.
- Of the 97 taxa recorded in the PAA from surveys and database records, six taxa were found to be at high risk from the Revised Proposal based on their local restriction of recorded occurrence.
- Significant residual impacts are expected to the MNES species of Black Cockatoos (Forest Red-tailed, Carnaby's and Baudin's), Woylie, Chuditch, Red-tailed Phascogale, Western Ringtail Possum and Quokka and Numbat.
- Environmental offsets will be provided to address the SRI associated with the implementation of the proposal on conservation significant species, and to maintain the value and viability of habitat for these species over the long-term, thus achieving no net loss of biodiversity.
- After the mitigation hierarchy has been applied, including avoidance and minimisation of direct impacts to key fauna and fauna habitat values and offsets, Worsley Alumina considers that the Revised Proposal can be managed to meet the EPA's objective for Terrestrial Fauna. The proposed loss of fauna habitat associated with the Revised Proposal is not expected to cause a loss of biological diversity at the local or regional scale and the ecological integrity of the surrounding area is expected to be maintained.

Key environmental objectives and outcomes – Terrestrial Environmental Quality

The key environmental objectives for Terrestrial Environmental Quality include:

- To maintain quality of land and soils so that environmental values are protected.

The key environmental outcomes for Terrestrial Environmental Quality include:

- Progressive mining and clearing activities associated with the Revised Proposal will result in the temporary loss of soil structure and increase in landscape erosion/sedimentation potential. These impacts will be managed under existing robust closure and rehabilitation processes, with rehabilitated areas expected to support native flora and fauna.
- The risk of encountering ASS through mining activities is considered low. The proposed infrastructure development in low-lying areas for the river crossings has the potential to disturb and excavate ASS, however disturbance within these areas will be limited and relatively localised.
- It is considered that on-site management measures associated with ASS, sedimentation and erosion during construction of river crossings will minimise both ecological impacts and impacts to visual amenity and cultural heritage values.
- Existing practices employed for chemical and hydrocarbon management will continue to be implemented along with Worsley Alumina's spill management procedures to ensure impacts related to contamination of soils are adequately managed.
- Potential impacts associated with the Revised Proposal to the quality of land and soils, and the environmental values they support, will be adequately managed through the implementation of avoidance, management and monitoring measures, including rehabilitation practices. Worsley Alumina considers that the Revised Proposal can be managed to meet the EPA's objectives for Terrestrial Environmental Quality.

Key environmental objectives and outcomes – Inland Waters

The key environmental objectives for Inland Waters include:

- To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected.

The key environmental outcomes for Inland Waters include:

- Vegetation clearing and development of mine pits has the potential to cause temporary and localised groundwater mounding resulting in minor alterations to stream flow characteristics at the BBM and the Refinery. These groundwater conditions are expected to stabilise following establishment of post-mining rehabilitation.
- The construction of river crossings will disturb the banks of the Hotham River and tributaries, this will be managed in accordance with the CEMP. It is considered that on-site management measures associated with ASS, sedimentation and erosion during construction of river crossings will be sufficient to minimise both ecological impacts and impacts to amenity and cultural heritage values as far as practicable. River conditions are expected to stabilise soon after construction.
- Aquatic fauna values are not considered to be at elevated risks due to the Revised Proposal. The Carter's Freshwater Mussel has been identified in the Freshwater Lake (located at the Refinery). However, no significant impacts are expected to this species as a result of the Revised Proposal given the nature of the activities proposed in the CBME and the existing and proposed mitigation measures. Therefore, this species is not carried further into biodiversity offset considerations.
- Potential groundwater mounding influence on groundwater dependent ecosystems vegetation structures have been identified during the assessment for this approval as a result of additional mining activities in

the WMDE and CBME. Worsley Alumina’s adaptive Water Management Plan (Worsley 2021j) will continue to be implemented to ensure TARP management is proactive and responses are practical to protecting sensitive vegetation from indirect impacts.

- Impacts to receptors that rely on water table depths from the proposed increased groundwater abstraction are considered minimal, with minor adjustments to the Hotham River contributions which mitigate clearing impacts and overall reducing mounding effects localised to the proposed abstraction bores. The proposed Nullaga abstraction bores intersect a small proportion of a potential groundwater dependent ecosystem with minor drawdown levels predicted.
- Existing practices employed for chemical and hydrocarbon management will continue to be implemented along with Worsley Alumina’s spill management procedures to ensure impacts related to contamination of groundwater and surface water are adequately managed.
- With the implementation of avoidance, management and monitoring measures, no significant residual impact to environmental values supported by hydrological processes or water quality (groundwater and surface water) are expected. Therefore, Worsley Alumina considers that the Revised Proposal can be managed to meet the EPA’s objectives for Inland Waters.

Key environmental objectives and outcomes – Air Quality

The key environmental objectives for Air Quality include:

- To maintain air quality and minimise emissions so that environmental values are protected. The key environmental outcomes for Air Quality include:
- Emissions of dust (primarily) and combustion products (including NO_x, SO₂ and CO) associated with continuation of mining operations will contribute to the surrounding local and regional airsheds. However, the primary emissions are dust.
- The potential for health and amenity related air quality impacts from dust emissions at the BBM is low to minimal, in terms of risk that the criterion may be exceeded. Residents that were identified through modelling to be at high risk of exceeding the relevant dust criteria will be sufficiently managed through implementation of the full suite of management measures as outlined in the Air Quality and Dust Management Plan for the BBM. Dust and combustion emissions associated with Refinery operations and BRDAs will remain consistent with existing operations.
- Following the implementation of the mitigation hierarchy, Worsley Alumina considers that the Revised Proposal can be managed to meet the EPA’s objectives for Air Quality.

Key environmental objectives and outcomes – Social Surroundings

The key environmental objectives for Social Surroundings include:

- To protect social surroundings from significant harm.

The key environmental outcomes for Social Surroundings include:

- Noise emissions associated with continuation of operations are likely to be managed within the applicable criteria for the majority of residences. The residences that were identified to be at risk of exceeding the criteria will be managed appropriately through the well-established noise management practices at the BBM. Vibration is not expected to impact on sensitive receptors at either the BBM or CBME.
- Disturbance to Aboriginal heritage sites cannot be avoided within two ‘Registered’ sites (‘Mount Saddleback’ [Site ID 17214] and ‘Hotham River’ [Site ID 27935]) due to the proposed river crossings. Following substantial consultation with the Gnaala Karla Booja Noongar People Traditional Owners about location and design of the crossing. Applications for consent to disturb these sites, and any additional ‘Registered’ sites impacted through mining activities, have been made under Section 18 of the AHA or the *Aboriginal Cultural Heritage Act 2021*, once the relevant provisions commence.
- Mining will unavoidably remain a dominant feature of the landscape, but visual changes associated with the Revised Proposal are unlikely to be visually discernible from the existing visual impacts due to the implementation are measures for permanent, noticeable changes, and the continuation of progressive rehabilitation.
- Changes to land use will occur during mining activities but will be mitigated in the long-term through progressive rehabilitation.
- Following the implementation of the mitigation hierarchy and with ongoing consultation with key stakeholders regarding the Revised Proposal, including the Gnaala Karla Booja Noongar People, and obligations under approved or authorised cultural heritage management plan under the relevant legislation, currently the *Aboriginal Cultural Heritage Act 2021*. Worsley Alumina considers that the Revised Proposal can be managed to meet the EPA’s objective for Social Surroundings.

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Key environmental objectives and outcomes – GHG Emissions	<p>The key environmental objectives for GHG Emissions include:</p> <ul style="list-style-type: none"> To reduce net greenhouse gas emissions in order to minimise the risk of environmental harm associated with climate change. <p>The key environmental outcomes for GHG Emissions include:</p> <ul style="list-style-type: none"> With the implementation of the GHG Management Plan, Worsley Alumina considers that the GHG emissions associated with the Revised Proposal will “reduce net greenhouse gas emissions in order to minimise the risk of environmental harm associated with climate change” and support the Western Australian Government’s and South32’s goal of net zero emissions by 2050. Specifically, Worsley Alumina commit to and anticipate the following commitments to become outcome- based conditions: <ul style="list-style-type: none"> Reduction of emissions on a five yearly basis in line with the targets specified in Table 6 3 (Section 6) of the ERD. Implementation of the GHG Management Plan.
Condition Clauses	<p>MS719 (As amended 30 November 2016) provides, amongst others, the following conditions of relevance to the Framework CEMP:</p> <ul style="list-style-type: none"> 2 Proponent Commitments 2-1 <i>The proponent shall implement the environmental management commitments documented within schedule 2 of this statement.</i> <p>Schedule 2 sets out the ‘Proponent’s Environmental Management Commitments, December 2005’ for Water Resources, Dust, Noise and Vibration, Offsets, Noise, Management of biodiversity, and forest resources and rehabilitation in Primary Bauxite Area.</p> <p>The following conditions may also apply:</p> <ul style="list-style-type: none"> 6 Greenhouse Gas Abatement 8 Biodiversity-Related Investigations 9 Protection of Biodiversity 12 Rehabilitation 13 Water Supply Protection 14 Air Quality Management Plan.
Key components in the Framework CEMP	<p>Section 3 – Description of the Revised Proposal and Construction Works</p> <p>Section 4 – Key Environmental Factors, Construction Activities, and Site-Specific Environmental Values</p> <p>Section 5 – Regulatory framework, approval conditions, and commitments</p> <p>Section 6 – Rationale and Approach</p> <p>Section 7 – Monitoring, Reporting and Adaptive Management</p> <p>Section 8 – Framework CEMP Components</p> <p>Section 9 – Stakeholder Consultation.</p>
Proposed construction date	<p>April 2024 to April 2026 (Stage 1 - Nullaga Mine Development Project) Future stage(s) construction dates to be determined</p>
CEMP required pre-construction?	<p>Yes.</p>

2. INTRODUCTION

2.1 OVERVIEW OF THE WORSLEY BAUXITE-ALUMINA PROJECT – REVISED PROPOSAL

South32 Worsley Alumina Pty Ltd (Worsley Alumina) operates the Worsley Bauxite-Alumina Project (the Proposal; the Project) in the southwest of Western Australia (WA) under Part IV of the *Environmental Protection Act 1986* (EP Act) Ministerial Statement (MS) 719 and in accordance with operating licences L4504/1981/17 (Worsley Alumina Refinery (the Refinery)) and L5960/1983/11 (Boddington Bauxite Mine (BBM)) under Part V of the EP Act. The Project location is shown on Figure 1. The Project also includes the BBM (Figure 2), an existing conveyor, the Refinery (Figure 3) and port operations at Bunbury Port.

In April 2006, Worsley Alumina was granted approval under Part IV of the EP Act via MS719 for the “Worsley Alumina Production to Maximum Capacity of 4.4 million tonnes per annum (Mtpa) Alumina and Associated Mining” (the Proposal).

Worsley Alumina proposes to implement an expansion project to facilitate the ongoing operation of the Project. The expansion project is the Worsley Mine Expansion – Revised Proposal (Revised Proposal). The Revised Proposal includes the following:

- Extension of existing mining area and introduction of new mining areas
- Development of a bauxite transport corridor (BTC)
- Development of a contingency mining area and maintenance work at the Worsley Alumina Refinery
- Development of associated mine and support infrastructure
- Clearing up to 3855 ha of native vegetation for the mine and mining related activities
- 1 river crossing over Hotham River and culverts over 34 Mile Brook .

Worsley Alumina submitted a referral to the Environmental Protection Authority (EPA) (WA) in June 2019 as the first step in the environmental approvals process for the Revised Proposal. An Environmental Review Document (ERD) was submitted in June 2022 (Worsley Alumina, 2022) to support the referral under s. 38 of the EP Act under for the Revised Proposal. The ERD and associated response to public submissions is currently under assessment by the EPA.

The Project also operates in accordance with the *Alumina Refinery (Worsley) Agreement Act 1973* (Worsley State Agreement). The Worsley State Agreement provided the initial basis for the Project to proceed. Clause 5A of the Worsley State Agreement required the Worsley Alumina Joint Venturers (WJVs) to submit a detailed Environmental Review and Management Programme (ERMP) for assessment and approval to enable Project operations to commence.

This initial ERMP was submitted to the EPA in July 1978 and released for public comment by the WA Department of Conservation and Environment and the Commonwealth Department of Environment, Housing and Community Development. The final ERMP for the Project was submitted in October 1979. In 1980, the WJVs received environmental approval to proceed with the Project to a capacity of 2 Mtpa alumina production. Approval to commence the Worsley Bauxite-Alumina Project was granted following assessment of the ERMP in 1980. The mining and Refinery operation commenced in 1984 with the Refinery granted a nominal production capacity of 2 Mtpa.

Since the implementation of the ERMP and commencement of operations, the Project has been the subject of several assessments under Part IV of the EP Act. and has received approval for expansions.

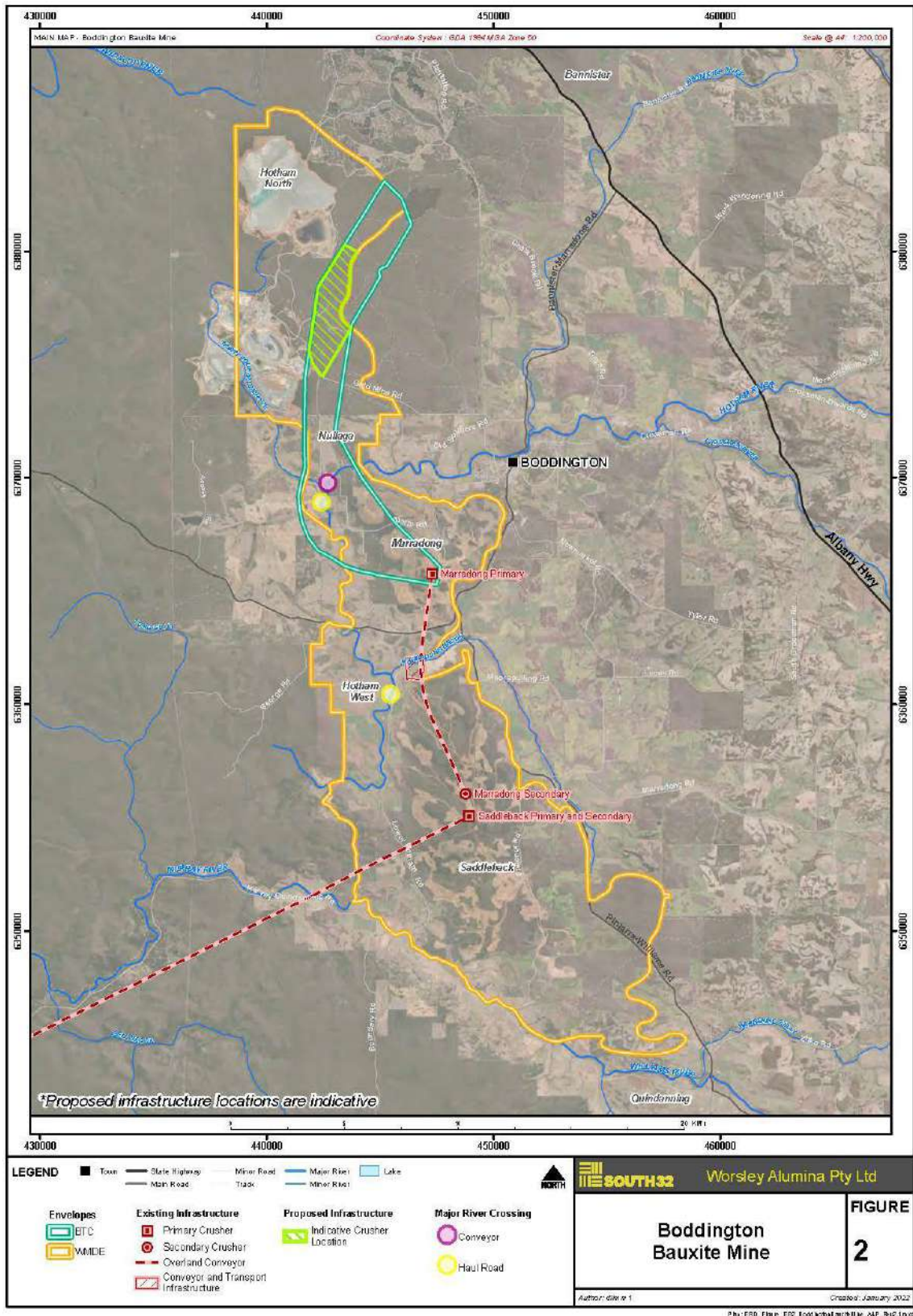


Figure 2 : Location of the Boddington Bauxite Mine

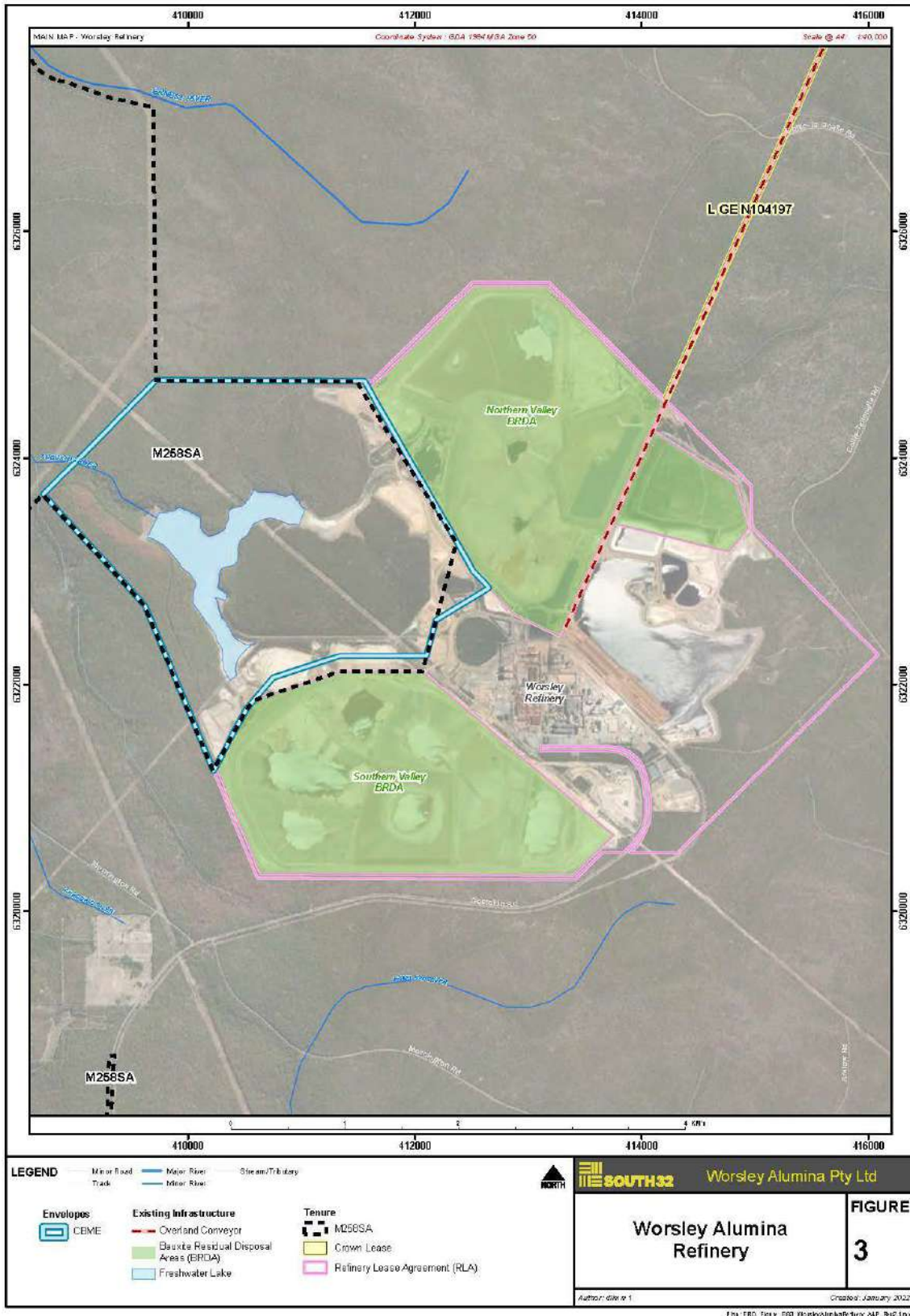


Figure 3 : Location of the Worsley Alumina Refinery

2.2 PURPOSE AND OBJECTIVES OF THE FRAMEWORK CEMP

The purpose of this Framework CEMP is to provide an overarching environmental management framework to adequately demonstrate and communicate how the environmental outcomes of the ERD can be monitored, managed and achieved, during the construction phase of the Revised Proposal. This document does not address the existing or future operational environmental management requirements for the Revised Proposal. The Framework CEMP outlines the environmental objectives, mitigation measures, and environmental outcomes set out in the ERD for the Revised Proposal (Worsley Alumina, 2022). It presents outcome based and objective based approaches to environmental management.

The Framework CEMP acceptance and approval by the EPA is in conjunction with that of the ERD (Worsley Alumina, 2022) which is currently under assessment by the EPA. It is anticipated that the Framework CEMP will therefore be revised periodically (as required) to address the ministerial conditions of the revised MS719 (for the Revised Proposal), environmental management requirements, and commitments.

After consultation with relevant key stakeholders (refer to Section 9), the Framework CEMP will be submitted to the EPA, and once it is approved, it will become a legally enforceable document. Worsley Alumina and its contractors will be required to adhere to the requirements of the Framework CEMP.

The EPA (2021)¹ notes that the purpose of a Part IV Environmental Management Plan is:

'to describe how the environmental impacts of activities related to the implementation of a proposal will be:

- *Adequately monitored, reported on and subject to adaptive management; and/ or*
- *Adequately managed where those impacts are not likely to be able to be managed by an outcome- based condition or limitation on the extent of a proposal.*

A management plan required for an implementation condition is a legally enforceable document. Proponents must comply with the components set out in the management plan.'

The objectives of this Framework CEMP are to:

- Provide details for the management and mitigation measures to be implemented, including timing and responsibilities.
- Ensure MS719 Conditions (including future revisions to MS719, and other approvals/agreements are adhered to by Worsley Alumina and its Contractors.
- Provide a process for implementation of the Framework CEMP, and subplans (topic specific and project specific CEMPs), including roles and responsibilities, monitoring, reporting, and auditing.
- Provide a commitment to continue meeting the requirements of Worsley Alumina's Document Management Systems, including the need for continual improvement / adaptive management.

Effective implementation of this Framework CEMP, and topic-specific and construction project-specific subplans, will assist Worsley Alumina and relevant Contractors to achieve compliance with necessary construction phase environmental regulatory and policy requirements in a systematic manner with an outcome of continual improvement in environmental management performance.

Contractors engaged to carry out construction works for Worsley Alumina will prepare and implement detailed environmental management documents to demonstrate compliance with the requirements of this Framework CEMP. All Contractor environmental management documentation will be submitted to Worsley Alumina for review and no work is to commence on the subject works until accepted by Worsley Alumina.

2.3 SCOPE OF THE FRAMEWORK CEMP

The scope of the Framework CEMP is for all construction works associated with the Revised Proposal. The framework CEMP may also be adapted for use for the environmental management pre-construction or early

1 Environmental Protection Authority 2021, Instructions on how to prepare *Environmental Protection Act 1986* Part IV Environmental Management Plans, EPA, Western Australia.

works projects associated with the Revised Proposal.

This Framework CEMP applies to construction projects that will be progressed in advance of normal mining operations; it does not apply to construction works that are carried out as part of mining operations. The scope does not include the operation,

rehabilitation, transition, and closure phases of the Revised Proposal.

The start of the construction period is indicatively defined to be the signing of a construction contract and / or the mobilisation to site of the construction contractor. The end of the construction period is indicatively defined as the hand-over of the construction site to the operator (typically following testing and commissioning).

The scope includes all Project components of the Revised Proposal, as described in the Worsley Mine Expansion Project – Revised Proposal – ERD (South32, July 2022). It is intended that an update and revision of this Framework CEMP will address future construction stages of the Proposal. This version of the Framework CEMP addresses the construction work generally aligned with Stage 1 of the Proposal, specifically, construction works for the Nullaga Mine Development Project (Nullaga Project).

2.4 DOCUMENT STRUCTURE

The structure of this Framework CEMP seeks to address the EPA’s instructions² and template³ for the preparation of a Part IV Environmental Management Plan. The EPA’s template requirements addressed in this document is shown in Table 2.

Additional sections have been developed to allow the document to be a ‘stand-alone’ management plan, and to show how the plan should be implemented in conjunction with Worsley Alumina’s Document Management System.

Table 2: EPA EMP Template Structure and Sections addressed

EPA EMP Template Structure	Section where addressed in this document
1. Executive Summary	Section 1 – Executive Summary
2. Context, scope and rationale	Section 2 – Introduction
2.1. Proposal	Section 3 – Description of the Proposal
2.2. Key environmental factor/s	Section 4 – Key Environmental Factors, Construction Activities, and Site-Specific Environmental Values
2.3. Condition requirements	Section 5 – Regulatory framework, approval conditions, and commitments
2.4. Rationale and approach	Section 6 – Rationale and Approach
· Environmental outcome or management objective/s	Section 6 – Rationale and Approach
· Survey and study findings	Section 6 – Rationale and Approach
· Key assumptions and uncertainties	Section 6 – Rationale and Approach
· Objective-based EMP – risk-based approach	Section 6 – Rationale and Approach
· Rationale for choice of indicators and/or management actions	Section 6 – Rationale and Approach
3. EMP Components	Section 8 – Framework CEMP Components

² Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans, EPA, Western Australia (2021).

³ Templates – Environmental Management Plans, EPA (October 2021)

EPA EMP Template Structure	Section were addressed in this document
3.1. Outcome-based EMPs	Section 8 – Framework CEMP Components
· Outcome	Section 8 – Framework CEMP Components
· Indicators (trigger criteria and threshold criteria)	Section 8 – Framework CEMP Components
· Response actions (trigger level actions and threshold contingency actions)	Section 8 – Framework CEMP Components
· Monitoring	Section 8 – Framework CEMP Components
· Reporting	Section 8 – Framework CEMP Components
3.2. Objective-based EMPs	Section 8 – Framework CEMP Components
· Objective	Section 8 – Framework CEMP Components
· Management actions	Section 8 – Framework CEMP Components
· Management targets	Section 8 – Framework CEMP Components
· Monitoring	Section 8 – Framework CEMP Components
4. Adaptive management and review of the EMP	Section 7 – Monitoring, Reporting and Adaptive Management
5. Stakeholder consultation	Section 9 – Stakeholder Consultation
6. Changes to an EMP table [if required]	Section 7.9 – Record of Changes to the Framework CEMP

2.5 DOCUMENT HIERARCHY

This Framework CEMP is supported by, and should be read in conjunction with, a suite of additional topic- specific and construction project-specific environmental management plans.

The construction contractors will be required to address the requirements of all environmental management plans, to the extent that they apply, and as directed by Worsley Alumina.

Topic specific Environmental Management Plans have are appended to the Environmental Review Document as Appendices E01 to E11:

- E01 – Biodiversity and Forest Management Plan
- E02 – Threatened Species Management Plan
- E03 – Threatened Fauna Pre-Clearance Survey and Management
- E04 – Protected Areas Plan
- E05 – BBM Closure Plan
- E06 – Refinery Closure Plan
- E07 – Water Management Plan
- E08 – Dust Management Plan – Bauxite Mining and Transport
- E09 – Air Quality and Dust Management Plan – RLA
- E10 – Greenhouse Gas Management Plan
- E11 – Exploration Environmental Management Plan.

These have been substantially updated as part of the Response to Submissions document and the updated versions have been provided as part of that submission.

Additionally, the Worsley Mine Expansion Stakeholder and Communications Engagement Plan has been developed and is a dynamic document that is being updated throughout the progression of the Revised Proposal.

Worsley Alumina environmental plans and procedures (which form part of the Worsley Alumina document control system), as listed in Section 5.5 of this Framework CEMP.

Additional topic specific plans may also be developed to support and supplement the Framework CEMP. The following plan has been prepared and is attached:

- Appendix A – Acid Sulphate Soil Management Plan (ASSMP) (Worsley Alumina, 2023).

It is intended that an update and revision of the Framework CEMP to address future construction stages of the Proposal will occur. This version of the Framework CEMP addresses the construction work generally aligned with Stage 1 of the Proposal, specifically, construction works for the Nullaga Project.

2.6 STATUS AND NEXT STEPS FOR THE FRAMEWORK CEMP

The current status (draft Framework CEMP) and next steps in the approval and implementation of the Framework CEMP are illustrated in Figure 4. The Framework CEMP will be assessed as part of the EPA’s assessment of the ERD (currently under assessment) for the Revised Proposal under Part IV of the EP Act.

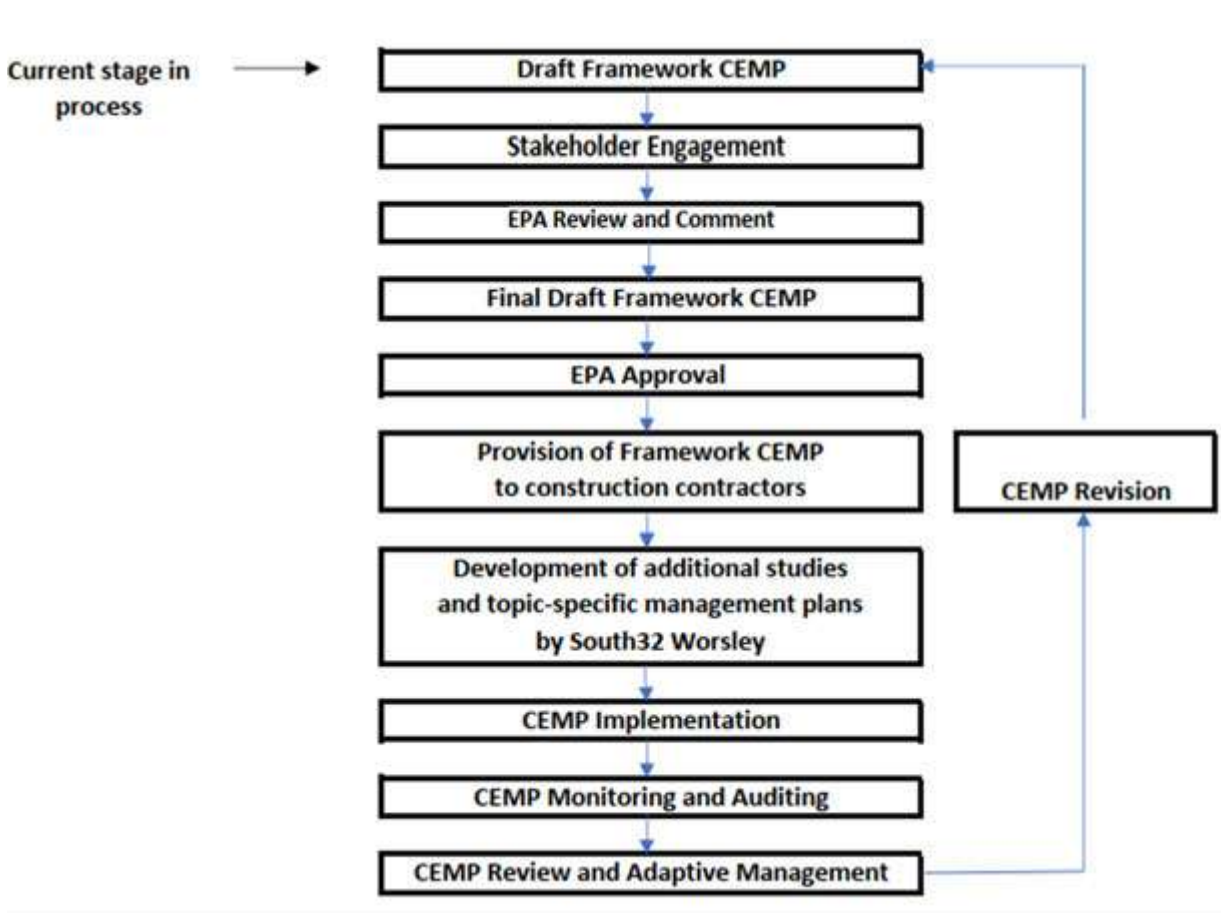


Figure 4: Framework CEMP – Current Status (draft) and Next Steps

3. DESCRIPTION OF THE REVISED PROPOSAL AND CONSTRUCTION WORKS

3.1 SUMMARY OF THE REVISED PROPOSAL

This section provides a summary of the Revised Proposal for background information only (as the Framework CEMP applies to advanced construction projects) and is based on information provided in the ERD. The description of construction works to be covered by this Framework CEMP is provided in the following sections.

In summary, the Revised Proposal comprises:

- Continuation of existing operations at the BBM, overland bauxite conveyor and Refinery.
- Expansion of the BBM within and adjacent to existing mining areas.
- Development of the BTC at BBM, with optionality for roads or a conveyor.
- Development of a contingency mining area and maintenance work at the Refinery, including the changes to the Contingency Bauxite Mining Envelope (CBME) boundary to accommodate bauxite residue disposal area activities.
- Development of associated mine/support infrastructure.
- Construct and operate the bauxite residue disposal area 4E.
- Increase the height of the bauxite residue disposal areas.
- Ongoing continuation of minor infrastructure activities.

The Revised Proposal primarily focuses on expansion activities being undertaken in three different development envelopes, namely the Worsley Mining Development Envelope (WMDE), BTC and CBME.

The existing Refinery, Overland Bauxite Conveyor, Product Transport and Port operations will not change.

3.2 LOCATION OF THE REVISED PROPOSAL

The Revised Proposal is located approximately 130 km southeast of Perth, and 20 km north-west of Collie, in the Southwest region of Western Australia (WA) (Figure 1). The Revised Proposal includes the Boddington Bauxite Mine (shown on Figure 2), the Worsley Refinery (shown on Figure 3), and the BTC (shown on Figure 2).

3.3 OVERVIEW OF STAGE 1 CONSTRUCTION WORKS – NULLAGA PROJECT

3.3.1 SUMMARY OF THE NULLAGA PROJECT

The Nullaga Project (Stage 1 of the Worsley Mine Expansion) comprises construction of a haul road including a bridge, culvert crossings of drainage lines and tributaries, construction access and laydown areas. The proposed transport corridor comprises a corridor for the construction of long-term infrastructure to transport bauxite ore to Marradong from the Nullaga Project and Hotham North Project (future stage) mining areas and provides a link to the extended mining areas.

The haul road will cross the Hotham River and tributaries in order to access the Nullaga Project mining areas, and bridges or culvert crossings are required to be constructed at these crossing locations. The bridge including the haul road over the Hotham River is proposed to have a dual span of approximately 70 m and require piles to be bored in excess of 40 m deep. The piles will be installed adjacent to the riverbanks. No piles to be installed within the normal flow course of the river. Excavations will be required to construct bridge abutments composed of concrete piles with reinforced concrete abutment wall to contain the earthen backfill. Dewatering of the excavations may also be required.

Culvert crossings over the tributaries, e.g. 34 Mile Brook, will be low level crossings with culverts placed directly in the stream path. Rock material will also be installed on the riverbed, embankments and at the ends of the culverts to provide scour protection. Preliminary concept construction drawings and figures are provided in Appendix C.

Ancillary works and infrastructure include services relocation and removal, combined office, ablution and crib facilities, water infrastructure (bores, storage, and distribution), heavy vehicle park up, fencing, refuelling facility, explosives storage, overhead power, and telecommunication towers.

3.3.2 OUTLINE CONSTRUCTION METHODOLOGY

3.3.2.1 CLEARING AND PREPARATION

Construction works will involve clearing and preparatory earthworks for access, equipment and material laydown areas. Access roads will be required along the alignment to allow construction crews access to work locations. To avoid areas unnecessary exposure to erosion by wind and rain, areas will only be opened immediately in advance of construction with erosion and sediment controls, where practicable. There may be instances where this is not possible as some larger areas may be cleared in a single campaign.

Clearing activities will remove ground cover to enable construction access and sufficient vehicular movement. Clearing of vegetation within the bed and banks will be necessary to facilitate construction of instream structures required for traversing of streams for site access.

Initial earthworks will establish the entry and exit points into creeks or riverbeds. Scour protection will to be incorporated into the design of each structure.

3.4 DESCRIPTION OF CONSTRUCTION METHODS

Typical construction phase methodologies are outlined below. These methodologies would be adapted and developed in more detail as part of pre-construction planning processes and will be provided in detail in the Construction Contractor's Project-Specific CEMPs, where applicable.

3.4.1 HAUL ROADS, ACCESS ROADS, BRIDGES, AND CULVERTS

Construction of the haul roads, access roads, bridges and culverts will generally involve the following:

- Completion of topographic survey and marking out construction areas.
- Installation of pre-construction environmental protection measures.
- Upgrade and maintenance of selected existing exploration roads / access roads to allow access to the construction sites.
- Pre-clearing surveys as per Worsley Alumina's internal procedures.
- Vegetation clearing and topsoil removal as per Worsley Alumina's internal procedures:
 - Hygiene assessments: Prior to clearing, forest disease assessments are undertaken by qualified personnel. If disease is not found, clearing operations may proceed. In areas where disease is found a disease management plan for the area is initiated. Clearing (or any other activity) must not proceed until the disease management plan for the area is approved and implemented.
 - Salvage of forest products: This is managed by the Forest Products Commission in State Forest. The salvage operation involves harvesting of merchantable timber, fencing timber and firewood. On private land, timber salvage is arranged, if required, by the landholder which has a pre-agreed notice and removal period.
 - Clearing of vegetation: After timber salvage, the remaining vegetation is cleared and suitable hollow logs, stumps and other large residues are salvaged for future use as fauna habitat. Remaining forest residue may be burned (weather permitting), used as biomass to reduce carbon emissions or used in rehabilitation research trials.
 - Topsoil stripping and overburden removal: Topsoil and gravel are removed using the most appropriate equipment. This process is typically completed with scrapers, bulldozers, front-end loaders or excavators and trucks. Overburden is then directly replaced on nearby mine pits undergoing rehabilitation or stockpiled for future use in rehabilitation.
- Establishment of site construction compounds.
- Bulk earthworks.

- Construction of permanent drainage basins, channels, berms, culverts and other drainage controls.
- Construction of access road foundation including ripping and compaction of in-situ material, importation, levelling and compaction of sub-base material and base material, followed by importation, spreading and grading the wearing course material (the new road surface).
- Excavation of foundations for bridge abutments including piling and dewatering (if required), installation of formwork and reinforcing, installation of pre-cast, or cast in-situ concrete foundations.
- Construction of bridge abutments and pier with concrete piles and steel reinforced cast in-situ concrete walls.
- Installation of prefabricated steel beams sections (via crane), concrete bridge deck, safety barriers and other associated facilities.
- Installation of safety barriers, berms and signage.
- Rehabilitation of construction areas and other post-construction environmental management

Construction materials and equipment, inputs for the haul roads will likely include civil engineering fleet of excavators, graders, dozers, roller compactors, cranes and dump trucks. The mining fleet may also be used in bulk earthworks for the road.

3.4.2 NON-PROCESS INFRASTRUCTURE AREAS AND SUPPORT AREAS

The general sequence of construction for non-process infrastructure and support areas will comprise completion of surveys and marking out, installation of environmental protection measures, removal of vegetation, topsoil and unsuitable sub-soils, earthworks, construction of foundations, hardstands and concrete slabs, construction / installation of infrastructure (buildings, machinery, worker facilities, refuelling facilities, workshops and stores etc.).

3.4.3 PILING

The bridge will be constructed in an area underlain by soft or compressible material. The bridge abutments and pier will be constructed on piled foundations.

The piling method associated with bridge construction will be subject to consideration of geotechnical information and detailed structural civil engineering design and construction limitations. For example, the results of existing geotechnical studies and calculations of expected pile bearing loads will be used to inform the type and design of foundations, and optimal piling method.

For the purposes of this Framework CEMP, piling will generally be as follows:

- Completion of topographic survey and marking out the construction areas.
- Pre-clearing surveys as per Worsley Alumina's internal procedures.
- Installation of pre-construction environmental protection measures.
- Removal of vegetation, topsoil and unsuitable sub-soils and transport to stockpiles (as per mine haul road).
- Construction of a stable work platform, such as geotextile mattress and clean dumped rock (piling platform may remain as engineered fill (behind abutments) or scour protection (at pier)).
- The most suitable piling methods will be determined following geotechnical, engineering and constructability analyses.
- Stabilising polymers and bentonite may be used in the piling process to ensure stabilisation of hole walls in the presence of water table and/or unstable ground conditions.
- Piles will be tested for design compliance and structural integrity.

4. KEY ENVIRONMENTAL FACTORS, CONSTRUCTION ACTIVITIES, AND SITE- SPECIFIC ENVIRONMENTAL VALUES

The EPA's key environmental factors for the Revised Proposal are listed in Section 4.1. The construction activities that may affect each of the key environmental factors are outlined in Sections 4.1.1 to 4.1.7.

Section 4.2 describes the site-specific environmental values of the Revised Proposal and the Nullaga Project, with reference to the material presented in the ERD.

4.1 KEY ENVIRONMENTAL FACTORS

The EPA identified the following key environmental factors relevant to the assessment of the Revised Proposal:

- Flora and Vegetation
- Terrestrial Fauna
- Terrestrial Environmental Quality
- Inland Waters
- Air Quality
- Social Surroundings
- GHG Emissions.

The construction activities that may affect the key environmental factors are outlined in the following sections.

4.1.1 PROPOSAL ACTIVITIES THAT AFFECT FLORA AND VEGETATION

The construction phase proposal activities (for the Revised Proposal and more specifically the Nullaga Project) that would specifically affect flora and vegetation include:

- Clearing of flora and vegetation from construction areas
- Removal and storage of topsoil from construction areas
- Transport of vehicles, equipment and machinery to site and around site
- Dust generation from vehicles, equipment and machinery
- Excavation and dewatering of construction areas near surface water drainage / high water table areas.

The potential flora and vegetation impacts associated with the Revised Proposal are summarized in the ERD executive summary (Worsley Alumina, 2022). Where relevant to construction work, these potential impacts are to be managed via the measures set out in Section 7.

4.1.2 PROPOSAL ACTIVITIES THAT AFFECT TERRESTRIAL FAUNA

The construction phase proposal activities (for the Revised Proposal and more specifically the Nullaga Project) that would specifically affect terrestrial fauna include:

- Removal of habitats and disruption to fauna corridors
- Transport of vehicles, equipment and machinery to site and around site
- Dust and noise generation from vehicles, equipment and machinery
- Excavation and dewatering of construction areas near surface water drainage / high water table areas.

The potential terrestrial fauna impacts associated with the Revised Proposal are summarized in the ERD executive summary (Worley Alumina, 2022). Where relevant to construction work, these potential impacts are to be managed via the measures set out in Section 7.

4.1.3 PROPOSAL ACTIVITIES THAT AFFECT TERRESTRIAL ENVIRONMENTAL QUALITY

The construction phase proposal activities (for the Revised Proposal and more specifically the Nullaga Project) that would specifically affect terrestrial environmental quality include:

- Clearing of vegetation from construction areas.
- Removal and storage of topsoil from construction areas.
- Bulk earthworks.
- Transport of vehicles, equipment and machinery to site and around site.
- Disturbance and compaction of land from vehicles, equipment and machinery.
- Excavation works and disturbance of Acid Sulphate Soils.
- Excavation and dewatering of construction areas near surface water drainage / high water table areas.
- Use and storage of fuels and chemicals.
- Construction works in the beds and banks of watercourses.

The potential terrestrial environmental impacts associated with the Revised Proposal are summarized in the ERD executive summary (Worsley Alumina, 2022). Where relevant to construction work, these potential impacts are to be managed via the measures set out in Section 7.

4.1.4 PROPOSAL ACTIVITIES THAT AFFECT INLAND WATERS

The construction phase proposal activities (for the Revised Proposal and more specifically the Nullaga Project) that would specifically affect inland waters include:

- Clearing of vegetation from construction areas.
- Removal and storage of topsoil from construction areas.
- Excavation and dewatering of excavations for construction works, including the potential to disturb acid sulfate soils.
- Bulk earthworks including excavations of road cutting and construction of embankments to construct the haul road to a suitable vertical alignment.
- Excavations and construction work in and adjacent to natural watercourses, including installation of a bridge across Hotham River.
- Construction of new road drainage, installation of culverts at points where roads or infrastructure traverse natural drainage lines.
- Abstraction of water from groundwater for use in construction works.
- Use and storage of fuels and chemicals.

The potential inland waters impacts associated with the Revised Proposal are summarized in the ERD executive summary (Worsley Alumina, 2022). Where relevant to construction work, these potential impacts are to be managed via the measures set out in Section 7.

4.1.5 PROPOSAL ACTIVITIES THAT AFFECT AIR QUALITY

The construction phase proposal activities (for the Revised Proposal and more specifically the Nullaga Project) that would specifically affect air quality include:

- Clearing of vegetation and topsoil from construction areas.
- Bulk earthworks.
- Transport and use of vehicles, equipment and machinery, powered by internal combustion engines, to site and around site.

The potential air quality impacts associated with the Revised Proposal are summarized in the ERD executive summary (Worsley Alumina, 2022). Where relevant to construction work, these potential impacts are to be managed via the measures set out in Section 7.

4.1.6 PROPOSAL ACTIVITIES THAT AFFECT SOCIAL SURROUNDINGS

The construction phase proposal activities (for the Revised Proposal and more specifically the Nullaga Project) that would specifically affect social surrounding include:

- Clearing of vegetation from construction areas.
- Removal and storage of topsoil from construction areas.
- Bulk earthworks including excavations of road cutting and construction of embankments to construct the haul road to a suitable vertical alignment.
- Transport of vehicles, equipment and machinery to site and around site.

The potential social impacts associated with the Revised Proposal are summarized below from the ERD executive summary (Worley Alumina, 2022). Where relevant to construction work, these potential impacts are to be managed via the measures set out in Section 7.

4.1.7 PROPOSAL ACTIVITIES THAT AFFECT GHG EMISSIONS

The construction phase proposal activities that would specifically affect GHG emissions include:

The potential air quality impacts associated with the Revised Proposal are summarized below from the ERD executive summary (Worley Alumina, 2022). Where relevant to construction work, these potential impacts are to be managed via the measures set out in Section 7:

- Clearing of vegetation and topsoil from construction areas.
- Transport and use of vehicles, equipment, and machinery, powered by internal combustion engines, to site and around site.

4.2 SITE-SPECIFIC ENVIRONMENTAL VALUES

The following sections outline the site-specific environmental values for the Revised Proposal and the Nullaga Project. Evaluation of the site-specific environmental values considered their conservation status at local, state, and national levels (i.e., environmental values with statutory protection, with policy-based protection, and/or values considered to be of local significance). These descriptions are a guide only and each environmental value are considered in relation to the specifics of the Revised Proposal, the Nullaga Project, and the local surrounding environment.

Site specific environmental values, existing and/or potential uses, ecosystem health condition or sensitive component of the key environmental factor, which will be affected will be addressed in project specific CEMPs to be prepared by South32's construction contractors.

4.2.1 PROTECTION AREAS, AVOIDANCE AREAS, AND PROTECTION COMMITMENT AREAS

The ERD outlines Protection Areas established under existing approvals, including proposed Protection Commitment Areas. Protection Areas are defined in the ERD Section 4.3.4 and are summarised below:

- Conservation reserves and parks
- Worsley Alumina will not clear more than 298 ha of the 1,228 ha of high-quality Wandoo habitat identified within the PAA. Clearing of these Wandoo areas will be for any operational activities within the PAA
- Listed State and/or Federal Priority Ecological Communities (PECs) and Threatened Ecological Communities (TECs)
- Listed State or Federal conservation significant flora (Threatened) and/or communities
- Old growth forests as defined by the DBCA.

Protection Areas are also defined and described in the Protected Areas Plan (ERD Appendix E04) as areas that are:

- Protected by law
- Of high biodiversity conservation value

- Of local, state, federal and / or international significance
- Protected for other operational reasons.

Protection Commitment Areas are defined in the Protected Areas Plan (ERD Appendix E04). Protection Commitment Areas are commitments made by Worsley Alumina to limit clearing associated with the Revised Proposal to a maximum area within a broader and defined spatial location that has identified biodiversity values. Worsley Alumina is committed to undertaking individual management, tracking, monitoring and reporting of clearing associated with the Revised Proposal to ensure its impact is limited to the defined limits.

The ERD also identifies Avoidance Areas, including:

- Freshwater Lake
- Worsley Alumina Protection Commitment Areas.

The Protection Areas, Protection Commitment Areas, and Avoidance Areas for the Revised Proposal are shown on Figure 5. The Avoidance Areas will likely be refined as part of the finalisation of the ERD and approval process. The Key Avoidance Areas (including Protection Commitment Areas) for the Nullaga Project are shown on Figure 6.

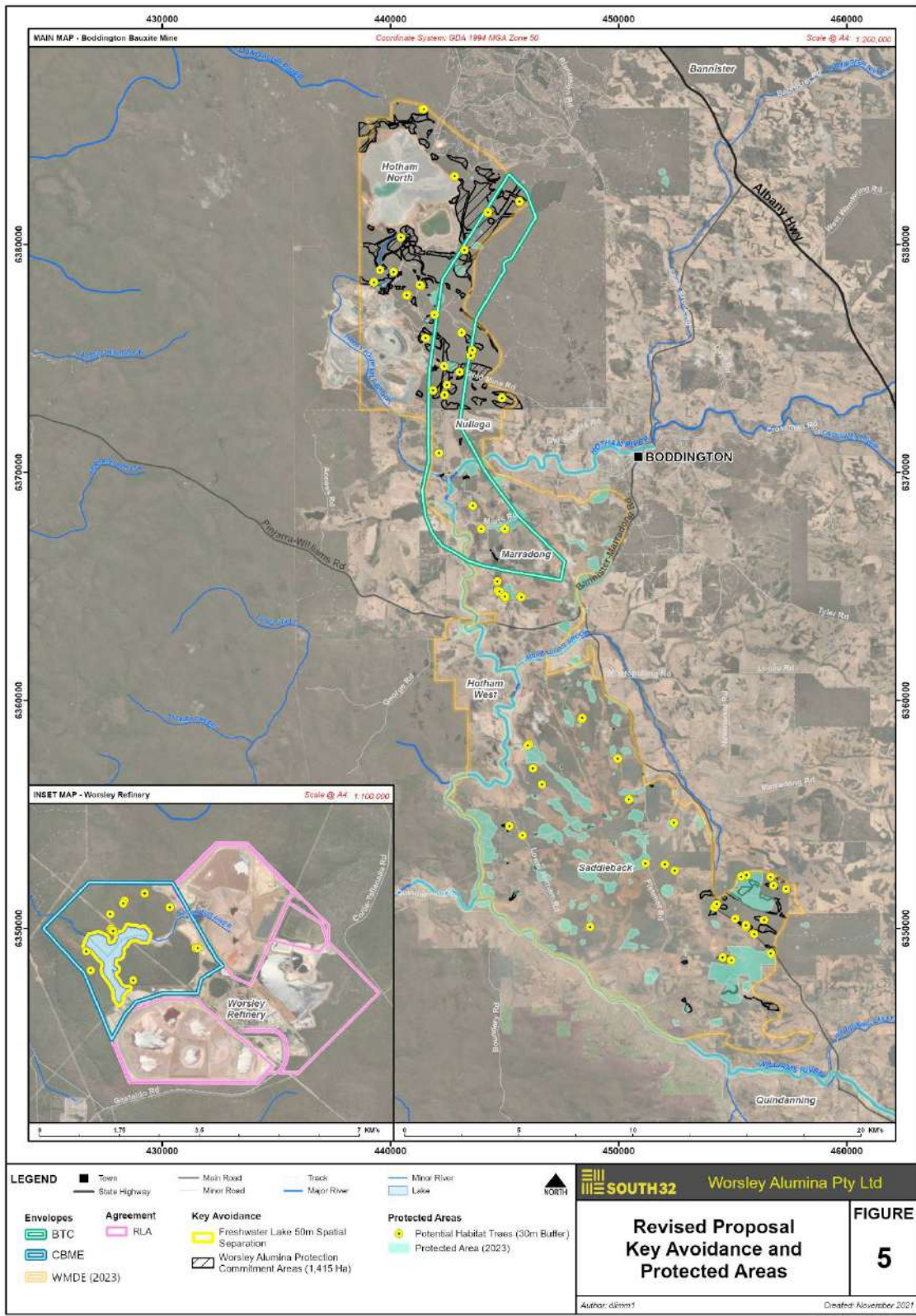


Figure 5: Key Avoidance and Protected Areas – Revised Proposal

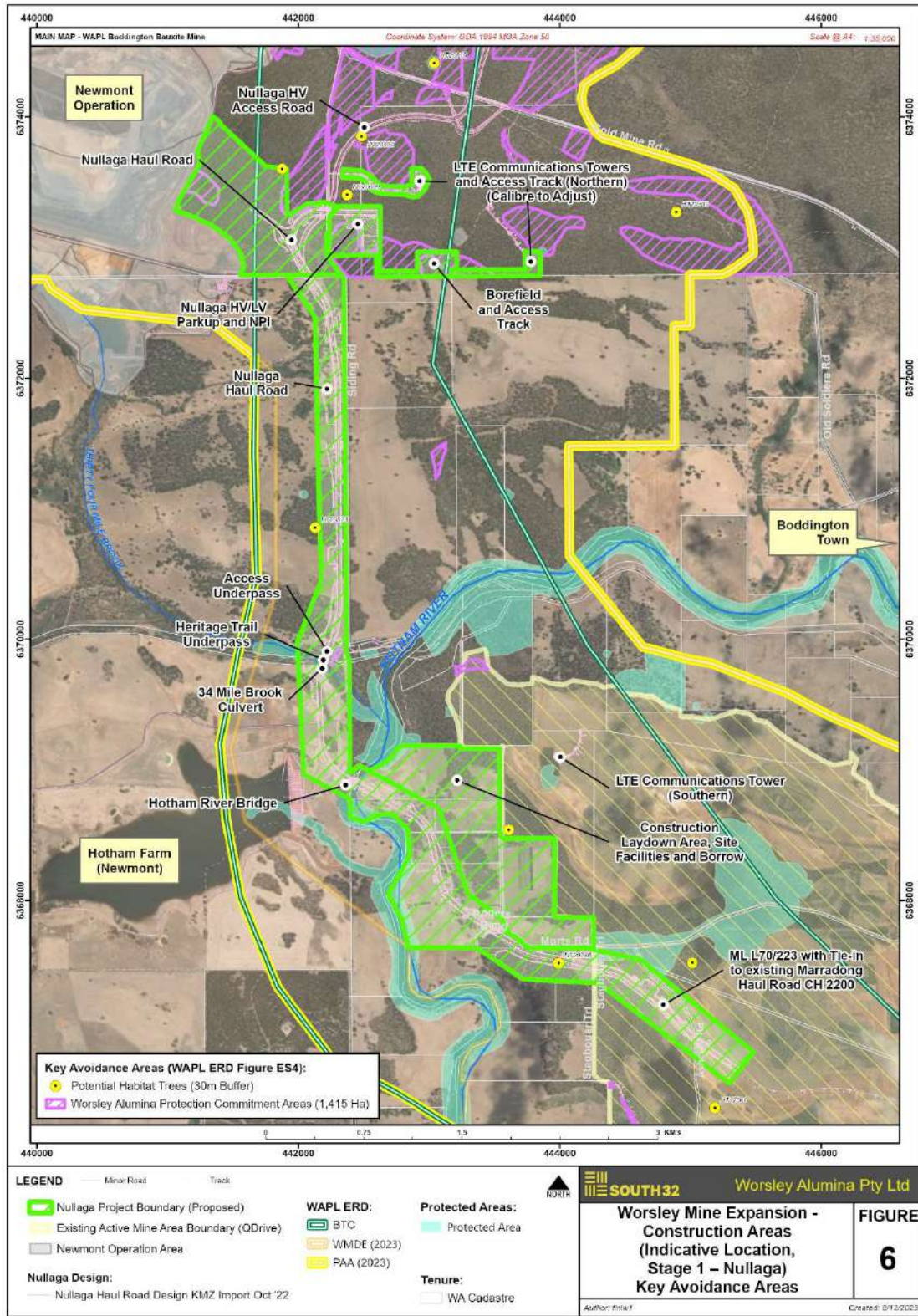


Figure 6 : Key Avoidance Areas (including Protection Commitment Areas) – Nullaga Project

4.2.2 SITE-SPECIFIC ENVIRONMENTAL VALUES – REVISED PROPOSAL

The existing physical and biological environment for the Revised Proposal is summarised in ERD Sections 1.5.1 and 1.5.2 respectively and are not repeated here.

The key environmental values that have been identified as requiring additional management controls for the Revised Proposal include:

- Conservation reserves and parks
- Wandoo habitat
- Listed State and/or Federal PECs and TECs
- Conservation significant flora
- Old growth forests as defined by the DBCA
- Conservation significant fauna
- Potential Black Cockatoo habitat trees
- Surface water – Hotham River and Thirty-Four Mile Brook.

4.2.3 SITE-SPECIFIC ENVIRONMENTAL VALUES – NULLAGA PROJECT

The existing physical and biological environment for the Revised Proposal (which includes the Nullaga Project) is summarised in ERD Sections 1.5.1 and 1.5.2 respectively and are not repeated here.

The key environmental values that have been identified as requiring additional management controls for the Nullaga Project include:

- Conservation significant fauna – *Phascogale tapoatafa wambenger* (Brush-tailed Phascogale), *Dasyurus geoffroii* (Chuditch), *Isoodon fusciventer* (Quenda), *Hydromys chrysogaster* (Rakali, Native Water Rat), *Notamacropus Irma* (Western Brush Wallaby), and *Bettongia penicillate ogilbyi* (Woylie/Brush-tailed Bettong), *Calyptorhynchus baudinii* (Baudin's Cockatoo), *Calyptorhynchus banksia naso* (Forest Red-Tailed Black Cockatoo) and *Calyptorhynchus latirostris* Carnaby's Cockatoo
- Conservation significant flora – *Gastrolobium* sp. Prostrate Boddington, *Hibbertia ambita*, *Halgania corymbosa*, and *Lasiopetalum cardiophyllum*
- Potential habitat trees for black cockatoos.
- Surface water – Hotham River and Thirty-Four Mile Brook.

The key environmental values for the Nullaga Project listed above are shown on Figure 6 and Figure 7.

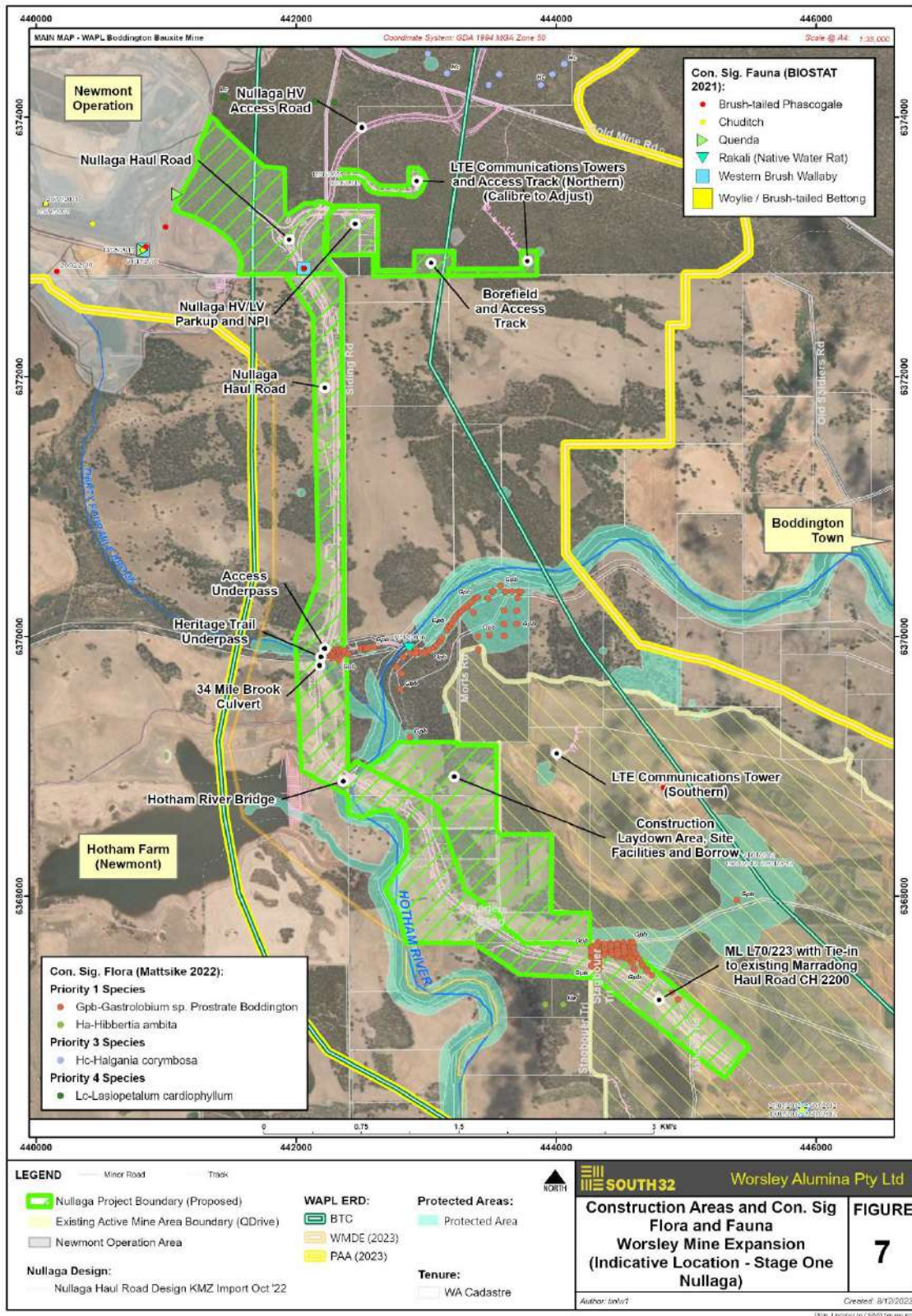


Figure 7: Key Environmental Values – Nullaga Project

5. REGULATORY FRAMEWORK, APPROVAL CONDITIONS, AND OUTCOMES

5.1 POLICY, LEGISLATIVE AND REGULATORY REQUIREMENTS

The environmental legislation, acts, regulations, standards, and State agreements relevant to environmental management for construction are listed in Table 3 (this list is not exhaustive).

Table 3: Legislation of relevance to the Framework CEMP

Environmental Activity	Legislation, Acts, Regulations, Standards, Agreements
General	<p><i>Alumina Refinery (Worsley) Agreement Act 1973 Environmental Protection Act 1986</i></p> <p><i>Biodiversity Conservation Act 2016</i></p> <p><i>Environment Protection and Biodiversity Conservation Act 1999 Mining Act 1978 Conservation and Land Management Act 1984</i></p> <p>Environmental Protection Regulations 1987 and guidelines AS/NZS ISO 14001:2016 Environmental management systems AS ISO 14004:2018 Environmental management systems AS/NZS ISO 14015-2003: Environmental Management</p>
Noise and vibration	<p>Environmental Protection (Noise) Regulations 1997 and guidelines</p> <p>AS 2436-2010: Guide to noise and vibration control on construction, demolition and maintenance sites</p> <p>Noise and Vibration Approval from the relevant local government authority if works are outside normal working hours (7am-7pm Monday-Saturday).</p>
Water quality	<p><i>Environment Protection and Biodiversity Conservation Act 1999</i></p> <p>Environmental Protection (Unauthorised Discharges) Regulations 2004 and guidelines</p> <p><i>Country Areas Water Supply Act 1947 Health (Miscellaneous Provisions) Act 1911 Water Services Act 2012</i></p> <p><i>Rights in Water and Irrigation Act 1914</i></p> <p><i>Waterways Conservation Act 1976 Water Corporation Act 1995</i></p> <p>Waterways Conservation Regulations 1981 and guidelines Water Services Regulations 2013 and guidelines</p> <p>Environment Protection and Biodiversity Conservation Regulations 2000 and guidelines</p> <p>ANZG 2018. Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia</p> <p>Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000), Volume 1, Australian and New Zealand Environment and Conservation Council, Agriculture and Resource Management Council of Australia and New Zealand</p> <p>26D licences to construct or alter a well and 5C licences to take water (DWER)</p>
Air quality	<p><i>Ozone Protection and Synthetic Greenhouse Gas Management Act 1989</i></p> <p>Environmental Protection (Unauthorised Discharges) Regulations 2004 and guidelines</p> <p>Clean Air (Determination of Air Impurities in Gases Discharged to the Atmosphere) Regulations 1983 and guidelines</p> <p>Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995 and guidelines</p> <p>AS/NZS 3580.1.1:2016 Methods for sampling and analysis of ambient air – Guide to siting air monitoring equipment.</p> <p>National Environment Protection Measure (NEPM) for Ambient Air Quality (NEPC, 2015)</p>
Flora and fauna	<p><i>Environment Protection and Biodiversity Conservation Act 1999 Biodiversity Conservation Act 2016</i></p> <p><i>Wildlife Conservation Act 1950</i></p>

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Environmental Activity	Legislation, Acts, Regulations, Standards, Agreements
	<p><i>Biosecurity and Agriculture Management Act 2007</i></p> <p>Biodiversity Conservation Regulations 2018 and guidelines</p> <p>Environment Protection and Biodiversity Conservation Regulations 2000 and guidelines Environmental Protection (Clearing of Native Vegetation) Regulations 2004 and guidelines.</p>
Hazardous materials	<p><i>Dangerous Goods Safety Act 2004 Explosives and Dangerous Goods Act 1961</i></p> <p>Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007 and guidelines Explosives and Dangerous Goods (Explosives) Regulations 1963 and guidelines</p> <p>Environmental Protection (Controlled Waste) Regulations 2004 and guidelines AS 1940 The Storage and Handling of Flammable and Combustible Liquids AS 3833 The Storage and Handling of Mixed Classes of Dangerous Goods</p>
Waste	<p><i>Waste Avoidance and Resource Recovery Act 2007</i></p> <p>Landfill Waste Classification and Waste Definitions 1996 (as amended 2019) Environmental Protection (Controlled Waste) Regulations 2004 and guidelines Environmental Protection Regulations 1987 and guidelines</p> <p>Health (Asbestos) Regulations 1992 and guidelines</p>
Land	<p><i>Environment Protection and Biodiversity Conservation Act 1999 Mining Act 1978 Contaminated Sites Act 2003 Main Roads Act 1930</i></p> <p><i>Biodiversity Conservation Act 2016 Conservation and Land Management Act 1984 Land Administration Act 1997</i></p> <p>Conservation and Land Management Regulations 2002 and guidelines</p> <p>Environment Protection and Biodiversity Conservation Regulations 2000 and guidelines National Environment Protection (Assessment of Site Contamination) Measure Contaminated Sites Regulations 2006 and guidelines</p>
Aboriginal heritage	<p><i>Aboriginal Cultural Heritage Act 2021</i></p> <p><i>Aboriginal Heritage Act 1972 Heritage Act 2018</i></p> <p><i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984 Native Title Act 1993</i></p> <p><i>Environment Protection and Biodiversity Conservation Act 1999</i></p> <p>Aboriginal Heritage Regulations 1974 and guidelines Heritage Regulations 2019 and guidelines</p>

5.2 APPROVALS, LICENCES, AND PERMITS

The primary (overarching project approvals) and secondary (activity approvals) environmental approvals relevant to the Framework CEMP are outlined in Table 4 and Table 5 respectively.

Table 4: Summary of primary environmental approvals and their relevance to the Framework CEMP

Legislation	Approval	Regulatory Authority	Relevance to the CEMP
<i>Environmental Protection Act 1986</i>	MS719	EPA	Compliance with the Ministerial Statement conditions is a statutory requirement and as such, failure to comply may constitute a criminal offence liable to criminal prosecution under the EP Act.
<i>Environment Protection</i>	EPBC Act Referral	DCCEEW	The Revised Proposal was referred to the DCCEEW under

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Legislation	Approval	Regulatory Authority	Relevance to the CEMP
<i>and Biodiversity Conservation Act 1999</i>			Section 68 of the EPBC Act in April 2019. The Revised Proposal received a Controlled Action decision, meaning that formal assessment under the EPBC Act is required (EPBC 2019/8437). Revised Proposal will be assessed by the EPA on behalf of the Commonwealth DCCEEW through an accredited assessment process. The EPA will prepare an assessment report for submission to the Commonwealth Minister for the Environment, along with additional information, for a final decision to approve (or not approve) the implementation of the Revised Proposal.
<i>Alumina Refinery (Worsley) Agreement Act 1973</i>	State Agreement	DJTSI	Mine Planning – Plan of Bauxite Mining Operations (10 Year Mine Plan). Plan of Bauxite Operations (10 Year Mine Plan) which outlines the rolling 10-year plan (10YP) for mining and ancillary operations.

Table 5: Summary of secondary environmental approvals and their relevance to the Framework CEMP

Legislation	Approval/Licence/Permit	Regulatory Authority	Relevance to the CEMP
<i>Rights in Water and Irrigation Act 1914</i>	11/17/21A permits to authorise interference or obstruction of the bed and banks of a watercourse or wetland.	DWER	A permit to authorise interference or obstruction of the bed and banks of a watercourse or wetland may be required and will impose certain conditions to be observed in the design and construction of bridges and culverts etc.
<i>Rights in Water and Irrigation Act 1914</i>	26D licences to construct or alter a well	DWER	A 26D licence would be required to commence, construct, enlarge, deepen or alter an artesian well (26A(1)), or a non- artesian well in a proclaimed groundwater area (26B (3) (a)).
<i>Rights in Water and Irrigation Act 1914</i>	5C licences to take water	DWER	A 5C licence would be required to allow the licence holder to take water from a watercourse, well, and or, underground source. A groundwater licence including approval of an Acid Sulfate Soil and Dewatering Management Plan by DWER may be required.
<i>Mining Act 1978</i>	Mining Proposal and Mine Closure Plan	DMIRS	The Mining Proposal outlines the environmental outcomes, performance criteria and monitoring requirements that are to be specified in relation to each of the environmental risks identified as a part of an environmental risk assessment. In accordance with DMIRS guidelines, all mining proposals must be accompanied with a Mine Closure Plan.
<i>Aboriginal Cultural Heritage Act 2021 & Aboriginal Heritage Act 1972</i>	Section 18 Approval	DPLH	South32 received S18 34-67837 approval on 30 October 2016 for the purpose of the road construction (amongst other activities). The consent holder must manage all archaeological heritage sites and places under a heritage management plan. An additional Section 18 application may be required to incorporate the proposed construction works for the Revised Proposal (if disturbance to a registered Aboriginal heritage site is required, outside the scope of S18 34-67837).
<i>Dangerous Goods Safety Act 2004 & Dangerous Goods Safety (Storage and Handling of Non-Explosives) Regulations 2007</i>	Dangerous Goods Licence	DMIRS	For the storage, handling and transport of dangerous goods.
<i>Environmental Protection Act 1986</i>	Works Approvals and/or licence	DWER	A works approval and/or licence may be required to construct and operate prescribed activities.
<i>Environmental Protection Act 1986 & Environmental Protection (Controlled Waste) Regulations 2004</i>	Application to transport controlled waste	DWER	Application to transport controlled waste on gazetted roads (for transporting contaminated/ASS if required).
Legislation	Approval/Licence/Permit	Regulatory Authority	Relevance to the CEMP
Environmental Protection (Noise) Regulations 1997	Out of Hours Work Permit and noise management plan	Shire / Local Government Authority/ DWER	An Out of Hours Work Permit may be required for any construction works that are proposed to be conducted out of hours. Approval of a noise management plan by the Shire and DWER, for out of hours works may also be required.

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Health (Miscellaneous Provisions) Act 1911 Application to construct or install an apparatus for the treatment of sewage
Shire of Boddington / Local Government Authority Application to construct or install an apparatus for the treatment of sewage for supporting mine services infrastructure.
Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974

5.3 KEY ENVIRONMENTAL OUTCOMES

The key environmental outcomes for each of the relevant EPA Key Environmental Factors (outlined in Section 4.1) are transcribed from the ERD in the following sections. These key environmental outcomes may be updated and refined following receipt of conditions attached to the revised MS719 as part of the Revised Proposal. Environmental outcomes that are less relevant to construction projects have been omitted from the transcribed text.

5.3.1 FLORA AND VEGETATION

The key environmental outcomes for Flora and Vegetation include (transcribed from ERD Section 5.2.7):

- Identification and protection of Protected Areas in accordance with the Protected Areas Plan. Protected Areas are areas with high biodiversity conservation values that are provided formal protection through legislation or agreements (e.g., State Agreement), such as Threatened flora (e.g., *Caladenia hopperiana*), PECs (e.g., Mount Saddleback Heath Communities Priority 1 PEC), and old growth forest (areas that meet the old growth forest criteria and as agreed with DBCA);
- Map and avoid the location of populations of Threatened flora species *Caladenia hopperiana*;
- Worsley Alumina will not clear more than 298 ha of the 1,228 ha of high-quality Wandoo habitat identified within the PAA (as shown on Figure 4 of the Protected Areas Plan). Clearing of these Wandoo areas will only be for any operational activities within the PAA;
- No loss of any TEC or PEC, specifically the Priority 1 PEC – Mount Saddleback Heath Communities;
- Continued development of the 10 Year Mine Plan on an annual basis; and
- The current rehabilitation deficit will be reduced from approximately 45% to <35% over a 10-year period (2033) and then maintained below 35%, with a two-year excursion allowance.

On the basis of the above assessment, it is expected that the Revised Proposal can meet the EPA’s objective for the flora and vegetation to “protect flora and vegetation so that biological diversity and ecological integrity are maintained”.

5.3.2 TERRESTRIAL FAUNA

The key environmental outcomes for Terrestrial Fauna include (transcribed from ERD Section 5.3.10):

- Worsley will not clear more than 1,898 ha of the 4,143 ha of Woylie habitat identified within the PAA as outlined in the Protected Areas Plan Appendix E4;
- Worsley will not clear more than 317 ha of the 634 ha of Red-Tailed Phascogale habitat identified within the PAA as outlined in the Protected Areas Plan;
- Pre-clearance surveys for potential Black Cockatoo habitat trees will occur prior to clearing;
- No more than 5% of the inferred breeding hollows will be removed (approximately 24);
- Confirmed Peregrine Falcon nesting sites will be avoided;
- Continued development of the 10 Year Mine Plan on an annual basis; and
- Environmental offsets will be provided to address the SRI associated with the implementation of the proposal on conservation significant species.

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Worsley Alumina has proposed a significant offset package to mitigate the SRI associated with the Revised Proposal. Worsley Alumina considers that with the outcomes as described related to avoidance, management and monitoring measures, and offsets, the Revised Proposal is able to meet the EPA's objectives for terrestrial fauna "to protect terrestrial fauna so that biological diversity and ecological integrity are maintained".

5.3.3 TERRESTRIAL ENVIRONMENTAL QUALITY

The key environmental outcomes for Terrestrial Environmental Quality include (transcribed from ERD Section 5.4.7):

- Progressive mining and clearing activities associated with the Revised Proposal will result in the temporary loss of soil structure and increase in landscape erosion/sedimentation potential. These impacts will be managed under existing environmental management (topsoil), robust closure and rehabilitation processes, with rehabilitated areas expected to support native flora and fauna;
- The risk of encountering ASS through mining activities is considered low. The proposed infrastructure development in low-lying areas for the river crossings has the potential to disturb and excavate ASS, however disturbance within these areas will be limited and relatively localised.
- It is considered that on-site management measures associated with ASS, sedimentation and erosion during construction of river crossings will minimise both ecological impacts and impacts to visual amenity and cultural heritage values;
- Existing practices employed for chemical and hydrocarbon management will continue to be implemented along with Worsley Alumina's spill management procedures to ensure impacts related to contamination of soils are adequately managed; and
- Potential impacts associated with the Revised Proposal to the quality of land and soils, and the environmental values they support, will be adequately managed through the implementation of avoidance, management and monitoring measures, including rehabilitation practices. Worsley Alumina considers that the Revised Proposal can be managed to meet the EPA's objectives for Terrestrial Environmental Quality.

Based on Worsley's Alumina's current management practices employed to mitigate risks to terrestrial environmental quality and the commitment to apply these practices to any new area, it is considered that the potential impacts on terrestrial environmental quality will be able to be adequately managed such that the EPA's environmental objective for Terrestrial Environmental Quality "to maintain the quality of land and soils so that environmental values are protected" will be met.

5.3.4 INLAND WATERS

The key environmental outcomes for Inland Waters include (transcribed from ERD Section 5.5.7):

- No ground disturbance shall be undertaken within the portion of the PAA that intersects the PDWSA until working arrangements are developed and agreed upon with regulators and the Water Corporation;
- Avoid storage of chemicals and hydrocarbons in the P1 and P2 PDWSA of the South Dandalup Dam Catchment Area;
- Chemicals, hydrocarbons and other environmentally hazardous materials will continue to be stored and handled in accordance with *Dangerous Goods Safety Act 2004* and associated regulations, including use of a bunded and sealed assembly area for hazardous chemicals (containerised);
- Avoid low-lying topographical areas in the vicinity of rivers and creeks. Management buffers will be applied around streams and riparian zones in accordance with the Protected Areas Plan (with the exception of essential infrastructure crossings to access new mining areas);
- A Construction Environmental Management Plan will be developed with an associated ASSMP to outline the identification, sampling and management of any ASS expected to be encountered for the construction of the river crossings;

- Monitor groundwater levels and quality as per the Worsley Alumina Water Management Plan and development of investigation trigger levels for the protection of sensitive receptors reliant on groundwater and surface water interactions; and
- For the scope of works pertaining to the construction of river crossings, the key environmental outcome is to minimise riverbank erosion and sedimentation as far as reasonably practicable, by implementing appropriate design measures (i.e., assess river crossing locations and design to consider riverbank stability, flood relief culverts etc.) and management controls (i.e., silt curtains, no clearing activities on the edges of water courses (except where haul crossings are required) etc.).

In summary, with the implementation of Worsley Alumina's current management practices and further tailored mitigation strategies on specific risks, the continued operations of the Revised Proposal are not expected to result in significant impacts greater than those currently observed in relation to Inland Water values. Disturbance to the rivers and tributaries from the Revised Proposal will be discrete and localised, with direct impacts limited to the construction of the river crossings. Implementation of the Revised Proposal and the continuation of existing operations are expected to meet the EPA's objectives for Inland Waters with consideration of the outcomes as described related to avoidance, management and monitoring measures.

5.3.5 AIR QUALITY

It is considered that Worsley Alumina's existing management approach relevant to Air Quality (primarily dust management practices) are applicable to the continued operation of the BBM and the proposed activities within the CBME. With consideration of the predicted outcomes as described, the Revised Proposal is expected to meet the EPA's objectives for Air Quality.

5.3.6 SOCIAL SURROUNDINGS

The key environmental outcomes for Social Surroundings include (transcribed from ERD Section 5.7.7):

- Avoid impacts to known Aboriginal and European heritage locations unless appropriate approval and consultation mechanisms are applied;
- Management of Aboriginal heritage values as per the Cultural Heritage Management Plan (Worsley 2021f) and associated heritage management procedures; and
- Implement the requirements of the *Aboriginal Heritage Act 1972* (WA) and update the Worsley Alumina processes and practices to be aligned with the requirements of the new act once the substantive provisions of that legislation commence.

It is also noted that in addition to the above commitments, the Worsley Alumina operations will also be required to comply with other legislation and regulations relating to Social Surroundings, including the *Aboriginal Heritage Act 1972*, and Environmental Protection (Noise) Regulations 1997.

It is considered that Worsley Alumina's existing management approach relevant to Social Surroundings is applicable to the continued operation of the BBM and the proposed activities within the CBME. Worsley Alumina will continue to progress mine planning and engagement openly with all stakeholders, as described in Section 2. With consideration of the predicted outcomes as described, the Revised Proposal is expected to meet the EPA's objectives for Social Surroundings.

5.3.7 GHG EMISSIONS

The key environmental outcomes for Social Surroundings include (transcribed from ERD Section 6.2.9):

- Reduction of emissions on a five yearly basis in line with the targets specified in Table 6-3 (of the ERD); and
- Implementation of the GHG Management Plan provided in Appendix E10 of the ERD.

With the implementation of the GHG Management Plan at Appendix E10, and the proposed measures to reduce carbon emissions directly and mitigate indirect impacts on other Key Environmental Factors, Worsley Alumina considers that the GHG emissions associated with the Revised Proposal will meet the EPA's objectives for GHG emissions to "reduce net greenhouse gas emissions in order to minimise the risk of environmental harm associated with climate change" and support the Western Australian Government's and South32's goal of net zero emissions by 2050.

5.4 SOUTH32 AND WORSLEY ALUMINA MANAGEMENT SYSTEM AND STANDARDS

5.4.1 WORSLEY ALUMINA MANAGEMENT SYSTEM

South32's Global Environment Standard provides a robust management framework enabling the business to operate in a socially responsible and sustainable manner. This Standard applies to all operations and exploration activities under the operational control of South32 (including Worsley Alumina), including activities associated with this Framework CEMP.

Worsley Alumina operates in accordance with a Document Management System (DMS). The purpose of the DMS is to ensure that the company policy requirements relating to the environment are fulfilled and progress is made towards achieving corporate environmental objectives. The Worsley Alumina DMS supports a number of Environment Management Plans (EMPs) that describe the strategies and procedures that are implemented to ensure compliance with Worsley Alumina's obligations and objectives to minimise the impact and risk of activities associated with the Project. These EMPs include monitoring programs, which verify impact predictions and the effectiveness of the mitigation and management measures.

This Framework CEMP identifies requirements and processes applicable to specific environmental impacts or aspects (e.g., air quality, dust, dieback and noise) of the construction activities associated with the Proposal and addresses approval conditions and mitigation measures, controls and monitoring requirements defined in the MS719.

The context and relationship of this Framework CEMP in relation to the Worsley Alumina document management system (including standards and procedures as set out in Table 6) is presented in Figure 8.

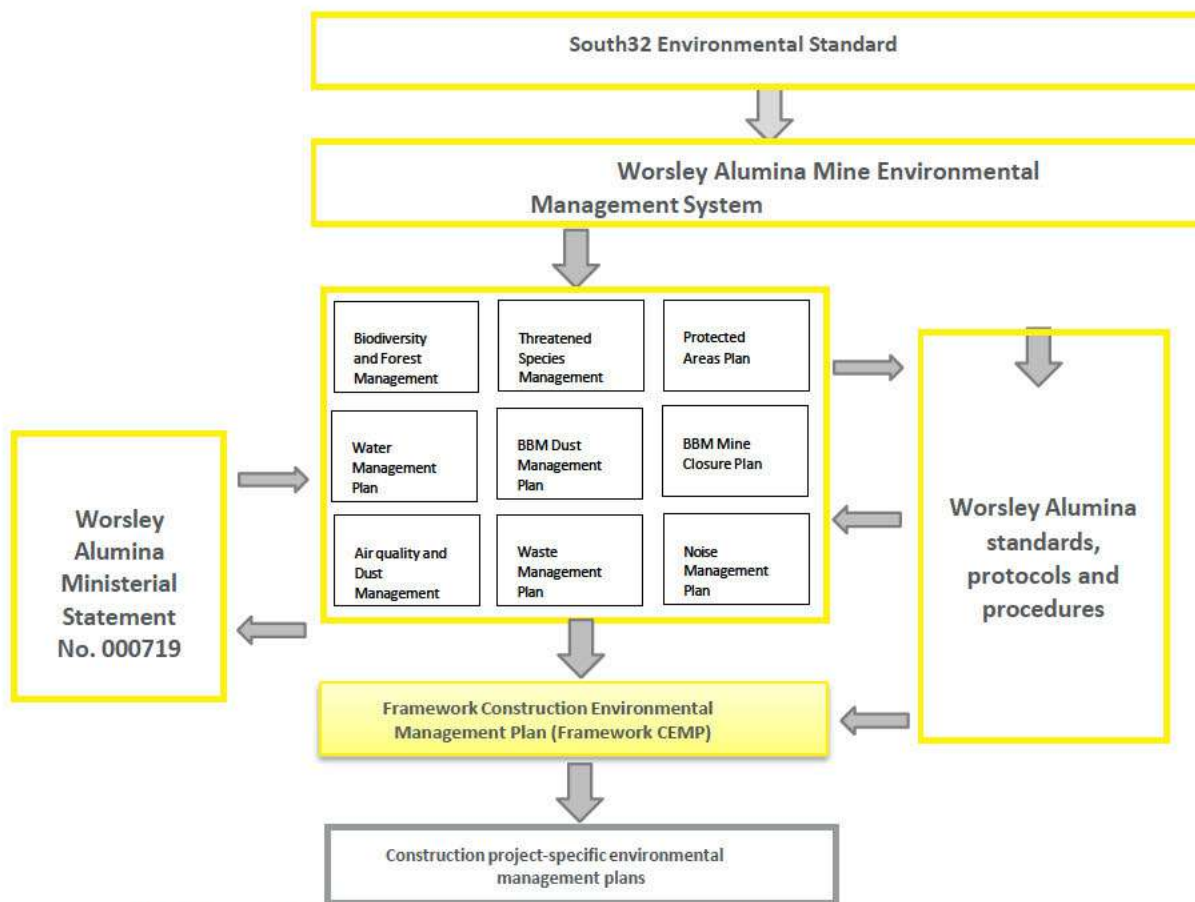


Figure 8: Relationship between CEMP and Worsley Alumina standards, policies and procedures

5.4.2 WORSLEY ALUMINA STANDARDS, POLICIES AND PROCEDURES

The relevant standards, policies and procedures of potential relevance to the Framework CEMP, that are in place under the Worsley Alumina document management system are summarised in Table 6

Table 6: Summary of standards, policies, and procedures of relevance to the Framework CEMP

Standard	Relevance to the CEMP
South32 standards, policies, and procedures	
Global Environment Standard	South32’s Global Environment Standard provides a robust management framework enabling the business to operate in a socially responsible and sustainable manner. The Global Environment Standard describes the minimum acceptable environmental requirements for all operations.
Health, Safety, Environment and Community Reporting Standard	Health, Safety, Environment and Community Reporting StandardSouth32’s Global HSEC Reporting Standard identifies Project Events as Category 1 Reportable. Additionally, Significant HSEC Events are identified as any which result in an Actual (realised) severity of 4 or higher or Potential (unrealised) severity of 5 or higher. This document defines the reporting requirements for AL4+ and PL5+ Events.
Sustainability Policy	South32’s Sustainability Policy documents the company’s commitments to Sustainable Development, including commitments to: <ul style="list-style-type: none"> Identify and manage risks, impacts and opportunities within South32 operations and host communities Be responsible stewards of the commodities extracted and the natural resources used, while promoting enduring environmental, social and economic benefits Create shared value with stakeholders

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Standard	Relevance to the CEMP
	<ul style="list-style-type: none"> Implement South32's approach to climate change to reduce emissions and build climate change resilience Recognise Indigenous and land-connected peoples' relationship with land, water and the environment Continually improving systems and processes, working with suppliers, customers and communities to drive performance Meet legal and other agreed commitments in all jurisdictions in which South32 operate. <p>Publicly report progress and encourage high standards of transparency and accountability in South32's business governance, risk and government interactions.</p>
Risk Management Standard	This Standard outlines the minimum mandatory requirements for the management of risks that can materially impact our ability to achieve our purpose, strategy and business plans.
Worsley Alumina standards, policies and procedures	
00114502 Hazardous Substances Management	All Hazardous Chemicals used on the Project site must be risk-assessed and approved and approved to ensure appropriate environmental stewardship.
01017132 BBM Traffic Management	Includes the requirements apply to control of mining, public and Project traffic.
01000155 WAPL Traffic Management Plan Requirements	Traffic Management planning will consider both H&S risks (mining, public and Project impacts) and Environmental risks (fauna impacts) associated with the use of Project vehicles.
00114017 Event and Hazard Reporting	All HSEC Events shall be reported and investigated in accordance with this Procedure.
00112223 Ground excavation and Penetration Procedure	The intent of this document is to ensure all excavations and penetrations are planned and executed safely, in accordance with regulatory, applicable standards and Worsley requirements.
00101417 Clearance to work	The intent of this process is to manage and control work activities undertaken throughout departments of Worsley Alumina Pty Ltd (WAPL). The Clearance to Work (CTW) system is designed to manage work, grant authorisation and return plant and equipment from maintenance and service-related activities.
Management of Ground Disturbing Activities and Newly Identified Cultural Material Procedure (200000496)	Provides guidance on minimising potential impacts to both Aboriginal heritage and Historic heritage sites from Worsley Alumina's ground disturbing activities by setting out processes to manage these activities. The procedure also guides Worsley on the engagement of Aboriginal heritage monitors and steps to take in the event any new heritage sites are identified.
Managing Finds of Skeletal Material Procedure (200000492)	Process if Worsley Alumina personnel, including contractors and sub-contractors, find any material which is suspected to be skeletal in nature.
00100891 Event Reporting Procedure	This Procedure describes the process for reporting events/hazards and escalation where necessary in accordance with business and legislative requirements.
Event Investigation and Action Management Procedure (01015997)	This Procedure described the investigation requirements and entering investigation details and actions in Global360.
Managing Heritage Incidents Procedure (200000493)	Sets out the processes that must be followed if there is a Heritage Incident. That is, a Worsley Alumina employee, contractor, subcontractor or Aboriginal Heritage Monitor cause impact to, or become aware of impact caused by Worsley Alumina's operations or activities, to any Aboriginal Site or Object or a historic place.
BBM Trunk Haul Road Design and Construction	This Specification details the requirements for construction of major trunk haul roads (i.e., roads that will remain in place and in operation for more than one year).
South32 Worsley Alumina Boddington Bauxite Mine Site Drainage STA.402	This standard defines the minimum performance requirements for design and inspection of drainage structures at the Boddington Bauxite Mine.

6. RATIONALE AND APPROACH

6.1 ENVIRONMENTAL OUTCOMES OR MANAGEMENT OBJECTIVES

This Framework CEMP transcribes the environmental outcomes presented in the ERD. These are high level outcomes for all stages of the Revised Proposal.

Construction-project specific and site-specific environmental outcomes and management objectives will be developed following more detailed design and construction project planning, together with site-specific and topic-specific environmental surveys and studies.

6.2 SURVEY AND STUDY FINDINGS

6.2.1 REVISED PROPOSAL SURVEY AND STUDY FINDINGS

The ERD (Worsley Alumina) is supported by environmental surveys and environmental studies. The ERD main document provides a summary of these surveys and studies. These are not re-presented here but are available at the following location:

<https://www.epa.wa.gov.au/proposals/worsley-mine-expansion-%E2%80%93-revised-proposal>

6.2.2 NULLAGA PROJECT SURVEY AND STUDY FINDINGS

The surveys and studies completed for the ERD covered the Nullaga Project. The results of the surveys and studies specific to the Nullaga Project are summarized in Section 4.2.2. The key environmental values for the Nullaga Project are shown on Figure 7.

6.3 KEY ASSUMPTIONS AND UNCERTAINTIES

Key assumptions of this Framework CEMP include:

- The Framework CEMP has been prepared in the advance of the finalization of the ERD assessment and the anticipated approval of the Revised Proposal. The Framework CEMP has been prepared in advance of receipt of the approval conditions likely to be attached to the revised Ministerial Statement for the Revised Proposal.
- The Framework CEMP has been prepared for the Stage 1 construction work (Nullaga Project) as the initial focus of the construction works. Additional design details and construction methodology details will be developed in due course, and the CEMP will be revised accordingly, when required.

6.4 OBJECTIVE-BASED AND OUTCOME-BASED MANAGEMENT MEASURES

The Framework CEMP comprises of outcome-based management measures. Objective-based and outcome-based approaches have been used where best suited to manage uncertainties, or to allow reference to existing approvals, regulatory regimes, or existing management plans and operation procedures.

6.5 RATIONALE FOR CHOICE OF INDICATORS AND/OR MANAGEMENT ACTIONS

The Framework CEMP presents a compilation of proposed outcomes, mitigation measures and proposed management actions derived from the ERD and general construction environmental management practice. Further indicators and management actions may be prescribed by the revised conditions of the Ministerial Statement and may be refined to be site specific and project specific, as part of detailed project-specific CEMPs and environmental topic-specific EMPs.

The proposed outcomes, mitigation measures and management actions are set out for each of the Key Environmental Factor are presented in Section 8.1 to 8.7.

7. MONITORING, REPORTING, AND ADAPTIVE MANAGEMENT

A summary of environmental monitoring requirements, auditing and incident reporting is provided below. It should be noted that the extent of monitoring in this version of the Framework CEMP is for the Stage 1 construction work (Nullaga Project), being the initial focus of the construction works. Additional design details and construction methodology details will be developed in due course, and the CEMP will be revised accordingly, when required.

7.1 MONITORING REQUIREMENTS

General environmental monitoring requirements are set out in Table 7 below.

The monitoring requirements set out in this Framework CEMP will utilise and build on existing monitoring programmes where practical, such as those programmes in place to address the existing BBM operating licence (L5960/1983/11). Where required, these monitoring programmes will be supplemented by project and activity specific monitoring programmes.

Table 7: Environmental Monitoring Requirements

Monitoring Frequency	Monitoring Actions
Daily	<ul style="list-style-type: none"> • Inspection of clearing extents to ensure no clearing outside of the approved clearing boundaries. • Walkover inspection for fauna ahead of and during vegetation clearing activities (such that further fauna relocation can be undertaken where appropriate using qualified personnel as per pre-clearing management action). • Daily inspection of excavations in the morning and afternoon to identify any trapped fauna and to enable capture and relocation. • Record and report any known injuries or mortalities of fauna. • Visual monitoring of airborne dust in relation to dust generation beyond the perimeter of the construction area to ensure no offsite impacts and efficacy of dust control measures. • Visual monitoring during construction to identify and manage any potential disturbed contamination or heritage objects. • Report and provide management guidance for any hydrocarbon or chemical spills. • Noise monitoring for works outside of standard construction hours (if applicable and if required under Environmental Protection (Noise) Regulations 1997). • Visual inspection of erosion and sediment controls to maintain functionality and report any releases of material. • Report any required alterations to management infrastructure.
Weekly	<ul style="list-style-type: none"> • Visual inspection for evidence of unauthorised access to areas of native vegetation surrounding the development area, attributable to construction. • Conduct required water / soil monitoring (up/ downstream) • Visual inspection of any water management infrastructure (i.e., booms or silt curtains) for integrity and suitability. • Spot checks of compliance with vehicle clean on entry/exit procedures at each entry and exit point. • Visual inspection of identified heritage sites or other Projected Areas to ensure no disturbance by contractor outside of the approved development envelope. • Visual inspection for evidence of erosion. • Produce a report on monitoring results. • Inspections of chemical and hydrocarbon storage infrastructure • Inspections of rehabilitation and land management
Monthly	<ul style="list-style-type: none"> • Visual inspection and coordinate management for weeds within the disturbance footprint. • Visual inspection of hazardous material storage, handling and disposal. In the event of a major spill, undertake groundwater and/or surface water monitoring. • Visual inspection of riverbanks for signs of scouring or erosion. • Visual monitoring of culvert infrastructure (once established) to ensure potential fauna passage is maintained. • Undertaking routine GHG emissions monitoring in accordance with the <i>National Greenhouse and Energy Reporting Act 2007</i> and National Greenhouse and Energy Reporting Regulations 2008. • Produce a report on monitoring results.
Annually	<ul style="list-style-type: none"> • Assessment and monitoring of dieback and Australian honey fungus free (un-infested) areas of native vegetation within and adjacent to the development area. • Produce a report on monitoring results.
As required	<ul style="list-style-type: none"> • Monitoring as required by any additional CEMP, ASSMP or other relevant management plans.
Monitoring Frequency	Monitoring Actions

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- Visual inspection of offsite discharges and downstream environments following rainfall events.
- Visual inspection for evidence of erosion in the lead up to and following inclement weather events.
- Aboriginal monitors to be present when initial ground disturbance is undertaken near registered or potential Aboriginal site, as per the Aboriginal Heritage Site Management Procedure (Worsley 2014).

7.2 AUDITING REQUIREMENTS

Worsley Alumina will implement an audit program to ensure all contractors and project activities are completed in accordance with the conditions of MS719. Worsley Alumina will prepare audit reports in accordance with the audit program.

7.3 WORSLEY ALUMINA REPORTING REQUIREMENTS

Worsley Alumina environmental reporting requirements are provided in Table 8 and in accordance with the Worsley Alumina Health, Safety, Environment and Community Reporting Standard.

Table 8: Worsley Alumina Environmental Reporting Requirements

Requirement	Scope	Timing/Frequency	Responsibility
Contractor Monthly Reporting	<p>Each Contractor is to prepare a Monthly Report to track progress on environmental performance.</p> <p>The Contractor monthly report will include relevant details including, but not be limited to:</p> <ul style="list-style-type: none"> • Environmental inspections • Environmental monitoring • Waste classification and disposal of waste details • Environmental incident • Environmental non-conformances • Environmental audits • Complaints and enquiries • Lessons learnt / identified continual improvements • Training. 	Monthly	Contractors
Complaints reporting	Recording of complaints and stakeholder interactions in accordance with the Worsley Alumina Community Complaints procedure (01002709) and Community and Stakeholder Management Plan.	As required	Worsley Alumina
General enviro inspection report	Environmental management controls and records for all works.	Frequency determined based on risk of the activity (minimum monthly)	Worsley Alumina and Contractors
Contract environmental inspection report	Environmental management controls and records for all works.	As per this CEMP (at least weekly)	Contractors

7.4 NON-COMPLIANCES AND INCIDENT RESPONSE

All events with an environmental consequence (actual or potential) must be promptly reported to South32 and recorded in G360. Significant environmental events are investigated (by appropriately trained personnel), actions identified, and learnings shared.

The management and reporting of environmental incidents shall be undertaken by the appropriate person as detailed in Worsley Alumina Event and Hazard Reporting Procedure (00100891).

7.5 ENVIRONMENTAL INCIDENT REPORTING

Worsley Alumina will report environmental incidents in accordance with the requirements of legislation, regulation and approval requirements relevant to the Revised Proposal / construction projects.

If impact is caused by personnel, or if personnel become aware of impact caused by Worsley Alumina’s activities, to any Aboriginal Site or Place, the Managing Heritage Incidents Procedure (200000493) must be followed.

Each Contractor will develop and implement an Environmental Incident and Emergency Plan/Procedure, in accordance with the requirements of this CEMP.

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The Contractor will make all personnel aware of the plan and their responsibilities.

Following formal notification of an incident to South32, an incident report detailing the cause of the incident and demonstrating corrective and preventative actions will be provided by the Contractor. A summary of the incident will be provided in the Contractor monthly report (e.g., provision of a spill register).

7.6 ADAPTIVE MANAGEMENT

The EPA EMP Instruction Manual (EPA, 2021) prescribes an adaptive management approach for implementation in the development and refinement of EMPs. The development and use of adaptive management will vary with the specific requirements of each key environmental factor and the details of project-specific construction EMPs. An indicative process for the application of adaptive management is set out below.

Worsley Alumina will create an adaptive management plan as follows:

- Confirm the outcomes and objectives relevant to the CEMP following approval and receipt of the Ministerial Statement.
- Determine and refine construction project specific quantitative performance measures to measure progress towards outcomes and objectives.
- Determine construction project specific environmental triggers to initiate further investigation and intervention. These are to indicate that performance is deviating from objectives (determined through information gathered from monitoring).
- Determine construction project specific reasonable and achievable interventions in response to triggers.
- Implemented monitoring programs which allow the evaluation of monitoring effectiveness and inform decisions about improving management actions.
- Identify and initiate investigations and development of appropriate actions when triggers are triggered
- Develop and implement updated and refined management actions to move project back to full compliance.

7.7 EARLY RESPONSE INDICATORS, CRITERIA AND ACTIONS

Worsley Alumina will seek to identify and set early response indicators, criteria and actions (for use in reporting and the adaptive management process) following the finalization and issue of the amended MS719 and completion of site-specific surveys and studies, and construction project specific planning.

7.8 DOCUMENT REVIEW

Review of this Framework CEMP will be undertaken as required, to ensure the ability to continue to meet conditions set out in MS719.

Worsley Alumina may initiate reviews of this Framework CEMP in response to change of legislation, an update on the MS719, improvement opportunities, non-conformances, and changes to scope of work or construction methodology or alterations to legal or contractual requirements.

Any changes identified and implemented through the variation and review process identified above will be communicated to relevant Contractors through re-issue of the revised Framework CEMP.

7.9 RECORD OF CHANGES TO THE FRAMEWORK CEMP

A template to be used to record changes to the Framework CEMP is provided in Appendix B.



8. FRAMEWORK CEMP COMPONENTS

This section presents the objectives, key impacts and risks, relevant approval conditions, relevant policy and guidance, relevant topic-specific specialist management plans and management actions for the entire Proposal.

This section transcribes relevant material from the ERD. In some instances, operation specific and other less relevant material has not been transcribed into the sections below.

8.1 FLORA AND VEGETATION

Key Environmental Factor

Flora and Vegetation

EPA Objective

To protect flora and vegetation so that biological diversity and ecological integrity are maintained.

Key impacts and risks

Loss of Threatened Ecological Community (TEC) or Priority Ecological Community (PEC), specifically the Priority 1 PEC – Mount Saddleback Heath Communities; loss of any Threatened flora, specifically the *Caladenia hopperiana*; loss of regionally and locally significant vegetation including Priority flora; increase in weeds; and spread of dieback.

Relevant Conditions of Ministerial Statement

MS719 2006:

Commitment 6 – Management of biodiversity, forest resources and rehabilitation in Primary Bauxite Area: The Biodiversity and Forest Management Plan summarises the rehabilitation program includes Worsley Alumina’s commitment to manage biodiversity, forest resources and rehabilitation.

Conditions 8, 9, and 12.

Relevant policy and guidance

EPA Policy and Guidance

- Environmental Factor Guideline – Flora and Vegetation (EPA, 2016a);
- Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016e);
- Guidance Statement No. 6 – Rehabilitation of Terrestrial Ecosystems (EPA, 2006);
- Instructions on how to prepare an Environmental Review Document (EPA, 2021a); and



- Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans (EPA, 2021b).

Commonwealth Policies and Guidance

- Threat abatement plan for disease in natural ecosystems caused by *Phytophthora cinnamomi* (DoEE, 2018); and
- Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy (DSEWPAC, 2012a). Other

Policy and Guidance

- WA Environmental Offsets Policy (GoWA, 2011a);
- WA Environmental Offsets Guidelines (GoWA 2014);
- Forest Management Plan 2014-2023 (Conservation Commission of Western Australia 2013);
- Biodiversity and Forest Management Plan – MS 719 Management Plan (Worsley 2021c);
- Managing Phytophthora Dieback in Bushland (Dieback Working Group 2015); and
- Management of Phytophthora Dieback in Extractive Industries (Dieback Working Group 2004).

Relevant Topic-Specific ERD Environmental Sub-Plans

- E01 – Biodiversity and Forest Management Plan
- E02 – Threatened Species Management Plan
- E03 – Threatened Fauna Pre-Clearance Survey and Management
- E04 – Protected Areas Plan

Management target	Management Actions (Development of Further Measures / Actions)	Monitoring	Timing / Frequency of actions	Reporting
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Vegetation clearing

No clearing of vegetation in Protected Areas and areas of potential high conservation value.	Targeted ground truthing assessments within areas of remnant native vegetation mapped as having the high and medium high potential old growth forest to be undertaken prior to disturbance of these areas.	Inspection during clearing activities of the condition of boundary demarcation and the location of vegetation cleared to ensure no clearing outside of clearing boundaries.	Daily	Worsley to report any unauthorised clearing as soon as practicable after it is identified.
No clearing of native vegetation to occur outside of the development envelope during and attributable to construction.	Clearing boundaries clearly marked on construction plans.			To be included in Worsley’s Annual Reporting with the location and area of vegetation cleared.
No disturbance to Threatened Ecological Community or Priority Ecological Community (PEC), specifically the Priority 1 PEC – Mount Saddleback Heath Communities.	Clearing boundaries clearly marked on site. Clearing of a track immediately inside the marked clearing boundary			

Plant biosecurity

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<p>No new introduction of declared of Weeds of National Significance weed species.</p> <p>No evidence of vegetation decline in the development envelope from significant weeds as a result of the</p>	<p>Weed inspections completed regularly and prior to commencement of development activities to inform weed management and detection.</p> <p>Completion of a forest disease assessment prior to any planned</p>	<p>Undertake visual inspections along the clearing edge adjacent to retained native vegetation.</p> <p>Spot checks of vehicle compliance with clean on entry/exit procedures throughout the duration of construction</p>	<p>Monthly</p> <p>Weekly</p>	<p>Compliance with these measures to be documented in the Project Annual Reporting.</p> <p>Maintain records of all weed inspections of vehicles, machinery.</p>
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project within five years from the commencement of construction, noting the existing infestations on site.

Phytophthora dieback and Australian honey fungus is not introduced to pathogen free areas of vegetation surrounding the development envelope. attributable to construction activities as observed within five years from the commencement of construction.

disturbance associated with the Revised Proposal, map forest areas for the presence of dieback and/or Australian honey fungus by a DBCA approved interpreter and inform management.

Ensuring all infested areas and clearing areas are surveyed and data made available for planning purposes.

Areas infested with dieback or Australian honey fungus, labelled uninterpretable for dieback and Disease Risk Areas are marked on clearing and exploration maps.

Training personnel in key areas of forest hygiene management.

Providing advice on sourcing uninfested (dieback-free) materials for civil works.

Advising employees and contractors on hygiene requirements for entering disease free/uninterpreted/uninterpretable areas, as required, and when leaving infested (diseased)/uninterpreted/uninterpretable areas.

Ensuring known forest hygiene status is shown on all exploration, clearing and earthwork plans.

Establishment of sign-posted vehicle/equipment clean-down points when earthworks are planned outside of dieback-free areas.

Unless travelling on formed, well drained and all-weather access approved haul roads, inspection and clean-down must occur at the following on exit; private land, any known dieback or uninterpreted areas, any known or suspect Armillaria areas and

of activities at each entry and exit point.



exploration areas.

Where practical, use single entry/exit points for accessing infested or uninfested areas during operations. Preferred access must always be through using existing tracks.

Ensuring a perimeter drain is established in accordance with the Site Drainage – BBM Standard (00111928) prior to clearing, to control the direction of water run-off.

Obtaining DBCA Disease Risk Area permits, as required.

Seeking advice and permission to continue operations in infested areas in wet conditions.

Areas that are dieback infested and are scheduled for mining and rehabilitation will have an area specific Soil Hygiene Management Plan. The Soil Hygiene Management Plan will take into account all hygiene considerations, including all soil movement, management and earthworks, access restrictions, the composition of pre-disturbance vegetation. The plan will also include a suitable revegetation program to reduce returned susceptible species.

Topsoil and gravel from dieback infested areas will be stockpiled separately within the footprint of the infested area and returned post-mining following typical rehabilitation practices, under the guidance of an area specific Soil Hygiene Management Plan. The infested topsoil and gravel stockpiles may also be demarcated using pink flags.

Signs are placed to indicate uninfested areas within the RLA.



8.2 TERRESTRIAL FAUNA

Key Environmental Factor

Terrestrial Fauna

EPA Objective

To protect flora and vegetation so that biological diversity and ecological integrity are maintained.

Key impacts and risks

Loss of Woylie habitat; loss of Red-Tailed Phascogale habitat; clearance of potential Black Cockatoo habitat trees; and more than 5% removal of the inferred breeding hollows.

Relevant Conditions of Ministerial Statement

MS719 2006:

Commitment 6 – Management of biodiversity, forest resources and rehabilitation in Primary Bauxite Area: The Biodiversity and Forest Management Plan summarises the rehabilitation program includes Worsley Alumina’s commitment to manage biodiversity, forest resources and rehabilitation.

Conditions 8, 9, and 12.

Relevant policy and guidance

EPA Policy and Guidance

- Environmental Factor Guideline – Terrestrial Fauna (EPA, 2016d);
- Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment (EPA, 2020d);
- Technical Guidance – Sampling of short range endemic invertebrate fauna (EPA, 2016f).

Commonwealth Policies and Guidance

- Survey guidelines for Australia’s Threatened mammals (DSEWPAC, 2011a);
- Survey guidelines for Australia’s Threatened birds (DEWHA, 2010);
- Survey guidelines for Australia’s Threatened reptiles (DSEWPAC, 2011b);
- Carnaby’s Cockatoo (*Calyptorhynchus latirostris*) Recovery Plan: Western Australian Wildlife Management Program No. 52 (DPaW, 2013);
- Forest Black Cockatoo (Baudin’s Cockatoo *Calyptorhynchus baudinii* and Forest Red-tailed Black Cockatoo *Calyptorhynchus banksii naso*) Recovery Plan (DEC, 2008);
- Chuditch (*Dasyurus geoffroii*) National Recovery Plan: Wildlife Management Program No. 54, (DEC, 2012a);
- National Recovery Plan for the Woylie (*Bettongia penicillata ogilbyi*): Wildlife Management Program No. 51 (DEC, 2012b);
- Western Ringtail Possum (*Pseudocheirus occidentalis*) Recovery Plan (DPAW, 2017);
- Quokka *Setonix brachyurus* Recovery Plan (DEC, 2013);
- Threat abatement plan for predation by feral cats (DoE 2015);

- Threat abatement plan for competition and land degradation by rabbits (DoEE, 2016);
- Threat abatement plan for predation by the European red fox (DEWHA, 2008);
- Threat abatement plan for predation, habitat degradation, competition and disease transmission by feral pigs (*Sus scrofa*) (DoEE, 2017); and
- Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy (DSEWPAC, 2012a). Other

Policy and Guidance

- DWER WA Environmental offsets calculator (DWER 2021a);
- Guideline Environmental offsets metric: Quantifying environmental offsets in Western Australia (DWER, 2021a);
- WA Environmental Offsets Policy (GoWA, 2011a); and
- WA Environmental Offsets Guidelines (GoWA, 2014).

Relevant Topic-Specific ERD Environmental Sub-Plans

- E01 – Biodiversity and Forest Management Plan
 - E02 – Threatened Species Management Plan
 - E03 – Threatened Fauna Pre-Clearance Survey and Management
 - E04 – Protected Areas Plan
-



Management target	Management Actions (Development of Further Measures / Actions)	Monitoring	Timing / Frequency of actions	Reporting
Vegetation clearing				
<p>No clearing of confirmed habitat trees for Black Cockatoos.</p> <p>No more than 2,631 ha of the 4,385 ha of Woylie habitat identified within the PAA will be cleared.</p> <p>No more than 449 ha of the 690.9 ha of Red-Tailed Phascogale habitat identified within the PAA as outlined in the Protected Areas Plan will be cleared.</p> <p>No more than 10% of inferred breeding hollows will be removed.</p> <p>Confirmed Peregrine Falcon nesting sites will be avoided.</p>	<p>Baseline fauna surveys completed in accordance with the Threatened Fauna Pre-Clearance Survey and Management Plan (Worsley 2021h) prior to commencement of development activities to characterise the receiving environment values and inform planning.</p> <p>Pre-clearance surveys by fauna spotter</p> <p>Avoidance of areas of potential high conservation value wherever practicable utilising the Biodiversity and Forest Management Plan (Worsley 2021c). Areas of potential high conservation value include specific vegetation communities of conservation value, high quality vegetation with potential to provide significant habitat for Threatened species and identified fauna corridors and ecological linkages.</p> <p>Clearing boundaries clearly marked on construction plans.</p> <p>Clearing boundaries clearly marked on site.</p> <p>Clearing of a track immediately inside the marked clearing boundary.</p> <p>Protected and no-go areas to be clearly identified on site</p> <p>All clearing areas must be surveyed after clearing to confirm the areas is cleared within the approved area and for entry into the clearing database.</p> <p>Access roads and infrastructure will be</p>	<p>Inspection during clearing activities of the condition of boundary demarcation and the location of the vegetation cleared to ensure no clearing outside of the development envelope.</p>	<p>Daily</p>	<p>Worsley to report any unauthorised clearing as soon as practicable after it is identified.</p> <p>To be included in the Project Annual Reporting with the location and area of vegetation cleared.</p>



preferentially located over ore in existing cleared, or disturbed and rehabilitated areas, to minimise clearing of remnant vegetation where practicable.

Continued implementation and compliance with internal procedures and standards, including the Native Vegetation Clearing Planning Procedure (Worsley, 2012), Mine Clearing Procedure (Worsley, 2015c), and Flora and Fauna Conservation Procedure (Worsley 2017a).

Installation of perimeter drains to prevent drainage outside the approved disturbance area.

Clearing of vegetation staged to minimise the number of fauna injuries/deaths during clearing such as harvesting of mature trees typically months in advance of clearing, thereby reducing the suitability of the habitat and encouraging fauna to move away from the area prior to clearing commencing.

Death, injury or displacement of fauna

No avoidable deaths of fauna attributable to construction during vegetation clearing.	Following suitable clearing protocol as outlined above.	Daily inspection for fauna species at clearing boundaries and in the construction area during native vegetation clearing activities.	Daily	Record any known injuries to, or deaths of fauna in a Fauna Register as soon as possible as the injury or death is identified (when attributable to construction) preferably on the same day. Reporting on any fauna trapped (providing details of methods used, number of animals caught and relocated, and location where they were released), injured or killed, and the adaptive management measures implemented in the Projects Annual Reporting. All employees and contractors are required to report sightings of feral animals and, if known, any conservation significant or uncommon native fauna. Any impacts to conservation significant fauna species are recorded within the Worsley Alumina incident and notification system and notified to the DBCA through the submission of the Fauna Reporting Form (Species Community Branch, DBCA).
	Injured fauna will be taken to a wildlife carer or vet.	Inspection of the development envelope for trapped fauna (in excavations or equipment) during construction works. Details of any trapped fauna and known injuries or mortalities of fauna are recorded.	Daily	
	Restricted speed limits on key access tracks and roads.	Twice daily inspections (early morning and late afternoon) of trenches that have been left open overnight, with recording, removal, and release of fauna.	Twice Daily	



8.3 TERRESTRIAL ENVIRONMENTAL QUALITY

Key Environmental Factor
Terrestrial Environmental Quality
EPA Objective
To maintain quality of land and soils so that environmental values are protected.
Key Impacts and Risks
A reduction in the quality of land and soils leading to negative impacts on environmental values such as erosion and contamination.
Relevant Conditions of Ministerial Statement
MS 0719 2006: Conditions 8, 9, and 12.
Relevant policy and guidance
EPA Policy and Guidance
<ul style="list-style-type: none"> Environmental Factor Guideline – Terrestrial Environmental Quality (EPA, 2016c). Other
Policy and Guidance
<ul style="list-style-type: none"> Contaminated Sites Regulations 2006 (GoWA, 2006); Australian Standards for fuel storage AS1940-2017 – The Storage and Handling of Flammable and Combustible Liquids; National Acid Sulfate Soils Guidance: National Acid sulfate soils sampling and identification methods manual (DAWE, 2018); Identification and investigation of acid sulfate soils and acidic landscapes (GoWA, 2015a); Treatment and management of soils and water in acid sulfate soil landscapes (GoWA, 2015b); WA Environmental Offsets Policy (GoWA, 2011a); and WA Environmental Offsets Guidelines (GoWA, 2014).
Relevant Topic-Specific ERD Environmental Sub-Plans
<ul style="list-style-type: none"> E01 – Biodiversity and Forest Management Plan E02 – Threatened Species Management Plan E03 – Threatened Fauna Pre-Clearance Survey and Management



• E04 – Protected Areas Plan

Management target	Management Actions (Development of Further Measures / Actions)	Monitoring	Timing / Frequency of actions	Reporting
ASS management				
Disturbance and excavation of ASS in low-lying areas for river crossings is limited and relatively localised. No impacts from disturbance of ASS.	Management buffers around streams and riparian zones in accordance with the Protected Areas Plan (with the exception of essential infrastructure crossings to access new mining areas). Management of acid sulphate soils in accordance with ASSMP (South32 2023).	Monitoring in accordance with the ASSMP.	As described in the ASSMP.	Report any disturbance of ASS to Worsley and relevant government stakeholder.
Erosion and loss of general soil health				
No erosion and sediment discharges off the Project area. Maintain good health of topsoil for an efficient rehabilitation.	Assessment of the river crossing locations will take into account bank stability and hydraulic studies to ensure bridge designs avoid excessive erosion and scouring. Excavation and removal of clay rich soils will be avoided, the placement of such materials (if excavated) at the surface of constructed landforms is unlikely to occur. Topsoil and overburden handling methods as per the Topsoil and Overburden Handling Procedure Vehicle traffic confined to defined roads and tracks and will be restricted from accessing rehabilitated surfaces (except for management purposes and in the event of an emergency) Topsoil and overburden stripping and spreading activities will be restricted in high winds if dust cannot be adequately controlled.	Inspection of erosion and sediment controls. Visual inspection of offsite discharges following rainfall events.	Weekly Post significant rainfall events	To be included in the Project Annual Reporting with the location and the impacted area.



Maximise direct return topsoil to minimise the handling and storage of rehabilitation materials.

Use of sediment traps/curtains located downstream of construction location during soil disturbing activities.

Contamination from spills and leaks

<p>On-site management measures employed for chemical and hydrocarbon management, along with spill management procedures ensure impacts related to contamination of soils are adequately managed.</p> <p>Manage any contamination on site in accordance with the <i>Contaminated Sites Act 2003</i>.</p> <p>Appropriate management of waste, drainage, fuels, and chemicals.</p>	<p>Chemicals, hydrocarbons, and other environmentally hazardous materials will be stored and handled in accordance with Dangerous Goods Safety Act 2004 and associated regulations., including use of a bunded and sealed assembly area for hazardous chemicals (containerised) and hydrocarbon storage and vehicular laydown located an appropriate distance from watercourses.</p> <p>Environmentally hazardous material releases will be managed in accordance with Worsley’s Spill Management Procedures for all activities associated with construction of river crossings.</p> <p>Spill kits to be located in storage and refuelling areas.</p> <p>Ensure all relevant employees and contractors are trained for safe handling procedures, incident response and good environmental practice.</p> <p>Fuel and chemical storage tanks will be established on stable soil in an area that is not subject to flooding.</p> <p>Unless otherwise approved, all fuel or chemical supply lines shall be above ground and on suitable bunded infrastructure, so leaks are detectable.</p>	<p>Inspections of chemical and hydrocarbon storage infrastructure.</p> <p>Monitoring of groundwater and/or surface water monitoring following a spill, in consultation with relevant agencies. Establish a baseline for groundwater and surface water as a reference.</p> <p>Any significant fuel or other chemical spill to the environment should be reported as pre S72 of the EP Act.</p>	<p>Weekly</p> <p>As required</p>	<p>Maintain a register of spills and leaks including location, date, nature of material spilt, and remedial action taken.</p> <p>A summary of spills and leaks to be reported annually in the Project Annual Reporting.</p> <p>Any disturbance of contamination will be reported in the Project Annual Reporting.</p> <p>Any disturbed contamination will be managed and reported in accordance with the <i>Contaminated Sites Act 2003</i>.</p>
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Avoid storage of chemical and hydrocarbons in the P1 and P2 Public Drinking Water Source Area (PDWSA) of the South Dandalup Dam

Catchment Area where practicable.

Environmentally hazardous material releases will be managed in accordance with Worsley's Spill Management Procedures for all activities including but not limited to construction of river crossings, mining and exploration activities.

Construction of fuel containment infrastructure will be in accordance with Australian Standards for fuel storage AS1940-2017 – The Storage and Handling of Flammable and Combustible Liquids.

Infrastructure will be periodically inspected and maintained to prevent failures to the wider environment.



8.4 INLAND WATERS

Key Environmental Factor
Inland Waters
EPA Objective
To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected.
Key Impacts and Risks
Unapproved ground disturbance activities; release of hazardous materials to the South Dandalup Dam Catchment Area and Augustus River; contingency mining activities impacting the Freshwater Lake and associated Carter’s Freshwater Mussel; disturbance to low-lying topographical areas in the vicinity of rivers and creeks; Acid Sulfate Soils; and disturbance to groundwater and surface water reliant receptors
Relevant Conditions of Ministerial Statement
MS 0719 2006: Commitment 1 – Water Resource: To ensure that the environmental values of surface and groundwater resources are maintained and protected from adverse impacts of bauxite mining activities and construction of bauxite transport corridors. Conditions 7, 12 and 13.
Relevant policy and guidance
EPA Policy and Guidance
<ul style="list-style-type: none"> • Environmental Factor Guideline – Inland Waters (EPA, 2018). Other
Policy and Guidance
<ul style="list-style-type: none"> • Preventing acid and metalliferous drainage – Leading practice sustainable development program for the mining industry (DIIS, 2016); • Western Australian water in mining guidelines (DoW, 2013); • Water Quality Protection Note 15 – Basic raw materials extraction (DWER, 2019b); • Water Quality Protection Note 44 – Roads near sensitive water resources (DoW, 2006); • Water Quality Protection Note 52 – Stormwater management at industrial sites (DoW, 2010); • Water Quality Protection Note 81 – Tracks and trails near sensitive water resources (DoW, 2015); • Water Quality Protection Note 83 – Infrastructure corridors near sensitive water resources (DoW, 2007); • WA Environmental Offsets Policy (GoWA, 2011a); and • WA Environmental Offsets Guidelines (GoWA, 2014).



Relevant Topic-Specific ERD Environmental Sub-Plans				
<ul style="list-style-type: none"> E04 – Protected Areas Plan E07 – Water Management Plan 				
Management target	Management Actions (Development of Further Measures / Actions)	Monitoring	Timing / Frequency of actions	Reporting
Riparian vegetation clearing				
No clearing of riparian vegetation to occur outside of the development envelope during and attributable to construction.	Footprint to avoid low-lying topographical areas in the vicinity of rivers and creeks. Management buffers around streams and riparian zones in accordance with the Protected Areas Plan (with the exception of essential infrastructure crossings to access new mining areas).	All clearing areas must be surveyed after clearing to confirm the area cleared is within the approved area and for entry into the clearing database.	Post-clearing.	Worsley to report any unauthorised clearing as soon as practicable after it is identified.
No clearing of vegetation in Protected Areas.				To be included in Worsley's Annual Reporting with the location and area of vegetation cleared.
Decline of aquatic fauna				
No decline in aquatic fauna.	Avoid clearing activities on the edges of water courses (except where haul crossings are required), management buffers to be maintained by the Protected Areas Plan.	All clearing areas must be surveyed after clearing to confirm the area cleared is within the approved area and for entry into the clearing database.	Post-clearing.	Worsley to report any unauthorised clearing as soon as practicable after it is identified. To be included in Worsley's Annual Reporting with the location and area of vegetation cleared.
Riverbank erosion and sedimentation management				
No erosion and sediment discharges off the Project area.	Installation of water management infrastructure including silt curtains during the dry season. No clearing activities on the edges of water courses (except for construction and access to the haul road bridge), management buffers to be included in the Protected Areas Plan. Assessment of the river crossing	Inspection of water management infrastructure and erosion and sediment controls. Monitoring of upstream and downstream surface water during construction to measure turbidity and EC changes prior, during and following construction.	Daily Prior, during and following construction	To be included in the Project Annual Reporting with the location and the impacted area.



<p>locations and designs will take into account bank stability and hydraulic studies to ensure bridge designs avoid excessive erosion and scouring.</p> <p>Detailed bridge designs will ensure erosion protection measures on the riverbanks are adequate to deal with modelled predictions.</p>	<p>Visual inspection of offsite discharges following rainfall events.</p>	<p>As required</p>
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Decline in surface water and groundwater quality values

<p>Disturbance and excavation of ASS in low-lying areas for river crossings is limited and relatively localised.</p> <p>No impacts from disturbance of ASS.</p> <p>Minimal impacts to groundwater salinity and water levels.</p>	<p>If ASS material is identified and excavated as part of construction activities, it must be managed in accordance with the ASSMP.</p> <p>Construction footprint to avoid low-lying topographical areas in the vicinity of rivers and creeks excluding bridge construction footprint. Management buffers around water courses are incorporated into planning.</p> <p>Progressive rehabilitation of disturbed land.</p>	<p>Monitoring of upstream and downstream surface water during construction to measure pH, turbidity and acidity changes prior, during and following construction.</p> <p>Ongoing groundwater monitoring with investigation trigger levels developed for mining areas to monitor salinity increases.</p> <p>Regular sustainable yield testing for all production bores.</p> <p>Monitoring of groundwater levels as per the adaptive Worsley Water Management Plan (Appendix E7) and development of investigation trigger levels for the protection of sensitive receptors interacting with shallow aquifers in the form of TARPs.</p>	<p>As required as per the ASSMP</p>	<p>Any disturbance of contamination will be reported in the Project Annual Reporting.</p> <p>Any disturbed contamination will be managed and reported in accordance with the <i>Contaminated Sites Act 2003</i>.</p>
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Contamination from spills and leaks

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<p>On-site management measures employed for chemical and hydrocarbon management, along with spill management procedures ensure impacts related to contamination of soils are adequately managed.</p>	<p>Construction of bridge works will be limited to the drier months to avoid interference with surface flow and increased stream flow. Where not practicable, appropriate mitigation methods will be employed to limit potential impact.</p>	<p>Inspections of chemical and hydrocarbon storage infrastructure. Weekly</p> <p>Visual inspections of hazardous materials storage, handling and disposal areas to ensure compliance with safe use practices. Weekly</p>	<p>Maintain inventory of hazardous materials storage including type, volume, and Material Safety Data Sheets.</p> <p>Maintain a register of spills and leaks including location, date, nature of material spilt and remedial action</p>
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8.5 AIR QUALITY

Key Environmental Factor

Air Quality

EPA Objective

To maintain air quality and minimise emissions so that environmental values are protected.

Key Impacts and Risks

Increase of particulate and combustion emissions; lack of adequate dust management

Relevant Conditions of Ministerial Statement

MS 0719 2006:

Commitment 1 – Water Resource: To ensure that the environmental values of surface and groundwater resources are maintained and protected from adverse impacts of bauxite mining activities and construction of bauxite transport corridors.

Condition 14.

Relevant policy and guidance

EPA Policy and Guidance

- Environmental Factor Guideline – Air Quality (EPA, 2020b); and
- Guidance Statement No. 3 – Separation Distance Between Industrial and Sensitive Land Uses (EPA, 2005). Other Policy

and Guidance

- National Environment Protection (Ambient Air Quality) Measure (NEPC, 2016);
- Air Quality Modelling Guidance Notes (DoE, 2006);
- Guideline – Air Emissions, draft for external consultation (DWER, 2019a);
- A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities (DEC, 2011); and
- Approved methods for the modelling and assessment of air pollutants in New South Wales, Sydney (NSW EPA, 2017).

Relevant Topic-Specific ERD Environmental Sub-Plans

- E08 – Dust Management Plan – Bauxite Mining and Transport
- E09 – Air Quality and Dust Management Plan – RLA

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Management target	Management Actions (Development of Further Measures / Actions)	Monitoring	Timing / Frequency of actions	Reporting
Dust generation				
No negative impact to health or safety as a result of reduced air quality.	<p>Areas requiring soil stabilisation will be treated as soon as practicable.</p> <p>Water tankers to be available to dampen exposed surfaces within construction and laydown areas.</p>	<p>Visual monitoring of excessive dust to be conducted during ground disturbance and construction vehicle activities.</p>	<p>During ground disturbing activities or post a dust complaint notification</p>	<p>Review and assessment of the effectiveness of the Air Quality and Dust Management Plan through revision of and reporting against community complaints and monitoring data.</p>
No incidents or complaints of impact to health/safety as a result of dust.	<p>Adequate signage of works in progress to be posted in visible areas.</p> <p>Dust generating activity to be minimised during days with high winds.</p>	<p>In the event of a complaint made to the administering authority about airborne contaminants generated in carrying out the authorized activity in the Project area, monitoring will be undertaken, and management measures will be revised and applied.</p>		
No fugitive dust emissions outside of the development footprint.	<p>Inform nearby receptors that activities may cause excessive dust.</p> <p>Limiting vegetation and soil clearing, so as to minimise the area of exposed soil that may generate dust.</p> <p>Manage activities in accordance with the ambient air quality targets specified in the DWER Part V operational licence, and related requirements outlined in the Dust Management Plan (where applicable).</p> <p>Flexible planning to take into account proactive response to meteorological conditions, as per the Dust Management Plan, including:</p> <p>Delaying or avoiding blasting if meteorological conditions (wind) are likely to result in dust emissions impacting on the amenity of nearby sensitive receptors.</p> <p>Avoidance of potentially high dust generating activities such as topsoil stripping and placement during unfavourable weather conditions (dry and strong winds).</p>	<p>A complaint register which will be maintained.</p> <p>Any air quality monitoring records including weather information will be retained for a period of five years.</p> <p>Any exceedance in air quality trigger limits will be managed through the incident management process.</p>		



Dust mitigation for the Refinery in accordance with the Air Quality and Dust Management Plan, including:

Daily management of BRDAs including ploughing/amphirolling/water carts/dust suppressant products and monitoring against Air NEPM criteria; and Maintaining dust monitors and store monitoring data to allow assessment of compliance.

Dust management and awareness training for identified personnel.

Watering of overburden stockpiles if dust lift-off is visible.

Regular watering of haul roads.

Watering or chemical treatment of haul roads to minimise wheel-generated dust.

Watering of exposed areas by water trucks and the use of low volume water sprays at dust generating points and over material/soil stockpile.

Progressive clearing to minimise the area of potential dust generating areas subject to wind erosion.

Restricting the speed of onsite traffic to minimise wheel generated dust.

Avoid burning cleared vegetation, where feasible alternatives exist.

Emissions



Maintain efficiency of the transport fleet through implementation of a robust scheduled maintenance program and reducing idling and waiting times where feasible.
Ensuring all vehicles are suitably fitted with exhaust systems that minimise gaseous and particulate emissions to meet vehicle design standard



8.6 SOCIAL SURROUNDINGS

Key Environmental Factor
Social Surroundings
EPA Objective
To protect social surroundings from significant harm.
Key Impacts and Risks
Reduced visual amenity; disturbance to known Aboriginal and European heritage; and vibration and noise disturbance to nearby receptors
Relevant Conditions of Ministerial Statement
MS 0719 2006: Commitment 3 – Noise and Vibration: To comply with the statutory requirements so that the amenity of nearby residences is protected from noise impacts resulting from mining activities.
Relevant policy and guidance
EPA Policy and Guidance <ul style="list-style-type: none"> • Environmental Factor Guideline – Social Surroundings (EPA, 2016b); • Guidance Statement No. 3 – Separation Distance Between Industrial and Sensitive Land Uses (EPA, 2005); and • Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans (EPA, 2021b). Other
Policy and Guidance <ul style="list-style-type: none"> • Environmental Protection (Noise) Regulations 1997 (Noise Regulations); • <i>Aboriginal Heritage Act 1972</i>; • <i>Conservation and Land Management Act 1984</i> (CALM Act); • <i>Visual Landscape Planning in Western Australia: A manual for evaluation, assessment, siting and design</i> (Western Australian Planning Commission 2007); • WA Environmental Offsets Policy (GoWA, 2011a); and • WA Environmental Offsets Guidelines (GoWA, 2014).
Relevant Topic-Specific ERD Environmental Sub-Plans
<ul style="list-style-type: none"> • E08 – Dust Management Plan – Bauxite Mining and Transport • E09 – Air quality and Dust Management Plan – RLA



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- Appendix J1 – Worsley Alumina Mine Expansion Air Quality Assessment
 - Appendix K5 – CBME Noise Screening Assessment
 - Appendix K7 – Landscape and Visual Impact Assessment (BRDA extension)
 - Appendix L01 – South32 Worsley Alumina Biodiversity Offsets Plan
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Management target	Management Actions (Development of Further Measures / Actions)	Monitoring	Timing / Frequency of actions	Reporting
Noise and vibration emissions				
<p>No exceedance of construction noise limits in accordance with Environmental Protection (Noise) Regulations 1997.</p> <p>Compliance with the Noise Regulations (Regulation 13) during construction of infrastructure.</p> <p>No unauthorised out of hours noise associated with construction.</p>	<p>Unless otherwise approved by local government authorities, undertake all construction works during standard construction hours only, defined as 7 am to 7 pm on days other than Sundays and Public Holidays.</p> <p>Noise management and awareness training for relevant personnel.</p> <p>Appropriate selection of construction processes/methodologies and equipment will be used to minimise the generation of noise.</p> <p>Unnecessary reviving of engines and switch off equipment when not required.</p> <p>Where appropriate, metal surfaces subject to impacts from heavy objects (such as rock dropping into empty truck trays, or metal grates on road ramps etc.) should be lined with rubber impact protection to minimise impact noise where possible and the drop height of material should be minimised.</p> <p>Limiting vehicle speeds in critical areas both on and off site.</p>	<p>Noise monitoring for works outside of standard construction hours (if required).</p>	<p>If required; post noise related complaints</p>	<p>Establish or use established complaint register to record noise and vibration complaints, including location, date, time, nature of complaint and complainant details.</p> <p>Complaints will be investigated, and the complainant contacted as soon as practicable.</p> <p>Outcomes of the investigation will be reported in the register and reported in the Project Annual Reporting including management measures implemented.</p> <p>Noise and vibration management issues where identified will be included in the contractor’s monthly report.</p>
Disturbance to heritage and tourism areas				

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<p>Disturbance to registered or potential heritage site does not exceed approved limits.</p> <p>No avoidable disturbance to Aboriginal objects identified or unearthed during construction activities.</p>	<p>Manage activities in accordance with the Cultural Heritage Management Plan (CHMP), existing Aboriginal heritage agreements, approvals and consents obtained under the AHA. This includes ongoing consultation with GKB traditional owners.</p>	<p>Record number and description of any Aboriginal objects identified during construction activities.</p> <p>Initial ground disturbance and excavation work to be monitored by Traditional Owners and a 'stop work' procedure will be in place if heritage</p>	<p>As required in accordance with the CHMP</p>	<p>Report any new Aboriginal objects identified during construction activities to the DPLH.</p> <p>Compliance with these measures to be documented and reported in the Project Annual Reporting.</p>
	<p>Consultation with the local community and key stakeholders regarding European heritage values and tourism areas.</p> <p>Minimise physical impacts to known Aboriginal and European heritage locations.</p> <p>Maintain a buffer of at least 200 m to the Bibbulmun Track.</p> <p>Management of heritage values as per the Cultural Heritage Management Plan (Worsley 2020) and Aboriginal Heritage Site Management Procedure (Worsley 2014).</p> <p>Compliance with the Worsley Protected Areas Procedure.</p> <p>Erect barriers and/or signage to protect known sites where this is culturally appropriate.</p> <p>Excavation work to be monitored by Traditional Owners and a 'stop work' procedure in place if heritage artefacts are uncovered.</p> <p>Facilitate programmes to increase Worsley personnel and Worsley corporate staff awareness of cultural values as managed under the CALM Act.</p> <p>Aboriginal Heritage Survey data is added to Worsley Alumina's GIS database and LandAssist.</p> <p>Cultural heritage training for all contractors.</p>	<p>artefacts are uncovered.</p>		

Reduced visual amenity

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Construction activities are managed to minimise visual amenity impacts.	Where feasible avoid establishing infrastructure in areas that are highly visible to the public. Minimise vegetation clearing.	Construction activities are managed to minimise visual amenity impacts.	As required	Maintain record of complaints received. Complaints to be documented and reported in the Project Annual Reporting.
	Maintain and plant vegetation			



buffers/screening where infrastructure are noticeable and permanently visible to the public (including native species, where practicable).

Maintain tidy construction areas.

Waste must be managed to prevent littering.

Progressively rehabilitate disturbed areas as per the BFMP and Rehabilitation Standard.

Select the design and colour of buildings and other infrastructure to provide a cohesive appearance with the surrounding landscape.

Access roads will be aligned to avoid a direct view of operations, where possible.

Changes to land use

<p>Minimise changes to land use where possible.</p>	<p>Compliance with the land use and management requirements as stated in the Mine Closure Plan (Worsley 2021e).</p> <p>Final land uses of other forested areas are expected to be consistent with the BFMP.</p> <p>Rehabilitate all WJV-owned private land for re-sale or re-integration into the State Conservation Estate in accordance with offset arrangements; and</p> <p>Implementation of the BBM Traffic Management Plan and ensure compliance with State and National controls for road going vehicle management, where required</p>	<p>Inspections of rehabilitation and land management.</p>	<p>Weekly</p>	<p>Compliance with these measures to be documented and reported in the Project Annual Reporting.</p>
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8.7 GHG EMISSIONS

Key Environmental Factor
GHG Emissions
EPA Objective
To reduce net greenhouse gas emissions in order to minimise the risk of environmental harm associated with climate change.
Key Impacts and Risks
Not meeting reduction of emissions on a five yearly basis in line with the targets;
Relevant Conditions of Ministerial Statement
MS 0719 2006: Condition 6.
Relevant policy and guidance
EPA Policy and Guidance <ul style="list-style-type: none"> • Environmental Factor Guideline – Greenhouse Gas Emissions (EPA, 2020c); • Instructions on how to prepare EP Act Part IV Environmental Management Plans (EPA, 2021b); and • Content of a Greenhouse Gas Management Plan (EPA, 2020a) Other Policy and Guidance <ul style="list-style-type: none"> • <i>National Greenhouse and Energy Reporting Act 2007 (NGER Act);</i> • <i>National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015;</i> • <i>National Greenhouse and Energy Reporting Regulations 2008;</i> • <i>Emissions Reduction Fund and associated Carbon Credits (Carbon Farming Initiative) Rule 2015;</i> • <i>Greenhouse Gas Emissions Policy for Major Projects (GoWA, 2019);</i> • <i>Western Australian Climate Policy (GoWA, 2020);</i> • <i>WA Environmental Offsets Policy (GoWA, 2011a); and</i> • <i>WA Environmental Offsets Guidelines (GoWA, 2014).</i>



Relevant Topic-Specific ERD Environmental Sub-Plans

- E10 – Greenhouse Gas Management Plan

Management target	Management Actions (Development of Further Measures / Actions)	Monitoring	Timing / Frequency of actions	Reporting
The qualities of the air environment that are conducive to protecting the health and biodiversity of ecosystems and human health and wellbeing.	<p>Avoid burning cleared vegetation, where feasible alternatives exist.</p> <p>Ensuring all vehicles are suitably fitted with exhaust systems that minimise gaseous and particulate emissions to meet vehicle design standards.</p> <p>Maintain all vehicles and machinery in satisfactory condition to minimise emission of pollutants into the atmosphere.</p> <p>Revegetate cleared areas which are no longer required for construction to naturally increase GHG (e.g., CO2) intake from the atmosphere.</p> <p>Compliance with the Safeguard Mechanism to maintain emissions within the Worsley Safeguard Mechanism Baseline.</p> <p>Continue to identify and assess GHG emissions reduction opportunities in accordance with adaptive management processes.</p> <p>Preventative maintenance to maintain current GHG emission levels and identify opportunities to minimise GHG emissions.</p>	Undertaking routine GHG emissions monitoring in accordance with the <i>National Greenhouse and Energy Reporting Act 2007</i> and National Greenhouse and Energy Reporting Regulations 2008.	Monthly data collation for an annual report	<p>Undertaking routine GHG reporting in accordance with the <i>National Greenhouse and Energy Reporting Act 2007</i> and National Greenhouse and Energy Reporting Regulations 2008.</p> <p>Annual compliance reporting and non-conformance/incident reporting in accordance with GHG Management Plan.</p>

9. STAKEHOLDER CONSULTATION

Stakeholder consultation has progressed as part of the development of the Proposal and as part of the publication and assessment of the ERD. The stakeholder consultation work completed as part of the ERD can be found in ERD Section 3 and is not repeated here.

Table 9 identifies stakeholders relevant to the construction environmental management, outlines stakeholder engagement activities, and Worsley Alumina’s response. Worsley Alumina is consulting with Newmont Boddington Gold, the Boddington community, neighbours and the Shire of Boddington and presenting an overview of the Nullaga Project. Comments with the Shire of Boddington are generally around road closures in vicinity of the Nullaga Project. Regular articles on Worsley’s projects and operations are included within the Boddington News.

An ethnographic survey of the haul road has been conducted by the South-West Aboriginal Land and Sea Council in 2023 to support an application to disturb a registered heritage site (Hotham River).

Identification and consultation of additional stakeholders specific to the Nullaga Project and future mining stages is ongoing and will occur prior to commencement works.

Table 9: Stakeholder Engagement Summary

Stakeholders	Comments Received	Worsley Alumina Response
Newmont Boddington Gold	<ul style="list-style-type: none"> Haul road, Bridge and operational and services interfaces Relocation of services infrastructure Interfaces discussion on 34 Mile Brook Rd Crossing, Bauxite Stockpile, Dam areas 	<ul style="list-style-type: none"> Ongoing consultation relating to impacts Services and Technical Interface meetings Presentations on services relocation and access to works. Investigate alternative access concepts
Shire of Boddington	<ul style="list-style-type: none"> Planned road closure and impact to stakeholders and tourism sites Commitment to meeting agreed outcomes 	<ul style="list-style-type: none"> Ongoing consultation on the project Feedback provided regularly on agreed arrangements.
South-West Aboriginal Land and Sea Council	<ul style="list-style-type: none"> Activity Notice was submitted, and South-West Aboriginal Land and Sea Council have responded that an ethnographic survey is required. 	<ul style="list-style-type: none"> An ethnographic survey has been conducted in March 2023 and a report is being drafted.
Local residents and community public consultation forums	<ul style="list-style-type: none"> General enquires about the Project design and impacts. 	<ul style="list-style-type: none"> Ongoing consultation on the project

10. TERMS AND DEFINITIONS

For the purposes of this document, the following terms and definitions apply:

Abbreviation / Acronym / Term	Meaning
AHA	<i>Aboriginal Heritage Act 1972 (WA)</i>
ASS	Acid Sulfate Soils
ASSMP	Acid Sulfate Soils Management Plan
BBM	Boddington Bauxite Mine
BFMP	Biodiversity and Forest Management Plan
BIOSTAT	BIOSTAT Pty Ltd
BRDA	Bauxite Residue Disposal Area
BTC	Bauxite Transport Corridor
CBME	Contingency Bauxite Mining Envelope
CEMP	Construction Environmental Management Plan
CLC	Community Liaison Committee
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
DAWE	Department of Agriculture, Water and the Environment (Cth)
DBCA	Department of Biodiversity, Conservation and Attractions
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DEC	Department of Environment and Conservation
DEWHA	Department of Environment, Water, Heritage and the Arts
DMIRS	Department of Mines, Industry Regulation and Safety
DMP	Department of Mines and Petroleum
DoE	Department of Environment
DoEE	Department of Environment and Energy (now DAWE)
DoW	Department of Water
DPAW	Department of Parks and Wildlife
DPLH	Department of Planning, Lands and Heritage
DSEWPAC	Department of Sustainability, Environment, Water, Population and Communities (now DAWE)
DWER	Department of Water and Environment Regulation
EMLG	Worsley Environmental Management Liaison Group
EMP	Environmental Management Plan
EMS	Environmental Management System
EP Act	<i>Environmental Protection Act 1986 (WA)</i>

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Abbreviation / Acronym / Term	Meaning
EPA	Environmental Protection Authority
ERD	Environmental Review Document
ERM	Environmental Resource Management
FHZ	Fauna Habitat Zone
GDE	Groundwater Dependent Ecosystem
GHD	GHD Pty Ltd
GHG	Greenhouse Gas
GKB	Gnaala Karla Booja
GoWA	Government of Western Australia
ha	Hectares
HSEC	Health, Safety, Environment and Community
km	Kilometre
KPI	Key Performance Indicator
MNES	Matters of National Environmental Significance
MS 719	Ministerial Statement 719
NEPM	National Environment Protection Measure for Ambient Air Quality 2003
NGER	<i>National Greenhouse and Energy Reporting Act 2007</i>
NO _x	Nitrogen Oxide
Nullaga Project	Nullaga Mine Development Project
OBC	Overland Bauxite Conveyor
PAA	Primary Assessment Area
PASS	Potential Acid Sulfate Soils
PDWSA	Public Drinking Water Source Area
PEC	Priority Ecological Community
PHT	Potential Habitat Tree
PM10	Particulate matter which is 10 micrometres or less in diameter
Project	Worsley Bauxite-Alumina Project
RLA	Refinery Lease Area (Crown Lease I150306)
RIWI Act	<i>Rights in Water and Irrigation Act 1914 (WA)</i>
SO ₂	Sulfur Dioxide
SRE	Short-range Endemic
SRI	Significant Residual Impact
TARP	Trigger Action Response Plan

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Abbreviation / Acronym / Term	Meaning
TEC	Threatened Ecological Community
TEOM	Tapered Element Oscillating Microbalances
tpa	Tonnes per annum
WA	Western Australia
WAPL	Worsley Alumina Pty Ltd
WJV	Worsley Alumina Joint Venture. The WJV includes South32 Aluminum (RAA) Pty Ltd, South32 Aluminium (Worsley) Pty Ltd, Japan Alumina Associates (Australia) Pty Ltd and Sojitz Alumina Pty Ltd
WMDE	Worsley Mining Development Envelope
Worsley Alumina	South32 Worsley Alumina Pty Ltd

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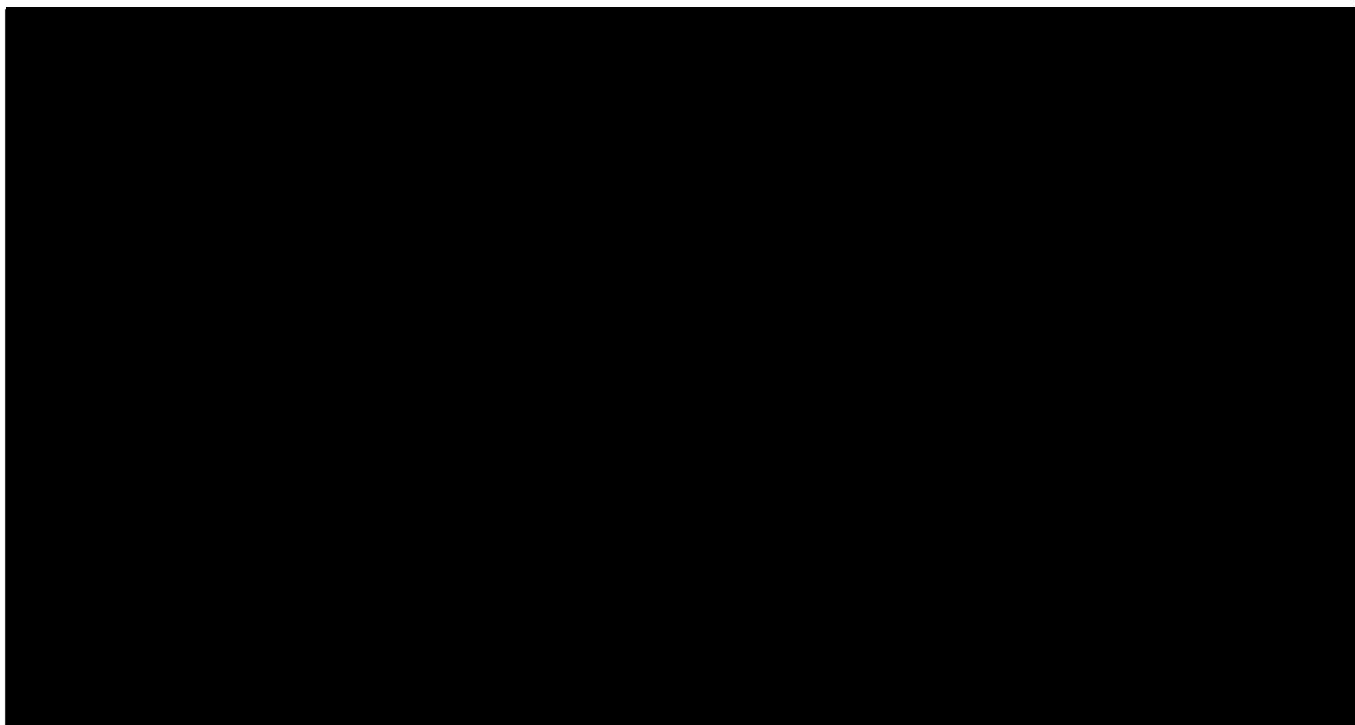
APPENDICES



Appendix A: Acid Sulphate Soil Management Plan



Operation:	South32 Worsley Alumina Boddington Bauxite Mine
Project Number:	A700.C.71183
Document Number:	WOR-71183-FS-PM-PLN-0005
Document title:	Acid Sulfate Soil Management Plan



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1 EXECUTIVE SUMMARY

This Acid Sulfate Soil Management Plan (ASSMP) identifies areas within the Nullaga Project Area where acid sulfate soils (ASS) are likely to be disturbed by construction works and provides management measures to avoid and/or mitigate potential environmental impacts. The Nullaga Project Area forms Stage 1 of the Worsley Mine Expansion Revised Proposal (the Revised Proposal).

Relevant summary information is provided in Table 1-1.

Table 1-1: ASSMP summary information

Proposal name	Worsley Mine Expansion – Revised Proposal
Proponent name	South32 Worsley Alumina Pty Ltd (ACN: 008 905 155) [REDACTED]
Ministerial Statement number	Ministerial Statement 719
Purpose of the ASSMP	The purpose of this ASSMP is to meet the commitments of the ERD and to provide Worsley Alumina and its contractors with the information required to address potential risk associated with the disturbance of ASS.
Key environmental factor/s, outcome/s and objective/s	The objective of the ASSMP is to prevent any acid generation from in situ materials due to ground disturbing activities and to manage any disturbance to minimise the environmental impacts. The risk of encountering ASS across the Nullaga Project Area is generally very low. ASS has been identified at the Hotham River and may be disturbed by excavation and dewatering during the construction of the bridge at this location. With the implementation of avoidance, management and monitoring measures, ASS disturbances are expected to result in minimal ecological impact.
Proposed construction date	2025-2027 (Stage 1 - Nullaga Mine Development Project) Future stage(s) construction dates to be determined
ASSMP required pre-construction?	Yes

2. INTRODUCTION

2.1 PROJECT BACKGROUND

South32 Worsley Alumina Pty Ltd (Worsley Alumina; the Proponent) operates the Worsley Bauxite-Alumina Project (the Proposal; the Project) in the southwest of Western Australia (WA) under *Environmental Protection Act 1986* (EP Act) Part IV Ministerial Statement (MS) 719 and EP Act Part V operating licences L4504/1981/17 (Worsley Alumina Refinery) and L5960/1983/11 (Boddington Bauxite Mine). The Project is one of the largest bauxite mining and alumina refining operations in the world, comprising the Boddington Bauxite Mine (BBM), an existing conveyor, the Worsley Alumina Refinery (the Refinery) near Collie and port operations at Bunbury Port.

In April 2006, Worsley Alumina was granted approval under Part IV of the EP Act via MS719 for the “Worsley Alumina Production to Maximum Capacity of 4.4 million tonnes per annum (Mtpa) Alumina and Associated Mining” (the Proposal).

Worsley Alumina proposes to continue operations by expanding existing activities with the next phase of bauxite mining, providing access to future bauxite reserves and resources to sustain production at the Refinery. This expansion is referred to as the Worsley Alumina Mine Expansion Revised Proposal (the Revised Proposal).

A Draft Environmental Review Document (ERD) has been submitted to the Environmental Protection Authority (EPA) for the Worsley Mine Expansion. The Revised Proposal ERD has undergone a public comment period, as a consultative step to achieve a consolidated, contemporised Ministerial Statement.

A critical component of the mine expansion is the development of haul roads to access new resources at the Nullaga mining area. The preferred haul road route is contained within the Nullaga Project area (Figure 1) which forms Stage 1 of the Worsley Mine Expansion. The haul road will require a bridge and culvert crossing at the Hotham River, and culvert crossings of drainage lines and tributaries along the route (Figure 2). Previous desktop studies for the Mine Expansion (GHD 2020) identified haul road construction in low lying areas and specifically water course crossings as having the potential to disturb Acid Sulfate Soils (ASS) if present.

2.2 SCOPE OF THE ASSMP

Within the ERD is a commitment to develop a Construction Environmental Management Plan (CEMP) with an associated Acid Sulfate Soil Management Plan (ASSMP) for the haul road and specific to construction of river and stream crossings.

The scope of this ASSMP includes:

- Identification of areas within the Nullaga Project area where construction activities may disturb ASS and therefore contribute to potential environmental impacts.
- Description of the potential environmental impacts associated with ASS disturbance and dewatering operations (if required);
- Definition of the appropriate controls required for the handling of ASS if encountered during scheduled site works, to minimise potential impacts; and
- Definition of the systematic processes to manage potential environmental impacts associated with ASS during the term of the Project.

WOR-71183-FS-PM-PLN-0005- ACID SULFATE SOIL MANAGEMENT PLAN

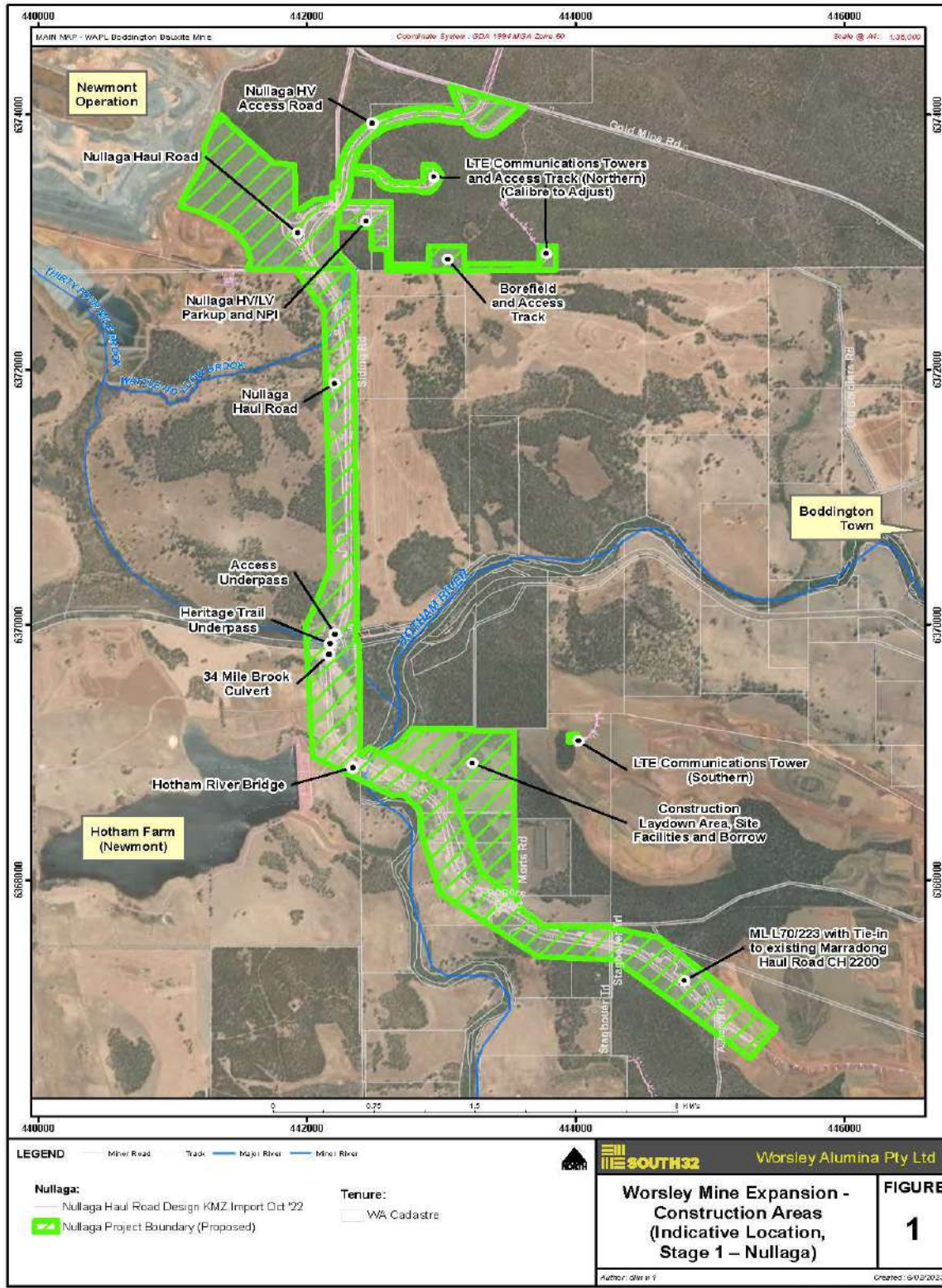


Figure 1: Nullaga Project Area

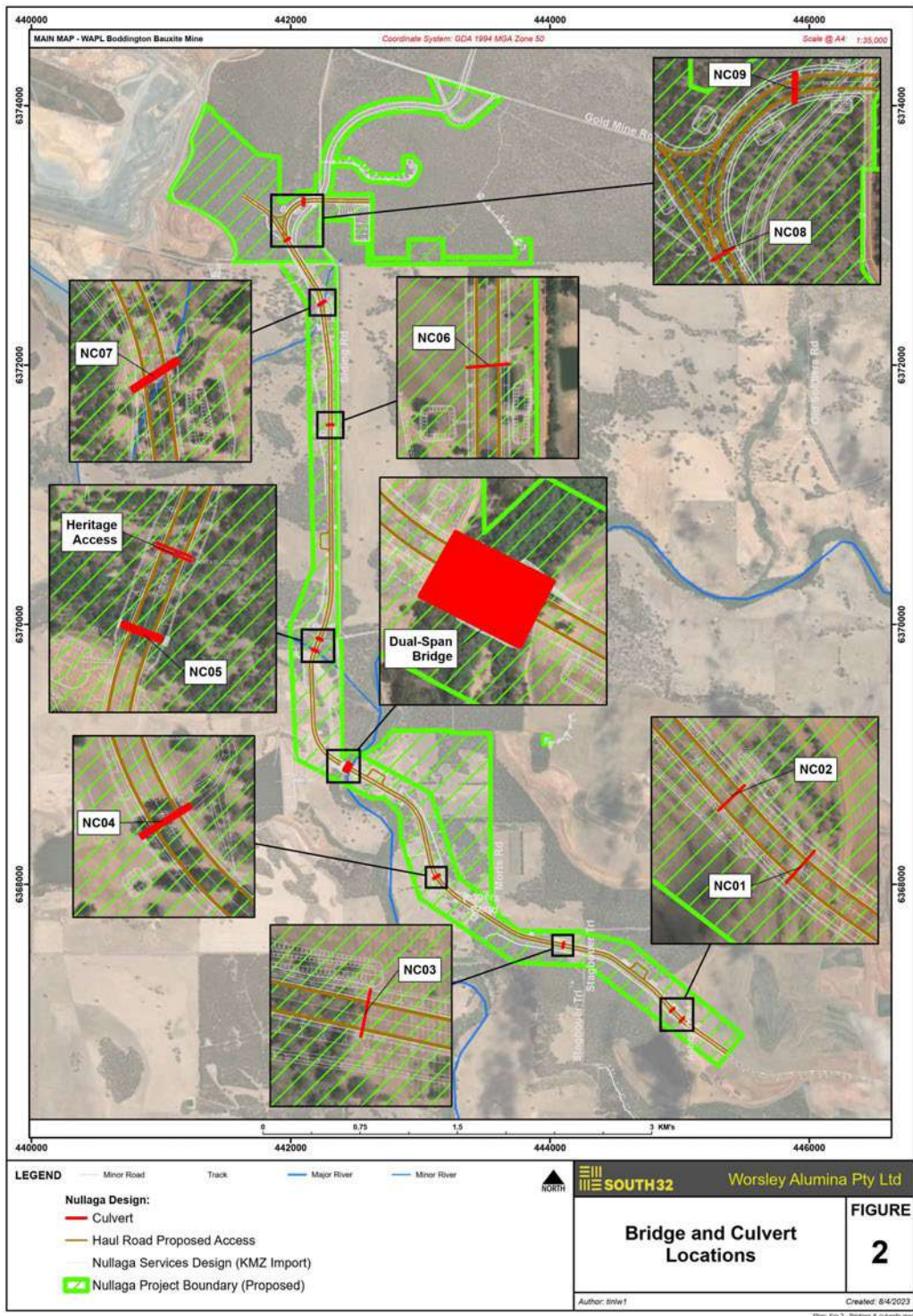


Figure 2: Bridge and Culvert Locations

2.3 PURPOSE AND OBJECTIVE

The purpose of this ASSMP is to meet the commitments of the ERD and to provide Worsley Alumina and

its contractors with the information required to address potential risk associated with the disturbance of ASS.

The objective of the ASSMP is to prevent any acid generation from in situ materials due to ground disturbing activities and to manage any disturbance to minimise the environmental impacts. The main mechanisms in the ASSMP to achieve this objective include:

- Provide an operational methodology, including contingency planning, for the sampling, interpretation, reporting and mitigation measures to determine:
 - Presence or absence of ASS in the construction areas for infrastructure crossings over the Hotham River and other high-risk drainage lines;
 - Lateral and vertical extent of any ASS identified;
 - Maximum expected net acidity; and
 - ASS management/remediation options, including operational monitoring.

2.4 ENVIRONMENTAL MANAGEMENT FRAMEWORK

The CEMP provides the environmental management framework corresponding to this ASSMP. The CEMP shall be referenced for the overarching obligations associated with:

- Roles and responsibilities.
- Performance outcomes and indicators.
- Training, competency, and awareness; and
- Communication and reporting.

Additionally, South32's Global Environmental Standard will apply to environmental management measures implemented under this ASSMP. A copy of this standards is presented in Appendix A. Statutory and permitting requirements will take precedence over South32 standards, except in those cases where the South32 standards are more stringent.

2.5 NULLAGA PROJECT AREA DETAILS

The Nullaga Project Area (Stage 1 of the Worsley Mine Expansion) comprises construction of the haul road including a road bridge, culvert crossings of drainage lines and tributaries, construction access and laydown areas. Ancillary works include Western Power relocations, Telstra removals and creation of bore water pump stations and pipework.

The bridge over the Hotham River is proposed to have a dual span of approximately 70m with the bridge deck supported on piled abutments on each riverbank and on the pier. Piles will be cast to depths of more than 30m below the current ground level and will extend above the current ground surface to a design level of about RL199 m (i.e., top of piles will be about 5 to 6 m above the current ground surfaces). The piled abutments will also support filled approaches to the bridge. No piles will be installed within the normal flow course of the river. Minor shallow excavations may be required on each riverbank behind the piled abutments. The depth of such excavations is not known at this time and dewatering in these excavations may be required. Rip Rap will be installed in the river channel and on the approach and departure sides of the bridge, this will require localised excavation of materials to allow placement of the rock and any other stabilisation treatments required.

Other haul road crossings are also planned over Thirty-Four Mile Brook, Wattle Hollow Brook, and other minor drainage lines. These crossings will be achieved by installing corrugated steel pipe culverts directly in the stream/drainage path. Scour protection primarily in the form of loose dumped rock and grouted or cement stabilised rock will be installed on the bed and banks and at the ends of the culverts. Construction of these crossings will be limited as much as practicable, to drier months of the year to prevent excessive erosion and sedimentation, as well as to minimise impacts on water flows.

2.6 REGULATORY FRAMEWORK

Legislative and other requirements (relevant to ASS), their application, and administrating authority are listed and described in Table 1.1.

Legislation or Other Requirement (Australian Standards, Codes of Practice, Licences, Approvals)	Application	Responsible Department / Administrator
National Acts		
<i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	The purpose of the EPBC Act is to provide a framework for the protection of matters of national environmental significance (MNES), which includes threatened species and communities. Unmanaged disturbance of ASS may cause a significant impact on a MNES.	Australian Government – Department of Agriculture, Water and Environment
National Guidelines/Manuals/Resources		
National Environmental Protection (Assessment of Site Contamination) Measure 1999 (ASC NEPM) as amended 2013	The purpose of this guidelines to provide a national approach to the assessment of site contamination and protect human health and the environment where contamination has occurred.	Australian Government – Department of Agriculture, Water and Environment (DAWE)
Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2018	The Water Quality Guidelines provide authoritative guidance on the management of water quality for natural and semi-natural water resources in Australia and New Zealand. These guidelines have replaced the ANZECC and ARMCANZ (2000) guidelines.	National Water Quality Management Strategy (NWQMS), an Australian Government initiative in partnership with state and territory governments
Australian Soil Resource Information System (ASRIS) (http://www.asris.csiro.au/)	ASRIS provides access to the best available soil and land resource information (spatial and temporal databases) in a consistent format across Australia. It provides a scientific information infrastructure for assessing and monitoring the condition of Australia's soil and land resources	Commonwealth Scientific and Industrial Research Organisation (CSIRO)
Sullivan, L, Ward, N, Toppler, N and Lancaster, G 2018, <i>National Acid Sulfate Soils guidance: National acid sulfate soils sampling and identification methods manual</i> , Department of Agriculture and Water Resources, Canberra ACT. CC BY 4.0.	This manual provides technical and practical advice on the identification and sampling of acid sulfate soil materials. Guidance is also provided on the sampling requirements necessary to define the extent of acid sulfate soil materials in the landscape.	Australian Government – Department of Agriculture, Water and Environment
Sullivan, L, Ward, N, Toppler, N and Lancaster, G 2018, <i>National Acid</i>	The purpose of this manual is to set out the current good practice	Australian Government – Department of Agriculture,

Legislation or Other Requirement (Australian Standards, Codes of Practice, Licences, Approvals)	Application	Responsible Department / Administrator
<i>Sulfate Soils Guidance: National acid sulfate soils identification and laboratory methods manual</i> , Department of Agriculture and Water Resources, Canberra, ACT. CC BY 4.0.	acid sulfate soils laboratory analytical methods for soil samples.	Water and Environment
Shand, P, Appleyard, S, Simpson, SL, Degens, B, Mosley, LM 2018, <i>National Acid Sulfate Soils Guidance: Guidance for the dewatering of acid sulfate soils in shallow groundwater environments</i> , Department of Agriculture and Water Resources, Canberra, ACT. CC BY 4.0.	The purpose of this guidance material on groundwater dewatering in ASS landscapes is to provide technical and practical advice on managing ASS to help prevent or minimize harm to the environment	Australian Government – Department of Agriculture, Water and Environment
State Acts (Western Australia - WA)		
<i>Environmental Protection Act 1986</i>	An Act to provide for an Environmental Protection Authority, for the prevention, control and abatement of pollution and environmental harm, for the conservation, preservation, protection, enhancement, and management of the environment and for matters incidental to or connected with the foregoing.	Department of Water and Environmental Regulation (DWER)
<i>Contaminated Sites Act 2003</i>	An Act providing for the identification, recording, management, and remediation of contaminated sites, to consequentially amend certain other Acts and for related purposes.	Department of Water and Environmental Regulation
State Guidelines/Regulations/Policies (Western Australia - WA)		
Identification and investigation of acid sulfate soils and acidic landscapes 2015	<p>The purpose of this guideline is to provide practical guidance in relation to the minimum level of investigation required to:</p> <ul style="list-style-type: none"> Identify the presence or the absence of acid sulfate soil (ASS) in areas likely to be disturbed by a proposed development or other project; and, if present Define the nature and extent of ASS and the amount of existing and potential acidity it contains in order to determine appropriate management measures. <p>This document provides information on the identification and investigation of ASS.</p>	Department of Environment Regulation (current DWER)

Legislation or Other Requirement (Australian Standards, Codes of Practice, Licences, Approvals)	Application	Responsible Department / Administrator
Treatment and management of soils and water in acid sulfate soil landscapes 2015	<p>The purpose of this guideline is to provide technical and procedural advice to avoid environmental harm and to assist in achieving best practice environmental management in areas underlain by ASS.</p> <p>The guideline has also been designed to assist decision-making and provide greater certainty to the development, construction and agricultural industries, state and local government and the community when planning for activities that may disturb ASS.</p> <p>This guideline is applicable to Western Australian sites and has been developed on the basis of experience in both Western Australia and in other States.</p>	Department of Environment Regulation (current DWER)

Table 1.1: Legal And Other Requirements

2.7 ACID SULFATE SOILS

ASS are naturally occurring sediments that contain iron sulfides (mostly pyrite with typically smaller quantities of iron monosulphides (FeS)). When the pyrites within ASS oxidise (i.e., when they are exposed to air, and then combined with water), sulfuric acid leachate can be generated. Where the pH of the surrounding ground/surface water decreases, the solubility of aluminium, iron and other heavy metals can increase, leading to chemical mobilisation. The mobilisation of sulfuric acid and/or heavy metals has the potential to cause significant environmental harm to the receiving environment.

Oxidisation of ASS normally occurs when soils are changed from anaerobic to aerobic by for example, being removed from below the groundwater table (excavated) or when the groundwater table is lowered.

ASS includes Actual ASS (AASS) and potential ASS (PASS). AASS are soils in which the pyrite content present within the soil has already been fully or partially oxidised potentially generating sulfuric acid and creating acidic soil layers. PASS are soils where there is pyrite present in the soil, but the soil has not been oxidised. If disturbed, the PASS has the potential to oxidise and form sulfuric acid. AASS is generally found overlaying PASS, however both have the potential to cause environmental harm.

Acid sulfate soils are typically found in low-lying coastal areas and are referred to as “coastal ASS”. However, the conditions for forming ASS can also exist in bottom sediments of drains, dams, constructed and natural waterways, swamps and billabongs, periodically stagnant creeks, places with perched water tables and saline inland areas. These types of environments are not restricted to coastal areas. Acid sulfate soils in non-coastal areas are commonly referred to as “inland ASS” or “upland ASS”. The occurrence of inland ASS is not limited by stratigraphy or sediment age.

3. ASSESSMENT OF ASS LANDSCAPES

3.1 ACID SULFATE SOILS

National Acid Sulfate Soils guidance: National acid sulfate soils sampling and identification methods manual (DAWE, 2018a) provides a staged approach to determine the likely presence and distribution of ASS materials. This national guidance approach has been used to identify possible ASS landscapes that may be encountered by Nullaga Project Area disturbances.

This approach is also consistent with Step 1 of the investigation process outlined in *Identification and investigation of acid sulfate soils and acidic landscapes* (GoWA 2015a)

3.2 DESKTOP ASSESSMENT

3.2.1 SITE CONDITIONS AND SURROUNDING ENVIRONMENT

3.2.1.1 TOPOGRAPHY

The Nullaga Project area is characterised by a moderate to gently undulating landscape with elevations typically ranging from approximately 194 to 330 m Australian Height Datum (AHD).

In the central and western portions of the Project area the valleys are generally shallow and broad, steepening where watercourses have incised the landscape.

3.2.1.2 VEGETATION

Remnant native vegetation covers approximately 60% of the total Expansion Project area. Upland areas support tall open forests of Jarrah and other Eucalypt species, with patches of closed heath consisting of Myrtaceae-Proteaceae species.

Valley areas comprise open Wandoo woodland, which transitions to Sheoak and Eucalyptus woodlands (and tall Melaleuca shrubland) in the valley floors. Understorey, where present in the Wandoo woodland, typically comprises Acacia species.

Depressions and swamps in upland areas support a mosaic of low open woodland of Melaleuca and Banksia species, closed Myrtaceae shrubland, and sedgelands.

Review of 'Vegetation Complexes – South-West forest region of Western Australia' dataset, confirms that the following vegetation complexes occur within the Project area: Cooke, Coolakin, Dwellingup, Michibin, Murray 1, Pillenorup, Swamp, Williams, Yalanbee, and Yarragil 1.

3.2.1.3 DRAINAGE AND HYDROLOGY

The Nullaga Project Area is located in the Murray River basin and is subject to the Murray River and Tributaries Surface Water Management Area in the Hotham River sub-area. The area is proclaimed as a RIWI Act Surface Water Area (Murray River System).

The Project area is broadly to moderately dissected by valleys incised by rivers and tributaries. Watercourses intersecting the Project area comprise the Hotham River, Thirty-four Mile Brook and Wattle Hollow Brook as shown on Figure 1. Hotham River is a mainstream water course with perennial flow. Thirty-four Mile Brook is a Hotham River tributary and is designated as a significant stream although it is largely ephemeral. Wattle Hollow Brook is a tributary of Thirty-four Mile Brook and is an ephemeral drainage line.

Historical surface water monitoring programs in the Hotham River by Worsley Alumina have indicated generally neutral to alkaline conditions with electrical conductivity readings ranging between 6,500 to 21,000 $\mu\text{S}/\text{cm}$. Historical sampling programs were not designed with the objective of defining pre-construction baseline conditions upstream and downstream of the Project bridge site.

3.2.1.4 LOCAL SENSITIVE ENVIRONMENT

The receiving environment of the Project area includes various species of native flora, terrestrial fauna and aquatic species and receiving water/ aquatic environments as mentioned above.

The Hotham River, its tributaries and remnant feeder creek systems provide an important fauna movement corridor system within the current landscape of the project area. The Hotham River and tributaries traverse the Project area, travelling through areas of State managed forests, private bush and agricultural lands.

The waterways are mostly fringed by narrow disturbed native riparian and associated communities, providing important habitat for aquatic and semi-aquatic species and numerous wetland bird and frog species. These corridors also allow for the movement of ground dwelling and arboreal species.

3.2.1.5 GEOLOGY

The 1:250,000 geological map indicates that the Nullaga Project Area is predominantly located on Ferruginous duricrust (Laterite) including massive to pisolitic ferruginous subsoil, mottled clays, magnesite, reworked products of ferruginous and siliceous duricrusts, calcrete, gossan and residual ferruginous saprolite.

Quaternary age channel and flood plain alluvium (comprised of gravels, sands, silts and clays) is indicated along the key drainage paths of the Hotham River and Thirty-four Mile Brook.

To the north of the Hotham River zones of Wells Formation felsic volcanics (including lavas and tuff) are present. These deposits are largely obscured by residual soils and colluvium.

3.2.1.6 SOILS

Review of Government of Western Australia (GoWA) Soil Landscape Mapping Units has identified four soil units within the Nullaga Project Area as described in Table 3.1.

WA Soil Groups are attributed to each Soil Landscape Mapping Unit as defined by Schoknecht and Pathan (2013) which use the following criteria to differentiate Soil Groups: presence of carbonates, colour, depth to soil horizons, pH and soil structure.

Soil Landscape Mapping Unit	Name	Description	WA Soil Group	
253MuDW	Dwellingup Subsystem (Marradong)	Divides, lower to upper slopes and hillcrests. Duplex sandy gravels and loamy gravels with minor areas of shallow gravels, deep sandy gravels, yellow deep sands and yellow and pale deep sands, often gravelly.	302	Duplex sandy gravel
253QdMN	Michibin Subsystem (Quindanning)	Hillslopes containing soils formed by the weathering of fresh rock. Rock outcrop is common.	505	Brown deep loamy duplex
255DpDW	Dwellingup Subsystem	Divides, lower to upper slopes and hillcrests. Duplex sandy gravels and loamy gravels with minor areas of shallow gravels, deep sandy	302	Duplex sandy gravel

Soil Landscape Mapping Unit	Name	Description	WA Soil Group	
		gravels, yellow deep sands and yellow and pale deep sands, often gravelly.		
255DpPN	Pindalup Subsystem	Shallow minor valleys (5-20 m) with gentle side slopes (3-10%) and broad swampy floors. Soils are loamy gravels, and deep sands and non-saline wet soils on the valley floors.	302	Duplex sandy gravel

Table 3.1: Soil Landscape And Soil Mapping Units Along Haul Road

3.2.1.7 GEOMORPHOLOGY

The northern extent of the Project occurs within the Western Darling Range Zone and the southern extent within the Eastern Darling Range Zone. These geomorphological zones belong to the Avon Province and are considered relevant to the occurrence of salinity and dryland salinity issues (GHD 2020).

The Project is broadly to moderately dissected by valleys incised by rivers and tributaries. Watercourses intersecting the Project include the Hotham River and its tributary Thirty-four Mile Brook. Soils occurring in low-lying areas represent sedimentary material (clay, silt, and sand) deposited through colluvial and alluvial processes (that have infilled depressions and palaeovalleys) and are typically preserved in low-lying areas, sometimes in association with modern rivers and flow paths.

3.2.1.8 HYRDOGEOLOGY

The groundwater host rocks of the Hotham region predominantly comprise the weathered and fresh Archaean basement crystalline rocks. In addition, more recent sediments are incised into the basement rocks, coincident with existing drainage or paleo drainage lines.

The generalised hydrogeology of the Hotham area comprises three main aquifer units (GHD, 2020):

- Shallow weathered zone aquifer: comprising lateritic cap rock and shallow gravelly to sandy sediments with represents a seasonal aquifer with significant storage, infiltration and flow capability;
- Deep weathered zone aquifer (lower saprolite). An aquifer of high storage potential, but limited bulk permeability (comprising clays); and
- Fractured bedrock aquifer- permeability and yields are dependent on facture development and connectivity of the fractures, which may be significant in brittle rocks (felsic intrusive) but absent in more ductile basement rocks (e.g., shales).

In addition to the above, where drainage lines are sufficiently developed, and have eroded the basement material, sediments, typically alluvial, have accumulated in the lower lying areas. The permeability of the sediments is variably distributed and related to lithology.

Broadly, groundwater levels within all aquifers appear to follow the topography, such that groundwater level is highest in areas of highest topography and lowest in areas of lowest topography. Groundwater is recognised as providing baseflow to the major rivers and creeks of the area.

3.3 ASS RISK MAPS

The Atlas of Australian Acid Sulfate Soils was compiled by CSIRO in 2013 to provide a consistent national collation of Australia's acid sulfate soils. The atlas includes mapping of inland ASS with risk criteria derived from soils, hydrography and landscape coverages. Risk mapping from the Atlas indicates an

Extremely Low Probability of ASS Occurrence (based on a low confidence level of 6-70%) across Project disturbance area. An area mapped as having high probability of ASS (based on a low confidence level) coincides with the Hotham Farm Dam located about 450m to the south-west of the proposed Hotham River bridge site, as shown in Figure 3. This high probability area coincides with a dammed water storage and does not fall within the Project disturbance area.

3.4 PREVIOUS INVESTIGATIONS

Limited investigations by the DWER between 2003 and 2005 identified PASS (with 6.73% sulfide-S) in surface peat within a saline seep at a location approximately 1.3 km outside of the Worsley Alumina Mine Expansion. This provides evidence that favourable conditions for PASS formation are present within permanent water courses and wetlands (including those fed by saline seeps) in this region.

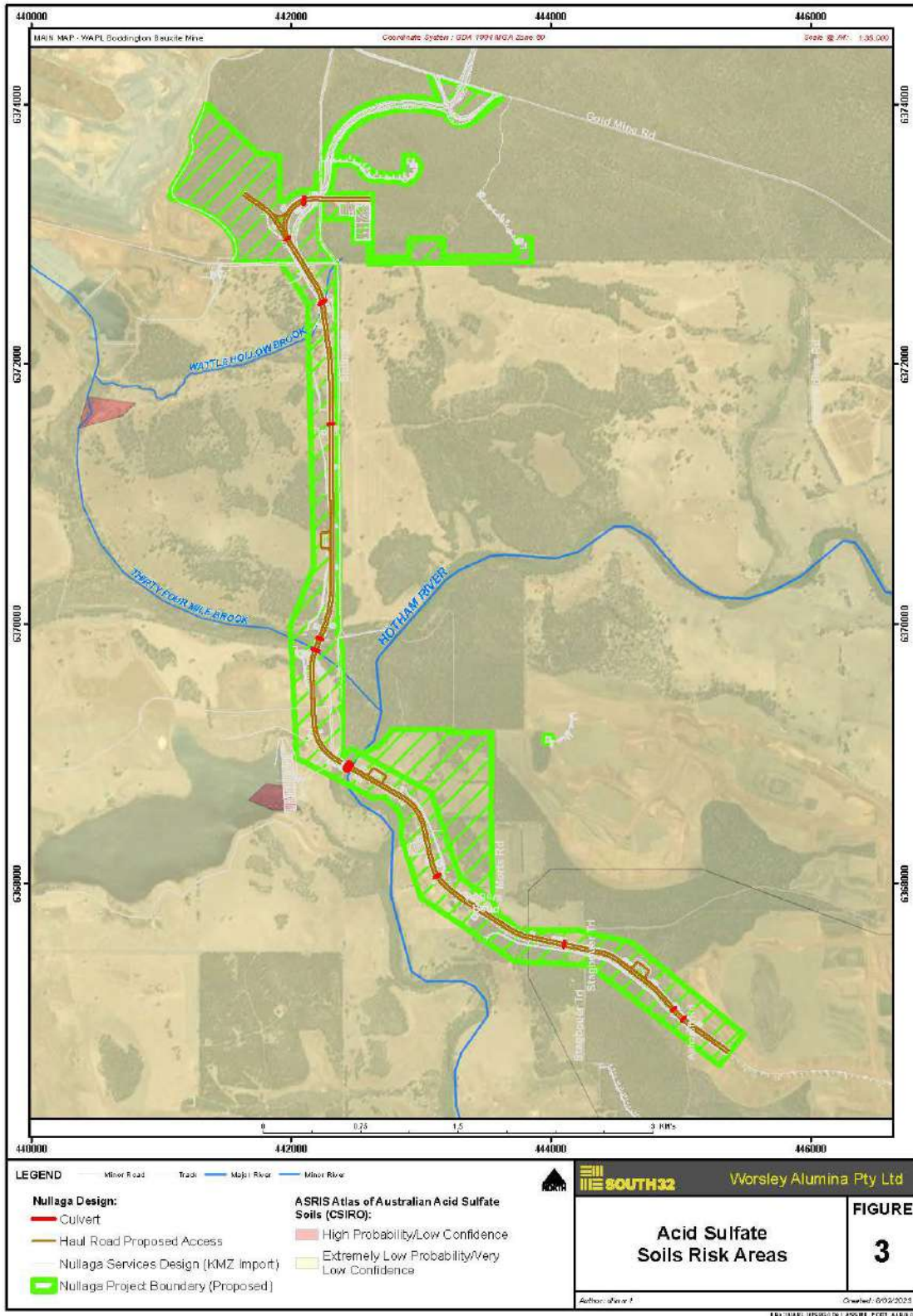


Figure 3: ASS Risk Map

3.5 SITE INSPECTION

An inspection of the proposed bridge and culvert locations was conducted for possible indicators of acid sulfate soils. Relevant observations are summarised below:

- Hotham River – Paperbarks were observed near the toe of the western riverbank and across the overflow area between the river and the eastern river bank (see Photographs 1 and 2). Paperbarks can be indicative of waterlogged conditions conducive to possible ASS formation.
- Thirty-four Mile Brook – Shallow surface water was present at the proposed culvert crossing location in November 2022 (see Photograph 3). A thin layer of organic matter was present in places within the base of the Brook suggesting seasonal flushing prevents ongoing build-up of organic matter. No other possible indicators of acid sulfate soils were observed.
- Wattle Hollow Brook and other culvert locations – These drainage lines are ephemeral and were dry in November 2022. Conditions conducive for possible ASS formation were not present at these locations.



Photograph 1: Paperbarks at Toe of Western Bank



Photograph 2: Paperbarks on Eastern Floodplain Looking Across Hotham River



Photograph 3: Thirty-Four Mile Brook Culvert Location Looking Northeast Towards Existing Crossing

3.6 IDENTIFIED AREAS OF CONCERN

Based upon the findings from the desktop review and site inspection:

- Conditions at the Hotham River are considered to have a high potential for the formation of ASS in the bed, lower banks and overflow areas. Investigation of disturbance areas at the Hotham River was recommended.
- Ephemeral conditions at the Thirty-four Mile Brook culvert crossing are less conducive to the formation of ASS. However, given the observations of surface water at this location in November and the presence of some organic matter over portions of the creek bed, limited investigation of bed sediment was recommended to confirm the absence of ASS.
- There is negligible risk of ASS formation/presence at Wattle Hollow Brook and other culvert locations. No investigations at these locations were considered to be warranted.

4. ASS INVESTIGATIONS

4.1 HOTHAM RIVER INVESTIGATION

4.1.1 INVESTIGATION SCOPE

ASS sampling and analysis was conducted by Calibre Professional Services (Calibre) as part of the geotechnical investigation at Hotham River. The scope of the ASS investigation was developed to target

proposed disturbances and meet requirements of *National Acid Sulfate Soils guidance: National acid sulfate soils sampling and identification methods manual* (DAWE, 2018a). The investigation comprised the following:

Western Bank

- Three window sampler boreholes (NUL-WS59, NUL-WS60 and NUL-WS61) to depths of 2m targeting shallow disturbances at the proposed piled abutment. Samples collected at 0.25 m depth intervals for field screening tests. On the basis to the field screening tests, samples were selected for Chromium Suite tests.
- At one of the geotechnical boreholes (NUL-BH17) located at the proposed piled abutment, samples were collected at 1m depth intervals in alluvial deposits extending below 2m. This sampling was aimed at evaluating deeper conditions should longer pile lengths is required as the design progresses. Field screening tests were conducted on recovered samples and selected samples were analysed for Chromium Suite tests.
- Two hand auger holes (ASS HA01 and ASS HA02) to depths ranging between 0.3m and 0.9m were conducted to the east of the piled abutment location following observations of wet, organic soils during formation of drilling rig access. The depth of sampling was limited by hand auger recovery. Samples were collected at 0.25 m depth intervals for field screening tests and Chromium Suite tests. ASS HA01 was converted into a temporary monitoring well to allow collection of a groundwater sample. The groundwater was tested for the analysis suite described in *Identification and investigation of acid sulfate soils and acidic landscapes* (GoWA 2015a).
- Three test pits (NUL-TP57, NUL-TP56 and NUL-TP58) to 3m depth were located near the crest of the western bank, 30m west of the crest and 70 m west of the crest, respectively. These test pits targeted conditions in the approach to the river, outside expected higher risk ASS areas. Samples were collected at 0.25 m depth intervals for field screening tests and selected samples were analysed for Chromium Suite tests.

Eastern Bank

- Three window sampler boreholes (NUL-WS62, NUL-WS63 and NUL-WS64) to depths of 1m to 2m targeting shallow disturbances at the proposed piled pier and the western extent of proposed pile. Samples were collected at 0.25 m depth intervals for field screening tests. On the basis to the field screening tests, samples were selected for Chromium Suite tests.
- One window sampler borehole (NUL-WS65) to a depth of 2m targeting the eastern extent of the proposed pier. Samples were collected at 0.25 m depth intervals for field screening tests. On the basis to the field screening tests, samples were selected for Chromium Suite tests.
- At one of the geotechnical boreholes (NUL-BH18) located at the proposed piled abutment, samples were collected at about 1m depth intervals in alluvial deposits extending below 2m. Whilst concrete bored and CFA piles are proposed, this sampling was aimed at evaluating deeper conditions should other piling methods be considered in the future. Field screening tests were conducted on recovered samples and selected samples were analysed for Chromium Suite tests.
- Two test pits (NUL-TP66 and NUL-TP67) to 3m depth were located about 20m and 40 m east of the bank crest, respectively. These test pits targeted conditions in the approach to the river outside expected higher risk ASS areas. Samples were collected at 0.25 m depth intervals for field screening tests and selected samples were analysed for Chromium Suite tests.

Investigation locations are shown on Figure 4 and factual results are presented in Appendix B.

4.1.2 INVESTIGATION FINDINGS

Western Bank

The proposed piled abutment on the western bank is located on the bank slope where surface levels range from about RL 192.7 m to RL194.3 m. Screening tests on soil samples from NUL-BH17 indicated the possible presence of PASS at a depth of about 6.3m below the ground surface. Laboratory test results confirmed the presence of PASS in a 4 m thick layer from about RL189.5 m to RL 185.6 m with a

maximum net acidity of 0.038% S.

Surface levels in the area between the toe of the western bank and the flowing river (immediately east of the proposed piled abutment and where paperbarks were observed) range from about RL192.4 m to RL 192 m. Field screening and laboratory testing of soils from this area confirmed the presence of PASS from the surface to about 1.5 m (RL 190.5 m) with maximum net acidity of 0.072% S. Laboratory results on a groundwater sample collected from this area indicated a pH of 6.6, acidity of 33 mg/L and total alkalinity of 150 mg/L. These results suggest the presence of high alkalinity groundwater with a buffering capacity generally adequate to maintain acceptable pH level in the future. More detailed groundwater investigation will be conducted to confirm baseline water quality.

Figure 4 provides an interpretation of the area where ASS has been identified.

Screening tests and laboratory tests on soil samples from investigation locations west of the crest indicated the presence of non-sulfidic acidic soils but did not indicate the presence of PASS.

Eastern Bank

Surface levels at investigation locations in the overflow area on the eastern side of the Hotham River range from about RL192.7 to RL193.6 m. Screening tests intermittently indicated the possible presence of PASS in wet alluvial soils (typically grey hued soils with a trace of organic matter and about 0.5m below the ground surface) across this area. Laboratory test results confirmed the presence of PASS in these wet alluvial soils with net acidities generally marginally above the action criteria of 0.03% S. The maximum net acidity of 0.1% S was detected at 5.6 m below the surface (i.e. at about RL 187.7 m) at NUL-BH18.

The confirmed PASS layer across the overflow area ranges in thickness from about 0.3 m (RL 193 m to RL192.7 m) at NUL-HR-WS65 near the toe of the eastern bank to about 6.5 m (RL 191.7 m to RL 185.3 m) at NUL-BH18 at the proposed piled abutment location.

Figure 4 provides an interpretation of the area where ASS has been identified.

Screening tests and laboratory test results in the upper 3m of the soil profile east of the eastern riverbank crest did not indicate the presence of PASS.

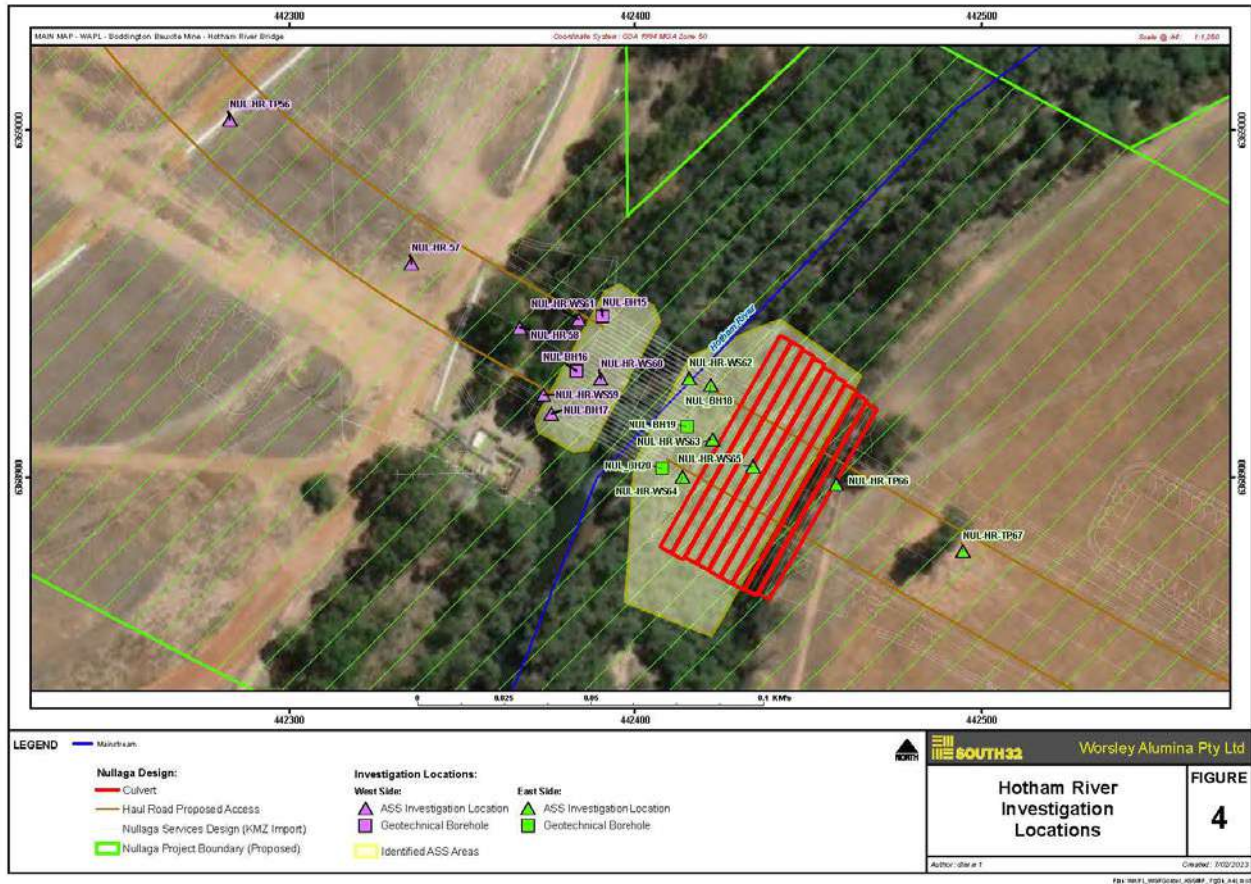


Figure 4: Hotham River Investigation Locations

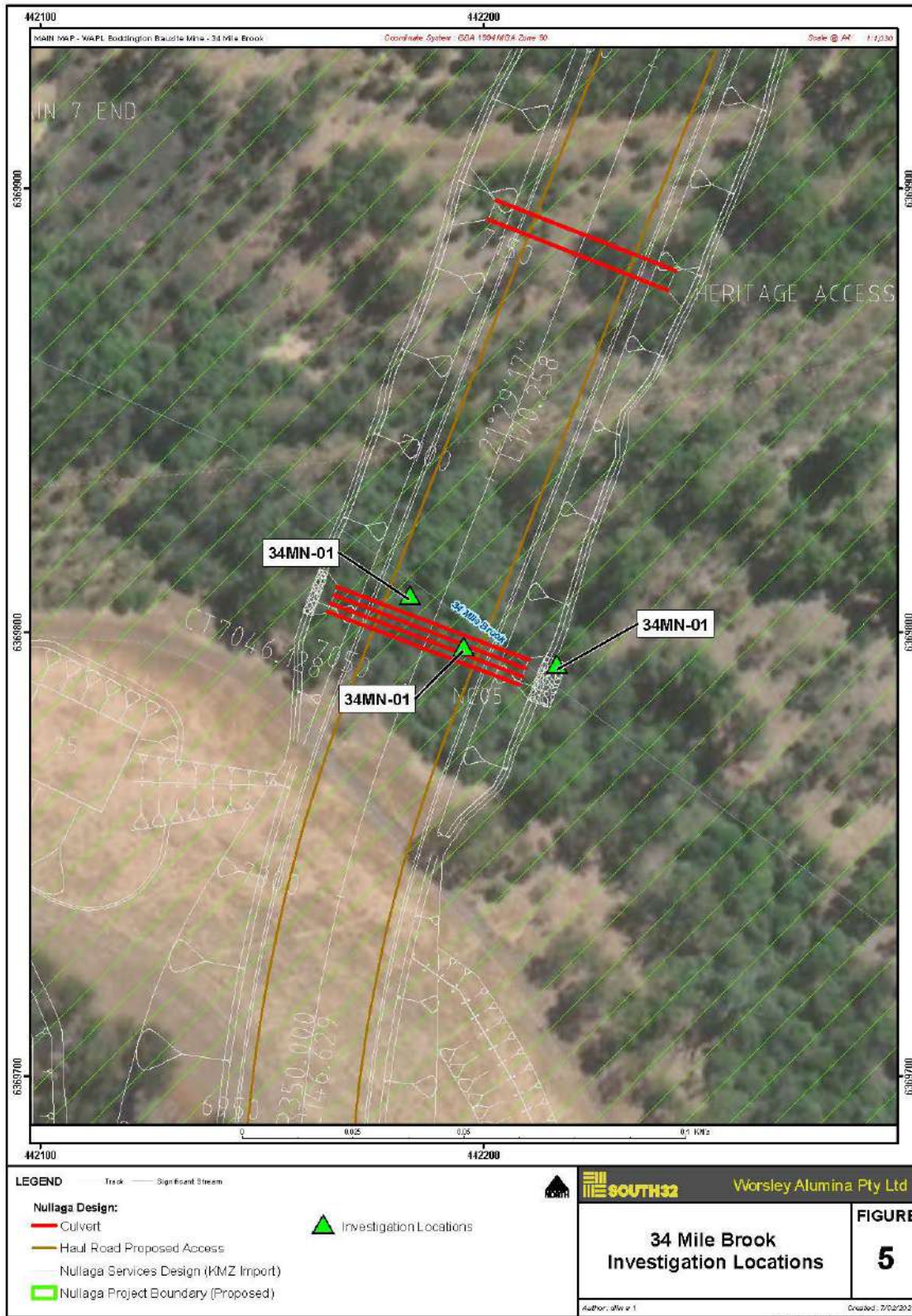


Figure 5: 34 Mile Brook Investigation Locations

4.2 THIRTY-FOUR MILE BROOK INVESTIGATION

4.2.1 INVESTIGATION SCOPE

ASS sampling and analysis was conducted by Calibre at Thirty-four Mile Brook. Given the lower risk of encountering ASS at this location, the investigation was limited to collection of sediment samples to depths of 0.1m in the bed of the brook at the proposed culvert crossing. Field screening tests and Chromium Suite tests were conducted on the recovered samples.

Investigation locations are shown on Figure 5 and factual results are presented in Appendix C.

4.2.2 INVESTIGATION FINDINGS

Field screening and laboratory test results did not indicate the presence of ASS in the sediment samples. This is considered suitable to confirm the absence of ASS at this location. No ASS management measures are required for disturbances at this location.

5. PROJECT ACTIVITIES AND POTENTIAL IMPACTS

Inappropriately managed ASS can have negative impacts on the environment and the life span of infrastructure built within areas containing ASS. Construction activities that may cause potential impacts include excavation and dewatering at Hotham River construction sites. Potential impacts are detailed below.

5.1 EXCAVATIONS/DISPLACEMENT OF ASS

During construction works ASS may be disturbed by excavation or displacement (i.e. by uplifting ground movements caused filling over ASS materials). Displacement can be avoided by appropriate geotechnical design.

ASS has been identified at abutment locations where piling is proposed. ASS materials will not be excavated by the installation of bored piles. Minor excavation/disturbance of identified ASS may occur in soft/wet spots exposed during the formation of access for the piling rig and during preparation works for fill placement immediately behind the piled abutments. Disturbance will be minimised by the use of a bridging layer rather than an excavate and replace strategy.

Potential impacts resulting from excavating or displacing identified ASS include:

- Disturbance of acid sulfate soils, as a result of Hotham River works, leading to contamination of land and soils;
- Oxidation of excavated or dewatered PASS producing sulfuric acid and leaching of metals (principally iron and aluminium) from the soil matrix;
- If disturbed ASS soil is not appropriately managed, contamination of soils and waters could potentially occur downstream as water within the Hotham River and its tributaries becomes acidified; and
- The shortening of the lifespan of built infrastructure due to corrosion of metal and calcium substitution in concrete.

5.2 DEWATERING OF ASS

The need for and possible extent of excavation dewatering at the Hotham River work sites is not fully known at this time. Although it is expected that dewatering of seepage entering culvert excavations on the eastern overflow area will be required.

If dewatering during construction is required, potential impacts associated with dewatering of ASS materials include:

- Alteration of the receiving waters physio-chemical parameters i.e., lowering pH, lowering dissolved oxygen levels, increasing of sediment loadings;

- Water table drawdown resulting in oxidation of PASS in areas surrounding excavations and subsequent leaching of acidic groundwater with elevated metals concentrations;
- Discharge/recharge of acidic water or groundwater with elevated metals concentrations;
- Contamination of receiving waters through the introduction of dissolved metals and or discolouration of water;
- Degradation or mortality of flora and fauna; and
- Potential drawdown of the groundwater table and associated settlement impacts to footings and neighbouring infrastructure.

6. MITIGATION AND MANAGEMENT MEASURES

ASS management will be in accordance with the *Treatment and management of soil and water in acid sulfate soil landscapes* guideline (GoWA 2015b). ASS mitigation and management measures are provided below.

6.1 SOIL MANAGEMENT

6.1.1 MINIMISATION OF ASS DISTURBANCE

Construction techniques will be adopted which minimise ground disturbance in identified ASS areas.

6.1.2 HANDLING AND STORAGE MEASURES

6.1.2.1 EXCAVATION AND STOCKPILING OF ASS

All confirmed and suspected ASS materials (i.e. grey to dark grey soils containing organic matter below the water table) encountered during excavations will be transported by truck to the onsite ASS treatment facility or an offsite facility licenced to accept ASS.

Where practical, excavated ASS materials will be transported directly to the offsite facility or onsite treatment facility as excavation occurs. Temporary stockpiling of untreated ASS should be avoided, where practicable. Where stockpiling is unavoidable, the recommended maximum short term period for which ASS can be temporarily stockpiled without treatment is 18 hours for coarse textured soil (less than 5% clay content), 70 hours for medium textured soil (more than 5% but less than 40% clay content) and fine textured soil (more than 40% clay content).

Any ASS materials that cannot be transported within the short-term period detailed above must be stockpiled on a suitably prepared storage area and the following additional management measures shall be followed:

- Stockpiles are to be contained by bunds with stormwater run-off directed to a collection sump. Bunds are to be constructed from low permeability materials that are not ASS;
- A guard layer of fine ground agricultural lime of at least 10 kg/m² will be spread across the soil surface prior to placement of the stockpile;
- The surface area of the stockpile will be minimised by shaping and possibly capping or covering to prevent moisture loss and rainfall entry; and
- Temporary or banded, short term stockpiling will not be permitted within 100 m of a waterway.

6.1.2.2 TRANSPORT AND MATERIALS TRACKING

Accurate records of material movements shall be kept including volumes, origin, material type, and destination. ASS materials shall be transported in suitable trucks to prevent spillage of soil and leakage of water.

The contractor will be responsible for maintaining transport route free of spilled and sloughed ASS sediments. All such spilled sediments are to be regularly (daily) collected and managed as ASS.

6.1.3 TREATMENT MEASURES

6.1.3.1 TREATMENT AREAS

The size of the treatment area(s) will depend on the amount of ASS encountered and time required for treatment and verification. ASS treatment area(s) will be developed and located on site by the contractor in consultation with the HSEC Manager and will be based on availability of sufficient and suitable area(s).

Treatment areas shall meet the following requirements:

- Treatment areas will not be located within 100 m of a waterway.
- Treatment areas shall be contained by compacted earthen bund walls of at least 0.15m height to contain potential leachate runoff within the treatment pad area and prevent surface water runoff from entering the treatment pad area. An area of at least 2 m width shall be left between the treatment areas and bunds to allow collection of run-off and direction to sumps.
- Treatment areas shall be prepared by stripping vegetation, topsoil and soil containing significant amounts of organic material and compacting the surface with a smooth drum roller. If sandy materials are exposed in the stripped surface, a layer of low permeability material shall be placed over the stripped surface.
- A guard layer of at least 0.3m thickness of compacted crushed limestone or 10 kg/m² of fine ground agricultural lime shall be applied to the prepared surface of the treatment area prior to placement of ASS materials.
- Excavated ASS materials shall be placed in layers at identifiable earthworks “lots” (not more than 100 m³) within the treatment area and following a materials tracking plan.
- The overall layer thickness shall not exceed 250 mm thickness unless effective treatment over a greater thickness can be demonstrated.
- Where required, drying shall be enhanced by mechanical methods (rotary hoe, disc plough, etc.) to create a relatively homogenous, friable material prior to addition of lime for neutralisation.
- Fine ground agricultural lime (or other neutralising agent approved by the HSEC Manager) shall be applied to the surface of the placed material at the applicable rate (see Section 6.1.3.3) using a spreader truck or other method (approved by the HSEC Manager). Following lime application, the lime shall be mixed into the ASS layer using mechanical methods (disc plough, rotary hoe, etc.).
- Following collection of verification samples (see Section 6.1.3.4) and confirmation of suitable treatment, the layer of treated material will be removed from the treatment area and placed at a Project location approved by the HSEC Manager.
- Once ground disturbance works have been completed at the Hotham River bridge site and soil treatment is no longer required, the treatment area shall be decommissioned. Decommissioning will include remediation and validation of the treatment area ground surface.

6.1.3.2 MONITORING AND DISPOSAL OF COLLECTED RUNOFF

Where water is collected in ASS stockpile or treatment areas, pH monitoring shall be conducted as follows:

- Daily pH measurements will be conducted using a calibrated meter, where accumulated water is present.
- Where pH of less than 5.5 is detected, the water shall be treated to achieve a pH between 6 and 8.5 by addition of agricultural lime. Where large volumes of low pH water are generated the use of other neutralising agents such as hydrated lime and/or liquid caustic will be allowed. Treatment of the water will be conducted by a suitably qualified person to avoid pH overshooting.

Treated or untreated waters with a pH of 5.5 or greater shall be disposed of by application over stockpiled or treated materials. Treated waters or untreated waters shall not be directly or indirectly

discharged into waterways.

6.1.3.3 LIMING RATES

Where the terms lime or agricultural lime occur in this management plan, these shall be interpreted as meeting the following definition – fine ground agricultural lime with a grading predominantly <1mm (and greater than 60% <0.5mm) and with an Effective Neutralising Value of at least 97%. Other proposed neutralising agents must be approved by the HSEC Manager prior to use.

The recommended ASS treatment rates using fine ground agricultural lime are presented in Table 6.1. These treatment rates were derived from the highest net acidities detected during investigations at Hotham River and assume an excavated soil bulk density of 1.6 t/m³.

WORKS AREA	TREATMENT RATE
Eastern Bank	6.3 kg lime/m ³
Western Bank	5.5 kg lime/m ³

Figure 6.1: Lime Treatment Rates

These recommended rates may be adopted or, alternatively, lime neutralisation rates for each treatment lot may be determined by sampling and Chromium Suite analysis of each treatment batch of excavated material. The liming rate required to neutralise the Net Acidity (Existing Acidity + Potential Acidity) shall be calculated by:

- Multiplying Net Acidity (calculated in kg/tonne) by a safety factor of 1.5 to allow for mixing deficiencies and poor reactivity of the lime.
- Multiplying the above result by the bulk density of the soil to arrive at the liming rate (kg/m³).
- Multiplying the above result by 1.03 (to account for an agricultural lime neutralising value of 97%).
- Calculating surface application rate (kg/m²) by multiplying the above result by the thickness of soil being treated.

Treatment rates for alternative neutralising agents must be determined based on a laboratory derived neutralising value.

6.1.3.4 VERIFICATION TESTING

Verification testing shall be undertaken using field testing (pH_F and pH_{Fox}) at a sampling intensity reflective of *Landfill Waste Classification and Waste Definitions 1996 (As amended 2019)* (DWER 2019). This will require 4 verification samples to be collected and field tested per earthworks lot.

Samples shall be collected over the full thickness of the treated soil.

The accuracy of the field-testing program shall be 'calibrated' by sending 25 per cent of samples to a laboratory for confirmatory analysis of pH_{KCl}, pH_{Ox} and Chromium Suite.

Where there is poor correlation between laboratory results and field test results then the verification laboratory analyses will be increased to 50% of samples.

The verification sampling process shall include a quality assurance/quality control (QA/QC) program to ensure the quality and reproducibility of sampling methods used at the site. The minimum QA/QC program requirements are:

- Field QA/QC
 - Collection of field duplicates (one field duplicate for every 20 verification sample) as quality control samples;
 - Use of standardised field sampling forms (including Chains of Custody) and methods; and
 - Documenting calibration and use of field instruments.

- Laboratory QA/QC
 - Analysis of samples will be completed by laboratories which hold National Association of Testing Authorities (NATA) accreditation for the particular parameters and methodologies needed. Information on QA/QC methods will be obtained from the designated laboratory before sampling to ensure that they meet acceptable standards; and
 - The laboratory report shall be a NATA endorsed report and include the results of the analysis, sample numbers, laboratory numbers, a statement about the condition of the samples when they were received (e.g. on ice, cold, ambient, etc.), date and time of receipt, dates and times of extraction and analysis of samples, quality control results and a report on sampling and extraction holding times.
- Following receipt of field and/or laboratory data, a detailed review of the data will be completed to determine their accuracy and validity.

6.1.3.5 PERFORMANCE CRITERIA

The following performance criteria must be met to confirm effective neutralisation of treated soils:

- The neutralising capacity of the treated soil must exceed the existing plus potential acidity of the soil, (e.g. pH_{FOX} must be >5 and/or net acidity <0);
- The neutralising material has been thoroughly mixed with the soil; and
- Soil pH must be in the range 6.0 to 8.5.

Where treated soils fail to meet these performance criteria, additional lime treatment neutralisation will be implemented until results comply with performance criteria.

6.2 MANAGEMENT OF DEWATERING ACTIVITIES

6.2.1 DEWATERING MANAGEMENT

A dewatering program has not been designed at the time of issuing this ASSMP. A hydrogeological assessment and establishment of baseline groundwater quality will be completed once design and construction methodologies, relevant to the specific excavations/dewatering, have been advanced. The ASSMP will be then amended to present management requirements relevant to the proposed dewatering.

The following sections outline appropriate groundwater management measures to be adopted for short term or longer-term dewatering of ASS.

6.2.2 MINIMISATION OF ASS DEWATERING

Dewatering techniques (including staged excavations) which minimise both the period and extent of planned dewatering will be adopted in identified ASS areas.

6.2.3 DEWATERING PERIOD <7 DAYS WITH A RADIUS OF INFLUENCE $<50\text{M}$

The risk of significant acidification at the Hotham River site is low providing the dewatering period is less than 7 days and the extent of dewatering of the ASS materials is less than a 50 m radius of influence. The following measures will apply for dewatering under these conditions:

- Walls and base of dewatered excavations in ASS shall be dusted (application rate of about $0.5\text{kg}/\text{m}^2$) with fine ground agricultural lime prior to backfilling.
- Untreated water within each excavation shall be monitored and managed as outlined in Table 6.2. Based on current investigation findings, the monitoring regime for Trigger Action 1 shall be initially adopted. The monitoring regime and management actions shall be varied in line with Table 6.2 where increases in total acidity and/or decreases in pH are detected.

- DWER's 24 hour Pollution Watch hotline – 1300 784 782 or the Online reporting form (<https://www.der.wa.gov.au/your-environment/reporting-pollution/report-pollution-form>) will be utilised where the management action in Table 6.2 requires advising DWER.
- Treated or untreated waters with a pH of 6 or greater may be reused for dust suppression or disposed of by irrigation to ground surfaces more than 100 m from water bodies. Treated waters or untreated waters shall not be directly or indirectly discharged into waterways.
- Water treatment shall occur in a settlement basin or holding tank to allow post-treatment precipitation of iron and other metals.
- Dewatering will not be allowed to cause any lowering of the water level in the Hotham River.
- The groundwater level immediately next to the Hotham River shall be monitored during dewatering works. Dewatering shall cease if groundwater immediately next to the river falls more than 100mm below the river level.

Groundwater levels outside of the excavation shall be monitored to ensure that the actual radial extent of the groundwater cone of depression is not more than predicted.

	TRIGGER	MANAGEMENT ACTION	MONITORING
1	Total titratable acidity <40mg/L, pH>6	Continue daily dewatering water quality monitoring.	Daily —field measurement: pH, Eh, DO, EC, TTA, TALK Fortnightly —laboratory analysis: TTA, TALK, pH
2	Total titratable acidity <40mg/L, pH in range 4 to 6	Undertake neutralisation treatment (liming) on extracted water. Continue dewatering water quality monitoring.	Daily —field measurement: pH, Eh, DO, EC, TTA, TALK Weekly —laboratory analysis: TTA, TALK, pH
3	Total titratable acidity in range 40mg/L to 100mg/L, pH>6	Undertake neutralisation treatment (liming) on extracted water and aeration of treated water to precipitate dissolved iron in settlement basin or other treatment system to allow removal of iron and other metals. Continue dewatering water quality monitoring	Daily —field measurement: pH, Eh, DO, EC, TTA, TALK Weekly —laboratory analysis: TTA, TALK, pH
4	Total titratable acidity in range 40mg/L to 100mg/L, pH in range 4 to 6	Undertake neutralisation treatment (liming) on extracted water and aeration of treated water to precipitate dissolved iron in settlement basin or other treatment system to allow removal of iron and other metals. Continue dewatering water quality monitoring.	Daily —field measurement: pH, Eh, DO, EC, TTA, TALK Weekly —laboratory analysis: TTA, TALK, pH Fortnightly —laboratory analysis: total acidity, total alkalinity, pH, sulfate, chloride, sodium, total iron, dissolved iron (filtered), total aluminium, dissolved aluminium (filtered), total arsenic, total chromium, total cadmium, total manganese, total nickel, total zinc, total selenium, ammoniacal nitrogen, hydrogen sulfide, EC, total suspended solids (TSS), total dissolved salts (TDS), total nitrogen (TN), total phosphorus (TP)
5	Total titratable acidity >100mg/L or pH<4 or total alkalinity <30mg/L	Increase neutralisation treatment (liming) on extracted water and aeration of treated water to precipitate dissolved iron in settlement basin or other treatment system to allow removal of iron and other metals. Cease dewatering and advise DWER immediately. Continue dewatering water quality monitoring	Daily —field measurement: pH, Eh, DO, EC, TTA, TALK Weekly —laboratory analysis: total acidity, total alkalinity, pH, sulfate, chloride, sodium, total iron, dissolved iron (filtered), total aluminium, dissolved aluminium (filtered), total arsenic, total chromium, total cadmium, total manganese, total nickel, total zinc, total selenium, ammoniacal nitrogen, hydrogen sulfide, EC, TSS, TDS, TN, TP
6	Total titratable acidity >100mg/L and 25% higher than baseline values	Change to Dewatering Measures in Section 6.2.4.	Change to Monitoring Requirements in Table 6.3.
7	pH decrease >1 pH unit from baseline values	Change to Dewatering Measures in Section 6.2.4.	Change to Monitoring Requirements in Table 6.3.

Table 6.2: Monitoring and Management Actions - Radius of Influence of Dewatering <50m and Duration of Groundwater Pumping <7Days

6.2.4 DEWATERING PERIOD >7 DAYS AND/OR RADIUS OF INFLUENCE >50M

The following measures will apply for dewatering for periods > 7days and/or with a radius of influence >50 m:

- The dewatering and excavation staging adopted must limit the radius of the groundwater cone of depression to less than 100 m.
- Baseline groundwater quality data must be collected before the commencement of dewatering operations.
- The ASSMP must be approved by DWER before commencement of site works.
- Untreated water within each excavation shall be monitored and managed as outlined in Table 6.3. Based on investigation findings, the groundwater monitoring regime for Trigger Action 1 shall be initially adopted. The monitoring regime and management actions shall be varied in line with Table 6.3 for increases in total acidity and/or decreases in pH are detected.
- Treated or untreated waters with a pH of 6 or greater shall be reused for dust suppression or disposed of by irrigation to ground surfaces more than 100 m from water bodies. Treated waters or untreated waters shall not be directly or indirectly discharged into waterways.
- Water treatment shall occur in a settlement basin or holding tank to allow post-treatment precipitation of iron and other metals.
- Dewatering will not be allowed to cause any lowering of the water level in the Hotham River.
- The groundwater level monitoring during dewatering works shall be conducted immediately next to the Hotham River and at a distance of 100 m elsewhere. Dewatering shall cease if groundwater level falls more than 100mm below the river level at adjacent monitoring locations or 100 mm at monitoring locations 100 m from the dewatering location.
- Groundwater quality monitoring:
 - Groundwater monitoring wells shall be installed up-gradient and down-gradient of dewatering location (wells will be appropriately positioned to enable them to be used to assess any impacts of dewatering on groundwater level and quality).
 - Groundwater monitoring of pH, standing water levels, EC, redox, DO, total titratable acidity and total alkalinity will be conducted in the field every second day during the dewatering operations and continued until it can be shown that groundwater quality and levels have returned to normal elevations.
 - Groundwater samples will be collected for laboratory analysis at fortnightly intervals during the dewatering operations and analysed for total acidity, total alkalinity, sulfate, chloride, dissolved aluminium (filtered), dissolved arsenic (filtered), dissolved chromium (filtered), dissolved cadmium (filtered), dissolved iron (filtered), dissolved manganese (filtered), dissolved nickel (filtered), dissolved zinc (filtered), dissolved selenium (filtered), ammoniacal nitrogen, TDS, total nitrogen, total phosphorus, filterable reactive phosphorus (FRP).
 - Groundwater samples will be collected from all groundwater monitoring wells and tested for the above listed laboratory analysis at two monthly intervals for a period of at least six months (including at least one groundwater monitoring event taken at the time of highest seasonal groundwater levels) following completion of the dewatering operations.
- Dewatering operations will be ceased if the results of groundwater monitoring indicate any deterioration in groundwater quality (i.e. change in trigger levels listed in Table 6.3). An assessment of the monitoring results will be conducted by an appropriately qualified person to confirm any required alteration to dewatering operations and the need for remedial works.
- DWER's 24 hour Pollution Watch hotline – 1300 784 782 or the Online reporting form (<https://www.der.wa.gov.au/your-environment/reporting-pollution/report-pollution-form>) will be utilised where the management action in Table 6.3 requires advising DWER.
- Groundwater remediation will be conducted if the results of the groundwater quality monitoring

program indicate that any environmental impact has occurred as a result of project works.

- On completion of dewatering activities, the results of the groundwater and effluent water quality and water level monitoring program will be reported within an initial closure report for the project along with a discussion of any environmental impacts observed. This initial closure report will be submitted to DWER.
- The results from any post-dewatering groundwater quality monitoring program will be reported within a post-dewatering monitoring closure report for the project along with a discussion of any environmental impacts observed. This post-dewatering closure report will be submitted to DWER.

	TRIGGER	MANAGEMENT ACTION	MONITORING
1	Total titratable acidity <40mg/L, pH>6	Continue daily dewatering water quality monitoring.	Daily —field measurement: pH, Eh, DO, EC, TTA, TALK Fortnightly —laboratory analysis: TTA, TALK, pH
2	Total titratable acidity <40mg/L, pH in range 4 to 6	Undertake neutralisation treatment (liming) on extracted water. Continue dewatering water quality monitoring	Daily —field measurement: pH, Eh, DO, EC, TTA, TALK Weekly —laboratory analysis: TTA, TALK, pH
3	Total titratable acidity in range 40mg/L to 100mg/L, pH>6	Undertake neutralisation treatment (liming) on extracted water and aeration of treated water to precipitate dissolved iron in settlement basin or other treatment system to allow removal of iron and other metals. Continue dewatering water quality monitoring	Daily —field measurement: pH, Eh, DO, EC, TTA, TALK Weekly —laboratory analysis: TTA, TALK, pH
4	Total titratable acidity in range 40mg/L to 100mg/L, pH in range 4 to 6	Undertake neutralisation treatment (liming) on extracted water and aeration of treated water to precipitate dissolved iron in settlement basin or other treatment system to allow removal of iron and other metals Continue dewatering water quality monitoring	Daily —field measurement: pH, Eh, DO, EC, TTA, TALK Weekly —laboratory analysis: TTA, TALK, pH Fortnightly —laboratory analysis: total acidity, total alkalinity, pH, sulfate, chloride, sodium, total iron, dissolved iron (filtered), total aluminium, dissolved aluminium (filtered), total arsenic, total chromium, total cadmium, total manganese, total nickel, total zinc, total selenium, ammoniacal nitrogen, hydrogen sulfide, EC, total suspended solids (TSS), total dissolved salts (TDS), total nitrogen (TN), total phosphorus (TP)
5	Total titratable acidity >100mg/L or pH<4 or total alkalinity <30mg/L	Increase neutralisation treatment (liming) on extracted water and aeration of treated water to precipitate dissolved iron in settlement basin or other treatment system to allow removal of iron and other metals. Cease dewatering and advise DWER immediately. Continue dewatering water quality monitoring	Twice Daily —field measurement: pH, Eh, DO, EC, TTA, TALK Weekly —laboratory analysis: total acidity, total alkalinity, pH, sulfate, chloride, sodium, total iron, dissolved iron (filtered), total aluminium, dissolved aluminium (filtered), total arsenic, total chromium, total cadmium, total manganese, total nickel, total zinc, total selenium, ammoniacal nitrogen, hydrogen sulfide, EC, TSS, TDS, TN, TP

Table 6.3: Monitoring and Management Actions - Radius of Influence of Dewatering >50m and Duration of Groundwater Pumping > 7 Days

6.3 OTHER MONITORING

6.3.1 VISUAL MONITORING

Regular visual monitoring of work areas at Hotham River shall be undertaken to identify signs of possible ASS oxidation. This monitoring will include looking for signs of:

- Unexplained scalding, degradation or death of vegetation;
- Unexplained death or disease of aquatic organisms;
- Areas of green-blue water or extremely clear water indicating high concentrations of aluminium;
- Formation of the mineral jarosite and other acidic salts in exposed or excavated soils;
- Rust coloured deposits on plants and on the banks of drains, water bodies and watercourses indicating iron precipitates;
- Excessive corrosion of concrete and / or steel structures in contact with soil or water;
- Black to very coloured waters indicating de-oxygenation; and
- Any sulphurous smells, e.g., hydrogen sulphide or rotten egg gas.

A record of visual monitoring (including photographs) and observations of possible ASS oxidation shall be kept. Any potential or confirmed environmental impact must be dealt with as an incident (see Section 6.6).

6.3.2 SURFACE WATER QUALITY MONITORING

Given the close proximity of the Hotham River monitoring of surface water quality shall be conducted during excavation in ASS areas. Establishment of baseline surface water quality and monitoring locations will be as per the Nullaga Project Area CEMP.

Surface water monitoring for ASS shall comprise:

- Field measurements at upstream and downstream monitoring locations of pH, redox, total titratable acidity and total alkalinity every second day during excavation works.
- Where monitoring indicates pH levels downstream lower than 1 pH unit of that upstream, works shall be ceased, a review works operations will be conducted by an appropriate qualified person and operations will be amended to minimise the risk of impact to surface water.

Where excavation dewatering of ASS occurs and a deterioration in groundwater quality (i.e. change in trigger levels listed in Table 6.2 or Table 6.3) has been detected in excavation groundwater monitoring bores, the surface water monitoring program shall be increased to:

- pH, EC, DO, Eh, total titratable acidity and total alkalinity in upstream and downstream surface water locations shall be monitored in the field every second day during dewatering operations.
- Laboratory water quality data shall be collected from upstream and downstream surface water locations at fortnightly intervals during dewatering operations. Laboratory surface water quality data shall be collected at intervals of two months for six months following completion of the dewatering operation. The laboratory analytical suite for surface water quality monitoring will comprise: total titratable acidity (TTA), total alkalinity, pH, sulfate, chloride, dissolved aluminium (filtered), total aluminium, dissolved arsenic (filtered), dissolved chromium (filtered), dissolved cadmium (filtered), total iron, dissolved iron (filtered), dissolved manganese (filtered), dissolved nickel (filtered), dissolved zinc (filtered), dissolved selenium (filtered), ammoniacal nitrogen, EC, TDS, total nitrogen, total phosphorus, filterable reactive phosphorus (FRP).
- Measurement of river water levels shall be carried out before the commencement of dewatering operations and at twice weekly intervals throughout the duration of the dewatering operation (to

ensure that water levels are not lowered as a result of the groundwater disturbance). Dewatering operations must cease immediately if monitoring results show any decline in water levels within the river or a decrease of more than 100mm in groundwater levels immediately adjacent to the river.

- Dewatering operations must cease immediately if surface water results and adjacent groundwater indicate a deterioration in water quality.
- On completion of dewatering activities in ASS areas, the results of surface water quality and water level monitoring program will be reported within an initial closure report along with a discussion of any environmental impacts observed. This initial closure report will be submitted to DWER.
- The results of any post-dewatering surface water quality will be reported within a post-dewatering monitoring closure report submitted to DWER.

6.4 TRAINING

Training for all staff involved in the excavation, transport, handling or dewatering of ASS will be included in Contractor Project Site Inductions and Contractor Environmental Awareness Training under the CEMP. Training sessions are to be designed to ensure that all staff are aware of the ASS issues involved on the site and that they understand their responsibilities in managing the treatment of ASS to minimise potential environmental impacts. This training should be delivered by an ASS specialist/ suitably qualified and experienced person and be completed prior to the commencement of works.

6.5 REPORTING AND RECORDS

All records of soil testing will be provided by the contractor to the HSEC Manager. These records will include the in-field and laboratory analyses of all samples, the pH prior to and after testing, the volume of material treated, and the volume of lime added.

An ASS Closure Report will be prepared at the completion of the construction activities, including finalising the treatment of any remaining ASS. The ASS Closure Report will be retained onsite as evidence of the management methodologies implemented during construction. The ASS Closure Report shall include the following:

- The soil and water management measures undertaken at the construction area.
- The volume of soil and groundwater treated at the ASS treatment area.
- The amount of neutralising agent used during works.
- The results of soil validation and monitoring programs.
- The results of dewatering effluent monitoring programs.
- The results of the groundwater and surface water monitoring program, including trends in water quality.
- A discussion of the effectiveness of management strategies employed at the site.
- A discussion of any potential risks to human health or the environment.
- A discussion and action plan if any remedial measures are needed.

6.6 INCIDENTS

Incidents related to the management of ASS must be promptly reported to Worsley Alumina and recorded in G360. Significant environmental events must be investigated (by appropriately trained personnel), actions identified, and learnings shared.

The management and reporting of environmental incidents shall be undertaken by the appropriate person as detailed in South32 Worsley Alumina Event Investigation and Action Management Procedure (01015997).

For additional information on incident reporting please see the Worsley Mine Expansion Framework

Construction Environmental Management Plan (WOR-71183-FS-DWER-MPL-0001).

7. ENVIRONMENTAL MANAGEMENT AND MONITORING

A summary of Environmental Management Measures, Monitoring, Inspection and Reporting requirements is provided in Table 7.1.



ID	Control Measures / Actions	Timing	Performed By	Activity / Record	Timing (minimum)	Performed by
1.	General					
1a	Adopt construction techniques that minimise ground disturbance in identified ASS areas.	Prior to Construction	Contractor	-	-	-
1b	Adopt dewatering techniques which minimise both the period and extent of planned dewatering in identified ASS areas	Prior to Construction	Contractor	-	-	-
1c	Induction and training of all personnel involved in the excavation, transport, handling or dewatering in identified ASS areas.	Prior to Construction	Contractor	Training Records	As Required	Contractor
1d	ASS Closure Report	Completion of all ASS disturbance works	Worsley	All Monitoring and Materials Tracking Records	Completion of all ASS disturbance works	Worsley
2.	Excavated ASS					
2a	Limit stockpile period for untreated ASS outside of designated treatment areas	During Construction	Contractor	Materials Tracking Register	As Required	Contractor
2b	Set up and maintain designated ASS treatment areas.	During Construction	Contractor	Inspection Checklist	Weekly	Contractor
2c	Treatment and validation of ASS	During Construction	Contractor	Materials Tracking Register, Lime Register, Monitoring Records	Each Earthworks Lot	Contractor
2d	Reuse of verified treated ASS within the Project site.	During Construction	Worsley	Materials Tracking Register,	Each Earthworks Lot	Contractor
2e	Capture, analyse and treat (if necessary) runoff from the designated ASS treatment areas and record results.	During Construction	Contractor	Monitoring Records	As Required	Contractor
2f	Release/reuse of captured runoff (treated or untreated) from designated ASS treatment areas.	During Construction	Contractor	Monitoring Records	As Required	Contractor
3.	Dewatering ASS					
3a	Dust walls and base of dewatered excavations in ASS with lime prior to backfilling.	During Construction	Contractor	Lime Register, Monitoring Records	On completion of dewatering	Contractor



ID	Control Measures / Actions	Timing	Performed By	Activity / Record	Timing (minimum)	Performed by
3b	Monitor untreated water quality within each excavation and treat (if necessary) and record results.	During Construction	Contractor	Monitoring Records	Daily	Contractor
3c	Release of untreated/treated water from excavations (pH >5.5) for dust suppression or disposed of by irrigation to ground surfaces more than 100 m from water bodies	During Construction	Worsley	Monitoring Records	As Required	Contractor
3d	Groundwater level monitoring (requirements dependent upon dewatering period/cone of depression) around excavations and between excavation and Hotham River.	During Dewatering	Worsley	Groundwater Monitoring Records	Twice Weekly	worsley
3e	Groundwater quality monitoring (requirements dependent upon dewatering period/cone of depression) around excavations.	During Dewatering	Worsley	Groundwater Monitoring Records	Dependent on pH and Total Titratable Acidity Levels	Worsley
3f	Groundwater quality monitoring post-dewatering	Post Dewatering	Worsley	Groundwater Monitoring Records	Monthly for 6 Months	Worsley
3g	Post-dewatering Closure Reporting	Post Dewatering	Worsley	Groundwater Monitoring Records, Closure Report	Initial Report on completion of dewatering. Final report on completion of post-dewatering monitoring.	Worsley
4.	Visual Monitoring					
4a	Visually monitoring for signs of ASS oxidisation.	During Construction	Contractor	Inspection Checklist	Weekly	Contractor
5.	Surface Water Monitoring					
5a	Field measurements at upstream and downstream monitoring locations of pH, redox, total titratable acidity and total alkalinity.	During Excavations in ASS areas	Contractor	Surface Water Monitoring Records	Every Second Day	Contractor



ID	Control Measures / Actions	Timing	Performed By	Activity / Record	Timing (minimum)	Performed by
5b	Increased monitoring of water quality (field and laboratory testing) and river levels where excavation dewatering of ASS occurs and a deterioration in groundwater quality is detected.	During Dewatering in ASS areas	Worsley	Surface Water Monitoring Records	Field Measurement Every Second Day. Laboratory Testing Fortnightly	Worsley
6.	Environmental Incidents					
6a	Investigate and report possible and actual environmental incidents related to the management of ASS.	During Construction	Worsley	Incident Record	As Required	Contractor

Table 7.1: Draft Management, Monitoring, Inspection and Reporting

* Draft Roles and Responsibilities are provided and are subject to change.

8. TERMS AND DEFINITIONS

For the purposes of this document, the following terms and definitions apply:

Abbreviation / Acronym / Term	Meaning
AASS	Actual Acid Sulfate Soils
ACT	Australian Capital Territory
AHD	Australian Height Datum
ANZECC	Australian and New Zealand Environment and Conservation Council
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
ASC - NEPM	National Environmental Protection (Assessment of Site Contamination) Measure 1999 as amended 2013
ASRIS	Australian Soil Resource Information System
ASS	Acid Sulfate Soils
ASSMP	Acid Sulfate Soil Management Plan
BBM	Boddington Bauxite Mine
CEMP	Construction Environmental Management Plan
CSIRO	Commonwealth Scientific and Industrial Research Organisation
Cth	Commonwealth
DAWE	Department of Agriculture, Water and the Environment (Cth)
DER	Department of Environment Regulation (now DWER)
DO	Dissolved Oxygen
DWER	Department of Water and Environment Regulation
EC	Electrical Conductivity
Eh	Redox potential
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
EPA	Environmental Protection Authority
ERD	Environmental Review Document
FRP	Filterable Reactive Phosphorus
GHD	GHD Pty Ltd
GoWA	Government of Western Australia
ha	Hectares
km	Kilometer
MNES	Matters of National Environmental Significance
MS 719	Ministerial Statement 719
NATA	National Association of Testing Authorities
NWQMS	National Water Quality Management Strategy
PASS	Potential Acid Sulfate Soils
pH	pH units

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QA/QC	Quality Assurance/Quality Control
RIWI Act	<i>Rights in Water and Irrigation Act 1914 (WA)</i>
RL	Relative Level
TAA	Total Titratable Acidity
TAlk	Total Alkalinity
TN	Total Nitrogen
TP	Total Phosphorous
tpa	Tonnes per annum
TSS	Total Suspended Solids
WA	Western Australia
Worsley Alumina	South32 Worsley Alumina Pty Ltd

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Appendix A -South32's Environmental Standard

ENVIRONMENT STANDARD



Type	Standard
Effective from:	25 May 2015
Document owner:	Chief Sustainability Officer
Date approved:	23 October 2020
Approved by:	Chief Executive Officer
Next review date:	23 October 2022
Version no:	04
Related documents:	Sustainability Policy Health Standard Community Standard Social Performance Framework Dam Management Standard Closure Standard Material Risk Management Standard HSEC Reporting Standard Supply Standard Asset Management Standard Training Standard Assurance Standard [Governance] Document Structure Standard Sustainable Development Framework: ICMM Principles

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1. PURPOSE

In line with the South32 Purpose, our Code of Business Conduct and our Breakthrough # 6 we commit to creating value for our owners through our environmental and social leadership. The Environment Standard is a key foundation to enable the business to deliver on these strategic objectives.

2. SCOPE AND APPLICATION

All exploration, major projects and operations under the operational control of South32 must implement, or demonstrate conformance aligned to the requirements of this Standard. Refer to Environment Standard performance requirement mapping matrix to understand which requirements apply relevant to the business cycle phase (i.e. Exploration through to Closure).

Statutory and permitting requirements will take precedence over South32 standards, except in those cases where the South32 standards are more stringent.

If approvals are required for a environment-related activity outside of this document, approvals as outlined in Appendix 1 must be obtained.

The specified period for implementation of this Standard is two years from date of published approval.

3. KEY CONTACT

Scott Coleman, Group Manager Environment

4. REVIEW OF THIS DOCUMENT

This document is scheduled to be reviewed on a two-yearly basis.

5. GENERAL REQUIREMENTS

The following requirements provide an environmental management framework that ensures appropriate focus and accountability, continuous improvement and a standardised process is in place that prevents environmental harm. The general requirements section is modelled on the International Organisation for Standardisation (ISO) 14001 Environmental Management System Standard and complements the ICMM Sustainable Development Principles and Performance Expectations.

5.1 Leadership and Accountability

The South32 Senior Leadership Team demonstrate leadership and accountability by ensuring that:

- A Sustainability policy that details the commitment to the management and improvement of environment is established, communicated and periodically reviewed;
- Plans, objectives and targets for the improvement of environmental performance are established, communicated and implemented; and
- Resources necessary to achieve key environmental improvement targets have been identified and adequately provisioned for.

South32 Leaders demonstrate leadership and accountability by ensuring that:

- Clear roles and responsibilities for environmental management are established;
- Action is taken to address breaches or non-compliance with external and internal environmental requirements.

5.2 Hazard Identification and Risk Management

Complementing the Material Risk Management Standard, processes shall be in place that ensure:

- All relevant personnel are involved in hazard and risk assessment processes, including environmental subject matter experts and operational personnel who interact with and/or influence environmental performance outcomes.
- A risk register is managed in G360 that includes all relevant environmental hazards and risks, with the risk profile informed through:
 - understanding local and regional context (refer to performance requirements 6.2.1 & 6.2.2)
 - application of the source-pathway-receptor model (refer to Appendix 3);
- Risk controls are identified and implemented using the hierarchy of controls to reduce risk as low as reasonably practicable (ALARP); and
- Controls are implemented and verified as effective.

5.3 Improvement Planning

Processes shall be in place to enable and drive continuous improvement relevant to environmental performance, at both Group and Operational level. This includes ensuring:

- Key environmental performance targets and objectives are incorporated into (where relevant):
 - Business Scorecard / Key Performance Indicators (KPIs)
 - Life of Operations Planning (LoOP) activities
 - Annual Business Plans
 - Local Environment Improvement Plans (EIPs)
- Processes to track and monitor progress against the agreed plans are in place and occur at regular and planned intervals or whenever there is a change to activities or operating conditions; and
- Reward and incentive schemes (where in place) are designed such that health, safety, environment, communities and social performance are not compromised in order to maximise the financial reward.

5.4 Legal and Other Requirements

Processes shall be in place to ensure that all applicable environmental legal and other obligations are met. Obligations are to be identified and evaluated for compliance and documented in a register.

- At a Group level, the register must:
 - List all relevant external commitments associated with environmental performance (e.g. ICMM performance expectations), and the South32 policies, standards and/or processes that address the commitment/s; and
 - Be checked regularly for currency.
- At an Operational level, the register must:
 - List all environmental licences, permits, authorisations and approval documents issued to the Operation by an external authority, including expiry/renewal dates;
 - Define the approach and accountability for maintaining compliance with each requirement, commitment and/or obligation associated with the above documents;
 - Be checked regularly for currency;
 - Include or provide reference to records that show periodic evaluation of compliance which includes managing of actions in G360 to address identified gaps; and
 - Be accessible to relevant personnel, with changes or updates communicated as appropriate.

5.5 Communication and Consultation

Processes shall be in place to ensure:

- Environmental management and performance information is communicated effectively;
- The workforce is engaged in understanding their role in the effective management of relevant environmental aspects; and
- The workforce is involved in environmental hazard identification, risk assessment, workplace inspections and event investigations.

5.6 Document Control and Record Management

- Documents and procedures related to environmental management shall be:
 - Reviewed and approved by authorised and competent personnel;
 - Current, dated, controlled by revision and readily available to relevant stakeholders; and
 - Maintained in accordance with local regulatory requirements.
- EQulS is to be used to manage all environmental data collected to inform and report on performance and compliance. Authorisations must be in place for the use of an alternate data management system (refer to authorisations table in Appendix 1).

5.7 Training and Competency

In accordance with the Training Standard, training frameworks focussed on key environmental management aspects shall be developed and periodically reviewed. At a minimum, a training framework will cover:

- Training needs or skills analysis including competencies required by legislation;
- Processes for the verification of training and competency; and
- Processes for ensuring training records are maintained and are current.

5.8 Change Management

Processes shall be in place to manage change ensuring all associated risk is managed, including processes that:

- Identify any change relating to people, plant, procedures, products, services or processes that could impact the environment;
- Assess new hazards and/or increased risks of existing hazards to the environment resulting from a change and develop appropriate controls.

5.9 Contractor and Supplier Management

In addition to the Supply Standard, processes shall be in place for the onboarding and management of contractors engaged in work with potential to impact the environment, including:

- Risk-based selection (tiers) and evaluation of suppliers and contractors, including supplier risk assessment and prequalification where appropriate;
- Establishing accountabilities for the management of contractors, including provision of appropriate supervision;
- Training, competency and induction requirements; and
- Requirements for contractors to provide work procedures and HSE plans including KPIs.

5.10 Assurance

In accordance with the Assurance Standard and supporting the three lines of defence assurance model, processes shall be in place to ensure:

- First and Second line assurance programs are in place to enable effective implementation of environmental performance requirements and processes, as outlined by this Standard.

5.11 Event Reporting and Investigation

In accordance with the HSEC Reporting Standard, processes shall be in place to ensure:

- All events with an environmental consequence (actual or potential) are promptly reported and recorded in G360; and
- Significant environmental events are investigated (by appropriately trained personnel), actions identified, and learnings shared.

5.12 Management Review

The South32 leadership team shall review environmental performance annually to ensure their continued suitability, adequacy and effectiveness. The management review shall be a part of the business planning and prioritisation process and should include consideration of:

- Changes in internal and external legislative and other requirements relevant to the business' environmental performance;
- The extent to which the current plan, objectives and targets have been met;
- Information on environmental performance and trends taking into consideration data from events, monitoring programs including compliance, and audit/assurance results;
- Adequacy of resources; and
- Opportunities for continual improvement.

6. ENVIRONMENTAL PERFORMANCE REQUIREMENTS

6.1 Environmental Commitments

We protect the environment in a way that demonstrates our values and are aligned with the ICMM commitments for mining and protected areas.

- 6.1.1 Exploration and extraction of resources must not occur within the boundaries of World Heritage listed properties.
- 6.1.2 Exploration and extraction of resources must not occur adjacent to World Heritage listed properties unless internal (Appendix 1) and external approvals are obtained.
- 6.1.3 Exploration and extraction of resources must not occur within or adjacent to the boundaries of International Union for Conservation of Nature (IUCN) Protected Areas Categories I to IV unless internal approvals (Appendix 1) and external approvals are obtained.
- 6.1.4 Exploration and extraction of resources must not occur within or adjacent to the boundaries of any protected area defined under legislation unless internal (Appendix 1) and external approvals are obtained.

6.2 Environmental Management

We understand our local and regional context and have processes in place to ensure we minimise adverse environmental impacts.

- 6.2.1 Identify and map key features within the area of influence in accordance with Appendix 2.
- 6.2.2 Establish the baseline or reference conditions for land, biodiversity, water resources and air within the area of influence.
- 6.2.3 Use the suite of minimum performance requirement documents to inform management of common environment risk exposures (as relevant to the operation/project, based on risk profile):
 - Air Emissions Management (Appendix 4)
 - Contamination Prediction and Management (Appendix 5)
 - Rehabilitation and Biodiversity Management (Appendix 6)
 - Water Management (Appendix 7)
 - Waste Management (Appendix 8)

6.3 Energy Efficiency and Climate Change

We actively reduce our emissions through the efficient use of energy resources, adoption of emission reduction technologies

- 6.3.1 Consider energy use and emissions within the optimisation of the integrated business planning process, and identify and implement energy efficiency and emission reduction initiatives that:
 - are aligned with the [South32 Our Approach to Climate Change](#);
 - are evaluated using the internal carbon pricing protocols; and
 - are approved through the planning process.
- 6.3.2 Maintain a GHG emissions forecast for the life of operation that:
 - is inclusive of Scope 1, 2 and 3 emissions;
 - is aligned with operational performance and external supply contracts;
 - includes all approved energy efficiency and emission reduction projects; and
 - is incorporated into the planning process.

6.4 Water Stewardship

We manage water resources using a holistic approach to promote better water use, effective catchment management and contribute to improved water security and sanitation.

- 6.4.1 Maintain a water resource forecast (supply/demand) that is incorporated into the Life of Operations Plans.
- 6.4.2 Undertake a water resource risk and opportunity analysis ([template](#)):
 - for operational locations on a five-yearly basis;
 - for exploration areas on an as-required basis; and
 - incorporate the outcomes into the planning process.

For Operations with a water-resource related Material Risk

6.4.3 Identify and implement controls that must:

- use the ‘water management’ performance requirement document to inform control design, implementation and verification (noting application will vary depending on local context); and
- where relevant, consider the potential socio-environmental impacts within the catchment area (including future climate risks) and how this will likely influence the catchment over the life of the operation.

6.4.4 Develop site specific contextual water targets or objectives that:

- considers and supports the management of the water-resource related Material Risk and the broader stakeholders and catchment needs.
- is authorised in accordance with Appendix 1.

6.5 Biodiversity and Land Stewardship

We manage Biodiversity and Land through an integrated land use planning process designed to protect ecosystem services and biodiversity values for future generations.

6.5.1 For new projects and major expansions, during the planning cycle, apply and implement the Biodiversity Mitigation Hierarchy for managing biodiversity values and ecosystem services across the project/operations lifecycle, aimed at achieving no net loss.

6.5.2 Undertake a biodiversity risk and opportunity analysis ([template](#)):

- for operational locations on a five-yearly basis;
- for exploration areas on an as required basis; and
- incorporate outcomes into the planning process and rehabilitation performance criteria.

For Operations with a biodiversity related Material Risk

6.5.3 Identify and implement controls that must:

- use the ‘rehabilitation and biodiversity management’ performance requirement document to inform control design (consistent with the Biodiversity Mitigation Hierarchy), implementation and verification (noting application will vary depending on local context); and
- where relevant, consider the potential cumulative impacts from land use in the surrounding area, including projected changes associated with climate and regional development and how these may likely influence the surrounding land use over the life of the Operation.

6.6 Waste Stewardship

We manage our waste streams to minimise environmental impact and realise value.

6.6.1 Identify, classify and record wastes generated and/or managed on site.

6.6.2 Implement governance processes (risk-based) to verify the treatment, handling and disposal of waste is being undertaken in accordance with local jurisdiction and/or specific company requirements where stipulated (inclusive of on and off-site waste management).

APPENDIX 1: ENVIRONMENTAL AUTHORITIES

Authority Description and Role		Endorse	Approve	Inform
Activities requiring internal approval (as outlined in Section 6.1)				
	COO	✓		
OR	CDO	✓		
	CEO		✓	
Environment Data managed outside of EQUIS				
	HSE Lead/Manager	✓		
	VP Operation		✓	
	GM Environment			✓
Contextual Water Targets approval				
	GM Environment and VP Operation	✓		
	COO		✓	
	CEO			✓

APPENDIX 2: ENVIRONMENTAL MANAGEMENT REQUIREMENTS

Requirement	Scope
Area of influence	<p>The boundary that takes into account South32’s business activities, and their potential direct, indirect and/or cumulative impacts on the environment. The area of influence may vary depending on the type and severity of environmental impact being considered within the regional context (e.g. air shed, water catchment, bio-region) and if relevant based on the risk profile, consider other ‘outside of the gate’ factors such as shipping or transportation through highly sensitive areas. These must align to the <i>HSEC Reporting Standard, Appendix 4: Decision tree for reporting boundary</i>.</p> <p>As a minimum, the area of influence should include:</p> <ul style="list-style-type: none"> • South32 operational footprints including land owned, managed and leased • Extent of potential impacts associated with executing activities associated with the operation (inclusive of potential cumulative impacts) • Water catchments that the operation interacts with (i.e. extracts from or discharges into) • External waste disposal facilities used by the operation (including port facilities) • The extent of the airshed that the operations interacts with
Identify and map key features	<ul style="list-style-type: none"> • Owned, leased or managed land; • Activities under South32 operational control; • Contaminated sites; • Designated protected areas and areas of high conservation value (including designated offset areas) via IBAT; • Distribution of red list and other listed species (e.g. IUCN Red List); • Sensitive receptors and host communities; • Water resources (natural sources of surface and sub-surface water, irrespective of quality, that sustain ecosystems, communities and/or are utilised for recreational, agricultural or other commercial purposes) and water catchments; • Areas of potential acid forming materials or other mineralisation with potential HSEC impacts (for example, asbestos) as defined by recognised standards (for example, INAP: The International Network for Acid Prevention: Global Acid Rock Drainage Guide); • Areas of stockpiled materials required to support rehabilitation; • Areas of cultural significance, including archaeological and anthropological sites; and • Other activities (for example, other resource extraction, agriculture) with potential cumulative or indirect impacts.
Risk assessment	<p>Risks must be assessed in consideration of:</p> <ul style="list-style-type: none"> • South32 Material Risk Management Standard; • Current and reasonably foreseeable activities consistent with Life of Operation Plan; • Closure plans; • Impacts of land and biodiversity, heritage, air and water quality, climate change, noise, vibration, light, erosion, amenity, acid rock drainage, salinity, radioactivity, metal leaching, mined waste rock and waste disposal; and • The ICMM Mining Principles. <p>The identified environmental risks must also be suitably integrated into the operational risk management process.</p>

Requirement	Scope
Hierarchy of Controls	<p>To be applied to all environmental risks, except for biodiversity related risks where the Biodiversity Mitigation Hierarchy is to be applied.</p> <p>From highest priority to lowest priority:</p> <ul style="list-style-type: none"> • Elimination; • Substitution; • Engineering Controls; • Administrative Controls. <p>Refer to below for description of Biodiversity Mitigation Hierarchy that specifically applies to the management of biodiversity.</p>
Scope 1, 2 and 3 definitions	<p>Scope 1 – Direct GHG emissions from activities where South32 has operational control.</p> <p>Scope 2 - Indirect emissions from purchased electricity from an external supplier.</p> <p>Scope 3 - Indirect emissions (not included in Scope 2) that occur in the South32 value chain (e.g. upstream and downstream emissions from the use or processing of South32 products).</p>
Important biodiversity and/or ecosystems	<p>Determined taking into account:</p> <ul style="list-style-type: none"> • Regulatory requirements; • Natural and critical habitats as defined by IFC Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources (2012), sections GN43 and GN53 to GN97 and • reasonable stakeholder expectations.
Water Resource Risk and Opportunity Analysis	<p>Analysis to include:</p> <ul style="list-style-type: none"> • Risk screening using the World Resource Institute ‘Aqueduct Water Risk Atlas’ tool; • Operational review/verification including supply/demand including seasonal patterns/variability, discharge quality and regulatory compliance, community issues and cumulative impacts on the water catchment area; • Outputs from the latest South32 Materiality Assessment specific to the operation. <p>Risk screening to be based on a minimum 10-year time horizon.</p> <ul style="list-style-type: none"> • Level of risk to be assessed in accordance with the South32 Material Risk Management Standard.
Biodiversity Risk and Opportunity Analysis	<p>Analysis to include:</p> <ul style="list-style-type: none"> • location of the Operation with respect to declared biodiversity hotspots or areas of high conservation value (located within or adjacent to); • likely interaction with IUCN species and habitats, including number of species and their conservation status (IUCN Red List); • nature of operation (total lease area and likely disturbance profile over the next 7 years (minimum) – information to be sourced from the Life of Operation Plan.); • Outputs from the latest South32 Materiality Assessment specific to the Operation. <p>Level of risk to be assessed in accordance with the South32 Material Risk Management Standard.</p>
Material Risk	<p>As defined in the South32 Material Risk Management Standard.</p>

Requirement	Scope
Rehabilitation Resources	Includes all materials required to undertake rehabilitation activities, includes resources such as: <ul style="list-style-type: none"> • Overburden; • Topsoil; • Mulch; • Felled vegetation; and • alternate growth media and/or artificial habitat structures.
Biodiversity Mitigation Hierarchy	To be applied when assessing biodiversity related risks, from highest priority to lowest priority: <ul style="list-style-type: none"> • Avoidance; • Minimisation; • Restoration/Rehabilitation; • Offset Residual Impacts.

APPENDIX 3: SOURCE, PATHWAY, RECEPTOR MODEL

Source

What are the contaminant sources that could cause pollution in and around our operations?

- Atmospheric – gaseous, fume, fugitives
- Water – direct discharges to marine, surface & ground waters
- Waste – spills, disposal & contamination.
- Other – noise & light

Consequence

What impacts or consequences could there be that require management from the pollutant at the receiving point

- Social / environmental / cultural
- Acute
- Cumulative.



Pathway

How might the pollutant travel to a sensitive Receptor?

- Air – dust, gases, noise
- Water – SW & GW
- Land – runoff, hydrogeology
- Animal translocation
- People / vehicle hygiene
- Other infrastructure

Receptor

Who or what could be affected or impacted by the pollutant?

- Environmental - ecosystems
- Human – employees / community

When risk assessing the aspect, ensure consideration that there may be multiple Sources, Pathways, Receptors and Consequences also that some receptors could eventually act as new or additional pathways.

APPENDIX 4: AIR EMISSIONS MANAGEMENT

Scope and application

This appendix covers emissions of particulate matter, gases, odour, noise, vibration and light and should consider the acute, incremental and cumulative ambient impacts on sensitive receptors, including communities located within the air shed.

This appendix represents the minimum performance requirements with respect to air emissions management and should be applied where there is an air emission related operational risk exposure, with consideration also given to the local/regional operating context and regulations.

Intent

The intent of these minimum performance requirements is to ensure that operations and projects under the operational control of South32 have identified and minimised air pollutants (and their potential impacts) by taking a risk-based approach and employing the *Source-Pathway-Receptor (SPR, refer to Appendix 3)* assessment method. Evaluation and management of air emissions from our activities should be done in consideration of the significance of point/diffuse source and cumulative impacts, taking effective measures to design and implement appropriate controls to ensure legal compliance (as a minimum) and protection of ambient air quality as it relates to the sensitive receptors.

In the absence of appropriate air quality performance limits/measures in operational licences or authorisations, due consideration should be made to align monitoring programs and performance criteria to jurisdictional or national air quality guidance standards, e.g. *Air Quality NEPM (AUS)* and *NEM: AQA (SAF)*.

Program design

1 Planning

- 1.1 Determine and maintain records of reference and/or background ambient conditions, including meteorological characteristics affecting pollutant dispersion, for material emissions sources within the airshed.
- 1.2 Identify, characterise, map and document operational emission sources (risk based) using the SPR method from all sources at the operation and their method of release into the environment factoring in cumulative impacts within the airshed.
- 1.3 Identify and document community health hazards and environmental impacts associated with the operational emissions profile.
- 1.4 Undertake change management procedures to identify and assess potential impacts to the operational emissions profile (and surrounding air shed) as a result of a change in operating context (i.e. change in production volumes, operating location etc)
- 1.5 Develop internal criteria on ambient air quality when government regulations are absent or incomplete to ensure protection of local community health and the environment. The criteria must have formal approval from the VPO and be in line with jurisdictionally accepted regulations, guidelines and/or methodologies.
- 1.6 Demonstrate that, under normal and plausible worst-case operating conditions and adverse meteorological conditions, emissions from the operation will not cause sustained periods of non-conformance to the adopted air quality criteria.

2 Implementation

- 2.1 Implement appropriate control procedures or control technologies to manage those identified emissions sources that have the potential to cause adverse environmental or community health impacts.
- 2.2 Develop Trigger Action Response Plans (TARP) where appropriate, to enable response to abnormal emission and dispersion conditions and/or exceedances of air quality criteria, including immediate measures to protect community health. Exceedances of criteria should also be reported in G360 (and externally, where regulatory requirements exist) with suitable corrective actions in place.

3 Performance measurement

- 3.1 Implement monitoring programs to assess operating performance, verify compliance with adopted performance criteria, facilitate reporting requirements and quantify the material emissions sources that have the potential to cause adverse environmental or community health impacts, in line with the agreed program objectives.
- 3.2 Store and manage environmental monitoring data within EQulS, unless authorisation is in place as per South32 Environment Standard requirements (Section 5.6).
- 3.3 Operate and maintain/calibrate monitoring equipment in line with manufacturer specifications and/or any relevant standards applicable to the jurisdiction. The maintenance regime should be incorporated into the site asset/work management system (e.g. SAP).

APPENDIX 5: CONTAMINATION PREDICTION AND MANAGEMENT

Scope and application

This appendix represents the minimum performance requirements with respect to the prediction and management of contamination and should be applied where there is:

- an existing or potential for contamination to lease areas or the receiving environment (herein referred to as 'contamination'), or
- where there are potential impacts from mine-site drainage, including those that may naturally occur.

The design and implementation of management approach should also consider the local/regional operating context and regulatory requirement relevant to operating jurisdiction.

Intent

The intent of these minimum performance requirements is to ensure that contamination risks for South32 projects and operations are effectively identified and managed by taking a risk-based approach and employing the *Source-Pathway-Receptor* (SPR, refer to Appendix 3) assessment method to minimise adverse environmental impacts, maintain compliance, prevent impacts to human health and reduce long-term costs and closure liabilities. The emphasis is on early identification of contamination (actual or potential), detailed analysis of the risk exposure to environment and community receptors, and implementation of fit for purpose control (management) strategies to manage the exposure.

Program design

1 Planning

- 1.1 Identify and assess the potential environmental contamination risks from spills associated with the transport, storage, use, transfer and disposal of hazardous materials, including failures of primary and secondary containment structures¹. This should include the identification of 'high-risk' areas such as bulk/hazardous material storage locations and maintenance/laydown areas.
- 1.2 Develop and maintain a contamination lands register (or equivalent) for land currently or previously owned, leased and/or managed (including legacy sites). The register must adhere to local regulatory requirements, but as a minimum include:
 - map of location and extent of existing contamination (in GIS), including location of sensitive receptors;
 - a description of the wastes and/or potential contaminants of concern, impacted media (e.g. soils, sediments, groundwater, surface water) and summary of the site history where known;
 - an understanding of 'natural' processes that could create, influence or exacerbate a contamination risk (e.g. acid generating potential);
 - risk assessment detailing exposure risks for the environment and/or the community, including assessment of any immediate risks that may require active management; and

The register should be integrated with the site Closure Plan and associated provision (as appropriate).

¹ Requirements and management of tailings storage facilities are stipulated in the South32 Dam Management Standard

- 1.3 Where contamination exists that poses an immediate risk to the environment or community, develop a remediation action plan (or equivalent) with level of response and timing commensurate with the risk exposure. The remediation action plan must consider local regulatory requirements, be approved by the VPO and be integrated into the life of operations plan.

2 Implementation

- 2.1 Develop and implement appropriate inspection regimes and spill prevention processes for the identified 'high-risk' areas.
- 2.2 Implement the activities outlined in the approved remediation action plan/s.
- 2.3 Update the contamination lands register (including files in GIS) at a minimum every three (3) years, or more frequently as determined by a change in operating context or following a contamination event.
- 2.4 Ensure that induction, general awareness and job specific training contains additional elements relating to contamination risks and how they are managed.

3 Performance measurement

- 3.1 Implement monitoring programs to assess performance of control and remediation measures, verify compliance, facilitate reporting requirements and track location and extent of contamination, in line with the agreed program objectives.
- 3.2 Store and manage environmental monitoring data within EQUIS, unless authorisation is in place as per South32 Environment Standard requirements (Section 5.6).

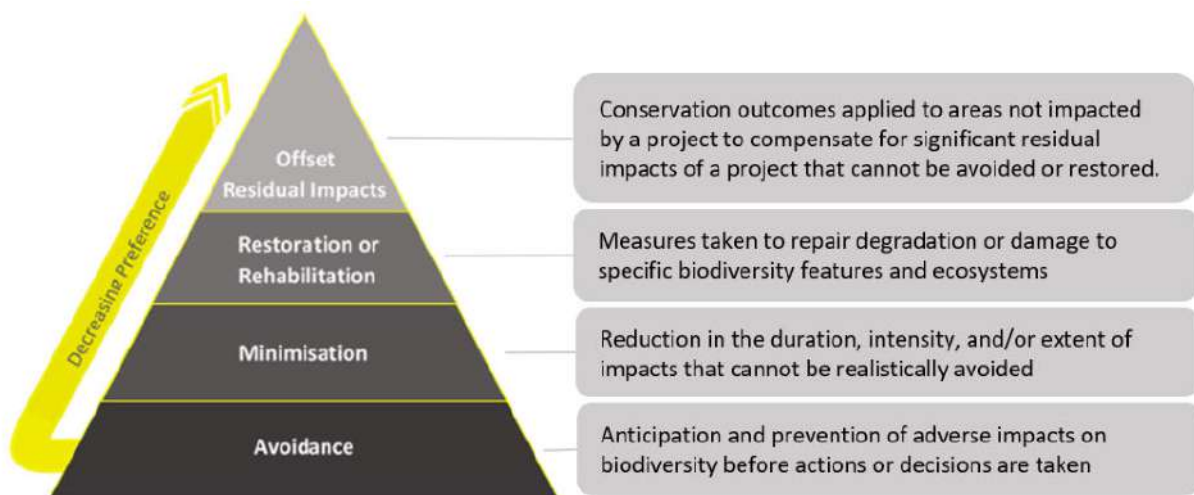
APPENDIX 6: REHABILITATION AND BIODIVERSITY MANAGEMENT

Scope and application

This appendix represents the minimum performance requirements to be applied where there is a rehabilitation and/or biodiversity related operational risk exposure, with consideration also given to the local/regional operating context and regulations.

Intent

The intent of these minimum performance requirements is to ensure that South32 maintains compliance with regulatory requirements and does not cause any long-term negative change to biodiversity values and ecosystem services² (including a ‘no net loss’ ambition within greenfields and major expansions). We aim to achieve this through application of the mitigation hierarchy for managing biodiversity related risks which comprises a sequence of four key actions:



Program Design

1 Planning

- 1.1 Identify the location, extent and significance of sensitive biodiversity features within the development footprint and ensure suitable buffer zones are developed, maintained and integrated into the operational planning process commensurate with the significance of the feature/s.
- 1.2 Understand the land use and biodiversity values within the surrounding bioregion that could be potentially impacted as a cumulative result of ours and other stakeholders’ activities, with consideration also given to projected changes in the future.
- 1.3 Develop and integrate vegetation clearing and progressive rehabilitation plan/ activities into operational planning processes developed consistent with regulatory requirements (where they exist) with adequate consideration given to:
 - storage, management and availability of rehabilitation resources (e.g. topsoil)
 - final landform/characteristics (as determined in the site closure plan); and
 - biodiversity offsetting requirements (where required).

- 1.4 Establish performance criteria for progressive rehabilitation activities that are approved by the VPO and include external stakeholder input where required.
- 1.5 Ensure expansions or changes in the development footprint trigger relevant biodiversity assessments (refer to Requirement 1.1) prior to disturbance. Outputs should inform changes in operational risk profile and planning/mitigation requirements, external approval processes and future biodiversity research priorities (where appropriate).

2 Implementation

- 2.1 Develop and implement a fit for purpose permit to clear (or equivalent) process relevant to the operational context, that considers sensitive biodiversity features and required mitigation processes commensurate with the significance of the feature and applicable legal requirements.
- 2.2 Execute progressive rehabilitation consistent with the approved life of operations plan, closure plan and any local regulatory requirements.
- 2.3 Where required, identify and execute prioritised research activities that address material knowledge gaps of biodiversity values related to operational risk profile, improve rehabilitation outcomes to enable adopted performance criteria to be met, and/or facilitate future external approval processes.

3 Performance measurement

- 3.1 Implement monitoring programs to assess performance against adopted rehabilitation and biodiversity criteria to manage and protect key aspects in line with the agreed program objectives.
- 3.2 Environmental data is to be stored and managed within EQUIS, unless authorisation is in place as per South32 Environment Standard requirements (Section 5.6).

APPENDIX 7: WATER MANAGEMENT

Scope and application

This appendix covers water management activities for all types and sources of water and must consider 'inside and outside the gate' users and stakeholders – this includes processing water for other uses, water discharged offsite or sent to third parties for treatment/discharge.

This appendix represents the minimum performance requirements with respect to water management and should be applied where there is a water related operational risk exposure with consideration also given to the local/regional operating context and regulations.

Intent

The intent of this appendix is to ensure that we achieve compliant, efficient, safe and sustainable management and protection of water resources by taking a risk-based approach and employing the Source-Pathway-Receptor (SPR, refer to Appendix 3) assessment method that address the current and future needs of ecosystems with consideration of other users within the catchments around South32 operations.

The requirements provide the basis for the development of a fit for purpose, meaningful and integrated approach to water management that ensures all legal requirements are met whilst also addressing relevant social, health, environmental, operational and economic aspects.

Program design

1 Planning

- 1.1 Develop and maintain a site water balance that is consistent with the Minerals Council of Australia Water Accounting Framework (MCA WAF), with verification processes in place to ensure the accuracy of the balance.
- 1.2 Understand the cumulative demands and impacts being placed on water resources in the catchment. This includes the current and future water requirements of other stakeholders within the catchment, and the potential impacts to water quality required to maintain ecosystem integrity and community health.
- 1.3 Employ change management procedures for changes to the operating context that has the potential to have a material impact on the water-related operational risk profile and/or catchment quality, function and use.
- 1.4 Establish (where appropriate) internal criteria on water abstraction, dewatering, discharge volumes or water quality when government regulations are insufficient to adequately protect key characteristics of the receiving environment. The criteria must have formal approval from the VPO and be in line with jurisdictionally accepted regulations, guidelines and/or methodologies.
- 1.5 Ensure any requirements for water related infrastructure is integrated into the life of operations plan.

2 Implementation

- 2.1 Implement appropriate controls to manage water related risks that have the potential to cause adverse environmental or community health impacts and assign clear responsibilities and accountabilities.
- 2.2 Design, construct, operate and maintain water withdrawal, storage, treatment and discharge facilities in accordance with relevant standards and local legislative requirements and ensure the design includes potential failure scenarios and its ability to handle expected flows and quality, including significant storm events with consideration of projected changes associated with climate change.
- 2.3 Develop Trigger Action Response Plans (TARP) where appropriate, to enable response to abnormal operating conditions (i.e. floods, droughts) and/or respond to exceedances to legal requirements, including immediate measures to protect the catchment and community health.
- 2.4 Progress agreed activities to support the contextual water targets/objectives (where in place) ensuring integration with the life of operations plan.

3 Performance measurement

- 3.1 Implement monitoring programs to assess operating performance, verify compliance with adopted performance criteria, facilitate reporting requirements and track water quality parameters that have the potential to cause adverse environmental or community health impacts, in line with the agreed program objectives.
- 3.2 Store and manage environmental monitoring data within EQUIS, unless authorisation is in place as per South32 Environment Standard requirements (Section 5.6).
- 3.3 Operate and maintain/calibrate monitoring equipment in line with manufacturer specifications and/or any relevant standards applicable to the jurisdiction. The maintenance regime should be incorporated into the site SAP work management program.

APPENDIX 8: WASTE MANAGEMENT

Scope and application

Waste reduction principles are inclusive of all forms of ‘waste’ generated at South32, whether hazardous or non-hazardous, mineral or non-mineral, in accordance with South32’s definition of ‘waste’.

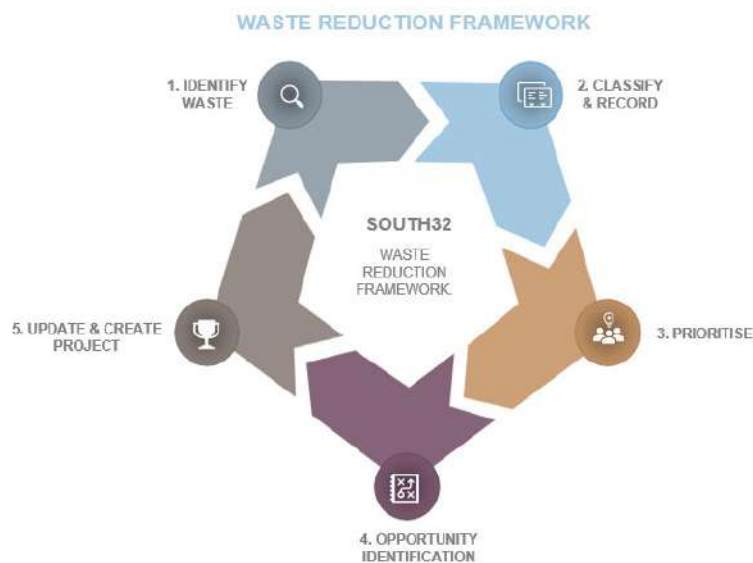
This appendix represents the minimum performance requirements with respect to waste management and should be applied where there is a waste related operational risk exposure with consideration also given to the local/regional operating context and regulations.

At South32, we define ‘waste’ as: “...any discarded, rejected, unwanted, surplus or abandoned matter”.

Intent

The intent of this appendix is to ensure sound waste management principles are implemented across all South32 operations with respect to classification, management and disposal of waste. The minimum performance requirements can be complimented by the application of the Waste Reduction Framework (at the discretion of the operation) to identify and evaluate ‘waste to value’ opportunities.

Effective characterisation, quantification and management of our wastes and by-products ensure long term benefits to our business, society and communities in which we operate.



Program design

1 Planning

- 1.1 Identify, assess and document the quantities, characteristics and risks/opportunities associated with waste types generated, disposed of on-site or transported and disposed of off-site or managed on behalf of others.
- 1.2 Develop and maintain an inventory/register (including quantity per year and cumulative total) of wastes generated or received and disposed on or off-site.

- 1.3 Ensure future waste volumes and waste storage facilities² are adequately considered/ integrated into the business planning processes (e.g. life of operations plan).

2 Implementation

- 2.1 Ensure that waste streams are segregated at generation and that wastes awaiting further treatment, transport or disposal are securely contained and monitored. Persons that manage or handle hazardous waste must be appropriately trained.
- 2.2 Maintain operational procedures and effective controls for the safe handling, on-site and off-site transportation, storage and disposal of wastes commensurate with their degree of hazard and compatibility.
- 2.3 Maintain records of wastes sent off-site, and a documented inventory and location of on-site waste landfills and storage areas. Historical and abandoned landfills shall be included in this inventory and their location documented.
- 2.4 Disposal of waste must only be carried out in engineered and approved facilities and in accordance with established operational procedures and applicable local laws and regulations and must be deemed physically, biologically and chemically safe.

3 Performance measurement

- 3.1 Inspect and monitor on-site waste handling and storage facilities taking a risk-based approach commensurate with the degree of hazard of the waste. Corrective actions must be taken where unacceptable conditions are identified.
- 3.2 Undertake verification assessments (governance processes) of contractors and 3rd party waste facilities (used to treat and dispose of waste generated by South32) to verify that the wastes have been managed in accordance with local jurisdiction and/or specific company requirements. The type and frequency of the verification³ assessments should be commensurate with the level of risk.

² Requirements and management of tailings storage facilities is stipulated in the South32 Dam Management Standard



Appendix B - Hotham River Sampling Results

FOR REFERENCE ONLY, NOT TO BE USED FOR CONSTRUCTION

	Surface Level (m AHD)	Level to	Level From	To	From	Description	
ASS-HA-01				0	0.9	Sandy, silty CLAY with organics. Grey, wet	
ASS-HA-02				0	0.3	Sandy, silty CLAY with organics. Grey, wet	
NUL-HR-TP56				0	0.2	Sand with fines and trace organics. Moist (topsoil)	
				0.2	0.85	Sand. Pale grey, dry to moist.	
NUL-HR-TP57				0.85	2.95	CLAY with trace sand. Mottled pale orange/pale grey-white/pale red, dry to moist.	
				0	0.15	SAND with fines and trace organics. Grey, moist(topsoil)	
NUL-HR-TP58				0.15	0.7	SAND with trace fines. Pale grey, dry to moist.	
				0.7	3	CLAY with trace sand. Mottled pale orange/pale grey-white/pale red, dry to moist.	
NUL-HR-TP58				0	0.25	SAND with trace fines and trace organics. Grey to brown, moist (topsoil)	
				0.25	2.6	CLAY with sand. Mottled pale orange/pale grey-white/pale red, dry.	
NUL-HR-TP66	195.412	195.412	195.162	0	0.25	Clayey SAND with trace gravel. Pale Orange, moist.	
		195.162	194.112	0.25	1.3	Silty SAND with trace organics. Grey to brown, dry (topsoil).	
		194.112	193.412	1.3	2	SAND with trace fines. Pale orange, moist.	
		193.412	192.412	2	3	Clayey SAND. Pale Orange, moist to wet.	
NUL-HR-TP67	198.971	198.971	198.721	0	0.25	SAND with trace fines and trace organics. Faint organic/sulphur odour. Pale grey to orange, wet.	
		198.721	198.271	0.25	0.7	SAND with trace fines. Pale grey, dry to moist.	
		198.271	196.371	0.7	2.6	Clayey SAND. Pale yellow to orange, dry to moist.	
		196.371	195.971	2.6	3	SAND with trace fines and trace organics. Grey to brown, dry (topsoil).	
NUL-BH15	195.244	195.244	193.594	0	1.65	SAND with trace fines. Pale orange to yellow, moist.	
		193.594	193.394	1.65	1.85	FILL consisting imported basecourse material for temporary works	
		193.394	192.294	1.85	2.95	TOPSOIL. Sandy clay with organics. Grey.	
		192.294	192.044	2.95	3.2	Sandy CLAY. light grey to light orange.	
		192.044	191.744	3.2	3.5	NO CORE	
		191.744	191.244	3.5	4	SILTSTONE, very low strength, pale grey brown.	
		191.244	191.144	4	4.1	No CORE	
		191.144	190.294	4.1	4.95	Sandy CLAY. Grey.	
		190.294	189.444	4.95	5.8	GRAVEL. Coarse gravel to cobbles. Sandy clay clasts.	
		189.444	189.244	5.8	6	NO CORE	
		189.244	188.794	6	6.45	CLAYEY SAND. Red brown.	
		188.794	188.244	6.45	7	SAND with trace silt. Grey.	
		188.244	187.744	7	7.5	NO CORE	
		187.744	187.294	7.5	7.95	SAND with trace silt and clay. Red brown.	
		187.294	186.944	7.95	8.3	SAND with silt and gravel. Pale grey to brown (possible extremely weathered rock).	
		186.944	185.794	8.3	9.45	NO CORE	
		185.794	184.944	9.45	10.3	SAND with silt and gravel. Pale grey brown (possible extremely weathered rock).	
		184.944	184.244	10.3	11	NO CORE	
		184.244	183.394	11	11.85	SAND with trace silt. Pale brown to pale grey (possible extremely weathered rock).	
	NUL-BH16	195.237	195.237	192.737	0	2.5	NO CORE
		192.737	192.337	2.5	2.9	FILL consisting imported basecourse material for temporary works	
		192.337	191.987	2.9	3.25	NO CORE	
		191.987	191.237	3.25	4	SANDY CLAY with trace gravel. Pale brown and pale green grey.	
		191.237	190.837	4	4.4	Clayey SAND with gravel. Orange.	
		190.837	190.287	4.4	4.95	NO CORE	
		190.287	189.937	4.95	5.3	SAND with clay/silt and gravel. Red brown and orange brown.	
		189.937	189.737	5.3	5.5	NO CORE	
		189.737	189.487	5.5	5.75	SAND with clay/silt and gravel. Red brown and orange brown.	
		189.487	189.037	5.75	6.2	NO CORE	
		189.037	188.787	6.2	6.45	SAND with clay/silt and gravel. Red brown and orange brown.	
		188.787	188.337	6.45	6.9	SAND with silt. Blue grey.	
		188.337	188.237	6.9	7	NO CORE	
		188.237	187.937	7	7.3	SAND, brown.	
		187.937	187.837	7.3	7.4	NO CORE	
		187.837	187.637	7.4	7.6	SAND with silt and trace gravel. Blue grey.	
		187.637	187.287	7.6	7.95	Gravelly SAND with clay. Dark brown.	
		187.287	186.837	7.95	8.4	SAND with silt and gravel. Pale grey brown, locally red brown (possible extremely weathered rock).	
NUL-BH16		195.616	195.616	194.316	0	1.3	NO CORE
			194.316	194.116	1.3	1.5	FILL consisting imported basecourse material for temporary works
		194.116	193.666	1.5	1.95	NO CORE	
		193.666	192.616	1.95	3	Clayey SAND. Pale grey mottled pale orange	
		192.616	192.016	3	3.6	NO CORE	
		192.016	191.616	3.6	4	Sandy CLAY. Pale grey to pale orange.	
		191.616	191.266	4	4.35	SILTY SAND. Pale grey to orange brown.	
		191.266	190.316	4.35	5.3	Cemented silty sand with trace quartz gravel	
		190.316	189.466	5.3	6.15	SILTY SAND. Pale grey to orange brown.	
		189.466	188.716	6.15	6.9	Sandy CLAY. Pale grey to pale orange.	
		188.716	187.866	6.9	7.75	SAND with trace fines. Grey brown.	
		187.866	187.316	7.75	8.3	Sandy CLAY. Pale grey to pale orange.	
		187.316	186.916	8.3	8.7	SAND with trace fines. Grey brown.	
		186.916	186.766	8.7	8.85	SAND with gravel and trace fines, grey brown.	
		186.766	185.616	8.85	10	NO CORE	
		185.616	185.616	8.85	10	SAND with gravel and trace fines, grey brown.	

NUL-BH17		185.616	185.116	10	10.5	NO CORE
		185.116	185.016	10.5	10.6	SAND with gravel and trace fines, grey brown.
		185.016	184.116	10.6	11.5	Sandy CLAY. Red brown. Firm to stiff.
		184.116	183.916	11.5	11.7	NO CORE
		183.916	183.616	11.7	12	Sandy CLAY. Red brown.
		183.616	183.166	12	12.45	CLAYEY SAND with gravel and trace fines, grey brown.
		183.166	182.966	12.45	12.65	NO CORE
		182.966	182.766	12.65	12.85	SAND
		182.766	182.466	12.85	13.15	CLAYEY SAND with gravel and trace fines, grey brown.
		182.466	182.116	13.15	13.5	NO CORE
		182.116	181.816	13.5	13.8	CLAYEY SAND with gravel and trace fines, grey brown.
		181.816	181.666	13.8	13.95	SAND with trace fines. Pale brown.
		181.666	181.416	13.95	14.2	NO CORE
		181.416	181.316	14.2	14.3	SAND
		181.316	181.016	14.3	14.6	CLAYEY SAND with gravel and trace fines, grey brown.
		181.016	176.116	14.6	19.5	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock).
		176.116	175.966	19.5	19.65	NO CORE
		175.966	167.166	19.65	28.45	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock).
		167.166	150.466	28.45	45.15	extremely weathered rock, displaying as silts/clays/sands to end of hole
	NUL-BH20	193.421	193.42	193.02	0	0.4
		193.02	191.92	0.4	1.5	NO CORE
		191.92	191.27	1.5	2.15	SAND with trace clay, dark grey.
		191.27	191.12	2.15	2.3	Cemented clayey GRAVEL. Red brown.
		191.12	191.02	2.3	2.4	CLAYEY SAND, dark grey.
		191.02	190.37	2.4	3.05	Cemented clayey sandy GRAVEL/clayey gravelly SAND. Red brown.
		190.37	190.22	3.05	3.2	CLAY, grey.
		190.22	188.67	3.2	4.75	Sandy CLAY, grey.
		188.67	188.07	4.75	5.35	SAND with trace fines. Grey.
		188.07	186.97	5.35	6.45	Gravelly SAND with clay. Grey brown.
		186.97	185.87	6.45	7.55	NO CORE
		185.87	185.42	7.55	8	Gravelly SAND with clay. Grey brown
		185.42	184.42	8	9	NO CORE
		184.42	184.07	9	9.35	Gravelly SAND with clay. Grey brown.
		184.07	183.97	9.35	9.45	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock). Black veins noted, possible black
		183.97	183.42	9.45	10	NO CORE
		183.42	179.42	10	14	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock). Black veins noted, possible black
		179.42	178.42	14	15	NO CORE
		178.42	177.42	15	16	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock). Black veins noted, possible black
		177.42	148.42	16	45	extremely weathered rock, displaying as silts/clays/sands to end of hole. Black veins noted, possible black silt (s
NUL-BH18	193.248	192.75	191.70	0.5	1.55	NO CORE
		191.70	191.25	1.55	2	SAND with trace clay, dark grey.
		191.25	190.70	2	2.55	NO CORE
		190.70	190.30	2.55	2.95	SAND with trace clay, dark grey,
		190.30	189.80	2.95	3.45	Interbedded sandy CLAY and SAND, dark grey.
		189.80	189.25	3.45	4	NO CORE
		189.25	187.95	4	5.3	SAND with trace clay, dark grey.
		187.95	186.80	5.3	6.45	Gravelly SAND with clay. Grey brown.
		186.80	186.50	6.45	6.75	NO CORE
		186.50	185.25	6.75	8	Gravelly SAND with clay. Grey brown.
		185.25	185.00	8	8.25	NO CORE
		185.00	184.25	8.25	9	Gravelly SAND with clay. Grey brown.
		184.25	182.75	9	10.5	NO CORE
		182.75	182.30	10.5	10.95	SILT/CLAY, light brown.
		182.30	181.85	10.95	11.4	NO CORE
		181.85	181.65	11.4	11.6	SILT/CLAY, light brown.
		181.65	181.35	11.6	11.9	NO CORE
		181.35	180.05	11.9	13.2	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock).
		180.05	179.75	13.2	13.5	NO CORE
		179.75	170.25	13.5	23	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock). Black veins noted, possible black
	170.25	148.25	23	45	extremely weathered rock, displaying as silts/clays/sands to end of hole. Black veins noted, possible black silt (s	
NUL-BH19	193.630	193.63	193.13	0	0.5	FILL Consisting imported basecourse material for temporary works
		193.13	192.53	0.5	1.1	NO CORE
		192.53	191.98	1.1	1.65	Sandy CLAY with trace organics. Dark grey.
		191.98	190.48	1.65	3.15	Sandy CLAYEY GRAVEL, grey to red brown.
		190.48	190.18	3.15	3.45	Interbedded Sandy CLAY and SAND (with clay), with trace organics. Dark grey.
		190.18	190.13	3.45	3.5	NO CORE
		190.13	189.63	3.5	4	Interbedded Sandy CLAY and SAND (with clay), with trace organics. Dark grey.
		189.63	189.13	4	4.5	NO CORE
		189.13	187.73	4.5	5.9	Interbedded Sandy CLAY and SAND (with clay), with trace organics. Dark grey
		187.73	187.18	5.9	6.45	Gravelly SAND with clay. Grey brown. Trace gravel sized pockets of black (possibly organic) material up to 5 mm
		187.18	186.33	6.45	7.3	CONGLOMERATE, red brown to pale grey.
		186.33	185.88	7.3	7.75	Gravelly SAND. Pale grey. Trace gravel sized pockets of black (possibly organic) material up to 5 mm.
		185.88	185.48	7.75	8.15	Gravelly SAND with clay. Pale grey brown. Trace gravel sized pockets of black (possibly organic) material up to 5
		185.48	184.38	8.15	9.25	SAND with trace fines, pale orange brown.
		184.38	184.18	9.25	9.45	Gravelly SAND. Pale grey to red brown. Trace gravel sized pockets of black (possibly organic) material up to 5 m
		184.18	183.13	9.45	10.5	NO CORE
		183.13	182.63	10.5	11	SILT/CLAY with trace sand. Hard. Low plasticity. Orange brown (possible extremely weathered rock). Black vei
		182.63	182.18	11	11.45	NO CORE
		182.18	181.18	11.45	12.45	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock). Black veins noted, possible black
		181.18	180.93	12.45	12.7	NO CORE
	180.93	180.13	12.7	13.5	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock). Black veins noted, possible black	
	180.13	179.38	13.5	14.25	NO CORE	
	179.38	177.88	14.25	15.75	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock). Black veins noted, possible black	
	177.88	148.63	15.75	45	extremely weathered rock, displaying as silts/clays/sands to end of hole. Black veins noted, possible black silt (s	
NUL-HR-WS59 (ASS-BH-03)	196.161	196.16	195.61	0	0.55	Gravelly SAND with fines. Pale brown, dry to moist.
		195.61	195.06	0.55	1.1	SAND with fines and trace organics. Pale orange-brown, moist to wet.
		195.06	194.16	1.1	2	Clayey SAND with fines and trace organics. Pale orange, mottled pale red, wet.
NUL-HR-WS60 (ASS-BH-02)	192.688	192.69	192.44	0	0.25	Sandy CLAY. High organic content/sulphur odour. Dark grey-black, moist.
		192.44	192.24	0.25	0.45	SAND with trace fines and trace organics. Grey, wet.
		192.24	190.89	0.45	1.8	CLAY with sand and trace organics. Pale grey, moist.
		190.89	190.69	1.8	2	Clayey SAND. Pale grey, streaked pale red, wet.

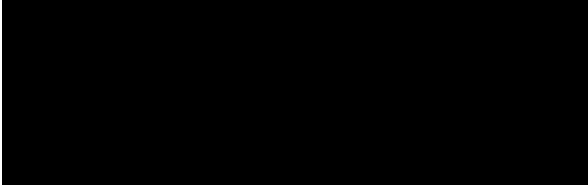
NUL-HR-WS61 (ASS- BH-01)	195.73	195.73	195.58	0	0.15	Silty SAND with trace organics. Brown, moist to wet (topsoil).
		195.58	194.38	0.15	1.35	SAND with fines and trace organics. Pale orange-brown, wet.
		194.38	193.73	1.35	2	Clayey SAND with trace gravel. Pale orange, mottled pale red, wet.
NUL-HR-WS62	193.100	193.10	192.95	0	0.15	Silty SAND with trace organics. Grey to brown, moist (topsoil).
		192.95	192.45	0.15	0.65	Sandy CLAY with trace organics. Grey, moist.
		192.45	192.05	0.65	1.05	Clayey SAND with trace organics. Grey, wet.
		192.05	191.10	1.05	2	CLAY with sand and trace organics. Grey, moist.
NUL-HR-WS63	192.653	192.65	192.55	0	0.1	SAND with fines and trace organics. Grey to brown, moist to wet (topsoil).
		192.55	192.30	0.1	0.35	SAND with trace fines and trace organics. Pale grey to brown, wet.
		192.30	191.65	0.35	1	Sandy CLAY with trace organics and trace cemented gravel. Pale grey to mottled pale orange, dry to moist.
NUL-HR-WS64	192.911	192.91	192.76	0	0.15	SAND with fines and trace organics. Grey to brown, moist (topsoil).
		192.76	192.51	0.15	0.4	SAND with trace fines and trace organics. Pale grey to brown, wet.
		192.51	191.91	0.4	1	Sandy CLAY with trace organics and trace cemented gravel. Pale grey to mottled pale orange, dry to moist.
NUL-HR-WS65	193.512	193.51	193.26	0	0.25	Silty SAND with trace organics. Grey to brown, moist (topsoil).
		193.26	193.01	0.25	0.5	SAND with trace fines and trace organics. Pale grey to brown, moist to wet.
		193.01	192.71	0.5	0.8	Sandy CLAY with trace organics and trace cemented gravel. Pale grey to mottled pale orange, moist.
		192.71	191.76	0.8	1.75	CLAY with trace sand trace cemented gravel, and trace organics. Pale grey to mottled pale orange, dry to moist

FOR REFERENCE ONLY, NOT TO BE USED FOR CONSTRUCTION

	Surface Level (m AHD)	Level to	Level From	To	From	Description	
ASS-HA-01				0	0.9	Sandy, silty CLAY with organics. Grey, wet	
ASS-HA-02				0	0.3	Sandy, silty CLAY with organics. Grey, wet	
NUL-HR-TP56				0	0.2	Sand with fines and trace organics. Moist (topsoil)	
				0.2	0.85	Sand. Pale grey, dry to moist.	
NUL-HR-TP57				0.85	2.95	CLAY with trace sand. Mottled pale orange/pale grey-white/pale red, dry to moist.	
				0	0.15	SAND with fines and trace organics. Grey, moist(topsoil)	
NUL-HR-TP58				0.15	0.7	SAND with trace fines. Pale grey, dry to moist.	
				0.7	3	CLAY with trace sand. Mottled pale orange/pale grey-white/pale red, dry to moist.	
NUL-HR-TP58				0	0.25	SAND with trace fines and trace organics. Grey to brown, moist (topsoil)	
				0.25	2.6	CLAY with sand. Mottled pale orange/pale grey-white/pale red, dry.	
NUL-HR-TP66	195.412	195.412	195.162	0	0.25	Clayey SAND with trace gravel. Pale Orange, moist.	
		195.162	194.112	0.25	1.3	Silty SAND with trace organics. Grey to brown, dry (topsoil).	
		194.112	193.412	1.3	2	SAND with trace fines. Pale orange, moist.	
		193.412	192.412	2	3	Clayey SAND. Pale Orange, moist to wet.	
NUL-HR-TP67	198.971	198.971	198.721	0	0.25	SAND with trace fines and trace organics. Faint organic/sulphur odour. Pale grey to orange, wet.	
		198.721	198.271	0.25	0.7	SAND with trace fines and trace organics. Grey to brown, dry (topsoil).	
		198.271	196.371	0.7	2.6	SAND with trace fines. Pale grey, dry to moist.	
		196.371	195.971	2.6	3	Clayey SAND. Pale yellow to orange, dry to moist.	
NUL-BH15	195.244	195.244	193.594	0	1.65	SAND with trace fines. Pale orange to yellow, moist.	
		193.594	193.394	1.65	1.85	FILL consisting imported basecourse material for temporary works	
		193.394	192.294	1.85	2.95	TOPSOIL. Sandy clay with organics. Grey.	
		192.294	192.044	2.95	3.2	Sandy CLAY. light grey to light orange.	
		192.044	191.744	3.2	3.5	NO CORE	
		191.744	191.244	3.5	4	SILTSTONE, very low strength, pale grey brown.	
		191.244	191.144	4	4.1	No CORE	
		191.144	190.294	4.1	4.95	Sandy CLAY. Grey.	
		190.294	189.444	4.95	5.8	GRAVEL. Coarse gravel to cobbles. Sandy clay clasts.	
		189.444	189.244	5.8	6	NO CORE	
		189.244	188.794	6	6.45	CLAYEY SAND. Red brown.	
		188.794	188.244	6.45	7	SAND with trace silt. Grey.	
		188.244	187.744	7	7.5	NO CORE	
		187.744	187.294	7.5	7.95	SAND with trace silt and clay. Red brown.	
		187.294	186.944	7.95	8.3	SAND with silt and gravel. Pale grey to brown (possible extremely weathered rock).	
		186.944	185.794	8.3	9.45	NO CORE	
		185.794	184.944	9.45	10.3	SAND with silt and gravel. Pale grey brown (possible extremely weathered rock).	
		184.944	184.244	10.3	11	NO CORE	
	NUL-BH16	195.237	195.237	192.737	0	2.5	SAND with trace silt. Pale brown to pale grey (possible extremely weathered rock).
			192.737	192.337	2.5	2.9	NO CORE
		192.337	191.987	2.9	3.25	FILL consisting imported basecourse material for temporary works	
		191.987	191.237	3.25	4	SANDY CLAY with trace gravel. Pale brown and pale green grey.	
		191.237	190.837	4	4.4	Clayey SAND with gravel. Orange.	
		190.837	190.287	4.4	4.95	NO CORE	
		190.287	189.937	4.95	5.3	SAND with clay/silt and gravel. Red brown and orange brown.	
		189.937	189.737	5.3	5.5	NO CORE	
		189.737	189.487	5.5	5.75	SAND with clay/silt and gravel. Red brown and orange brown.	
		189.487	189.037	5.75	6.2	NO CORE	
		189.037	188.787	6.2	6.45	SAND with clay/silt and gravel. Red brown and orange brown.	
		188.787	188.337	6.45	6.9	SAND with silt. Blue grey.	
		188.337	188.237	6.9	7	NO CORE	
		188.237	187.937	7	7.3	SAND, brown.	
		187.937	187.837	7.3	7.4	NO CORE	
		187.837	187.637	7.4	7.6	SAND with silt and trace gravel. Blue grey.	
		187.637	187.287	7.6	7.95	Gravelly SAND with clay. Dark brown.	
		187.287	186.837	7.95	8.4	SAND with silt and gravel. Pale grey brown, locally red brown (possible extremely weathered rock).	
		186.837	186.737	8.4	8.5	NO CORE	
		186.737	186.337	8.5	8.9	SAND with silt and gravel. Pale grey brown, locally red brown (possible extremely weathered rock).	
		186.337	185.787	8.9	9.45	NO CORE	
		185.787	185.287	9.45	9.95	SAND with silt and gravel. Pale grey brown, locally red brown (possible extremely weathered rock).	
		185.287	185.237	9.95	10	NO CORE	
		185.237	184.987	10	10.25	SAND with silt and gravel. Brown	
		184.987	184.287	10.25	10.95	NO CORE	
		184.287	183.887	10.95	11.35	SAND with silt and gravel. Pale brown to grey brown (possible extremely weathered rock).	
	183.887	183.737	11.35	11.5	NO CORE		
	183.737	183.287	11.5	11.95	SAND with silt and gravel, brown.		
	183.287	182.787	11.95	12.45	NO CORE		
	182.787	182.287	12.45	12.95	SAND with silt and gravel. Pale brown to grey brown, locally red brown (possible extremely weathered rock).		
	182.287	182.237	12.95	13	NO CORE		
	182.237	148.737	13	46.5	SAND with silt and gravel, brown.		
195.616	195.616	195.616	194.316	0	1.3	extremely weathered rock, displaying as silts/clays/sands to end of hole	
		194.316	194.116	1.3	1.5	FILL consisting imported basecourse material for temporary works	
		194.116	193.666	1.5	1.95	NO CORE	
		193.666	192.616	1.95	3	Clayey SAND. Pale grey mottled pale orange	
		192.616	192.016	3	3.6	NO CORE	
		192.016	191.616	3.6	4	Sandy CLAY. Pale grey to pale orange.	
		191.616	191.266	4	4.35	SILTY SAND. Pale grey to orange brown.	
		191.266	190.316	4.35	5.3	Cemented silty sand with trace quartz gravel	
		190.316	189.466	5.3	6.15	SILTY SAND. Pale grey to orange brown.	
		189.466	188.716	6.15	6.9	Sandy CLAY. Pale grey to pale orange.	
		188.716	187.866	6.9	7.75	SAND with trace fines. Grey brown.	
		187.866	187.316	7.75	8.3	Sandy CLAY. Pale grey to pale orange.	
		187.316	186.916	8.3	8.7	SAND with trace fines. Grey brown.	
		186.916	186.766	8.7	8.85	SAND with gravel and trace fines, grey brown.	
		186.766	185.616	8.85	10	NO CORE	

NUL-BH17		185.616	185.116	10	10.5	NO CORE
		185.116	185.016	10.5	10.6	SAND with gravel and trace fines, grey brown.
		185.016	184.116	10.6	11.5	Sandy CLAY. Red brown. Firm to stiff.
		184.116	183.916	11.5	11.7	NO CORE
		183.916	183.616	11.7	12	Sandy CLAY. Red brown.
		183.616	183.166	12	12.45	CLAYEY SAND with gravel and trace fines, grey brown.
		183.166	182.966	12.45	12.65	NO CORE
		182.966	182.766	12.65	12.85	SAND
		182.766	182.466	12.85	13.15	CLAYEY SAND with gravel and trace fines, grey brown.
		182.466	182.116	13.15	13.5	NO CORE
		182.116	181.816	13.5	13.8	CLAYEY SAND with gravel and trace fines, grey brown.
		181.816	181.666	13.8	13.95	SAND with trace fines. Pale brown.
		181.666	181.416	13.95	14.2	NO CORE
		181.416	181.316	14.2	14.3	SAND
		181.316	181.016	14.3	14.6	CLAYEY SAND with gravel and trace fines, grey brown.
		181.016	176.116	14.6	19.5	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock).
		176.116	175.966	19.5	19.65	NO CORE
		175.966	167.166	19.65	28.45	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock).
		167.166	150.466	28.45	45.15	extremely weathered rock, displaying as silts/clays/sands to end of hole
	NUL-BH20	193.421	193.42	193.02	0	0.4
		193.02	191.92	0.4	1.5	NO CORE
		191.92	191.27	1.5	2.15	SAND with trace clay, dark grey.
		191.27	191.12	2.15	2.3	Cemented clayey GRAVEL. Red brown.
		191.12	191.02	2.3	2.4	CLAYEY SAND, dark grey.
		191.02	190.37	2.4	3.05	Cemented clayey sandy GRAVEL/clayey gravelly SAND. Red brown.
		190.37	190.22	3.05	3.2	CLAY, grey.
		190.22	188.67	3.2	4.75	Sandy CLAY, grey.
		188.67	188.07	4.75	5.35	SAND with trace fines. Grey.
		188.07	186.97	5.35	6.45	Gravelly SAND with clay. Grey brown.
		186.97	185.87	6.45	7.55	NO CORE
		185.87	185.42	7.55	8	Gravelly SAND with clay. Grey brown
		185.42	184.42	8	9	NO CORE
		184.42	184.07	9	9.35	Gravelly SAND with clay. Grey brown.
		184.07	183.97	9.35	9.45	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock). Black veins noted, possible bla
		183.97	183.42	9.45	10	NO CORE
		183.42	179.42	10	14	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock). Black veins noted, possible bla
		179.42	178.42	14	15	NO CORE
		178.42	177.42	15	16	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock). Black veins noted, possible bla
		177.42	148.42	16	45	extremely weathered rock, displaying as silts/clays/sands to end of hole. Black veins noted, possible black silt (s
NUL-BH18	193.248	192.75	191.70	0.5	1.55	NO CORE
		191.70	191.25	1.55	2	SAND with trace clay, dark grey.
		191.25	190.70	2	2.55	NO CORE
		190.70	190.30	2.55	2.95	SAND with trace clay, dark grey,
		190.30	189.80	2.95	3.45	Interbedded sandy CLAY and SAND, dark grey.
		189.80	189.25	3.45	4	NO CORE
		189.25	187.95	4	5.3	SAND with trace clay, dark grey.
		187.95	186.80	5.3	6.45	Gravelly SAND with clay. Grey brown.
		186.80	186.50	6.45	6.75	NO CORE
		186.50	185.25	6.75	8	Gravelly SAND with clay. Grey brown.
		185.25	185.00	8	8.25	NO CORE
		185.00	184.25	8.25	9	Gravelly SAND with clay. Grey brown.
		184.25	182.75	9	10.5	NO CORE
		182.75	182.30	10.5	10.95	SILT/CLAY, light brown.
		182.30	181.85	10.95	11.4	NO CORE
		181.85	181.65	11.4	11.6	SILT/CLAY, light brown.
		181.65	181.35	11.6	11.9	NO CORE
		181.35	180.05	11.9	13.2	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock).
		180.05	179.75	13.2	13.5	NO CORE
		179.75	170.25	13.5	23	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock). Black veins noted, possible bla
	170.25	148.25	23	45	extremely weathered rock, displaying as silts/clays/sands to end of hole. Black veins noted, possible black silt (s	
NUL-BH19	193.630	193.63	193.13	0	0.5	FILL Consisting imported basecourse material for temporary works
		193.13	192.53	0.5	1.1	NO CORE
		192.53	191.98	1.1	1.65	Sandy CLAY with trace organics. Dark grey.
		191.98	190.48	1.65	3.15	Sandy CLAYEY GRAVEL, grey to red brown.
		190.48	190.18	3.15	3.45	Interbedded Sandy CLAY and SAND (with clay), with trace organics. Dark grey.
		190.18	190.13	3.45	3.5	NO CORE
		190.13	189.63	3.5	4	Interbedded Sandy CLAY and SAND (with clay), with trace organics. Dark grey.
		189.63	189.13	4	4.5	NO CORE
		189.13	187.73	4.5	5.9	Interbedded Sandy CLAY and SAND (with clay), with trace organics. Dark grey
		187.73	187.18	5.9	6.45	Gravelly SAND with clay. Grey brown. Trace gravel sized pockets of black (possibly organic) material up to 5 mn
		187.18	186.33	6.45	7.3	CONGLOMERATE, red brown to pale grey.
		186.33	185.88	7.3	7.75	Gravelly SAND. Pale grey. Trace gravel sized pockets of black (possibly organic) material up to 5 mm.
		185.88	185.48	7.75	8.15	Gravelly SAND with clay. Pale grey brown. Trace gravel sized pockets of black (possibly organic) material up to 5
		185.48	184.38	8.15	9.25	SAND with trace fines, pale orange brown.
		184.38	184.18	9.25	9.45	Gravelly SAND. Pale grey to red brown. Trace gravel sized pockets of black (possibly organic) material up to 5 m
		184.18	183.13	9.45	10.5	NO CORE
		183.13	182.63	10.5	11	SILT/CLAY with trace sand. Hard. Low plasticity. Orange brown (possible extremely weathered rock). Black vei
		182.63	182.18	11	11.45	NO CORE
		182.18	181.18	11.45	12.45	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock). Black veins noted, possible bla
		181.18	180.93	12.45	12.7	NO CORE
	180.93	180.13	12.7	13.5	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock). Black veins noted, possible bla	
	180.13	179.38	13.5	14.25	NO CORE	
	179.38	177.88	14.25	15.75	SILT/CLAY with trace sand. Orange brown (possible extremely weathered rock). Black veins noted, possible bla	
	177.88	148.63	15.75	45	extremely weathered rock, displaying as silts/clays/sands to end of hole. Black veins noted, possible black silt (s	
NUL-HR-WS59 (ASS-BH-03)	196.161	196.16	195.61	0	0.55	Gravelly SAND with fines. Pale brown, dry to moist.
		195.61	195.06	0.55	1.1	SAND with fines and trace organics. Pale orange-brown, moist to wet.
		195.06	194.16	1.1	2	Clayey SAND with fines and trace organics. Pale orange, mottled pale red, wet.
NUL-HR-WS60 (ASS-BH-02)	192.688	192.69	192.44	0	0.25	Sandy CLAY. High organic content/sulphur odour. Dark grey-black, moist.
		192.44	192.24	0.25	0.45	SAND with trace fines and trace organics. Grey, wet.
		192.24	190.89	0.45	1.8	CLAY with sand and trace organics. Pale grey, moist.
		190.89	190.69	1.8	2	Clayey SAND. Pale grey, streaked pale red, wet.

NUL-HR-WS61 (ASS- BH-01)	195.73	195.73	195.58	0	0.15	Silty SAND with trace organics. Brown, moist to wet (topsoil).
		195.58	194.38	0.15	1.35	SAND with fines and trace organics. Pale orange-brown, wet.
		194.38	193.73	1.35	2	Clayey SAND with trace gravel. Pale orange, mottled pale red, wet.
NUL-HR-WS62	193.100	193.10	192.95	0	0.15	Silty SAND with trace organics. Grey to brown, moist (topsoil).
		192.95	192.45	0.15	0.65	Sandy CLAY with trace organics. Grey, moist.
		192.45	192.05	0.65	1.05	Clayey SAND with trace organics. Grey, wet.
		192.05	191.10	1.05	2	CLAY with sand and trace organics. Grey, moist.
NUL-HR-WS63	192.653	192.65	192.55	0	0.1	SAND with fines and trace organics. Grey to brown, moist to wet (topsoil).
		192.55	192.30	0.1	0.35	SAND with trace fines and trace organics. Pale grey to brown, wet.
		192.30	191.65	0.35	1	Sandy CLAY with trace organics and trace cemented gravel. Pale grey to mottled pale orange, dry to moist.
NUL-HR-WS64	192.911	192.91	192.76	0	0.15	SAND with fines and trace organics. Grey to brown, moist (topsoil).
		192.76	192.51	0.15	0.4	SAND with trace fines and trace organics. Pale grey to brown, wet.
		192.51	191.91	0.4	1	Sandy CLAY with trace organics and trace cemented gravel. Pale grey to mottled pale orange, dry to moist.
NUL-HR-WS65	193.512	193.51	193.26	0	0.25	Silty SAND with trace organics. Grey to brown, moist (topsoil).
		193.26	193.01	0.25	0.5	SAND with trace fines and trace organics. Pale grey to brown, moist to wet.
		193.01	192.71	0.5	0.8	Sandy CLAY with trace organics and trace cemented gravel. Pale grey to mottled pale orange, moist.
		192.71	191.76	0.8	1.75	CLAY with trace sand trace cemented gravel, and trace organics. Pale grey to mottled pale orange, dry to moist



Certificate of Analysis PDK1619

Client Details

Client	Calibre Professional Services One Pty Ltd
Contact	[Redacted]
Address	[Redacted]

Sample Details

Your Reference	COPP18134
Number of Samples	10 Soil
Date Samples Received	25/11/2022
Date Samples Registered	25/11/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
 Samples were analysed as received from the client. Results relate specifically to the samples as received.
 Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

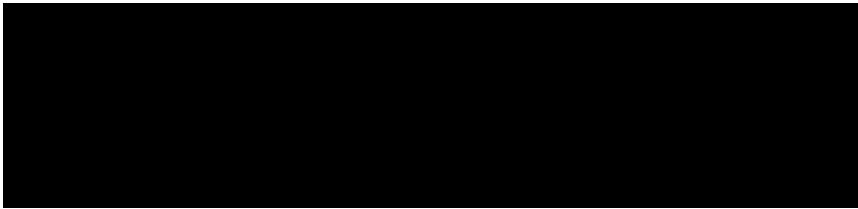
Report Details

Date Results Requested by	16/12/2022
Date of Issue	05/12/2022

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Authorisation Details

[Redacted]	[Redacted]
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Certificate of Analysis PDK1619

Samples in this Report

Envirolab ID	Sample ID	Depth	Matrix	Date Sampled	Date Received
PDK1619-01	ASS-BH-01	1.50-1.75	Soil	24/11/2022	25/11/2022
PDK1619-02	ASS-BH-02	0.70-1.00	Soil	24/11/2022	25/11/2022
PDK1619-03	ASS-BH-02	1.50-1.75	Soil	24/11/2022	25/11/2022
PDK1619-04	ASS-BH-02	1.75-2.00	Soil	24/11/2022	25/11/2022
PDK1619-05	ASS-BH-03	0.50-0.95	Soil	24/11/2022	25/11/2022
PDK1619-06	ASS-BH-03	1.30-1.60	Soil	24/11/2022	25/11/2022
PDK1619-07	ASS-HA-01	0.00-0.30	Soil	24/11/2022	25/11/2022
PDK1619-08	ASS-HA-01	0.30-0.60	Soil	24/11/2022	25/11/2022
PDK1619-09	ASS-HA-01	0.60-0.90	Soil	24/11/2022	25/11/2022
PDK1619-10	ASS-HA-02	0.00-0.30	Soil	24/11/2022	25/11/2022

Certificate of Analysis PDK1619

Acid Sulfate Soils (Soil)

Envirolab ID	Units	PQL	PDK1619-07	PDK1619-08	PDK1619-09	PDK1619-10
Your Reference			ASS-HA-01	ASS-HA-01	ASS-HA-01	ASS-HA-02
Date Sampled			24/11/2022	24/11/2022	24/11/2022	24/11/2022
Depth			0.00-0.30	0.30-0.60	0.60-0.90	0.00-0.30
pHF (field pH test)*	pH units		6.2	7.1	7.3	6.0
pHFOX (field peroxide test)*	pH units		4.0	2.6	2.7	2.9
Reaction Rate*	-		Medium	Medium	Medium	Medium

Certificate of Analysis PDK1619

Chromium Reducible Sulfur Suite (Soil)

Envirolab ID	Units	PQL	PDK1619-01	PDK1619-02	PDK1619-03	PDK1619-04	PDK1619-05
Your Reference			ASS-BH-01	ASS-BH-02	ASS-BH-02	ASS-BH-02	ASS-BH-03
Date Sampled			24/11/2022	24/11/2022	24/11/2022	24/11/2022	24/11/2022
Depth			1.50-1.75	0.70-1.00	1.50-1.75	1.75-2.00	0.50-0.95
pH KCl	pH units		5.7	5.7	5.8	5.8	6.0
TAA	moles H+/t	5.0	6.2	<5.0	5.9	<5.0	5.7
pH ox	pH units		5.8	4.8	5.5	5.0	4.5
s-TAA	% w/w S	0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chromium Reducible Sulfur	% w/w	0.0050	<0.0050	0.041	0.011	0.014	<0.0050
TPA	moles H+/t	5.0	<5.0	<5.0	<5.0	9.3	<5.0
a-Chromium Reducible Sulfur	moles H+/t	3.0	<3.0	26	6.6	8.7	<3.0
SHCl	% w/w S	0.0050	NT	NT	NT	NT	NT
SKCl	% w/w S	0.0050	NT	NT	NT	NT	NT
SNAS	% w/w S	0.0050	NT	NT	NT	NT	NT
a-SNAS	moles H+/t	5.0	NT	NT	NT	NT	NT
s-SNAS	% w/w S	0.010	NT	NT	NT	NT	NT
Fineness Factor	-	1.5	1.5	1.5	1.5	1.5	1.5
ANCBT	% CaCO3	0.010	NT	NT	NT	NT	NT
a-ANCBT	moles H+/t	5.0	NT	NT	NT	NT	NT
s-ANCBT	% w/w S	0.010	NT	NT	NT	NT	NT
s-Net Acidity	% w/w S	0.0050	0.013	0.047	0.020	0.021	0.0091
a-Net Acidity	moles H+/t	5.0	8.3	29	13	13	5.7
Liming rate	kg CaCO3/t	0.75	<0.75	2.2	0.94	1.0	<0.75
s-Net Acidity without ANCE	% w/w S	0.0050	0.013	0.047	0.020	0.021	0.0091
a-Net Acidity without ANCE	moles H+/t	5.0	8.3	29	13	13	5.7
Liming rate without ANCE	kg CaCO3/t	0.75	<0.75	2.2	0.94	1.0	<0.75

Envirolab ID	Units	PQL	PDK1619-06	PDK1619-07	PDK1619-08	PDK1619-09	PDK1619-10
Your Reference			ASS-BH-03	ASS-HA-01	ASS-HA-01	ASS-HA-01	ASS-HA-02
Date Sampled			24/11/2022	24/11/2022	24/11/2022	24/11/2022	24/11/2022
Depth			1.30-1.60	0.00-0.30	0.30-0.60	0.60-0.90	0.00-0.30
pH KCl	pH units		5.8	5.8	5.7	5.9	5.8
TAA	moles H+/t	5.0	8.7	14	14	11	15
pH ox	pH units		5.5	4.3	4.5	4.6	4.4
s-TAA	% w/w S	0.010	0.014	0.022	0.022	0.017	0.025
Chromium Reducible Sulfur	% w/w	0.0050	<0.0050	0.012	0.050	0.042	0.029
TPA	moles H+/t	5.0	<5.0	17	32	17	55
a-Chromium Reducible Sulfur	moles H+/t	3.0	<3.0	7.5	31	26	18
SHCl	% w/w S	0.0050	NT	NT	NT	NT	NT
SKCl	% w/w S	0.0050	NT	NT	NT	NT	NT
SNAS	% w/w S	0.0050	NT	NT	NT	NT	NT
a-SNAS	moles H+/t	5.0	NT	NT	NT	NT	NT
s-SNAS	% w/w S	0.010	NT	NT	NT	NT	NT
Fineness Factor	-	1.5	1.5	1.5	1.5	1.5	1.5
ANCBT	% CaCO3	0.010	NT	NT	NT	NT	NT
a-ANCBT	moles H+/t	5.0	NT	NT	NT	NT	NT
s-ANCBT	% w/w S	0.010	NT	NT	NT	NT	NT
s-Net Acidity	% w/w S	0.0050	0.014	0.034	0.072	0.059	0.053
a-Net Acidity	moles H+/t	5.0	8.7	21	45	37	33
Liming rate	kg CaCO3/t	0.75	<0.75	1.6	3.4	2.7	2.5

Certificate of Analysis PDK1619

Chromium Reducible Sulfur Suite (Soil)

Envirolab ID	Units	PQL	PDK1619-06	PDK1619-07	PDK1619-08	PDK1619-09	PDK1619-10
Your Reference			ASS-BH-03	ASS-HA-01	ASS-HA-01	ASS-HA-01	ASS-HA-02
Date Sampled			24/11/2022	24/11/2022	24/11/2022	24/11/2022	24/11/2022
Depth			1.30-1.60	0.00-0.30	0.30-0.60	0.60-0.90	0.00-0.30
s-Net Acidity without ANCE	% w/w S	0.0050	0.014	0.034	0.072	0.059	0.053
a-Net Acidity without ANCE	moles H+/t	5.0	8.7	21	45	37	33
Liming rate without ANCE	kg CaCO ₃ /t	0.75	<0.75	1.6	3.4	2.7	2.5

Certificate of Analysis PDK1619

Method Summary

Method ID	Methodology Summary
INORG-063	pH- measured using pH meter and electrode. Solids are oxidised with Hydrogen Peroxide or extracted with water. Based on section H, Acid Sulfate Soils Laboratory Methods Guidelines, latest edition. To ensure accurate results these tests are recommended to be done in the field as pH may change with time thus these results may not be representative of true field conditions. There is no documented official holding time, we have assigned an arbitrary 180 days to frozen samples.
INORG-068	Determination of Chromium Suite analysis - a sample is analysed by traditional titration method as well as ICP-OES analysis. Based on Acid Sulfate Soils Laboratory Methods Guidelines, latest edition. There is no documented official holding time, we have assigned an arbitrary 180 days to frozen samples.

Certificate of Analysis PDK1619

Result Definitions

Identifier	Description
NR	Not reported
NEPM	National Environment Protection Measure
NS	Not specified
LCS	Laboratory Control Sample
RPD	Relative Percent Difference
>	Greater than
<	Less than
PQL	Practical Quantitation Limit
INS	Insufficient sample for this test
NA	Test not required
NT	Not tested
DOL	Samples rejected due to particulate overload (air filters only)
RFD	Samples rejected due to filter damage (air filters only)
RUD	Samples rejected due to uneven deposition (air filters only)
##	Indicates a laboratory acceptance criteria outlier, for further details, see Result Comments and/or QC Comments

Quality Control Definitions

Blank

This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, and is determined by processing solvents and reagents in exactly the same manner as for samples.

Surrogate Spike

Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

LCS (Laboratory Control Sample)

This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Matrix Spike

A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

Duplicate

This is the complete duplicate analysis of a sample from the process batch. The sample selected should be one where the analyte concentration is easily measurable.

Certificate of Analysis PDK1619

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria. Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction. Spikes for Physical and Aggregate Tests are not applicable. For VOCs in water samples, three vials are required for duplicate or spike analysis.

General Acceptance Criteria (GAC) - Analyte specific criteria applies for some analytes and is reflected in QC recovery tables.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% - see ELN-P05 QAQC tables for details (available on request); <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase. Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was typically insufficient in order to satisfy laboratory QA/QC protocols.

Miscellaneous Information

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached. We have taken the sampling date as being the date received at the laboratory.

Two significant figures are reported for the majority of tests and with a high degree of confidence, for results <10*PQL, the second significant figure may be in doubt i.e. has a relatively high degree of uncertainty and is provided for information only.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS where sediment/solids are included by default.

Urine Analysis - The BEI values listed are taken from the 2022 edition of *TLVs and BEIs Threshold Limits by ACGIH*.

Air volume measurements are not covered by Envirolab's NATA accreditation.

Data Quality Assessment Summary PDK1619

Client Details

Client	Calibre Professional Services One Pty Ltd
Your Reference	COPP18134
Date Issued	05/12/2022

Recommended Holding Time Compliance

No recommended holding time exceedances

Quality Control and QC Frequency

QC Type	Compliant	Details
Blank	Yes	No Outliers
LCS	Yes	No Outliers
Duplicates	Yes	No Outliers
Matrix Spike	Yes	No Outliers
Surrogates / Extracted Internal Standards	Yes	No Outliers
QC Frequency	Yes	No Outliers

Surrogates/Extracted Internal Standards, Duplicates and/or Matrix Spikes are not always relevant/applicable to certain analyses and matrices. Therefore, said QC measures are deemed compliant in these situations by default. See Laboratory Acceptance Criteria for more information

Data Quality Assessment Summary PDK1619

Recommended Holding Time Compliance

Analysis	Sample Number(s)	Date Sampled	Date Extracted	Date Analysed	Compliant
pH F Soil	7-10	24/11/2022	25/11/2022	28/11/2022	Yes
pH FOX Soil	7-10	24/11/2022	25/11/2022	28/11/2022	Yes
Reaction Rate Soil	7-10	24/11/2022	25/11/2022	28/11/2022	Yes
CRS Suite Soil	1-10	24/11/2022	28/11/2022	28/11/2022	Yes
SPOCAS Soil	1-10	24/11/2022	28/11/2022	02/12/2022	Yes

Quality Control PDK1619

INORG-063 | Acid Sulfate Soils (Soil) | Batch BDK2993

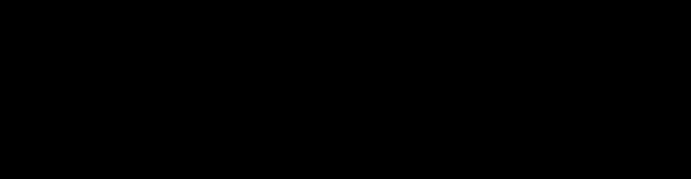
Analyte	Units	PQL	Blank	DUP1	LCS %
				PDK1619-07 Samp QC RPD %	
pHF (field pH test)	pH units			6.2 5.7 8.54	101
pHFOX (field peroxide test)	pH units			4.0 3.4 17.9	101
Reaction Rate	-			Medium Medium [NA]	[NA]

INORG-068 | Chromium Reducible Sulfur Suite (Soil) | Batch BDK3030

Analyte	Units	PQL	Blank	DUP1	LCS %
				PDK1619-01 Samp QC RPD %	
pH ox	pH units			5.75 5.71 0.698	100
TPA	moles H+/t	5		<5 0 <5.0 [NA]	[NA]

INORG-068 | Chromium Reducible Sulfur Suite (Soil) | Batch BDK3031

Analyte	Units	PQL	Blank	DUP1	LCS %
				PDK1619-01 Samp QC RPD %	
pH KCl	pH units		NT	5.70 5.80 1.74	98.4
TAA	moles H+/t	5.0	<5.0	6.17 5.40 13.3	106
s-TAA	% w/w S	0.010	<0.010	<0.010 <0.010 [NA]	[NA]
Chromium Reducible Sulfur	% w/w	0.0050	<0.0050	<0.0050 <0.0050 [NA]	101
a-Chromium Reducible Sulfur	moles H+/t	3.0	<3.0	<3 0 <3.0 [NA]	[NA]
SHCl	% w/w S	0.0050	<0.0050	NT NT [NA]	[NA]
SKCl	% w/w S	0.0050	<0.0050	NT NT [NA]	[NA]
SNAS	% w/w S	0.0050	<0.0050	NT NT [NA]	[NA]
a-SNAS	moles H+/t	5.0	<5.0	NT NT [NA]	[NA]
s-SNAS	% w/w S	0.010	<0.010	NT NT [NA]	[NA]
Fineness Factor	-	1.5	NT	1.50 1.50 0 00	[NA]
ANCBT	% CaCO3	0.010	<0.010	NT NT [NA]	[NA]
a-ANCBT	moles H+/t	5.0	<5.0	NT NT [NA]	[NA]
s-ANCBT	% w/w S	0.010	<0.010	NT NT [NA]	[NA]
s-Net Acidity	% w/w S	0.0050	<0.0050	0 0133 0.0112 17.4	[NA]
a-Net Acidity	moles H+/t	5.0	<5.0	8.30 6.96 17.4	[NA]
Liming rate	kg CaCO3/t	0.75	<0.75	<0.75 <0.75 [NA]	[NA]
s-Net Acidity without ANCE	% w/w S	0.0050	<0.0050	0 0133 0.0112 17.4	[NA]
a-Net Acidity without ANCE	moles H+/t	5.0	<5.0	8.30 6.96 17.4	[NA]
Liming rate without ANCE	kg CaCO3/t	0.75	<0.75	<0.75 <0.75 [NA]	[NA]



Certificate of Analysis PDL0201

Client Details

Client Calibre Professional Services One Pty Ltd
Contact [REDACTED]
Address [REDACTED]

Sample Details

Your Reference COPP18134
Number of Samples 9 Soil
Date Samples Received 05/12/2022
Date Samples Registered 05/12/2022

Analysis Details

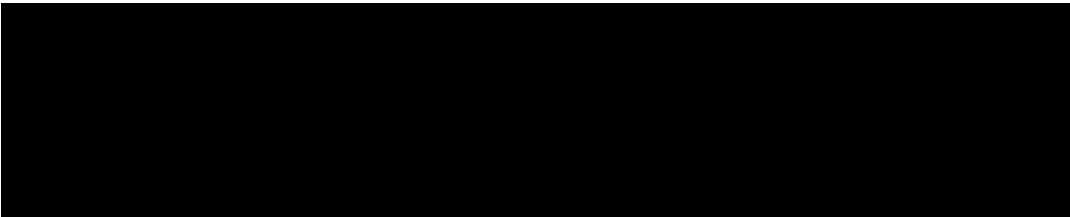
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date Results Requested by 12/12/2022
Date of Issue 06/12/2022

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Authorisation Details



Certificate of Analysis PDL0201

Samples in this Report

Envirolab ID	Sample ID	Depth	Matrix	Date Sampled	Date Received
PDL0201-01	NVL - BH17	3.45-3.60	Soil	02/12/2022	05/12/2022
PDL0201-02	NVL - BH17	4.40-4.50	Soil	02/12/2022	05/12/2022
PDL0201-03	NVL - BH17	5.50-5.60	Soil	02/12/2022	05/12/2022
PDL0201-04	NVL - BH17	6.30-6.40	Soil	02/12/2022	05/12/2022
PDL0201-05	NVL - BH17	7.40-7.50	Soil	02/12/2022	05/12/2022
PDL0201-06	NVL - BH17	9.00-9.45	Soil	03/12/2022	05/12/2022
PDL0201-07	NVL - BH17	9.70-9.75	Soil	03/12/2022	05/12/2022
PDL0201-08	NVL - BH17	12.70-12.75	Soil	03/12/2022	05/12/2022
PDL0201-09	NVL - BH17	13.50-13.15	Soil	03/12/2022	05/12/2022

Certificate of Analysis PDL0201

Acid Sulfate Soils (Soil)

Envirolab ID	Units	PQL	PDL0201-01	PDL0201-02	PDL0201-03	PDL0201-04	PDL0201-05
Your Reference			NVL - BH17	NVL - BH17	NVL - BH17	NVL - BH17	NVL - BH17
Date Sampled			02/12/2022	02/12/2022	02/12/2022	02/12/2022	02/12/2022
Depth			3.45-3.60	4.40-4.50	5.50-5.60	6.30-6.40	7.40-7.50
pHF (field pH test)*	pH units		6.4	6.6	9.0	6.9	6.4
pHFOX (field peroxide test)*	pH units		5.5	4.9	4.8	2.2	2.8
Reaction Rate*	-		High	Low	Low	Low	Low

Envirolab ID	Units	PQL	PDL0201-06	PDL0201-07	PDL0201-08	PDL0201-09
Your Reference			NVL - BH17	NVL - BH17	NVL - BH17	NVL - BH17
Date Sampled			03/12/2022	03/12/2022	03/12/2022	03/12/2022
Depth			9.00-9.45	9.70-9.75	12.70-12.75	13.50-13.15
pHF (field pH test)*	pH units		6.6	6.6	7.0	6.5
pHFOX (field peroxide test)*	pH units		4.7	3.2	4.8	5.0
Reaction Rate*	-		Low	Low	Low	Low

Certificate of Analysis PDL0201

Method Summary

Method ID	Methodology Summary
INORG-063	pH- measured using pH meter and electrode. Solids are oxidised with Hydrogen Peroxide or extracted with water. Based on section H, Acid Sulfate Soils Laboratory Methods Guidelines, latest edition. To ensure accurate results these tests are recommended to be done in the field as pH may change with time thus these results may not be representative of true field conditions. There is no documented official holding time, we have assigned an arbitrary 180 days to frozen samples.

Certificate of Analysis PDL0201

Result Definitions

Identifier	Description
NR	Not reported
NEPM	National Environment Protection Measure
NS	Not specified
LCS	Laboratory Control Sample
RPD	Relative Percent Difference
>	Greater than
<	Less than
PQL	Practical Quantitation Limit
INS	Insufficient sample for this test
NA	Test not required
NT	Not tested
DOL	Samples rejected due to particulate overload (air filters only)
RFD	Samples rejected due to filter damage (air filters only)
RUD	Samples rejected due to uneven deposition (air filters only)
##	Indicates a laboratory acceptance criteria outlier, for further details, see Result Comments and/or QC Comments

Quality Control Definitions

Blank

This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, and is determined by processing solvents and reagents in exactly the same manner as for samples.

Surrogate Spike

Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

LCS (Laboratory Control Sample)

This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Matrix Spike

A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

Duplicate

This is the complete duplicate analysis of a sample from the process batch. The sample selected should be one where the analyte concentration is easily measurable.

Certificate of Analysis PDL0201

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria. Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction. Spikes for Physical and Aggregate Tests are not applicable. For VOCs in water samples, three vials are required for duplicate or spike analysis.

General Acceptance Criteria (GAC) - Analyte specific criteria applies for some analytes and is reflected in QC recovery tables.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% - see ELN-P05 QAQC tables for details (available on request); <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase. Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was typically insufficient in order to satisfy laboratory QA/QC protocols.

Miscellaneous Information

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached. We have taken the sampling date as being the date received at the laboratory.

Two significant figures are reported for the majority of tests and with a high degree of confidence, for results <10*PQL, the second significant figure may be in doubt i.e. has a relatively high degree of uncertainty and is provided for information only.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS where sediment/solids are included by default.

Urine Analysis - The BEI values listed are taken from the 2022 edition of *TLVs and BEIs Threshold Limits by ACGIH*.

Air volume measurements are not covered by Envirolab's NATA accreditation.

Data Quality Assessment Summary PDL0201

Client Details

Client	Calibre Professional Services One Pty Ltd
Your Reference	COPP18134
Date Issued	06/12/2022

Recommended Holding Time Compliance

Recommended holding time exceedances exist - See detailed list below

Quality Control and QC Frequency

QC Type	Compliant	Details
Blank	Yes	No Outliers
LCS	Yes	No Outliers
Duplicates	Yes	No Outliers
Matrix Spike	Yes	No Outliers
Surrogates / Extracted Internal Standards	Yes	No Outliers
QC Frequency	Yes	No Outliers

Surrogates/Extracted Internal Standards, Duplicates and/or Matrix Spikes are not always relevant/applicable to certain analyses and matrices. Therefore, said QC measures are deemed compliant in these situations by default. See Laboratory Acceptance Criteria for more information

Data Quality Assessment Summary PDL0201

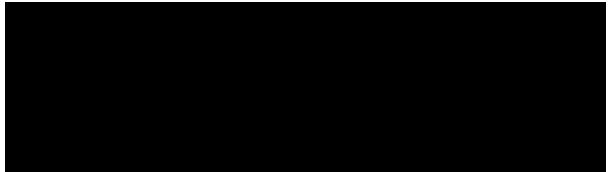
Recommended Holding Time Compliance

Analysis	Sample Number(s)	Date Sampled	Date Extracted	Date Analysed	Compliant
pH F Soil	1-5	02/12/2022	05/12/2022	05/12/2022	No
	6-9	03/12/2022	05/12/2022	05/12/2022	No
pH FOX Soil	1-5	02/12/2022	05/12/2022	05/12/2022	No
	6-9	03/12/2022	05/12/2022	05/12/2022	No
Reaction Rate Soil	1-5	02/12/2022	05/12/2022	05/12/2022	Yes
	6-9	03/12/2022	05/12/2022	05/12/2022	Yes

Quality Control PDL0201

INORG-063 | Acid Sulfate Soils (Soil) | Batch BDL0524

Analyte	Units	PQL	Blank	DUP1	LCS %
				PDL0201-01 Samp QC RPD %	
pHF (field pH test)	pH units			6.4 6.7 3.80	100
pHFOX (field peroxide test)	pH units			5.5 5.8 5.48	100
Reaction Rate	-			High High [NA]	[NA]



Certificate of Analysis PDL0201

Client Details

Client Calibre Professional Services One Pty Ltd
Contact [Redacted]
Address [Redacted]

Sample Details

Your Reference COPP18134
Number of Samples 9 Soil
Date Instructions Received 06/12/2022
Date Samples Registered 05/12/2022

Analysis Details

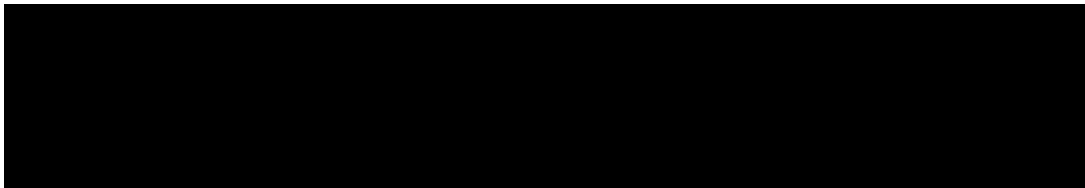
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date Results Requested by 20/12/2022
Date of Reissue 15/12/2022 - This report supercedes previous report, see amendment history for details

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Authorisation Details



Certificate of Analysis PDL0201

Report Amendment History

Revision	Reason for Amendment
R-01	Additional analysis requested 6-12-22

Certificate of Analysis PDL0201

Samples in this Report

Envirolab ID	Sample ID	Depth	Matrix	Date Sampled	Date Received
PDL0201-01	NVL - BH17	3.45-3.60	Soil	02/12/2022	05/12/2022
PDL0201-02	NVL - BH17	4.40-4.50	Soil	02/12/2022	05/12/2022
PDL0201-03	NVL - BH17	5.50-5.60	Soil	02/12/2022	05/12/2022
PDL0201-04	NVL - BH17	6.30-6.40	Soil	02/12/2022	05/12/2022
PDL0201-05	NVL - BH17	7.40-7.50	Soil	02/12/2022	05/12/2022
PDL0201-06	NVL - BH17	9.00-9.45	Soil	03/12/2022	05/12/2022
PDL0201-07	NVL - BH17	9.70-9.75	Soil	03/12/2022	05/12/2022
PDL0201-08	NVL - BH17	12.70-12.75	Soil	03/12/2022	05/12/2022
PDL0201-09	NVL - BH17	13.50-13.15	Soil	03/12/2022	05/12/2022

Certificate of Analysis PDL0201

Acid Sulfate Soils (Soil)

Envirolab ID	Units	PQL	PDL0201-01	PDL0201-02	PDL0201-03	PDL0201-04	PDL0201-05
Your Reference			NVL - BH17	NVL - BH17	NVL - BH17	NVL - BH17	NVL - BH17
Date Sampled			02/12/2022	02/12/2022	02/12/2022	02/12/2022	02/12/2022
Depth			3.45-3.60	4.40-4.50	5.50-5.60	6.30-6.40	7.40-7.50

pHF (field pH test)*	pH units		6.4	6.6	9.0	6.9	6.4
pHFOX (field peroxide test)*	pH units		5.5	4.9	4.8	2.2	2.8
Reaction Rate*	-		High	Low	Low	Low	Low

Envirolab ID	Units	PQL	PDL0201-06	PDL0201-07	PDL0201-08	PDL0201-09
Your Reference			NVL - BH17	NVL - BH17	NVL - BH17	NVL - BH17
Date Sampled			03/12/2022	03/12/2022	03/12/2022	03/12/2022
Depth			9.00-9.45	9.70-9.75	12.70-12.75	13.50-13.15

pHF (field pH test)*	pH units		6.6	6.6	7.0	6.5
pHFOX (field peroxide test)*	pH units		4.7	3.2	4.8	5.0
Reaction Rate*	-		Low	Low	Low	Low

Certificate of Analysis PDL0201

Chromium Reducible Sulfur Suite (Soil)

Envirolab ID Your Reference Date Sampled Depth	Units	PQL	PDL0201-01 NVL - BH17 02/12/2022 3.45-3.60	PDL0201-04 NVL - BH17 02/12/2022 6.30-6.40	PDL0201-07 NVL - BH17 03/12/2022 9.70-9.75
pH KCl	pH units		5.9	5.8	5.6
TAA	moles H+/t	5.0	13	11	17
pH ox	pH units		6.4	5.5	5.9
s-TAA	% w/w S	0.010	0.020	0.018	0.027
Chromium Reducible Sulfur	% w/w	0.0050	<0.0050	0.012	0.010
TPA	moles H+/t	5.0	<5.0	<5.0	7.8
a-Chromium Reducible Sulfur	moles H+/t	3.0	<3.0	7.4	6.5
SHCl	% w/w S	0.0050	NT	NT	NT
SKCl	% w/w S	0.0050	NT	NT	NT
SNAS	% w/w S	0.0050	NT	NT	NT
a-SNAS	moles H+/t	5.0	NT	NT	NT
s-SNAS	% w/w S	0.010	NT	NT	NT
Fineness Factor	-	1.5	1.5	1.5	1.5
ANCBT	% CaCO3	0.010	NT	NT	NT
a-ANCBT	moles H+/t	5.0	NT	NT	NT
s-ANCBT	% w/w S	0.010	NT	NT	NT
s-Net Acidity	% w/w S	0.0050	0.020	0.030	0.038
a-Net Acidity	moles H+/t	5.0	13	19	24
Liming rate	kg CaCO3/t	0.75	0.96	1.4	1.8
s-Net Acidity without ANCE	% w/w S	0.0050	0.020	0.030	0.038
a-Net Acidity without ANCE	moles H+/t	5.0	13	19	24
Liming rate without ANCE	kg CaCO3/t	0.75	0.96	1.4	1.8

Certificate of Analysis PDL0201

Method Summary

Method ID	Methodology Summary
INORG-063	pH- measured using pH meter and electrode. Solids are oxidised with Hydrogen Peroxide or extracted with water. Based on section H, Acid Sulfate Soils Laboratory Methods Guidelines, latest edition. To ensure accurate results these tests are recommended to be done in the field as pH may change with time thus these results may not be representative of true field conditions. There is no documented official holding time, we have assigned an arbitrary 180 days to frozen samples.
INORG-068	Determination of Chromium Suite analysis - a sample is analysed by traditional titration method as well as ICP-OES analysis. Based on Acid Sulfate Soils Laboratory Methods Guidelines, latest edition. There is no documented official holding time, we have assigned an arbitrary 180 days to frozen samples.

Certificate of Analysis PDL0201

Result Definitions

Identifier	Description
NR	Not reported
NEPM	National Environment Protection Measure
NS	Not specified
LCS	Laboratory Control Sample
RPD	Relative Percent Difference
>	Greater than
<	Less than
PQL	Practical Quantitation Limit
INS	Insufficient sample for this test
NA	Test not required
NT	Not tested
DOL	Samples rejected due to particulate overload (air filters only)
RFD	Samples rejected due to filter damage (air filters only)
RUD	Samples rejected due to uneven deposition (air filters only)
##	Indicates a laboratory acceptance criteria outlier, for further details, see Result Comments and/or QC Comments

Quality Control Definitions

Blank

This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, and is determined by processing solvents and reagents in exactly the same manner as for samples.

Surrogate Spike

Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

LCS (Laboratory Control Sample)

This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Matrix Spike

A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

Duplicate

This is the complete duplicate analysis of a sample from the process batch. The sample selected should be one where the analyte concentration is easily measurable.

Certificate of Analysis PDL0201

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria. Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction. Spikes for Physical and Aggregate Tests are not applicable. For VOCs in water samples, three vials are required for duplicate or spike analysis.

General Acceptance Criteria (GAC) - Analyte specific criteria applies for some analytes and is reflected in QC recovery tables.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% - see ELN-P05 QAQC tables for details (available on request); <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase. Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was typically insufficient in order to satisfy laboratory QA/QC protocols.

Miscellaneous Information

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached. We have taken the sampling date as being the date received at the laboratory.

Two significant figures are reported for the majority of tests and with a high degree of confidence, for results <10*PQL, the second significant figure may be in doubt i.e. has a relatively high degree of uncertainty and is provided for information only.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS where sediment/solids are included by default.

Urine Analysis - The BEI values listed are taken from the 2022 edition of *TLVs and BEIs Threshold Limits by ACGIH*.

Air volume measurements are not covered by Envirolab's NATA accreditation.

Data Quality Assessment Summary PDL0201

Client Details

Client	Calibre Professional Services One Pty Ltd
Your Reference	COPP18134
Date Issued	15/12/2022

Recommended Holding Time Compliance

Recommended holding time exceedances exist - See detailed list below

Quality Control and QC Frequency

QC Type	Compliant	Details
Blank	Yes	No Outliers
LCS	Yes	No Outliers
Duplicates	Yes	No Outliers
Matrix Spike	Yes	No Outliers
Surrogates / Extracted Internal Standards	Yes	No Outliers
QC Frequency	Yes	No Outliers

Surrogates/Extracted Internal Standards, Duplicates and/or Matrix Spikes are not always relevant/applicable to certain analyses and matrices. Therefore, said QC measures are deemed compliant in these situations by default. See Laboratory Acceptance Criteria for more information

Data Quality Assessment Summary PDL0201

Recommended Holding Time Compliance

Analysis	Sample Number(s)	Date Sampled	Date Extracted	Date Analysed	Compliant
pH F Soil	1-5	02/12/2022	05/12/2022	05/12/2022	No
	6-9	03/12/2022	05/12/2022	05/12/2022	No
pH FOX Soil	1-5	02/12/2022	05/12/2022	05/12/2022	No
	6-9	03/12/2022	05/12/2022	05/12/2022	No
Reaction Rate Soil	1-5	02/12/2022	05/12/2022	05/12/2022	Yes
	6-9	03/12/2022	05/12/2022	05/12/2022	Yes
CRS Suite Soil	1, 4	02/12/2022	07/12/2022	07/12/2022	Yes
	7	03/12/2022	07/12/2022	07/12/2022	Yes
SPOCAS Soil	1, 4	02/12/2022	07/12/2022	15/12/2022	Yes
	7	03/12/2022	07/12/2022	15/12/2022	Yes

Quality Control PDL0201

INORG-063 | Acid Sulfate Soils (Soil) | Batch BDL0524

Analyte	Units	PQL	Blank	DUP1	LCS %
				PDL0201-01 Samp QC RPD %	
pHF (field pH test)	pH units			6.4 6.7 3.80	100
pHFOX (field peroxide test)	pH units			5.5 5.8 5.48	100
Reaction Rate	-			High High [NA]	[NA]

INORG-068 | Chromium Reducible Sulfur Suite (Soil) | Batch BDL0752

Analyte	Units	PQL	Blank	DUP1	LCS %
				PDL0201-01 Samp QC RPD %	
pH KCl	pH units		NT	5.91 5.83 1.36	93.9
TAA	moles H+/t	5.0	<5.0	12.6 11.2 12.5	107
s-TAA	% w/w S	0.010	<0.010	0.0203 0.0179 12.5	[NA]
Chromium Reducible Sulfur	% w/w	0.0050	<0.0050	<0.0050 <0.0050 [NA]	101
a-Chromium Reducible Sulfur	moles H+/t	3.0	<3.0	<3.0 <3.0 [NA]	[NA]
SHCl	% w/w S	0.0050	<0.0050	NT NT [NA]	[NA]
SKCl	% w/w S	0.0050	<0.0050	NT NT [NA]	[NA]
SNAS	% w/w S	0.0050	<0.0050	NT NT [NA]	[NA]
a-SNAS	moles H+/t	5.0	<5.0	NT NT [NA]	[NA]
s-SNAS	% w/w S	0.010	<0.010	NT NT [NA]	[NA]
Fineness Factor	-	1.5	NT	1.50 1.50 0.00	[NA]
ANCBT	% CaCO3	0.010	<0.010	NT NT [NA]	[NA]
a-ANCBT	moles H+/t	5.0	<5.0	NT NT [NA]	[NA]
s-ANCBT	% w/w S	0.010	<0.010	NT NT [NA]	[NA]
s-Net Acidity	% w/w S	0.0050	<0.0050	0.0205 0.0181 12.4	[NA]
a-Net Acidity	moles H+/t	5.0	<5.0	12.8 11.3 12.4	[NA]
Liming rate	kg CaCO3/t	0.75	<0.75	0.957 0.846 12.4	[NA]
s-Net Acidity without ANCE	% w/w S	0.0050	<0.0050	0.0205 0.0181 12.4	[NA]
a-Net Acidity without ANCE	moles H+/t	5.0	<5.0	12.8 11.3 12.4	[NA]
Liming rate without ANCE	kg CaCO3/t	0.75	<0.75	0.957 0.846 12.4	[NA]

INORG-068 | Chromium Reducible Sulfur Suite (Soil) | Batch BDL0753

Analyte	Units	PQL	Blank	DUP1	LCS %
				PDL0201-01 Samp QC RPD %	
pH ox	pH units			6.40 6.40 0.00	97.1
TPA	moles H+/t	5		<5.0 <5.0 [NA]	[NA]



Certificate of Analysis PDL0635

Client Details

Client	Calibre Professional Services One Pty Ltd
Contact	[REDACTED]
[REDACTED]	[REDACTED]

Sample Details

Your Reference	COPP18134
Number of Samples	10 Soil
Date Samples Received	09/12/2022
Date Samples Registered	09/12/2022

Analysis Details

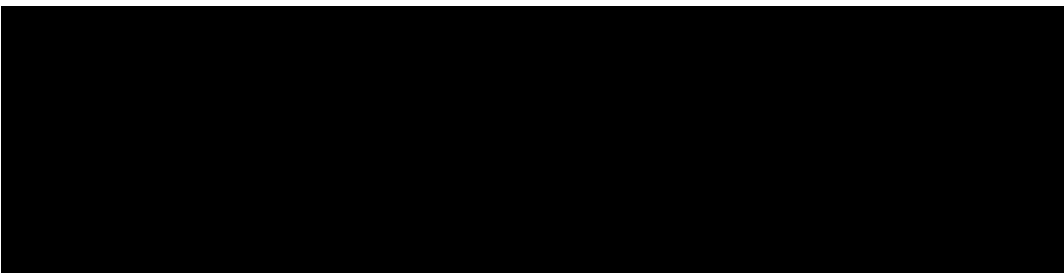
Please refer to the following pages for results, methodology summary and quality control data.
 Samples were analysed as received from the client. Results relate specifically to the samples as received.
 Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date Results Requested by	16/12/2022
Date of Issue	15/12/2022

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Authorisation Details



Certificate of Analysis PDL0635

Samples in this Report

Envirolab ID	Sample ID	Depth	Matrix	Date Sampled	Date Received
PDL0635-01	NUL-HR-56	0.25	Soil	08/12/2022	09/12/2022
PDL0635-02	NUL-HR-56	2.00	Soil	08/12/2022	09/12/2022
PDL0635-03	NUL-HR-57	1.00	Soil	08/12/2022	09/12/2022
PDL0635-04	NUL-HR-57	2.75	Soil	08/12/2022	09/12/2022
PDL0635-05	NUL-HR-57	3.00	Soil	08/12/2022	09/12/2022
PDL0635-06	NUL-HR-58	0.50	Soil	08/12/2022	09/12/2022
PDL0635-07	NUL-HR-58	2.00	Soil	08/12/2022	09/12/2022
PDL0635-08	NUL-HR-66	0.75	Soil	08/12/2022	09/12/2022
PDL0635-09	NUL-HR-66	2.25	Soil	08/12/2022	09/12/2022
PDL0635-10	NUL-HR-67	1.25	Soil	08/12/2022	09/12/2022

Sample Comments

NUL-HR-57 Depth on bag labelled: "1.25"
NUL-HR-66 Depth on bag labelled: "2.5"

Certificate of Analysis PDL0635

Chromium Reducible Sulfur Suite (Soil)

Envirolab ID Your Reference Date Sampled Depth	Units	PQL	PDL0635-01 NUL-HR-56 08/12/2022 0.25	PDL0635-02 NUL-HR-56 08/12/2022 2.00	PDL0635-03 NUL-HR-57 08/12/2022 1.00	PDL0635-04 NUL-HR-57 08/12/2022 2.75	PDL0635-05 NUL-HR-57 08/12/2022 3.00
pH KCl	pH units		5.9	5.4	5.4	5.4	5.4
TAA	moles H+/t	5 0	16	21	31	32	33
pH ox	pH units		4.1	5.7	5.0	5.4	5.4
s-TAA	% w/w S	0 010	0 026	0.033	0.050	0.051	0.053
Chromium Reducible Sulfur	% w/w	0.0050	<0.0050	<0.0050	<0 0050	0.022	<0.0050
TPA	moles H+/t	5 0	<5.0	10	23	19	16
a-Chromium Reducible Sulfur	moles H+/t	3 0	<3.0	<3 0	<3.0	14	<3 0
SHCl	% w/w S	0.0050	NT	NT	NT	NT	NT
SKCl	% w/w S	0.0050	NT	NT	NT	NT	NT
SNAS	% w/w S	0.0050	NT	NT	NT	NT	NT
a-SNAS	moles H+/t	5 0	NT	NT	NT	NT	NT
s-SNAS	% w/w S	0 010	NT	NT	NT	NT	NT
Fineness Factor	-	1 5	1.5	1 5	1.5	1.5	1 5
ANCBT	% CaCO3	0 010	NT	NT	NT	NT	NT
a-ANCBT	moles H+/t	5 0	NT	NT	NT	NT	NT
s-ANCBT	% w/w S	0 010	NT	NT	NT	NT	NT
s-Net Acidity	% w/w S	0.0050	0 025	0.033	0.050	0.073	0.054
a-Net Acidity	moles H+/t	5 0	16	21	31	46	34
Liming rate	kg CaCO3/t	0.75	1.2	1 5	2.3	3.4	2 5
s-Net Acidity without ANCE	% w/w S	0.0050	0 025	0.033	0.050	0.073	0.054
a-Net Acidity without ANCE	moles H+/t	5 0	16	21	31	46	34
Liming rate without ANCE	kg CaCO3/t	0.75	1.2	1 5	2.3	3.4	2 5

Envirolab ID Your Reference Date Sampled Depth	Units	PQL	PDL0635-06 NUL-HR-58 08/12/2022 0.50	PDL0635-07 NUL-HR-58 08/12/2022 2.00	PDL0635-08 NUL-HR-66 08/12/2022 0.75	PDL0635-09 NUL-HR-66 08/12/2022 2.25	PDL0635-10 NUL-HR-67 08/12/2022 1.25
pH KCl	pH units		5.4	5 5	5.6	5.8	5 6
TAA	moles H+/t	5 0	22	18	15	7.9	15
pH ox	pH units		5.3	5 6	5.5	6.0	5.7
s-TAA	% w/w S	0 010	0 035	0.029	0.024	0.013	0.024
Chromium Reducible Sulfur	% w/w	0.0050	<0.0050	<0.0050	<0 0050	<0.0050	<0.0050
TPA	moles H+/t	5 0	10	<5 0	<5.0	<5.0	5 2
a-Chromium Reducible Sulfur	moles H+/t	3 0	<3.0	<3 0	<3.0	<3.0	<3 0
SHCl	% w/w S	0.0050	NT	NT	NT	NT	NT
SKCl	% w/w S	0.0050	NT	NT	NT	NT	NT
SNAS	% w/w S	0.0050	NT	NT	NT	NT	NT
a-SNAS	moles H+/t	5 0	NT	NT	NT	NT	NT
s-SNAS	% w/w S	0 010	NT	NT	NT	NT	NT
Fineness Factor	-	1 5	1.5	1 5	1.5	1.5	1 5
ANCBT	% CaCO3	0 010	NT	NT	NT	NT	NT
a-ANCBT	moles H+/t	5 0	NT	NT	NT	NT	NT
s-ANCBT	% w/w S	0 010	NT	NT	NT	NT	NT
s-Net Acidity	% w/w S	0.0050	0 034	0.033	0.024	0.015	0.026
a-Net Acidity	moles H+/t	5 0	21	21	15	9.1	16
Liming rate	kg CaCO3/t	0.75	1.6	1 6	1.1	<0.75	1 2

Certificate of Analysis PDL0635

Chromium Reducible Sulfur Suite (Soil)

Envirolab ID	Units	PQL	PDL0635-06	PDL0635-07	PDL0635-08	PDL0635-09	PDL0635-10
Your Reference			NUL-HR-58	NUL-HR-58	NUL-HR-66	NUL-HR-66	NUL-HR-67
Date Sampled			08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Depth			0.50	2.00	0.75	2.25	1.25
s-Net Acidity without ANCE	% w/w S	0.0050	0.034	0.033	0.024	0.015	0.026
a-Net Acidity without ANCE	moles H+/t	5.0	21	21	15	9.1	16
Liming rate without ANCE	kg CaCO ₃ /t	0.75	1.6	1.6	1.1	<0.75	1.2

Certificate of Analysis PDL0635

Method Summary

Method ID	Methodology Summary
INORG-068	Determination of Chromium Suite analysis - a sample is analysed by traditional titration method as well as ICP-OES analysis. Based on Acid Sulfate Soils Laboratory Methods Guidelines, latest edition. There is no documented official holding time, we have assigned an arbitrary 180 days to frozen samples.

Certificate of Analysis PDL0635

Result Definitions

Identifier	Description
NR	Not reported
NEPM	National Environment Protection Measure
NS	Not specified
LCS	Laboratory Control Sample
RPD	Relative Percent Difference
>	Greater than
<	Less than
PQL	Practical Quantitation Limit
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DOL	Samples rejected due to particulate overload (air filters only)
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Quality Control Definitions

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This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, and is determined by processing solvents and reagents in exactly the same manner as for samples.

Surrogate Spike

Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

LCS (Laboratory Control Sample)

This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Matrix Spike

A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

Duplicate

This is the complete duplicate analysis of a sample from the process batch. The sample selected should be one where the analyte concentration is easily measurable.

Certificate of Analysis PDL0635

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria. Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction. Spikes for Physical and Aggregate Tests are not applicable. For VOCs in water samples, three vials are required for duplicate or spike analysis.

General Acceptance Criteria (GAC) - Analyte specific criteria applies for some analytes and is reflected in QC recovery tables.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% - see ELN-P05 QAQC tables for details (available on request); <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase. Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was typically insufficient in order to satisfy laboratory QA/QC protocols.

Miscellaneous Information

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached. We have taken the sampling date as being the date received at the laboratory.

Two significant figures are reported for the majority of tests and with a high degree of confidence, for results <10*PQL, the second significant figure may be in doubt i.e. has a relatively high degree of uncertainty and is provided for information only.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS where sediment/solids are included by default.

Urine Analysis - The BEI values listed are taken from the 2022 edition of *TLVs and BEIs Threshold Limits by ACGIH*.

Air volume measurements are not covered by Envirolab's NATA accreditation.

Data Quality Assessment Summary PDL0635

Client Details

Client	Calibre Professional Services One Pty Ltd
Your Reference	COPP18134
Date Issued	15/12/2022

Recommended Holding Time Compliance

No recommended holding time exceedances

Quality Control and QC Frequency

QC Type	Compliant	Details
Blank	Yes	No Outliers
LCS	Yes	No Outliers
Duplicates	Yes	No Outliers
Matrix Spike	Yes	No Outliers
Surrogates / Extracted Internal Standards	Yes	No Outliers
QC Frequency	Yes	No Outliers

Surrogates/Extracted Internal Standards, Duplicates and/or Matrix Spikes are not always relevant/applicable to certain analyses and matrices. Therefore, said QC measures are deemed compliant in these situations by default. See Laboratory Acceptance Criteria for more information

Data Quality Assessment Summary PDL0635

Recommended Holding Time Compliance

Analysis	Sample Number(s)	Date Sampled	Date Extracted	Date Analysed	Compliant
CRS Suite Soil	1-10	08/12/2022	12/12/2022	12/12/2022	Yes
SPOCAS Soil	1-10	08/12/2022	12/12/2022	15/12/2022	Yes

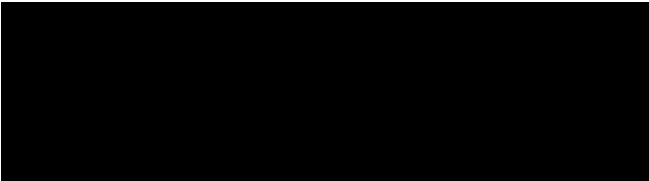
Quality Control PDL0635

INORG-068 | Chromium Reducible Sulfur Suite (Soil) | Batch BDL1215

Analyte	Units	PQL	Blank	DUP1	LCS %
				PDL0635-01 Samp QC RPD %	
pH KCl	pH units		NT	5.86 5.76 1.72	93.9
TAA	moles H+/t	5.0	<5.0	16.1 15.9 1.55	107
s-TAA	% w/w S	0.010	<0.010	0.0258 0.0254 1.55	[NA]
Chromium Reducible Sulfur	% w/w	0.0050	<0.0050	<0.0050 <0.0050 [NA]	101
a-Chromium Reducible Sulfur	moles H+/t	3.0	<3.0	<3.0 <3.0 [NA]	[NA]
SHCl	% w/w S	0.0050	<0.0050	NT NT [NA]	[NA]
SKCl	% w/w S	0.0050	<0.0050	NT NT [NA]	[NA]
SNAS	% w/w S	0.0050	<0.0050	NT NT [NA]	[NA]
a-SNAS	moles H+/t	5.0	<5.0	NT NT [NA]	[NA]
s-SNAS	% w/w S	0.010	<0.010	NT NT [NA]	[NA]
Fineness Factor	-	1.5	NT	1.50 1.50 0.00	[NA]
ANCBT	% CaCO3	0.010	<0.010	NT NT [NA]	[NA]
a-ANCBT	moles H+/t	5.0	<5.0	NT NT [NA]	[NA]
s-ANCBT	% w/w S	0.010	<0.010	NT NT [NA]	[NA]
s-Net Acidity	% w/w S	0.0050	<0.0050	0.0255 0.0254 0.139	[NA]
a-Net Acidity	moles H+/t	5.0	<5.0	15.9 15.9 0.139	[NA]
Liming rate	kg CaCO3/t	0.75	<0.75	1.19 1.19 0.139	[NA]
s-Net Acidity without ANCE	% w/w S	0.0050	<0.0050	0.0255 0.0254 0.139	[NA]
a-Net Acidity without ANCE	moles H+/t	5.0	<5.0	15.9 15.9 0.139	[NA]
Liming rate without ANCE	kg CaCO3/t	0.75	<0.75	1.19 1.19 0.139	[NA]

INORG-068 | Chromium Reducible Sulfur Suite (Soil) | Batch BDL1216

Analyte	Units	PQL	Blank	DUP1	LCS %
				PDL0635-01 Samp QC RPD %	
pH ox	pH units			4.12 4.16 0.966	97.1
TPA	moles H+/t	5		<5.0 <5.0 [NA]	[NA]



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Client Details

Client Calibre Professional Services One Pty Ltd

Contact

Address



Sample Details

Your Reference	COPP18134
Number of Samples	30 Soil, 1 Water
Date Instructions Received	05/01/2023
Date Samples Registered	15/12/2022

Analysis Details

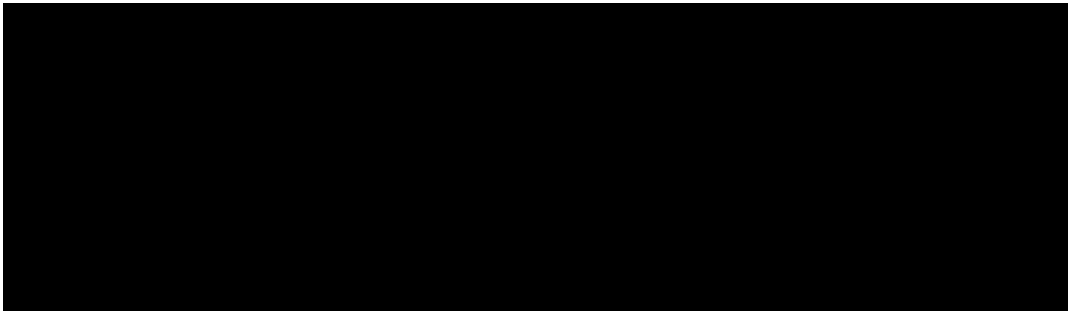
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date Results Requested by	13/01/2023
Date of Reissue	12/01/2023 - This report supercedes previous report, see amendment history for details

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Authorisation Details



Certificate of Analysis PDL1070

Report Amendment History

Revision	Reason for Amendment
R-01	Additional analysis requested 5-1-23

Certificate of Analysis PDL1070

Samples in this Report

Envirolab ID	Sample ID	Depth	Matrix	Date Sampled	Date Received
PDL1070-01	NUL-BH18	3.40	Soil	14/12/2022	13/01/2023
PDL1070-02	NUL-BH18	7.90	Soil	14/12/2022	13/01/2023
PDL1070-03	NUL-BH18	7.50	Soil	14/12/2022	13/01/2023
PDL1070-04	NUL-BH18	8.50	Soil	14/12/2022	13/01/2023
PDL1070-05	NUL-BH18	5.60	Soil	14/12/2022	13/01/2023
PDL1070-06	NUL-BH18	4.70	Soil	14/12/2022	13/01/2023
PDL1070-07	NUL-BH18	1.70	Soil	14/12/2022	13/01/2023
PDL1070-08	NUL-HR-WS62	0.25	Soil	14/12/2022	13/01/2023
PDL1070-09	NUL-HR-WS62	0.50	Soil	14/12/2022	13/01/2023
PDL1070-10	NUL-HR-WS62	0.75	Soil	14/12/2022	13/01/2023
PDL1070-11	NUL-HR-WS62	1.00	Soil	14/12/2022	13/01/2023
PDL1070-12	NUL-HR-WS62	1.25	Soil	14/12/2022	13/01/2023
PDL1070-13	NUL-HR-WS62	1.50	Soil	14/12/2022	13/01/2023
PDL1070-14	NUL-HR-WS62	1.75	Soil	14/12/2022	13/01/2023
PDL1070-15	NUL-HR-WS62	2.00	Soil	14/12/2022	13/01/2023
PDL1070-16	NUL-HR-WS63	0.25	Soil	14/12/2022	13/01/2023
PDL1070-17	NUL-HR-WS63	0.50	Soil	14/12/2022	13/01/2023
PDL1070-18	NUL-HR-WS63	0.75	Soil	14/12/2022	13/01/2023
PDL1070-19	NUL-HR-WS63	1.00	Soil	14/12/2022	13/01/2023
PDL1070-20	NUL-HR-WS64	0.25	Soil	14/12/2022	13/01/2023
PDL1070-21	NUL-HR-WS64	0.50	Soil	14/12/2022	13/01/2023
PDL1070-22	NUL-HR-WS64	0.75	Soil	14/12/2022	13/01/2023
PDL1070-23	NUL-HR-WS64	1.00	Soil	14/12/2022	13/01/2023
PDL1070-24	NUL-HR-WS65	0.25	Soil	14/12/2022	13/01/2023
PDL1070-25	NUL-HR-WS65	0.50	Soil	14/12/2022	13/01/2023
PDL1070-26	NUL-HR-WS65	0.75	Soil	14/12/2022	13/01/2023
PDL1070-27	NUL-HR-WS65	1.00	Soil	14/12/2022	13/01/2023
PDL1070-28	NUL-HR-WS65	1.25	Soil	14/12/2022	13/01/2023
PDL1070-29	NUL-HR-WS65	1.50	Soil	14/12/2022	13/01/2023
PDL1070-30	NUL-HR-WS65	1.75	Soil	14/12/2022	13/01/2023
PDL1070-31	NUL-HR-WS60		Water	14/12/2022	13/01/2023

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Acid Extractable Metals (Water)

Envirolab ID	Units	PQL	PDL1070-31
Your Reference			NUL-HR-WS60
Date Sampled			14/12/2022
Phosphorus	mg/L	0.050	2.6

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Acid Extractable Low Level Metals (Water)

Envirolab ID	Units	PQL	PDL1070-31
Your Reference			NUL-HR-WS60
Date Sampled			14/12/2022
Aluminium	µg/L	10	470000
Iron	µg/L	10	430000

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Dissolved Metals (Water)

Envirolab ID	Units	PQL	PDL1070-31
Your Reference			NUL-HR-WS60
Date Sampled			14/12/2022
Calcium	mg/L	0.50	38
Magnesium	mg/L	0.50	82
Potassium	mg/L	0.50	6.9
Sodium	mg/L	0.50	520
Hardness as CaCO3	mg/L	3.0	430

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Dissolved Low Level Metals (Water)

Envirolab ID Your Reference Date Sampled	Units	PQL	PDL1070-31 NUL-HR-WS60 14/12/2022
Aluminium	µg/L	10	32
Arsenic	µg/L	1.0	1.5
Cadmium	µg/L	0.10	<0.10
Chromium	µg/L	1.0	1.7
Iron	µg/L	10	23000
Manganese	µg/L	1.0	1600
Nickel	µg/L	1.0	4.4
Selenium	µg/L	1.0	1.3
Zinc	µg/L	1.0	4.7

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Inorganics (Water)

Envirolab ID Your Reference Date Sampled	Units	PQL	PDL1070-31 NUL-HR-WS60 14/12/2022
Acidity	mg/L	5.0	33
Ammonia as N	mg/L	0.0050	0.60
Chloride	mg/L	1.0	580
Electrical Conductivity	µS/cm	2.0	3400
Total Nitrogen	mg/L	0.10	48
pH	pH units		6.6
Sulfate	mg/L	1.0	37
Total Dissolved Solids	mg/L	5.0	2100
Carbonate Alkalinity as CaCO ₃	mg/L as CaCO ₃	5.0	<5.0
Bicarbonate Alkalinity as CaCO ₃	mg/L as CaCO ₃	5.0	150
Hydroxide OH ⁻ as CaCO ₃	mg/L as CaCO ₃	5.0	<5.0
Total Alkalinity as CaCO ₃	mg/L as CaCO ₃	5.0	150

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Acid Sulfate Soils (Soil)

Envirolab ID	Units	PQL	PDL1070-01	PDL1070-02	PDL1070-03	PDL1070-04	PDL1070-05
Your Reference			NUL-BH18	NUL-BH18	NUL-BH18	NUL-BH18	NUL-BH18
Date Sampled			14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Depth			3.40	7.90	7.50	8.50	5.60
pHF (field pH test)*	pH units		6.5	6.4	6.4	6.2	6.4
pHFOX (field peroxide test)*	pH units		2.6	5.6	5.4	4.0	2.7
Reaction Rate*	-		Low	High	High	Low	Volcanic

Envirolab ID	Units	PQL	PDL1070-06	PDL1070-07	PDL1070-08	PDL1070-09	PDL1070-10
Your Reference			NUL-BH18	NUL-BH18	NUL-HR-WS62	NUL-HR-WS62	NUL-HR-WS62
Date Sampled			14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Depth			4.70	1.70	0.25	0.50	0.75
pHF (field pH test)*	pH units		6.5	6.0	6.9	6.9	7.1
pHFOX (field peroxide test)*	pH units		2.5	2.4	3.8	4.6	4.1
Reaction Rate*	-		Extreme	Low	Medium	Medium	Medium

Envirolab ID	Units	PQL	PDL1070-11	PDL1070-12	PDL1070-13	PDL1070-14	PDL1070-15
Your Reference			NUL-HR-WS62	NUL-HR-WS62	NUL-HR-WS62	NUL-HR-WS62	NUL-HR-WS62
Date Sampled			14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Depth			1.00	1.25	1.50	1.75	2.00
pHF (field pH test)*	pH units		6.7	6.3	6.6	6.7	6.8
pHFOX (field peroxide test)*	pH units		3.2	3.3	4.2	4.0	3.7
Reaction Rate*	-		Volcanic	High	Medium	High	Extreme

Envirolab ID	Units	PQL	PDL1070-16	PDL1070-17	PDL1070-18	PDL1070-19	PDL1070-20
Your Reference			NUL-HR-WS63	NUL-HR-WS63	NUL-HR-WS63	NUL-HR-WS63	NUL-HR-WS64
Date Sampled			14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Depth			0.25	0.50	0.75	1.00	0.25
pHF (field pH test)*	pH units		6.6	7.0	7.3	7.5	7.7
pHFOX (field peroxide test)*	pH units		3.6	6.8	6.6	7.5	4.9
Reaction Rate*	-		Medium	Volcanic	Volcanic	High	Low

Envirolab ID	Units	PQL	PDL1070-21	PDL1070-22	PDL1070-23	PDL1070-24	PDL1070-25
Your Reference			NUL-HR-WS64	NUL-HR-WS64	NUL-HR-WS64	NUL-HR-WS65	NUL-HR-WS65
Date Sampled			14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Depth			0.50	0.75	1.00	0.25	0.50
pHF (field pH test)*	pH units		7.0	7.0	7.0	7.6	7.0
pHFOX (field peroxide test)*	pH units		4.2	6.4	6.4	5.6	6.4
Reaction Rate*	-		Extreme	Volcanic	Volcanic	Low	Extreme

Envirolab ID	Units	PQL	PDL1070-26	PDL1070-27	PDL1070-28	PDL1070-29	PDL1070-30
Your Reference			NUL-HR-WS65	NUL-HR-WS65	NUL-HR-WS65	NUL-HR-WS65	NUL-HR-WS65
Date Sampled			14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Depth			0.75	1.00	1.25	1.50	1.75
pHF (field pH test)*	pH units		7.3	7.0	6.9	7.7	7.5
pHFOX (field peroxide test)*	pH units		3.5	4.6	6.1	7.4	6.8
Reaction Rate*	-		Extreme	Low	High	Extreme	Extreme

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Chromium Reducible Sulfur Suite (Soil)

Envirolab ID Your Reference Date Sampled Depth	Units	PQL	PDL1070-01 NUL-BH18 14/12/2022 3.40	PDL1070-03 NUL-BH18 14/12/2022 7.50	PDL1070-04 NUL-BH18 14/12/2022 8.50	PDL1070-05 NUL-BH18 14/12/2022 5.60	PDL1070-06 NUL-BH18 14/12/2022 4.70
pH KCl	pH units		5.6	5.4	5.4	5.6	5.7
TAA	moles H+/t	5 0	12	15	13	12	11
pH ox	pH units		5.4	6 5	6.0	4.4	4.7
s-TAA	% w/w S	0 010	0 019	0.025	0.022	0.018	0.017
Chromium Reducible Sulfur	% w/w	0.0050	<0.0050	0.0060	<0 0050	0.085	0.040
TPA	moles H+/t	5 0	<5.0	<5 0	9.4	35	59
a-Chromium Reducible Sulfur	moles H+/t	3 0	<3.0	3.7	<3.0	53	25
SHCl	% w/w S	0.0050	NT	NT	NT	NT	NT
SKCl	% w/w S	0.0050	NT	NT	NT	NT	NT
SNAS	% w/w S	0.0050	NT	NT	NT	NT	NT
a-SNAS	moles H+/t	5 0	NT	NT	NT	NT	NT
s-SNAS	% w/w S	0 010	NT	NT	NT	NT	NT
Fineness Factor	-	1 5	1.5	1 5	1.5	1.5	1 5
ANCBT	% CaCO3	0 010	NT	NT	NT	NT	NT
a-ANCBT	moles H+/t	5 0	NT	NT	NT	NT	NT
s-ANCBT	% w/w S	0 010	NT	NT	NT	NT	NT
s-Net Acidity	% w/w S	0.0050	0 024	0.031	0.026	0.10	0.057
a-Net Acidity	moles H+/t	5 0	15	19	16	64	36
Liming rate	kg CaCO3/t	0.75	1.1	1.4	1.2	4.8	2.7
s-Net Acidity without ANCE	% w/w S	0.0050	0 024	0.031	0.026	0.10	0.057
a-Net Acidity without ANCE	moles H+/t	5 0	15	19	16	64	36
Liming rate without ANCE	kg CaCO3/t	0.75	1.1	1.4	1.2	4.8	2.7

Envirolab ID Your Reference Date Sampled Depth	Units	PQL	PDL1070-11 NUL-HR-WS62 14/12/2022 1.00	PDL1070-15 NUL-HR-WS62 14/12/2022 2.00	PDL1070-18 NUL-HR-WS63 14/12/2022 0.75	PDL1070-21 NUL-HR-WS64 14/12/2022 0.50	PDL1070-26 NUL-HR-WS65 14/12/2022 0.75
pH KCl	pH units		5.9	5 5	5.8	5.7	5 6
TAA	moles H+/t	5 0	8.2	20	8.4	15	12
pH ox	pH units		4.6	4.9	6.4	5.9	5.4
s-TAA	% w/w S	0 010	0 013	0.032	0.013	0.024	0.019
Chromium Reducible Sulfur	% w/w	0.0050	0 015	0.053	0.0060	<0.0050	0.020
TPA	moles H+/t	5 0	<5.0	31	<5.0	6.5	5 8
a-Chromium Reducible Sulfur	moles H+/t	3 0	9.2	33	3.7	<3.0	12
SHCl	% w/w S	0.0050	NT	NT	NT	NT	NT
SKCl	% w/w S	0.0050	NT	NT	NT	NT	NT
SNAS	% w/w S	0.0050	NT	NT	NT	NT	NT
a-SNAS	moles H+/t	5 0	NT	NT	NT	NT	NT
s-SNAS	% w/w S	0 010	NT	NT	NT	NT	NT
Fineness Factor	-	1 5	1.5	1 5	1.5	1.5	1 5
ANCBT	% CaCO3	0 010	NT	NT	NT	NT	NT
a-ANCBT	moles H+/t	5 0	NT	NT	NT	NT	NT
s-ANCBT	% w/w S	0 010	NT	NT	NT	NT	NT
s-Net Acidity	% w/w S	0.0050	0 028	0.084	0.019	0.027	0.039
a-Net Acidity	moles H+/t	5 0	17	53	12	17	24
Liming rate	kg CaCO3/t	0.75	1.3	3.9	0.91	1.3	1 8

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Chromium Reducible Sulfur Suite (Soil)

Envirolab ID	Units	PQL	PDL1070-11	PDL1070-15	PDL1070-18	PDL1070-21	PDL1070-26
Your Reference			NUL-HR-WS62	NUL-HR-WS62	NUL-HR-WS63	NUL-HR-WS64	NUL-HR-WS65
Date Sampled			14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Depth			1.00	2.00	0.75	0.50	0.75
s-Net Acidity without ANCE	% w/w S	0.0050	0.028	0.084	0.019	0.027	0.039
a-Net Acidity without ANCE	moles H+/t	5.0	17	53	12	17	24
Liming rate without ANCE	kg CaCO ₃ /t	0.75	1.3	3.9	0.91	1.3	1.8

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Method Summary

Method ID	Methodology Summary
INORG-001	pH - Measured using pH meter and electrode based on APHA latest edition, Method 4500-H+. Please note that the results for water analyses are indicative only, as analysis can be completed outside of the APHA recommended holding times. Solids are reported from a 1:5 water extract unless otherwise specified. Alternatively, pH is determined in a 1:5 extract using 0.01M calcium chloride or a solid is extracted at a ratio of 1:2.5 (AS1289.4.3.1), pH is measured in the extract.
INORG-002	Conductivity and Salinity - measured using a conductivity cell at 25°C based on APHA latest edition Method 2510. Soil results reported from a 1:5 Soil:Water extract unless otherwise specified. Please note Resistivity is estimated by calculation and may not correlate with results otherwise obtained using the Resistivity current method (based on AS 1289.4.4.1), depending on the nature of the soil being analysed.
INORG-005	Acidity - determined by titration based on APHA latest edition 2310 B. Solids reported from a 1:5 water extract unless otherwise specified. Free Carbon Dioxide - determined titrimetrically in accordance with APHA latest edition,4500-CO2 C.
INORG-006	Alkalinity - determined titrimetrically based on APHA latest edition 2320-B. Solids reported from a 1:5 water extract unless otherwise specified. Total Carbon Dioxide - determined by calculation in accordance with APHA latest edition,4500-CO2 D.
INORG-018	Total Dissolved Solids - determined gravimetrically. The solids are dried at 180±10°C.
INORG-057	Ammonia - determined colourimetrically. Water samples are filtered on receipt prior to analysis. Soils and OHS media are analysed following a water extraction. Alternatively, Ammonia can be extracted from soil using 1M KCl.
INORG-063	pH- measured using pH meter and electrode. Solids are oxidised with Hydrogen Peroxide or extracted with water. Based on section H, Acid Sulfate Soils Laboratory Methods Guidelines, latest edition. To ensure accurate results these tests are recommended to be done in the field as pH may change with time thus these results may not be representative of true field conditions. There is no documented official holding time, we have assigned an arbitrary 180 days to frozen samples.
INORG-068	Determination of Chromium Suite analysis - a sample is analysed by traditional titration method as well as ICP-OES analysis. Based on Acid Sulfate Soils Laboratory Methods Guidelines, latest edition. There is no documented official holding time, we have assigned an arbitrary 180 days to frozen samples.
INORG-081	Anions determined by Ion Chromatography. Waters samples are filtered on receipt prior to analysis. Solids are analysed from a water extract. Alternatively determined by colourimetry/turbidity using Discrete Analyser.
INORG-127	Total Nitrogen by high temperature catalytic combustion with chemiluminescence detection. Organic Carbon forms (inorganic, organic, total) determined using a TOC/NDIR analyser via combustion. Dissolved forms require filtering prior to determination.
METALS-020	Determination of various metals by ICP-OES.
METALS-022	Determination of various metals by ICP-MS.

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Result Definitions

Identifier	Description
NR	Not reported
NEPM	National Environment Protection Measure
NS	Not specified
LCS	Laboratory Control Sample
RPD	Relative Percent Difference
>	Greater than
<	Less than
PQL	Practical Quantitation Limit
INS	Insufficient sample for this test
NA	Test not required
NT	Not tested
DOL	Samples rejected due to particulate overload (air filters only)
RFD	Samples rejected due to filter damage (air filters only)
RUD	Samples rejected due to uneven deposition (air filters only)
##	Indicates a laboratory acceptance criteria outlier, for further details, see Result Comments and/or QC Comments

Quality Control Definitions

Blank

This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, and is determined by processing solvents and reagents in exactly the same manner as for samples.

Surrogate Spike

Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

LCS (Laboratory Control Sample)

This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Matrix Spike

A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

Duplicate

This is the complete duplicate analysis of a sample from the process batch. The sample selected should be one where the analyte concentration is easily measurable.

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Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria. Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction. Spikes for Physical and Aggregate Tests are not applicable. For VOCs in water samples, three vials are required for duplicate or spike analysis.

General Acceptance Criteria (GAC) - Analyte specific criteria applies for some analytes and is reflected in QC recovery tables.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% - see ELN-P05 QAQC tables for details (available on request); <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase. Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was typically insufficient in order to satisfy laboratory QA/QC protocols.

Miscellaneous Information

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached. We have taken the sampling date as being the date received at the laboratory.

Two significant figures are reported for the majority of tests and with a high degree of confidence, for results <10*PQL, the second significant figure may be in doubt i.e. has a relatively high degree of uncertainty and is provided for information only.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS where sediment/solids are included by default.

Urine Analysis - The BEI values listed are taken from the 2022 edition of *TLVs and BEIs Threshold Limits by ACGIH*.

Air volume measurements are not covered by Envirolab's NATA accreditation.

Data Quality Assessment Summary PDL1070

Client Details

Client	Calibre Professional Services One Pty Ltd
Your Reference	COPP18134
Date Issued	12/01/2023

Recommended Holding Time Compliance

Recommended holding time exceedances exist - See detailed list below

Quality Control and QC Frequency

QC Type	Compliant	Details
Blank	Yes	No Outliers
LCS	Yes	No Outliers
Duplicates	No	Duplicate Outliers Exist - See detailed list below
Matrix Spike	No	Matrix Spike Outliers Exist - See detailed list below
Surrogates / Extracted Internal Standards	Yes	No Outliers
QC Frequency	Yes	No Outliers

Surrogates/Extracted Internal Standards, Duplicates and/or Matrix Spikes are not always relevant/applicable to certain analyses and matrices. Therefore, said QC measures are deemed compliant in these situations by default. See Laboratory Acceptance Criteria for more information

Data Quality Assessment Summary PDL1070

Recommended Holding Time Compliance

Analysis	Sample Number(s)	Date Sampled	Date Extracted	Date Analysed	Compliant
Total Phosphorus Water	31	14/12/2022	20/12/2022	22/12/2022	Yes
Total Metals (LL) Water	31	14/12/2022	20/12/2022	22/12/2022	Yes
Dissolved Cations Water	31	14/12/2022	22/12/2022	28/12/2022	Yes
Dissolved Metals (LL) Water	31	14/12/2022	22/12/2022	04/01/2023	Yes
Acidity Water	31	14/12/2022	03/01/2023	03/01/2023	No
Alkalinity Suite Water	31	14/12/2022	21/12/2022	21/12/2022	Yes
Chloride Water	31	14/12/2022	20/12/2022	21/12/2022	Yes
EC Water	31	14/12/2022	21/12/2022	21/12/2022	Yes
Nitrogen - Ammonia Water	31	14/12/2022	22/12/2022	22/12/2022	Yes
Nitrogen - Total N Water	31	14/12/2022	19/12/2022	21/12/2022	No
pH Water	31	14/12/2022	21/12/2022	21/12/2022	No
Sulfate Water	31	14/12/2022	20/12/2022	21/12/2022	Yes
TDS Water	31	14/12/2022	20/12/2022	20/12/2022	Yes
pH F Soil	1-30	14/12/2022	16/12/2022	16/12/2022	No
pH FOX Soil	1-30	14/12/2022	16/12/2022	16/12/2022	No
Reaction Rate Soil	1-30	14/12/2022	16/12/2022	16/12/2022	Yes
CRS Suite Soil	1, 3-6, 11, 15, 18, 21, 26	14/12/2022	09/01/2023	09/01/2023	Yes
SPOCAS Soil	1, 3-6, 11, 15, 18, 21, 26	14/12/2022	09/01/2023	12/01/2023	Yes

Outliers: Duplicates

INORG-068 | Chromium Reducible Sulfur Suite (Soil) | Batch BEA0407

Sample ID	Duplicate ID	Analyte	% Limits	RPD
PDL1070-01	DUP1	a Chromium Reducible sulfur	30.00	200
PDL1070-01	DUP1	Chromium Reducible Sulfur	30.00	200

METALS-022 | Dissolved Low Level Metals (Water) | Batch BDL2438

Sample ID	Duplicate ID	Analyte	% Limits	RPD
PDL1070-31	DUP1	Nickel	20.00	49.8[3]
PDL1070-31	DUP1	Selenium	20.00	200[3]

Data Quality Assessment Summary PDL1070

Outliers: Matrix Spike

INORG-081 | Inorganics (Water) | Batch BDL2208

Sample ID	Analyte	% Limits	% Recovery
BDL2208-MS1#	Chloride	70 - 130	##[1]

INORG-127 | Inorganics (Water) | Batch BDL2117

Sample ID	Analyte	% Limits	% Recovery
BDL2117-MS1#	Total Nitrogen	70 - 130	##[2]

METALS-020 | Dissolved Metals (Water) | Batch BDL2439

Sample ID	Analyte	% Limits	% Recovery
BDL2439-MS1#	Sodium	70 - 130	##[1]

METALS-022 | Acid Extractable Low Level Metals (Water) | Batch BDL2188

Sample ID	Analyte	% Limits	% Recovery
BDL2188-MS1#	Aluminium	70 - 130	##[1]
BDL2188-MS1#	Iron	70 - 130	##[1]

METALS-022 | Dissolved Low Level Metals (Water) | Batch BDL2438

Sample ID	Analyte	% Limits	% Recovery
BDL2438-MS1#	Iron	70 - 130	##[1]
BDL2438-MS1#	Manganese	70 - 130	##[1]
BDL2438-MS1#	Zinc	70 - 130	##[1]

Quality Control PDL1070

METALS-020 | Acid Extractable Metals (Water) | Batch BDL2186

Analyte	Units	PQL	Blank	DUP1	DUP2	LCS %	Spike %
				BDL2186-DUP1# Samp QC RPD %	BDL2186-DUP2# Samp QC RPD %		
Phosphorus	mg/L	0.050	<0.050	7.01 6.78 3.41	<0.050 <0.050 [NA]	109	70.3

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

METALS-022 | Acid Extractable Low Level Metals (Water) | Batch BDL2188

Analyte	Units	PQL	Blank	DUP1	DUP2	LCS %	Spike %
				BDL2188-DUP1# Samp QC RPD %	BDL2188-DUP2# Samp QC RPD %		
Aluminium	µg/L	10	<10	45300 46800 3.40	<10 <10 [NA]	120	##[1]
Iron	µg/L	10	<10		<10 <10 [NA]	119	##[1]

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

METALS-020 | Dissolved Metals (Water) | Batch BDL2439

Analyte	Units	PQL	Blank	DUP1	DUP2	LCS %	Spike %
				PDL1070-31 Samp QC RPD %	BDL2439-DUP2# Samp QC RPD %		
Calcium	mg/L	0.50	<0.50	38.1 38.6 1.22	21.9 21.6 1.42	92.5	87.0
Magnesium	mg/L	0.50	<0.50	81.6 82.8 1.45	8.78 8.70 0.950	94.7	92.2
Potassium	mg/L	0.50	<0.50	6.86 6.82 0.522	2.92 2.98 2.03	98.1	95.6
Sodium	mg/L	0.50	<0.50	520 519 0.137	109 109 0.560	97.2	##[1]
Hardness as CaCO3	mg/L	3.0	<3.0	431 437 1.40	90.9 89.8 1.23	[NA]	[NA]

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

METALS-022 | Dissolved Low Level Metals (Water) | Batch BDL2438

Analyte	Units	PQL	Blank	DUP1	DUP2	LCS %	Spike %
				PDL1070-31 Samp QC RPD %	BDL2438-DUP2# Samp QC RPD %		
Aluminium	µg/L	10	<10	31.9 36.9 14.5	<100 <100 [NA]	104	##[2]
Arsenic	µg/L	1.0	<1.0	1.49 1.25 17.5	<10 <10 [NA]	110	115
Cadmium	µg/L	0.10	<0.10	<0.10 <0.10 [NA]	3.60 3.60 0.00	106	113
Chromium	µg/L	1.0	<1.0	1.68 1.66 1.20	<10 <10 [NA]	112	116
Iron	µg/L	10	<10	22800 22500 1.39	372 368 0.919	115	##[1]
Manganese	µg/L	1.0	<1.0	1550 1530 1.72	7510 7600 1.19	108	##[1]
Nickel	µg/L	1.0	<1.0	4.39 2.64 49.8 [3]	40.7 40.2 1.24	111	79.0
Selenium	µg/L	1.0	<1.0	1.34 <1.0 200 [3]	<10 <10 [NA]	112	118
Zinc	µg/L	1.0	<1.0	4.67 4.16 11.6	240 234 2.44	109	##[1]

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

INORG-127 | Inorganics (Water) | Batch BDL2117

Analyte	Units	PQL	Blank	DUP1	DUP2	LCS %	Spike %
				BDL2117-DUP1# Samp QC RPD %	BDL2117-DUP2# Samp QC RPD %		
Total Nitrogen	mg/L	0.10	<0.10	63.2 62.2 1.65	4.68 4.59 1.88	111	##[2]

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

INORG-018 | Inorganics (Water) | Batch BDL2207

Analyte	Units	PQL	Blank	DUP1	DUP2	LCS %
				BDL2207-DUP1# Samp QC RPD %	BDL2207-DUP2# Samp QC RPD %	
Total Dissolved Solids	mg/L	5.0	<5.0	386 348 10.4	63.0 63.0 0.00	111

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

Quality Control PDL1070

INORG-081 | Inorganics (Water) | Batch BDL2208

Analyte	Units	PQL	Blank	DUP1	DUP2	LCS %	Spike %
				BDL2208-DUP1# Samp QC RPD %	BDL2208-DUP2# Samp QC RPD %		
Chloride	mg/L	1.0	<1.0	147 147 0.128	3.60 3 30 8.57	103	##[1]
Sulfate	mg/L	1.0	<1.0	19.7 19.4 1 81	<1.0 <1 0 [NA]	99 5	116

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

INORG-002 | Inorganics (Water) | Batch BDL2337

Analyte	Units	PQL	Blank	DUP1	DUP2	LCS %
				BDL2337-DUP1# Samp QC RPD %	BDL2337-DUP2# Samp QC RPD %	
Electrical Conductivity	µS/cm	2.0	2.10	400 401 0.150	170 170 0 294	101
pH	pH units		5.4	6.6 6 6 0.609	7.1 7.1 0.140	101
Carbonate Alkalinity as CaCO3	mg/L as CaCO3	5.0	<5.0	<5 0 <5.0 [NA]	<5.0 <5 0 [NA]	[NA]
Bicarbonate Alkalinity as CaCO3	mg/L as CaCO3	5.0	<5.0	100 104 3.23	89.7 93.6 4.26	[NA]
Hydroxide OH- as CaCO3	mg/L as CaCO3	5.0	<5.0	<5 0 <5.0 [NA]	<5.0 <5 0 [NA]	[NA]
Total Alkalinity as CaCO3	mg/L as CaCO3	5.0	<5.0	100 104 3.23	89.7 93.6 4.26	114

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

INORG-057 | Inorganics (Water) | Batch BDL2463

Analyte	Units	PQL	Blank	DUP1	DUP2	LCS %	Spike %
				BDL2463-DUP1# Samp QC RPD %	BDL2463-DUP2# Samp QC RPD %		
Ammonia as N	mg/L	0.0050	<0.0050	<0.0050 <0.0050 [NA]	<0 0050 <0 0050 [NA]	96 0	114

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

INORG-005 | Inorganics (Water) | Batch BEA0006

Analyte	Units	PQL	Blank	DUP1	DUP2	LCS %
				PDL1070-31 Samp QC RPD %	BEA0006-DUP2# Samp QC RPD %	
Acidity	mg/L	5.0	<5.0	32.8 39.1 17.6	39.5 38.9 1.58	86.1

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

INORG-063 | Acid Sulfate Soils (Soil) | Batch BDL2185

Analyte	Units	PQL	Blank	DUP1	DUP2	LCS %
				PDL1070-01 Samp QC RPD %	PDL1070-11 Samp QC RPD %	
pHF (field pH test)	pH units			6.5 6.2 5.03	6.7 6.1 10.1	99 6
pHFOX (field peroxide test)	pH units			2.6 2.6 3.09	3.2 2 8 15.1	99 6
Reaction Rate	-			Low Low [NA]	Extreme Extreme [NA]	[NA]

Analyte	Units	PQL	Blank	DUP3	LCS %
				PDL1070-21 Samp QC RPD %	
pHF (field pH test)	pH units			7.0 6.7 3.50	100
pHFOX (field peroxide test)	pH units			4.2 4.7 11.9	100
Reaction Rate	-			High High [NA]	[NA]

Quality Control PDL1070

INORG-068 | Chromium Reducible Sulfur Suite (Soil) | Batch BEA0407

Analyte	Units	PQL	Blank	DUP1	LCS %
				PDL1070-01 Samp QC RPD %	
pH KCl	pH units		NT	5.59 5.65 1.07	93.7
TAA	moles H+/t	5.0	<5.0	12.0 11.3 6.19	92.4
s-TAA	% w/w S	0.010	<0.010	0.0192 0.0181 6.19	[NA]
Chromium Reducible Sulfur	% w/w	0.0050	<0.0050	<0.0050 0.00523 200	105
a-Chromium Reducible Sulfur	moles H+/t	3.0	<3.0	<3.0 3.26 200	[NA]
SHCl	% w/w S	0.0050	<0.0050	NT NT [NA]	[NA]
SKCl	% w/w S	0.0050	<0.0050	NT NT [NA]	[NA]
SNAS	% w/w S	0.0050	<0.0050	NT NT [NA]	[NA]
a-SNAS	moles H+/t	5.0	<5.0	NT NT [NA]	[NA]
s-SNAS	% w/w S	0.010	<0.010	NT NT [NA]	[NA]
Fineness Factor	-	1.5	NT	1.50 1.50 0.00	[NA]
ANCBT	% CaCO3	0.010	<0.010	NT NT [NA]	[NA]
a-ANCBT	moles H+/t	5.0	<5.0	NT NT [NA]	[NA]
s-ANCBT	% w/w S	0.010	<0.010	NT NT [NA]	[NA]
s-Net Acidity	% w/w S	0.0050	<0.0050	0.0239 0.0233 2.51	[NA]
a-Net Acidity	moles H+/t	5.0	<5.0	14.9 14.5 2.51	[NA]
Liming rate	kg CaCO3/t	0.75	<0.75	1.12 1.09 2.51	[NA]
s-Net Acidity without ANCE	% w/w S	0.0050	<0.0050	0.0239 0.0233 2.51	[NA]
a-Net Acidity without ANCE	moles H+/t	5.0	<5.0	14.9 14.5 2.51	[NA]
Liming rate without ANCE	kg CaCO3/t	0.75	<0.75	1.12 1.09 2.51	[NA]

INORG-068 | Chromium Reducible Sulfur Suite (Soil) | Batch BEA0408

Analyte	Units	PQL	Blank	DUP1	LCS %
				PDL1070-01 Samp QC RPD %	
pH ox	pH units			5.39 5.40 0.185	96.7
TPA	moles H+/t	5		<5.0 <5.0 [NA]	[NA]

QC Comments

Identifier	Description
[1]	Spike recovery is not applicable due to the relatively high analyte background in the sample (>3* spike level). However, the LCS recovery is within acceptance criteria.
[2]	Spike recovery is outside routine acceptance criteria (70-130%), this may be due to suspected non-homogeneity and/or matrix interference effects. However, an acceptable recovery was achieved for the LCS.
[3]	Duplicate %RPD may be flagged as an outlier to routine laboratory acceptance, however, where one or both results are <10*PQL, the RPD acceptance criteria increases exponentially.



Appendix C – 34 Mile Brook Sampling Results

FOR REFERENCE ONLY, NOT TO BE USED FOR CONSTRUCTION

	Surface Level (m AHD)	Level to	Level From	To	From	Description
34 Mile Brook S1				0	0.2	Topsoil. Clayey, silty SAND with organics. Brown, moist.
34 Mile Brook S2				0	0.2	Clayey, silty SAND, organic rich. Brown, wet.
34 Mile Brook S1				0	0.2	Clayey, silty SAND, organic rich. Brown, wet.

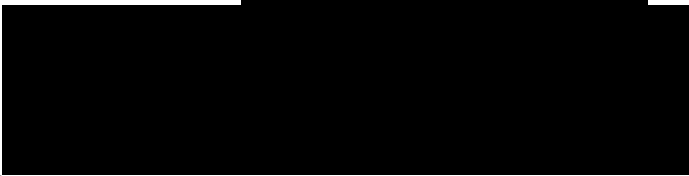
SUMMARY OF FIELD AND LABORATORY TESTS

Test Location	Depth	Field Screening Tests			Laboratory Tests and Calculated ABA						Confirmed ASS?	Liming Rate (kg CaCO ₃ /m ³)
		pH _F	pH _{FOX}	Reaction	pH _{KCl}	sTAA %S	S _{NAS} (if pH less than 4.5)	Existing Acidity %S (sTAA + 0.75 x S _{NAS})	Chromium Reducible Sulfur (S _{CR}) %S	Net Acidity %S (S _{CR} +Existing Acidity) ANC not considered		
Western Bank Locations												
34MB-01	0.0-0.1	6.4	4.7	High	6.6	< 0.010	0.000	0.013	0.013	Non-ASS	1.0	
34MB-02	0.0-0.1	6.3	6.3	Volcanic	6.8	< 0.010	0.000	0.009	0.009	Non-ASS	0.6	
34MB-03	0.0-0.1	7	5.5	Extreme	7.5	< 0.010	0.000	0.022	0.022	Non-ASS	1.7	

Liming rates assume a bulk density of 1.60 t/m³

Note: Fineness Factor = 1.5

Field Screening Test Results shaded orange indicate high potential for PASS



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Client Details

Client Calibre Professional Services One Pty Ltd
Contact [Redacted]
Address [Redacted]

Sample Details

Your Reference COPP18134
Number of Samples 3 Sediment
Date Samples Received 14/11/2022
Date Samples Registered 14/11/2022

Analysis Details

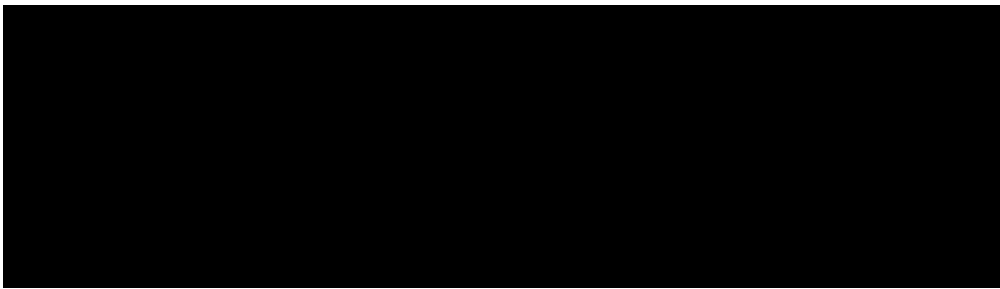
Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date Results Requested by 21/11/2022
Date of Issue 18/11/2022

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Authorisation Details



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Samples in this Report

Envirolab ID	Sample ID	Depth	Matrix	Date Sampled	Date Received
PDK0838-01	34MB_01	0.00-0.10	Sediment	14/11/2022	14/11/2022
PDK0838-02	34MB_02	0.00-0.10	Sediment	14/11/2022	14/11/2022
PDK0838-03	34MB_03	0.00-0.10	Sediment	14/11/2022	14/11/2022

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Acid Sulfate Soils (Sediment)

Envirolab ID	Units	PQL	PDK0838-01	PDK0838-02	PDK0838-03
Your Reference			34MB_01	34MB_02	34MB_03
Date Sampled			14/11/2022	14/11/2022	14/11/2022
Depth			0.00-0.10	0.00-0.10	0.00-0.10
pHF (field pH test)*	pH units		6.4	6.3	7.0
pHFOX (field peroxide test)*	pH units		4.7	6.3	5.5
Reaction Rate*	-		High	Volcanic	Extreme

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Chromium Reducible Sulfur Suite (Sediment)

Envirolab ID Your Reference Date Sampled Depth	Units	PQL	PDK0838-01 34MB_01 14/11/2022 0.00-0.10	PDK0838-02 34MB_02 14/11/2022 0.00-0.10	PDK0838-03 34MB_03 14/11/2022 0.00-0.10
pH KCl	pH units		6.6	6.8	7.5
TAA	moles H+/t	5.0	<5.0	<5.0	<5.0
pH ox	pH units		3.9	7.5	7.5
s-TAA	% w/w S	0.010	<0.010	<0.010	<0.010
Chromium Reducible Sulfur	% w/w	0.0050	0.013	0.0085	0.022
TPA	moles H+/t	5.0	150	<5.0	<5.0
a-Chromium Reducible Sulfur	moles H+/t	3.0	7.9	5.3	14
SHCl	% w/w S	0.0050	NT	NT	NT
SKCl	% w/w S	0.0050	NT	NT	NT
SNAS	% w/w S	0.0050	NT	NT	NT
a-SNAS	moles H+/t	5.0	NT	NT	NT
s-SNAS	% w/w S	0.010	NT	NT	NT
Fineness Factor	-	1.5	1.5	1.5	1.5
ANCBT	% CaCO3	0.010	1.3	4.5	2.1
a-ANCBT	moles H+/t	5.0	270	900	410
s-ANCBT	% w/w S	0.010	0.43	1.4	0.66
s-Net Acidity	% w/w S	0.0050	<0.0050	<0.0050	<0.0050
a-Net Acidity	moles H+/t	5.0	<5.0	<5.0	<5.0
Liming rate	kg CaCO3/t	0.75	<0.75	<0.75	<0.75
s-Net Acidity without ANCE	% w/w S	0.0050	0.013	0.0085	0.022
a-Net Acidity without ANCE	moles H+/t	5.0	7.9	5.3	14
Liming rate without ANCE	kg CaCO3/t	0.75	<0.75	<0.75	1.0

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Method Summary

Method ID	Methodology Summary
INORG-063	pH- measured using pH meter and electrode. Solids are oxidised with Hydrogen Peroxide or extracted with water. Based on section H, Acid Sulfate Soils Laboratory Methods Guidelines, latest edition. To ensure accurate results these tests are recommended to be done in the field as pH may change with time thus these results may not be representative of true field conditions. There is no documented official holding time, we have assigned an arbitrary 180 days to frozen samples.
INORG-068	Determination of Chromium Suite analysis - a sample is analysed by traditional titration method as well as ICP-OES analysis. Based on Acid Sulfate Soils Laboratory Methods Guidelines, latest edition. There is no documented official holding time, we have assigned an arbitrary 180 days to frozen samples.

Certificate of Analysis PDK0838

Result Definitions

Identifier	Description
NR	Not reported
NEPM	National Environment Protection Measure
NS	Not specified
LCS	Laboratory Control Sample
RPD	Relative Percent Difference
>	Greater than
<	Less than
PQL	Practical Quantitation Limit
INS	Insufficient sample for this test
NA	Test not required
NT	Not tested
DOL	Samples rejected due to particulate overload (air filters only)
RFD	Samples rejected due to filter damage (air filters only)
RUD	Samples rejected due to uneven deposition (air filters only)
##	Indicates a laboratory acceptance criteria outlier, for further details, see Result Comments and/or QC Comments

Quality Control Definitions

Blank

This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, and is determined by processing solvents and reagents in exactly the same manner as for samples.

Surrogate Spike

Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

LCS (Laboratory Control Sample)

This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Matrix Spike

A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

Duplicate

This is the complete duplicate analysis of a sample from the process batch. The sample selected should be one where the analyte concentration is easily measurable.

Certificate of Analysis PDK0838

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria. Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction. Spikes for Physical and Aggregate Tests are not applicable. For VOCs in water samples, three vials are required for duplicate or spike analysis.

General Acceptance Criteria (GAC) - Analyte specific criteria applies for some analytes and is reflected in QC recovery tables.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% - see ELN-P05 QAQC tables for details (available on request); <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase. Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was typically insufficient in order to satisfy laboratory QA/QC protocols.

Miscellaneous Information

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Two significant figures are reported for the majority of tests and with a high degree of confidence, for results <10*PQL, the second significant figure may be in doubt i.e. has a relatively high degree of uncertainty and is provided for information only.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS where sediment/solids are included by default.

Urine Analysis - The BEI values listed are taken from the 2022 edition of *TLVs and BEIs Threshold Limits by ACGIH*.

Air volume measurements are not covered by Envirolab's NATA accreditation.

Data Quality Assessment Summary PDK0838

Client Details

Client	Calibre Professional Services One Pty Ltd
Your Reference	COPP18134
Date Issued	18/11/2022

Recommended Holding Time Compliance

No recommended holding time exceedances

Quality Control and QC Frequency

QC Type	Compliant	Details
Blank	Yes	No Outliers
LCS	Yes	No Outliers
Duplicates	Yes	No Outliers
Matrix Spike	Yes	No Outliers
Surrogates / Extracted Internal Standards	Yes	No Outliers
QC Frequency	Yes	No Outliers

Surrogates/Extracted Internal Standards, Duplicates and/or Matrix Spikes are not always relevant/applicable to certain analyses and matrices. Therefore, said QC measures are deemed compliant in these situations by default. See Laboratory Acceptance Criteria for more information

Data Quality Assessment Summary PDK0838

Recommended Holding Time Compliance

Analysis	Sample Number(s)	Date Sampled	Date Extracted	Date Analysed	Compliant
pH F Soil	1-3	14/11/2022	14/11/2022	16/11/2022	Yes
pH FOX Soil	1-3	14/11/2022	14/11/2022	16/11/2022	Yes
Reaction Rate Soil	1-3	14/11/2022	14/11/2022	16/11/2022	Yes
CRS Suite Soil	1-3	14/11/2022	16/11/2022	16/11/2022	Yes
SPOCAS Soil	1-3	14/11/2022	16/11/2022	18/11/2022	Yes

Quality Control PDK0838

INORG-063 | Acid Sulfate Soils (Soil) | Batch BDK1769

Analyte	Units	PQL	Blank	DUP1	DUP2	LCS %
				PDK0838-01 Samp QC RPD %	BDK1769-DUP2# Samp QC RPD %	
pHF (field pH test)	pH units			6.4 6.6 3.84	8.0 8.4 5.85	101
pHFOX (field peroxide test)	pH units			4.7 4.5 4.31	5.9 6.2 5.29	101
Reaction Rate	-			High High [NA]	Medium Medium [NA]	[NA]

The QC reported was not specifically part of this workorder but formed part of the QC process batch.

INORG-068 | Chromium Reducible Sulfur Suite (Soil) | Batch BDK1890

Analyte	Units	PQL	Blank	DUP1	LCS %
				PDK0838-01 Samp QC RPD %	
pH KCl	pH units		NT	6.63 6.63 0.00	95.5
TAA	moles H+/t	5.0	<5.0	<5.0 <5.0 [NA]	95.5
s-TAA	% w/w S	0.010	<0.010	<0.010 <0.010 [NA]	[NA]
Chromium Reducible Sulfur	% w/w	0.0050	<0.0050	0.0127 0.0135 6.45	91.2
a-Chromium Reducible Sulfur	moles H+/t	3.0	<3.0	7.91 8.44 6.45	[NA]
SHCl	% w/w S	0.0050	<0.0050	NT NT [NA]	[NA]
SKCl	% w/w S	0.0050	<0.0050	NT NT [NA]	[NA]
SNAS	% w/w S	0.0050	<0.0050	NT NT [NA]	[NA]
a-SNAS	moles H+/t	5.0	<5.0	NT NT [NA]	[NA]
s-SNAS	% w/w S	0.010	<0.010	NT NT [NA]	[NA]
Fineness Factor	-	1.5	NT	1.50 1.50 0.00	[NA]
ANCBT	% CaCO3	0.010	<0.010	1.33 1.17 12.8	[NA]
a-ANCBT	moles H+/t	5.0	<5.0	266 234 12.8	[NA]
s-ANCBT	% w/w S	0.010	<0.010	0.426 0.375 12.8	[NA]
s-Net Acidity	% w/w S	0.0050	<0.0050	<0.0050 <0.0050 [NA]	[NA]
a-Net Acidity	moles H+/t	5.0	<5.0	<5.0 <5.0 [NA]	[NA]
Liming rate	kg CaCO3/t	0.75	<0.75	<0.75 <0.75 [NA]	[NA]
s-Net Acidity without ANCE	% w/w S	0.0050	<0.0050	0.0127 0.0135 6.45	[NA]
a-Net Acidity without ANCE	moles H+/t	5.0	<5.0	7.91 8.44 6.45	[NA]
Liming rate without ANCE	kg CaCO3/t	0.75	<0.75	<0.75 <0.75 [NA]	[NA]

INORG-068 | Chromium Reducible Sulfur Suite (Soil) | Batch BDK1891

Analyte	Units	PQL	Blank	DUP1	LCS %
				PDK0838-01 Samp QC RPD %	
pH ox	pH units			3.91 3.95 1.02	99.8
TPA	moles H+/t	5		153 158 3.25	[NA]

Appendix B: Record Change Template

Complexity of Changes (Minor, Moderate, Major)

Number of Key Environmental Factors

Date Revision Submitted to EPA

Proponent's operational requirement timeframe for approval of revision Reason for
Timeframe:

Item no.	EMP Section No.	EMP Page No.	Summary of Changes	Reason for Change

Appendix C: Preliminary Concept Construction Drawings

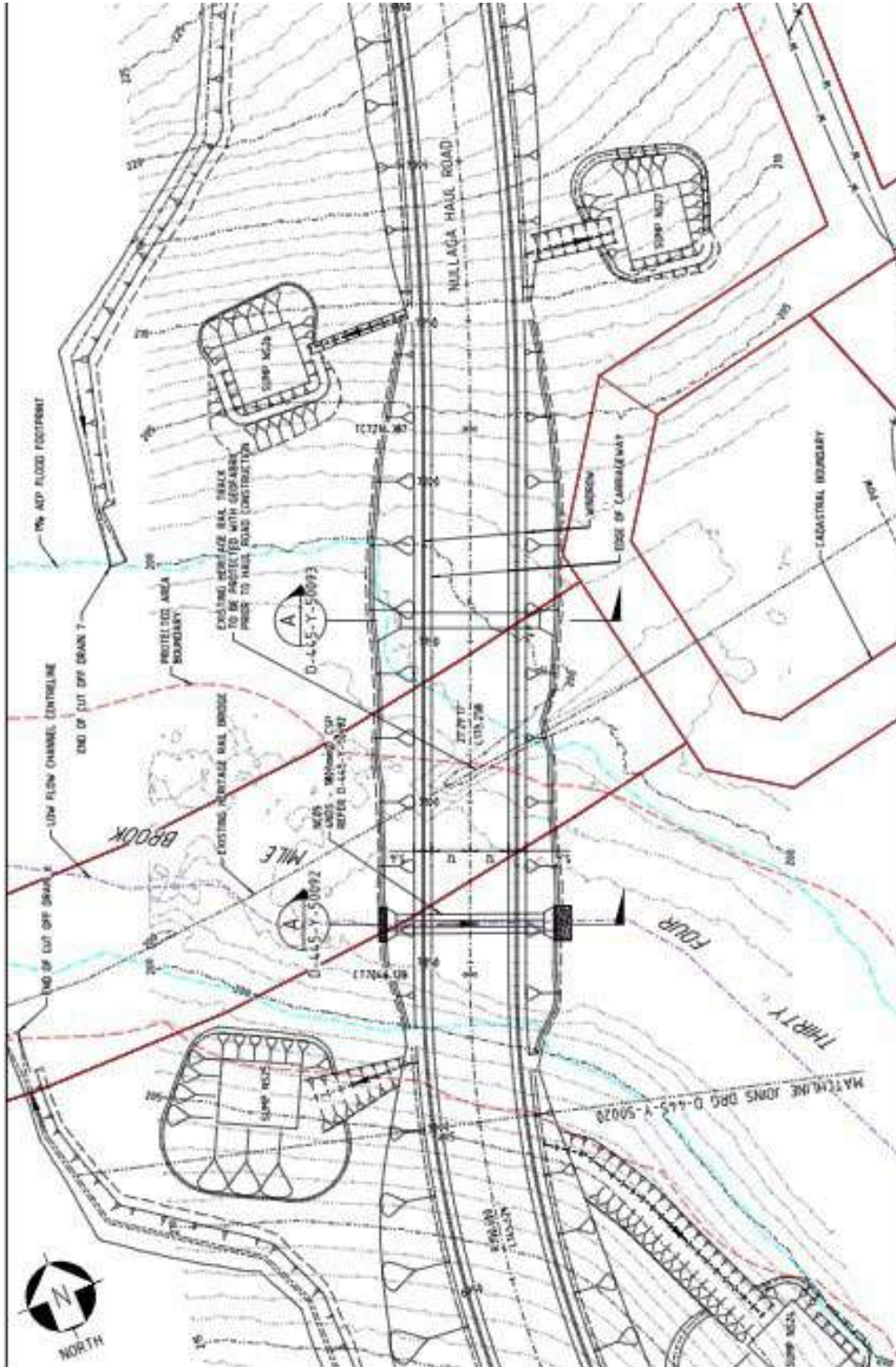


Figure C1: Preliminary concept drawing – Thirty-Four Mile Brook

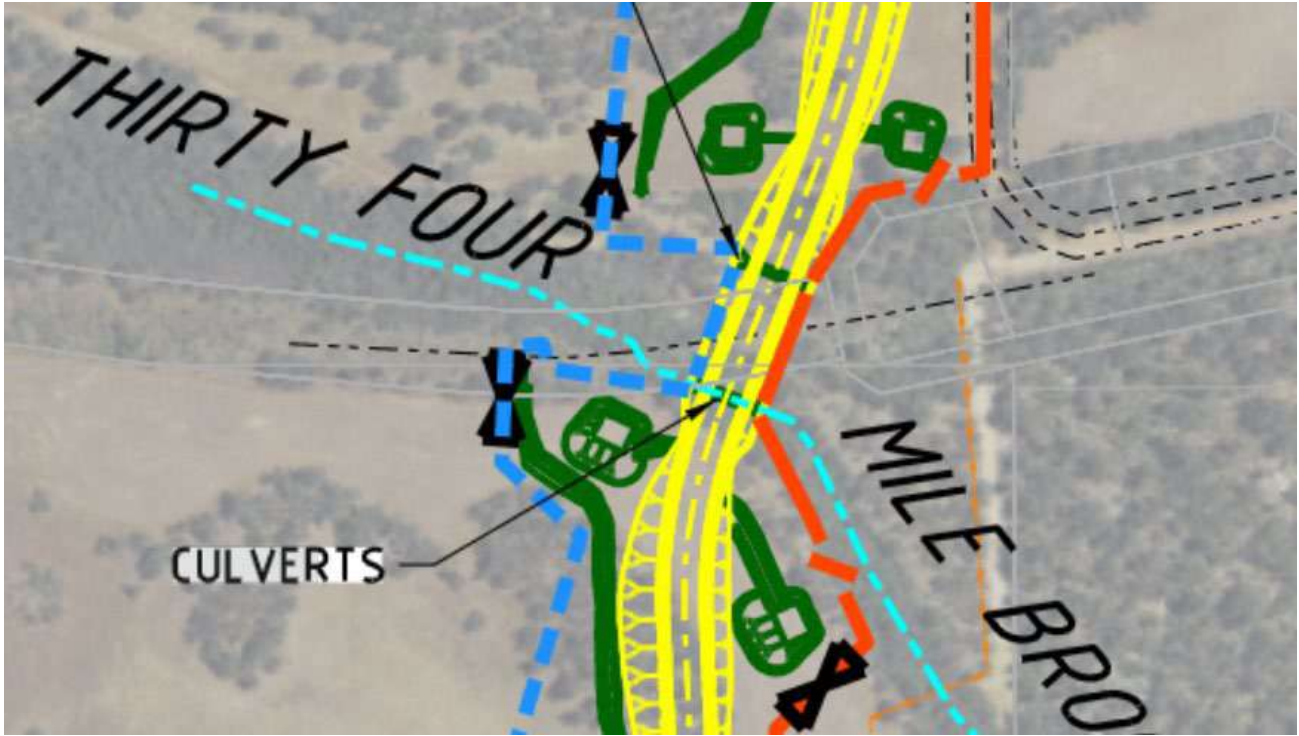


Figure C2: Thirty-four Mile Brook Culvert

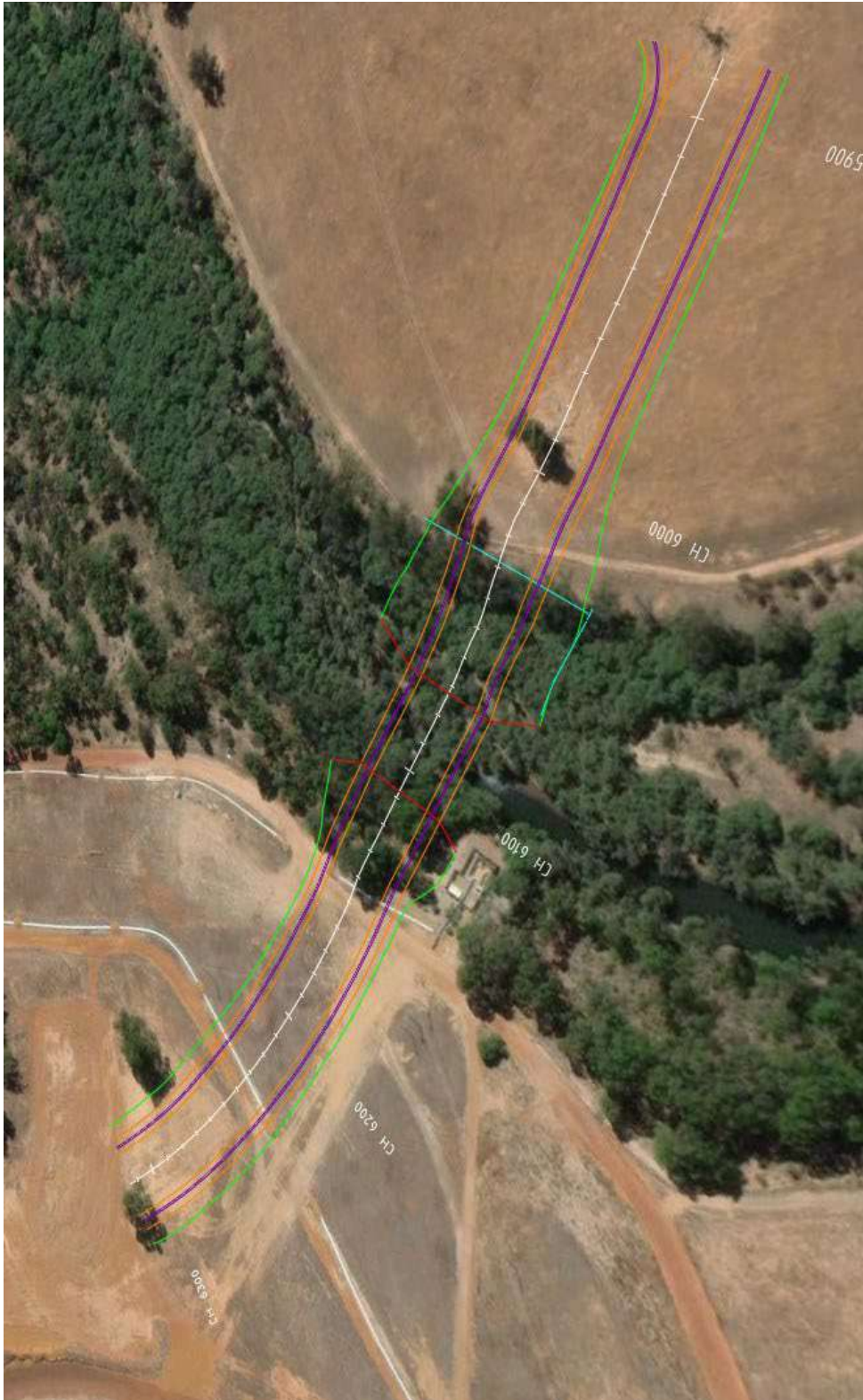


Figure C3: Nullaga Bridge Limits



Figure C4: Indicative Nullaga Bridge Design

9.2 CHIEF EXECUTIVE OFFICER

9.2.1 Boddington Medical Centre | Accommodation Support

File Reference: 1.004
Applicant: Not applicable
Previous Item: Nil
Author: Chief Executive Officer
Disclosure of Interest: Nil
Voting Requirements: Absolute Majority
Attachments: Nil

Summary

Council is requested to approve a request from Bouldermed Pty Ltd, to support the accommodation requirements of a locum, for the period 18 April to 30 May 2024.

Background

Bouldermed have been operating at the Boddington Medical Centre for approximately three months. Currently they are awaiting a financial support package to be finalised to assist in ensuring the viability of the business.

The Shire currently provides an incentive package including the provision of a vehicle, housing, and a commercial premise including outgoings. Due to ongoing financial pressures, and difficulty in sourcing housing, the operator of the Practice has requested the Shire considers providing, and also funding, the accommodation for a locum for a period of 6 weeks while the primary General Practitioner is on leave.

Comment

Accommodation is requested for Monday to Thursday nights, between 18 April 2024 to 30 May 2024, being a total of 25 nights. The Old Police Station within the Boddington Caravan Park is available for the majority of this period, but is unavailable on 22 and 23 May.

Approval is sought to waive fees for the Old Police Station for twenty three (23) nights, ordinarily charged out at \$165/night, and also fund the locums accommodation at a local accommodation provider for two (2) nights at up to \$150/night.

Accommodation Location	Duration	Total
Local accommodation provider	Two (2) nights: 22, 23 May	\$300
The Old Police Station	Twenty three (23) nights: 18 April – 21 May and 24 May – 30 May (Monday – Thursday nights only)	\$3,795
TOTAL		\$4,095

Consultation

Consultation has occurred with the operators of the Boddington Medical Centre.

Strategic Implications

Aspiration People
 Outcome 2 A healthy and active community
 Objective 2.1 Improve access to health facilities and services

Legislative Implications

Waiver of fees

Policy Implications

Nil

Financial Implications

The implication of the decision is that the Shire will forgo income of up to \$3,795, and expend \$300.

The 2023/24 Budget contains an allocation of \$25,000 for the provision of medical services of which only \$4,290 has been utilised.

Economic Implications

General Practitioners support a strong economy through provision of healthcare and associated services to all levels of business.

Social Implications

Medical services provided by a General Practitioner underpin healthy communities and are a critical factor in lifestyle and locality satisfaction.

Environmental Considerations

Nil

Risk Considerations

Risk Statement and Consequence	Approving the request to waive accommodation fees may create an unintentional precedent for other organisations to seek a waiver for delivering services from Shire owned facilities.
Risk Rating (prior to treatment or control)	Medium
Principal Risk Theme	Reputational
Risk Action Plan (controls or treatment proposed)	Nil

Officer Recommendation

That Council:

- 1. Approves the request to waive fees of up to \$3,795 for Bouldermed Pty Ltd, being for accommodation at the Old Police Station.**
- 2. Fund two nights accommodation at a local accommodation provider, up to a total of \$300, when the Old Police Station is not available.**

9.2.2 Dump Truck Display Proposal

File Reference:	2.063
Applicant:	Not Applicable
Previous Item:	Nil
Author:	Chief Executive Officer
Disclosure of Interest:	Nil
Voting Requirements:	Simple Majority
Attachments:	9.2.2A Dump Truck Display Location Options

Summary

Council is requested to endorse community consultation being undertaken in relation to the proposed display of a dump truck within the Boddington townsite, which is being considered by Newmont Boddington Gold as a donation to the Shire.

Background

Boddington has a rich history in mining, which has significantly contributed to its identity and economy.

As a part of ongoing discussions, Newmont Boddington Gold (NBG) has indicated that the company may consider donating a dump truck as a display to Boddington. The truck is a 793D truck, weighing around 122 tonnes, with dimensions being approximately 6m high, 7m wide, and 13m long. There are a number of considerations in relation to this proposal which will occur in due course, however, there is first a need to determine whether there is community appetite for this opportunity.

Comment

A dump truck display would offer a unique attraction for Boddington that is aligned with its heritage, by showcasing a prominent symbol of the town's mining industry as a focal point for tourists. There is no other similar display in close proximity to Perth, with the closest displays being in Kalgoorlie and Newman.

Such a display would also add value and context to the recommencement of gold mine tours, which are currently being thought through.

Several locations have been considered for the display, and while a preferred location has not been finalised, it would be preferable to include potential locations in the community consultation, to allow the full context of the proposal to be understood.

In order to maximise the outcomes from this opportunity, it would be ideal to have the truck located in the town centre, close to other tourism attractions, with opportunities for passers-by to stop and take photos, and then visit local businesses and attractions. Other considerations include:

- Ability to be situated back from the road frontage due to the size of the truck being impeding if situated too close to the road
- Sufficient land around the truck to allow landscaping, access ramps etc
- Logistical capability to maneuver the truck into place, around and over existing infrastructure

The three locations are detailed in Attachment 9.2.2A. The priority order for these locations is considered to be:

1. Lot 150 Reserve 34391– vacant block adjacent to the Arts Council (Johnstone Street)
2. Boddington Old School Oval (specific placement to be determined)
3. Lot 22 Bannister Road – adjacent to Celebrations

While the proposal is aligned with a significant part of Boddingtons history, it may generate diverse opinions within the community. It is therefore recommended to undertake a public consultation process to provide an opportunity to gather feedback, address concerns, and ensure broad support for the proposed dump truck display prior to progressing this project.

Consultation

Engaging the public through consultation is essential to gather feedback, address concerns, and ensure transparency in the decision-making process.

Consultation is proposed for a minimum period of two weeks.

Strategic Implications

Aspiration	Prosperity
Outcome 11	An attractive destination for day trips and short stay visitors
Objective 11.1	Develop and promote high quality tourist accommodation and experiences

Legislative Implications

Nil

Policy Implications

Nil

Financial Implications

The installation and maintenance of the dump truck display will require an initial and ongoing financial allocation. Project costs may include site preparation, signage, landscaping, street furniture and project management. Ongoing costs will include cleaning, painting, and maintenance of the truck and surrounding infrastructure.

Initial discussions have indicated that NBG may agree to be responsible for:

- Painting the truck
- Preparing the draft agreement between the two parties
- Moving the truck to site
- Manufacturing and installing the steel plinths for the truck to rest on
- Moving the truck into position, and securing onto the steel plinths

Final projects costs to be incurred by the Shire of Boddington are yet to be established, but are estimated at \$100,000.

Economic Implications

The display has the potential to stimulate economic activity in Boddington by attracting tourists, thereby supporting local businesses, and increasing visitor spending.

Social Implications

The proposed display may have social implications, including fostering community pride, promoting historical awareness, and creating opportunities for public interaction and engagement.

Environmental Considerations

There will be no impact on the environment as a result of the proposal.

Risk Considerations

Risk Statement and Consequence	Potential risks associated with the proposal include community concern, and unforeseen costs. Additionally, a number of risks such as logistical and site constraints will be relevant if the project progresses.
Risk Rating (prior to treatment or control)	Medium
Principal Risk Theme	Reputational
Risk Action Plan (controls or treatment proposed)	Conducting a thorough project risk assessment and contingency planning will mitigate risks and allow the successful implementation of the project.

Officer Recommendation

That Council:

- 1. Approve the proposed dump truck display for community consultation.**
- 2. Note the requirement of a financial allocation in the 2024/25 Budget of approximately \$100,000 for this project if it proceeds.**

Following a review of various sites, three locations were determined as the most suitable for pursuing:

1. Boddington Old School Oval (specific placement to be determined)
2. Lot 22 Bannister Road – purchased by the Shire of Boddington in 2023
3. Lot 150 Reserve 34391– vacant block adjacent to the Arts Council.



Supplementary Information

Approximate scale size truck in each location



9.2.3 Appointment to Committees

File Reference:	2.049
Applicant:	Nil
Previous Item:	122/23
Author:	Chief Executive Officer
Disclosure of Interest:	Nil
Voting Requirements:	Absolute Majority (Appointment to Committees of Council) Simple Majority (Appointment to other Committees / Groups)
Attachments:	Nil

Summary

Council is requested to consider appointments to Committees of Council and to various external committees and advisory groups, following the recent Extraordinary Election.

Background

The Local Government Act 1995 and Emergency Management Act 2005 requires the establishment of the following committees:

- Audit Committee; and
- Local Emergency Management Committee.

The legislation specifies various roles and duties of these committees which have been incorporated into the Terms of Reference previously resolved.

Legislation permits, but does not require, the establishment of committees for other purposes.

The Shire is also requested to appoint Council delegates and deputy delegates to represent the Shire on a range of groups and committees of external organisations. The Shire appoints Councillors as delegates to these external groups and committees by way of membership or by invitation.

It should be noted that Council is not required to appoint a delegate to each of the external Committees / Groups, and may choose not to appoint a delegate if Council is of the view that there is little value to the Shire in doing so.

Comment

The current delegates to committees and groups are as follows:

Committee of Council		
Committees of Council	Delegate	Proxy Delegate
Shire of Boddington Audit Committee	All Councillors	Not Applicable
CEO Employment and Performance Appraisal Committee	All Councillors	Not Applicable
Local Emergency Management Committee (LEMC)	Cr L Lewis	Cr A Ryley
Bushfire Advisory Committee (BFAC)	Cr L Lewis	Cr A Ryley

Other Committees / Groups		
Committee / Group	Delegate	Proxy Delegate
Boddington Aged Accommodation Project Steering Group	Cr G Ventris Cr E Smalberger Cr L Lewis	Nil
Peel Regional Leaders Forum	Shire President	Deputy Shire President
Peel Zone of WALGA (2 Delegates)	Shire President Deputy Shire President	Chief Executive Officer
Hotham Williams VROC	Shire President	Deputy Shire President
South West Regional Road Group (RRG)	Cr L Lewis Executive Manager Infrastructure Services	Nil
Boddington Local Health Advisory Group (LHAG)	Cr G Ventris	Cr E Smalberger
South32 Worsley Alumina Community Liaison Committee (CLC)	Cr L Lewis	Cr E Smalberger
Rail Heritage Foundation of WA	Cr A Ryley	Cr L Lewis
Youth Advisory Committee	Cr E Smalberger	Cr G Ventris
Community Reference Group (Newmont)	Cr A Ryley	Cr G Ventris
Development Assessment Panel (DAP)	Cr G Ventris and Cr A Ryley	Cr E Smalberger and Cr L Lewis
Australia Day Citizenship Awards Panel	Cr G Ventris Cr E Smalberger Cr L Lewis	Chief Executive Officer Executive Manager Development Services
Aboriginal Reference Group	Cr G Ventris Cr L Lewis	Nil

Consultation

Nil

Strategic Implications

Nil

Legislative Implications

Local Government Act (1995)

5.8. Establishment of committees A local government may establish* committees of 3 or more persons to assist the council and to exercise the powers and discharge the duties of the local government that can be delegated to committees.

* Absolute majority required.

5.10. Appointment of committee members

1. A committee is to have as its members –
 - a) persons appointed* by the local government to be members of the committee (other than those referred to in paragraph (b)); and
 - b) persons who are appointed to be members of the committee under subsection (4) or (5).

* Absolute majority required.

2. At any given time each council member is entitled to be a member of at least one committee referred to in section 5.9(2)(a) or (b) and if a council member nominates himself or herself to be a member of such a committee or committees, the local government is to include that council member in the persons appointed under subsection (1)(a) to at least one of those committees as the local government decides.
3. Section 52 of the Interpretation Act 1984 applies to appointments of committee members other than those appointed under subsection (4) or (5) but any power exercised under section 52(1) of that Act can only be exercised on the decision of an absolute majority of the local government.
4. If at a meeting of the council a local government is to make an appointment to a committee that has or could have a council member as a member and the mayor or president informs the local government of his or her wish to be a member of the committee, the local government is to appoint the mayor or president to be a member of the committee.
5. If at a meeting of the council a local government is to make an appointment to a committee that has or will have an employee as a member and the CEO informs the local government of his or her wish –
 - a) to be a member of the committee; or
 - b) that a representative of the CEO be a member of the committee, the local government is to appoint the CEO or the CEO's representative, as the case may be, to be a member of the committee.

5.11. Tenure of committee membership

1. Where a person is appointed as a member of a committee under section 5.10(4) or (5), the person's membership of the committee continues until –
 - a) the person no longer holds the office by virtue of which the person became a member, or is no longer the CEO, or the CEO's representative, as the case may be
 - b) the person resigns from membership of the committee;
 - c) the committee is disbanded; or
 - d) the next ordinary elections day, whichever happens first.
2. Where a person is appointed as a member of a committee other than under section 5.10(4) or (5), the person's membership of the committee continues until –
 - a) the term of the person's appointment as a committee member expires
 - b) the local government removes the person from the office of committee member or the office of committee member otherwise becomes vacant;
 - c) the committee is disbanded; or
 - d) the next ordinary elections day, whichever happens first.

Section 38 of the Emergency Management Act 2005 requires local governments to establish a Local Emergency Management Committee. The provisions of the Local Government Act 1995 do not apply to Local Emergency Management Committees.

Policy Implications

Nil

Financial Implications

Nil

Economic Implications

Nil

Social Implications

Nil

Environmental Considerations

Nil

Risk Considerations

Risk Statement and Consequence	Failure to provide adequate representation on Committees of Council and various external working groups may result in non-compliance, as well as the inability to have strategic representation on matters of importance.
Risk Rating (prior to treatment or control)	Moderate
Principal Risk Theme	Reputational, Compliance
Risk Action Plan (controls or treatment proposed)	No further actions planned

Officer Recommendation

That Council nominate members to the following Committees of Council and as delegates of Council to the respective committee or group:

Committee of Council		
Committees of Council	Delegate	Proxy Delegate
Shire of Boddington Audit Committee	All Councillors	Not Applicable
CEO Employment and Performance Appraisal Committee	All Councillors	Not Applicable
Local Emergency Management Committee (LEMC)	Cr L Lewis	Cr A Ryley
Bushfire Advisory Committee (BFAC)	Cr L Lewis	Cr A Ryley

Other Committees / Groups		
Committee / Group	Delegate	Proxy Delegate
Boddington Aged Accommodation Project Steering Group	Cr G Ventris Cr E Smalberger Cr L Lewis	Nil
Peel Regional Leaders Forum	Shire President	Deputy Shire President
Peel Zone of WALGA (2 Delegates)	Shire President Deputy Shire President	Chief Executive Officer
Hotham Williams VROC	Shire President	Deputy Shire President
South West Regional Road Group (RRG)	Cr L Lewis Executive Manager Infrastructure Services	Nil
Boddington Local Health Advisory Group (LHAG)	Cr G Ventris	Cr E Smalberger

South32 Worsley Alumina Community Liaison Committee (CLC)	Cr P Carrotts	Cr H Prandl
Rail Heritage Foundation of WA	Cr A Ryley	Cr J Van Heerden
Youth Advisory Committee	Cr E Smalberger	Cr H Prandl
Community Reference Group (Newmont)	Cr H Prandl	Cr J Van Heerden
Development Assessment Panel (DAP)	Cr E Smalberger and Cr A Ryley	Cr J Van Heerden and Cr L Lewis
Australia Day Citizenship Awards Panel	Cr G Ventris Cr E Smalberger Cr L Lewis	Cr A Ryley Cr P Carrotts Cr H Prandl Cr J Van Heerden
Aboriginal Reference Group	Cr G Ventris Cr L Lewis	Nil

9.3 CORPORATE SERVICES

9.3.1 Payment Listing

File Reference:	3.0070
Applicant:	Nil
Previous Item:	Nil
Author:	Executive Manager Corporate Services
Disclosure of Interest:	Nil
Voting Requirements:	Simple Majority
Attachments:	9.3.1A List of Payments ending 29 February 2024

Summary

The list of payments for February 2024 is presented for noting by Council.

Background

Council has delegated the Chief Executive Officer the exercise of its power to make payments from the Shires municipal fund and the trust fund.

In exercising their authority, and in accordance with the Local Government (Financial Management) Regulation, it is a requirement to produce a list of payments made from Councils Municipal Fund and Trust Fund bank accounts to be presented to Council for the purposes of noting, in the following month.

Comment

The List of Payments have been made in accordance with Council's adopted budget, and statutory obligations.

Consultation

Nil

Strategic Implications

Aspiration	Performance
Outcome 12	Visionary Leadership and Responsible Governance
Objective 12.2	Responsibly manage the Shire's finances, human resources and assets

Legislative Implications

Local Government (Financial Management) Regulations 1996 - Reg 13

- (1) If the local government has delegated to the CEO the exercise of its power to make payments from the municipal fund or the trust fund, a list of accounts paid by the CEO is to be prepared each month showing for each account paid since the last such list was prepared —
 - (a) the payee's name; and
 - (b) the amount of the payment; and
 - (c) the date of the payment; and
 - (d) sufficient information to identify the transaction.

Policy Implications

Nil

Financial Implications

As disclosed within the payment listing.

Economic Implications

Nil

Social Implications

Nil

Environmental Considerations

Nil

Risk Considerations

Risk Statement and Consequence	Failure to present a detailed listing of payments made from the Shire bank accounts in the prescribed form would result in non-compliance with the Local Government (Financial Management) Regulations 1996, which may result in a qualified audit.
Risk Rating (prior to treatment or control)	Minor
Principal Risk Theme	Reputational / Compliance
Risk Action Plan (controls or treatment proposed)	Nil

Officer Recommendation

That Council receive the list of payments for the period ending 29 February 2024 as presented.

SHIRE OF BODDINGTON - LIST OF PAYMENTS - FEBRUARY 2024

Chq/EFT	Date	Name	Description	Amount
EFT26090	02/02/2024	OFFICEWORKS BUSINESS DIRECT	STATIONERY ITEMS	81.48
EFT26091	02/02/2024	DOWN TO EARTH TRAINING & ASSESSING	TRAFFIC MANAGEMENT COURSE	1,650.00
EFT26092	02/02/2024	SEEK LIMITED	ADVERTISING - HUMAN RESOURCES COORDINATOR	379.50
EFT26093	02/02/2024	KOMATSU AUSTRALIA PTY LTD	LOADER CONDITION REPORT	1,796.61
EFT26094	02/02/2024	MJB INDUSTRIES PTY LTD	CULVERTS HARVEY-QUINDANNING RD & CLUB DR	29,869.67
EFT26095	02/02/2024	AMPAC DEBT RECOVERY (WA) PTY LTD	DEBT COLLECTION FEES JANUARY 2024	86.90
EFT26096	02/02/2024	AMD CHARTERED ACCOUNTANTS	GROWING REGIONS GRANT DECLARATION SIGNOFF	1,650.00
EFT26097	02/02/2024	BANNISTER EXCAVATIONS PTY LTD	INSTALL DRAINAGE AT CLUB DRIVE	5,887.20
EFT26098	02/02/2024	VOLT AIR PTY LTD	ELECTRICAL WORK AT 15 BLUE GUM CLOSE	2,504.00
EFT26099	02/02/2024	RUSTY CAMP OVEN	CATERING FOR AUSTRALIA DAY 2024	1,972.50
EFT26100	02/02/2024	THE FOOD BOSS	CATERING SERVICES	120.00
EFT26101	02/02/2024	HARTAC SIGNS AND SAFETY SOLUTIONS	GUIDE POSTS	2,695.00
EFT26102	02/02/2024	GREG'S CULTURAL TOURS	WELCOME TO COUNTRY AUSTRALIA DAY CEREMONY	500.00
EFT26103	02/02/2024	BODDINGTON MINI SKIPS	TOWN BIN COLLECTION FOR JANUARY 2024	1,880.00
EFT26104	02/02/2024	AQUA PUMPS & IRRIGATION	REPAIRS TO DAM PUMP	11,235.64
EFT26105	02/02/2024	SAPIO PTY LTD	CCTV MAINTENANCE	4,756.02
EFT26106	02/02/2024	BODDINGTON SUPERMARKET PTY LTD	SHIRE PURCHASES FOR DECEMBER 2023	1,075.11
EFT26107	02/02/2024	NICHOLAS JAMES CLEMENTS	COMMUNITY GYM PROJECT	2,880.00
EFT26108	02/02/2024	PYKE PLUMBING & GAS PTY LTD	PLUMBING WORK AT THE PAVILION	2,980.12
EFT26109	02/02/2024	ALLMARK & ASSOCIATES PTY LTD	SCULPTURE PLAQUES	990.00
EFT26110	02/02/2024	BUILDING & CONSTRUCTION INDUSTRY TRAINING FUND	BCITF JANUARY 2024	81.75
EFT26111	02/02/2024	E & MJ ROSHER PTY LTD	SEWELL ROAD SWEEPER	62,895.40
EFT26112	02/02/2024	SHIRE OF BODDINGTON	COMMISSION JANUARY 2024	38.25
EFT26113	02/02/2024	LOGO APPOINTMENTS WA	CONTRACTING SERVICES - RELIEF HR OFFICER	8,916.47
EFT26114	02/02/2024	DEPARTMENT OF MINES,INDUSTRY REGULATION AND SAFETY	BSL JANUARY 2024	910.80
EFT26115	02/02/2024	BODDINGTON SES	REIMBURSEMENT FOR THE SES	643.50
EFT26116	09/02/2024	INITIAL HYGIENE PTY LTD (RENTOKIL)	SANITARY BIN SERVICE	558.69
EFT26117	09/02/2024	WA ELECTORAL COMMISSION	SHIRE OF BODDINGTON 2023 ORDINARY ELECTION	7,344.08
EFT26118	09/02/2024	BODDINGTON TYRE SERVICE	NEW TYRES FITTED TO GRADER	3,745.00
EFT26119	09/02/2024	ABCO PRODUCTS PTY LTD	CLEANING PRODUCTS	1,208.70
EFT26120	09/02/2024	SEEK LIMITED	ADVERTISING - ADMINISTRATION OFFICER	401.50
EFT26121	09/02/2024	TEAM GLOBAL EXPRESS PTY LTD	COURIER CHARGES	352.09
EFT26122	09/02/2024	NEWMONT BODDINGTON GOLD	RENT FOR 3 PRUSSIAN WAY	1,300.00
EFT26123	09/02/2024	WALLIS COMPUTER SOLUTIONS	ANNUAL BILLING 2024/2025	10,022.10
EFT26124	09/02/2024	NESSCO PRESSURE SYSTEMS	SERVICE TO AIRMAC COMPRESSOR	468.16
EFT26125	09/02/2024	VOLT AIR PTY LTD	ELECTRICAL WORK AT THE MEDICAL CENTRE	2,094.00
EFT26126	09/02/2024	BODDINGTON MINI SKIPS	COLLECT & EMPTY SKIP BIN FROM THE PAVILION	315.00
EFT26127	09/02/2024	THE WEST AUSTRALIAN (IRSA)	ADVERTISING IN THE WEST AUSTRALIAN IRSASW	550.00
EFT26128	09/02/2024	CORSIGN WA	SIGNAGE	268.95
EFT26129	09/02/2024	RINGCENTRAL INC	MONTHLY TELEPHONE SUBSCRIPTION FEE	908.38
EFT26130	09/02/2024	PROMPT SAFETY SOLUTIONS	12 MONTHS REVISION OF WHS PROCESSES	3,410.00
EFT26131	09/02/2024	SERVICES AUSTRALIA CHILD SUPPORT	PAYROLL DEDUCTIONS/CONTRIBUTIONS	357.09
EFT26132	09/02/2024	INTERFIRE AGENCIES PTY LTD	PROTECTIVE WEAR	4,910.88
EFT26133	09/02/2024	GFG TEMPORARY ASSIST	PROJECT MANAGEMENT SERVICES	5,688.38
EFT26134	09/02/2024	RCA CIVIL GROUP PTY LTD	POLLARD STREET DRAINAGE WORK	81,447.91
EFT26135	09/02/2024	TOTAL PLANT HIRE PTY LTD	DELIVERY OF WATER CART FROM PINJARRA	880.00
EFT26136	09/02/2024	BRUCE WILLIAM BOUSFIELD	REIMBURSEMENT FOR REFRESHMENTS	57.00
EFT26137	09/02/2024	WESTRAC EQUIPMENT WA PTY LTD	REPAIRS TO CATERPILLAR GRADER	3,194.99
EFT26138	16/02/2024	BODDINGTON MEDICAL CENTRE	EMPLOYMENT MEDICAL	580.50
EFT26139	16/02/2024	ADVANTAGE ENVIRONMENTAL PEST	PEST CONTROL	286.00
EFT26140	16/02/2024	BODDINGTON WINDSCREENS	SUPPLY & FIT WINDOW TO STREET SWEEPER	660.00
EFT26141	16/02/2024	EDGE PLANNING & PROPERTY	PLANNING SERVICES JANUARY 2024	811.38
EFT26142	16/02/2024	MCLEODS BARRISTERS AND SOLICITORS	LEGAL SERVICES	1,039.50
EFT26143	16/02/2024	LEONARD ALLEN ALEXANDER LEWIS	COUNCILLOR ALLOWANCES	2,012.90
EFT26144	16/02/2024	NEWMONT BODDINGTON GOLD	RENT FOR 25 FARMERS AVE	1,300.00
EFT26145	16/02/2024	G & D LYSTER	GRAVEL - CLUB DRIVE	14,971.00
EFT26146	16/02/2024	ZIRCODATA PTY LTD	STORAGE FEES	96.73
EFT26147	16/02/2024	THE FOOD BOSS	CATERING SERVICES	594.00
EFT26148	16/02/2024	ACCESS LIFE	STRENGTH FOR LIFE COACH FEES JANUARY 2024	360.00
EFT26149	16/02/2024	FLEX FITNESS EQUIPMENT	FITNESS EQUIPMENT	22,480.00
EFT26150	16/02/2024	DESNIE EUGENE SMALBERGER	COUNCILLOR ALLOWANCES	2,243.75
EFT26151	16/02/2024	SHERRIN RENTALS PTY LTD	ROLLER HIRE	5,945.52
EFT26152	16/02/2024	J & M REID EARTHMOVING PTY LTD	GRAVE DIG AT QUINDANNING CEMETERY	1,892.00
EFT26153	16/02/2024	BWP BUILD & LANDSCAPE PTY LTD	EARTHWORKS AT WILLIAM STREET RIVER CROSSING	26,400.00
EFT26154	16/02/2024	THALIA DOUGLAS	REIMBURSEMENT FOR CATERING SUPPLIES	64.40
EFT26155	16/02/2024	CORE BUSINESS AUSTRALIA PTY LTD	ABORIGINAL ENGAGEMENT OFFICER	2,412.61
EFT26156	16/02/2024	DYLAN & SUANNE VAN ZUYDAM	CATERING FOR AUSTRALIA DAY 2024	1,527.50
EFT26157	16/02/2024	GREAT WESTERN SERVICES	BODDINGTON COMMUNITY GYM PROJECT	1,128.63
EFT26158	16/02/2024	LD TOTAL	SPRINKLER REPAIRS AT THE TOWN OVAL	2,370.50
EFT26159	16/02/2024	ALEXWAYNEMUSIC.COM	ENTERTAINMENT FOR THANK A VOLUNTEER DAY	400.00
EFT26160	16/02/2024	BETH NURNBERGER	DESIGN AND DELIVER STAFF WORKSHOP	2,400.00
EFT26161	16/02/2024	PINJARRA VETERINARY HOSPITAL	VETERINARY CALL OUT SERVICE	440.00
EFT26162	16/02/2024	GLASS 100	COMMUNITY GYM MIRRORS	4,550.00
EFT26163	16/02/2024	AVON WASTE	RUBBISH SERVICES JANUARY 2024	6,438.75
EFT26164	16/02/2024	GREG DAY MOTORS	FUEL FOR JANUARY 2024	12,191.47
EFT26165	16/02/2024	LOGO APPOINTMENTS WA	CONTRACTING SERVICES - RELIEF RATES OFFICER	2,112.62
EFT26166	16/02/2024	CHUBB FIRE & SECURITY PTY LTD	MONTHLY FIRE PANEL SERVICING	330.00
EFT26167	16/02/2024	WATTLEUP TRACTORS	BLADES FOR SLASHER	147.50

SHIRE OF BODDINGTON - LIST OF PAYMENTS - FEBRUARY 2024

EFT26168	16/02/2024	BODDINGTON SES	LIGHTING FOR THE CHRISTMAS CELEBRATIONS 2023	350.00
EFT26169	16/02/2024	THE LOCK MAN SECURITY	NEW LOCK FOR THE TENNIS COURT	134.00
EFT26170	23/02/2024	AUSTRALIA POST ACCOUNTS RECEIVABLE	POSTAGE JANUARY 2024	529.52
EFT26171	23/02/2024	LOCAL GOVERNMENT PROFESSIONALS WA	TIME MANAGEMENT COURSE	495.00
EFT26172	23/02/2024	OFFICEWORKS BUSINESS DIRECT	STATIONERY ITEMS	239.89
EFT26173	23/02/2024	LANDGATE	ONLINE LAND ENQUIRY	30.50
EFT26174	23/02/2024	BODDINGTON TYRE SERVICE	TYRE REPAIR BT61	90.00
EFT26175	23/02/2024	ABCO PRODUCTS PTY LTD	CLEANING PRODUCTS	30.78
EFT26176	23/02/2024	RYLAN CONCRETE	KERBING - CLUB DRIVE	10,560.00
EFT26177	23/02/2024	TEAM GLOBAL EXPRESS PTY LTD	COURIER CHARGES	526.73
EFT26178	23/02/2024	CONTRACT AQUATIC SERVICES	SWIMMING POOL MANAGEMENT CONTRACT FEBRUARY	15,000.00
EFT26179	23/02/2024	BODDINGTON MOTEL	ACCOMMODATION FOR CONTRACTOR GYM SETUP	260.00
EFT26180	23/02/2024	SHERIDAN'S	STAFF NAME BADGE AND PLAQUE	175.95
EFT26181	23/02/2024	VOLT AIR PTY LTD	ELECTRICAL WORKS FOR MONTH OF FEBRUARY 24	12,002.00
EFT26182	23/02/2024	RURAL & REGIONAL ECONOMIC SOLUTIONS	CONSULTING SERVICES - AGED ACCOMMODATION	552.75
EFT26183	23/02/2024	SCAVENGER SUPPLIES PTY LTD	EZYSTRIKE MATCHES	308.00
EFT26184	23/02/2024	BODDINGTON POST OFFICE & STORE	STATIONERY ITEMS JANUARY 2024	260.96
EFT26185	23/02/2024	BODDINGTON SUPERMARKET PTY LTD	SHIRE PURCHASES FOR JANUARY 2024	1,607.81
EFT26186	23/02/2024	SOS OFFICE EQUIPMENT	PHOTOCOPIER CHARGES	254.70
EFT26187	23/02/2024	CARPET CALL WA	HARD FLOORING - 15 BLUE GUM CLOSE	4,250.00
EFT26188	23/02/2024	GFG CONSULTING	PROJECT MANAGEMENT SERVICES CULTURAL CENTRE	16,406.29
EFT26189	23/02/2024	INTERFIRE AGENCIES PTY LTD	PROTECTIVE WEAR	554.04
EFT26190	23/02/2024	MANDURAH PSYCHOLOGICAL SERVICES	EAP SERVICE	225.50
EFT26191	23/02/2024	PYKE PLUMBING & GAS PTY LTD	INSTALLATION OF DRINKING FOUNTAIN AT THE REC	3,389.83
EFT26192	23/02/2024	ALL WALKS OF LIFE BODDINGTON	CATERING SERVICES	1,870.00
EFT26193	23/02/2024	INTERNODE PTY LTD	NBN AT THE MEDICAL CENTRE	109.99
EFT26194	23/02/2024	BODDINGTON SERVICE STATION	GLOBE - BT3886	29.00
EFT26195	23/02/2024	LOGO APPOINTMENTS WA	CONTRACTING SERVICES - RELIEF RATES OFFICER	2,166.79
EFT26196	23/02/2024	BODDINGTON SES	REIMBURSEMENT FOR THE SES	1,377.13
EFT26197	23/02/2024	THE LOCK MAN SECURITY	NEW KEYS FOR THE REC CENTRE	385.50
DD16226.1	01/02/2024	WESTNET	INTERNET CHARGES - MEDICAL CENTRE	39.95
DD16226.2	01/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	664.65
DD16226.3	01/02/2024	SYNERGY	ELECTRICITY CHARGES -CROSSMAN FIRE SHED	446.11
DD16239.1	02/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	971.00
DD16239.2	02/02/2024	SYNERGY	ELECTRICITY CHARGES - VARIOUS SHIRE LOCATIONS	2,139.49
DD16240.1	05/02/2024	WESTNET	INTERNET CHARGES - POOL	59.95
DD16240.2	05/02/2024	NATIONAL AUSTRALIA BANK	TRANSACT FEE	15.35
DD16240.3	05/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	913.40
DD16240.4	05/02/2024	SYNERGY	ELECTRICITY CHARGES - VARIOUS SHIRE LOCATIONS	817.65
DD16241.1	06/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	963.55
DD16241.2	06/02/2024	TELSTRA LIMITED	MOBILE PHONE CHARGES - SHIRE	681.67
DD16242.1	07/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	2,140.05
DD16242.2	07/02/2024	SYNERGY	ELECTRICITY CHARGES - BCRC	1,654.58
DD16245.1	08/02/2024	PRECISION ADMINISTRATION SERVICES	SUPERANNUATION CONTRIBUTIONS	14,848.35
DD16245.2	08/02/2024	NEWBOOK PTY LTD	CARAVAN PARK ONLINE BOOKINGS	239.25
DD16245.3	08/02/2024	SYNERGY	ELECTRICITY CHARGES - SWIMMING POOL	1,433.41
DD16252.1	12/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	351.60
DD16253.1	09/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	5,072.65
DD16260.1	15/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	837.50
DD16261.1	14/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	3,829.30
DD16262.1	13/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	15,727.85
DD16262.2	13/02/2024	SYNERGY	ELECTRICITY CHARGES - VARIOUS SHIRE LOCATIONS	2,167.73
DD16271.1	16/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	1,333.05
DD16272.1	20/02/2024	PRECISION ADMINISTRATION SERVICES	SUPERANNUATION CONTRIBUTIONS	14,872.20
DD16272.2	20/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	104.30
DD16273.1	21/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	2,807.10
DD16273.2	21/02/2024	SYNERGY	ELECTRICITY CHARGES - NEWMONT	284.93
DD16280.1	22/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	1,537.25
DD16281.1	19/02/2024	BUSINESS FUEL CARDS (FLEET CARD)	FIRE BRIGADE FLEET CARDS	657.45
DD16281.2	19/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	651.95
DD16281.3	19/02/2024	BOND ADMINISTRATOR	RENTAL BOND	200.00
DD16281.4	19/02/2024	TELSTRA LIMITED	PHONE CHARGES - SES LANDLINES	196.04
DD16294.1	23/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	1,402.95
DD16294.2	23/02/2024	BOC GASES BOC ACCOUNT PROCESSING	GAS CONTAINER FEES	19.85
DD16294.3	23/02/2024	SYNERGY	ELECTRICITY CHARGES - QUINDANNING FIRE SHED	178.77
DD16295.1	27/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	335.75
DD16296.1	29/02/2024	NATIONAL AUSTRALIA BANK	NAB BPAY & ACCT FEES	779.59
DD16296.2	29/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	1,931.25
DD16296.3	29/02/2024	SYNERGY	ELECTRICITY CHARGES - STREET LIGHTS	6,468.79
DD16297.1	28/02/2024	NATIONAL AUSTRALIA BANK	NAB CONNECT FEE	55.23
DD16297.2	28/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	9,603.10
DD16299.1	26/02/2024	EASIFLEET MANAGEMENT	LEASE PAYMENT - CEO - 1HIZ195 & EMDS -1GVR651	3,960.44
DD16299.2	26/02/2024	DEPARTMENT OF TRANSPORT	DEPT OF TRANSPORT AGENCY	2,160.70
DD16299.3	26/02/2024	SYNERGY	ELECTRICITY CHARGES - 25 FARMERS AVE	94.09
DD16299.4	26/02/2024	TELSTRA LIMITED	PHONE CHARGES - SHIRE	1,009.68
DD		NAB CREDIT CARD		10,395.63
				<u>587,373.87</u>
		JEFF ATKINS		
18/01/2024		BIGW ONLINE	ITEMS FOR THE NEW DEPOT CRIB ROOM	75.50
		JAMES WICKENS		
19/01/2024		ALL WALKS OF LIFE	FOOD SAMPLING	18.00

SHIRE OF BODDINGTON - LIST OF PAYMENTS - FEBRUARY 2024

19/01/2024	DOUBLE SHOT CAFÉ SAM KEMPTON	FOOD SAMPLING	16.00
09/01/2024	AUSTRALIA DAY SA	ITEMS FOR AUSTRALIA DAY CELEBRATIONS	664.70
10/01/2024	BUNNINGS GROUP LTD	ITEMS FOR AUSTRALIA DAY CELEBRATIONS	32.95
10/01/2024	TOOLMART	WALL FANS FOR THE PAVILION	916.00
10/01/2024	BUNNINGS GROUP LTD	ITEMS FOR AUSTRALIA DAY CELEBRATIONS	527.20
10/01/2024	BUNNINGS GROUP LTD	ITEMS FOR AUSTRALIA DAY CELEBRATIONS	131.80
10/01/2024	BUNNINGS GROUP LTD	ITEMS FOR AUSTRALIA DAY CELEBRATIONS	-32.95
15/01/2024	NETFLIX	SUBSCRIPTION FOR THE YOUTH CENTRE	16.99
22/01/2024	BUNNINGS GROUP LTD	ITEMS FOR AUSTRALIA DAY CELEBRATIONS	-131.80
22/01/2024	BUNNINGS GROUP LTD	ITEMS FOR AUSTRALIA DAY CELEBRATIONS	-32.95
25/01/2024	BUNNINGS GROUP LTD	ITEMS FOR AUSTRALIA DAY CELEBRATIONS	294.00
25/01/2024	BUNNINGS GROUP LTD	ITEMS FOR AUSTRALIA DAY CELEBRATIONS	164.75
	CARA RYAN		
22/01/2024	WA NEWSPAPER	DIGITAL SUBSCRIPTION	28.00
23/01/2024	SEEK	ADVERTISING - EXECUTIVE MANAGER INFRASTRUCTURE	797.50
23/01/2024	SEEK	ADVERTISING - YOUTH CENTRE ASSISTANT	368.50
23/01/2024	SEEK	ADVERTISING - CIVIL PLANT OPERATOR/GENERAL HAND	390.50
	JULIE BURTON		
03/01/2024	MAILCHIMP	NEWSLETTER SOFTWARE	58.56
03/01/2024	EXETEL PTY LTD	INTERNET PLAN	975.00
05/01/2024	DROP BOX	COUNCILLOR INFORMATION	18.69
08/01/2024	LOCAL GOVERNMENT PROFESSIONALS	IGNITE LEADERSHIP PROGRAM - STAFF TRAINING	3,510.00
16/01/2024	ADOBE	LICENSE	29.99
19/01/2024	REMARKABLE	SUBSCRIPTION FEE	4.99
29/01/2024	JB HI-FI ONLINE	HISENSE TV & WALL MOUNT - GYM	1,508.00
29/01/2024	NAB CARD FEE	FEE	45.00
29/01/2024	NAB INTERNATIONAL TRANSACTION FEES	FEE	0.71
	PAYROLL PAYMENTS		
	NAB	NET PAYROLL F/N ENDING 04/02/2024	77,158.37
	NAB	NET PAYROLL F/N ENDING 18/02/2024	77,264.22
	TOTAL MUNI		<u>741,796.46</u>
	TOTAL TRUST & MUNI		<u>741,796.46</u>

9.3.2 Financial Report

File Reference: 3.0056
Applicant: Nil
Previous Item: Nil
Author: Executive Manager Corporate Services
Disclosure of Interest: Nil
Voting Requirements: Simple Majority
Attachments: 9.3.2A Monthly Financial Report February 2024

Summary

The Monthly Financial Report for the period ending 29 February 2024 is presented for Councils consideration.

Background

In accordance with the Local Government Act 1995, a statement of financial activity must be presented at an Ordinary Meeting of Council. This is required to be presented within two months, after the end of the month, to which the statement relates.

The statement of financial activity is to report on the revenue and expenditure as set out in the annual budget for the month, including explanations of any variances. Regulation 34, from the Local Government (Financial Management) Regulations 1996 sets out the detail that is required to be included in the reports.

Comment

The attached monthly financial statements and supporting information have been compiled to meet compliance with the Local Government Act 1995 and associated Regulations.

Consultation

Nil

Strategic Implications

Aspiration	Performance
Outcome 12	Visionary Leadership and Responsible Governance
Objective 12.2	Responsibly manage the Shire's finances, human resources and assets

Legislative Implications

Local Government Act 1995

Section 6.4 Specifies that a local government is to prepare such other financial reports as are prescribed.

Local Government (Financial Management) Regulations 1996

Regulation 34 states:

- (1) A local government is to prepare each month a statement of financial activity reporting on the sources and applications of funds, as set out in the annual budget under regulation 22(1)(d) for that month in the following detail:
 - (a) annual budget estimates, taking into account any expenditure incurred for an additional purpose under section 6.8(1)(b) or (c);
 - (b) budget estimates to the end of month to which the statement relates;

- (c) actual amounts of expenditure, revenue and income to the end of the month to which the statement relates;
- (d) material variances between the comparable amounts referred to in paragraphs (b) and (c);
- (e) the net current assets at the end of the month to which the statement relates.

Sub regulations 2, 3, 4, 5, and 6 prescribe further details of information to be included in the monthly statement of financial activity.

Policy Implications

Nil

Financial Implications

As disclosed in the financial statements.

Economic Implications

Nil

Social Implications

Nil

Environmental Considerations

Nil

Risk Considerations

Risk Statement and Consequence	Failure to monitor the Shire's ongoing financial performance would increase the risk of a negative impact on the Shire's financial position. As the monthly report is a legislative requirement, non-compliance may result in a qualified audit.
Risk Rating (prior to treatment or control)	Minor
Principal Risk Theme	Reputational / Compliance
Risk Action Plan (controls or treatment proposed)	Nil

Officer Recommendation

That Council receive the financial statements as presented, for the period ending 29 February 2024.



MONTHLY FINANCIAL REPORT
(Containing the Statement of Financial Activity)

For the Period Ended 29 February 2024

LOCAL GOVERNMENT ACT 1995
LOCAL GOVERNMENT (FINANCIAL MANAGEMENT) REGULATIONS 1996

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SHIRE OF BODDINGTON
STATEMENT OF FINANCIAL ACTIVITY
FOR THE PERIOD ENDED 29 FEBRUARY 2024

	Note	Adopted Budget Estimates (a) \$	YTD Budget Estimates (b) \$	YTD Actual (c) \$	Variance* \$ (c)-(b)	Variance* % (c)-(b)/(b)	Var.
OPERATING ACTIVITIES							
Revenue from operating activities							
Rates	6	6,538,742	6,531,406	6,538,972	7,566	0%	
Grants, subsidies and contributions	10	372,788	234,892	231,693	(3,199)	(1%)	
Fees and charges		1,199,971	925,166	999,519	74,353	8%	
Interest revenue		331,977	197,706	217,249	19,543	10%	
Other revenue		144,950	110,198	126,081	15,883	14%	▲
Profit on disposal of assets	8	65,582	65,582	36,603	(28,979)	(44%)	▼
		8,654,010	8,064,950	8,150,117	85,167		
Expenditure from operating activities							
Employee costs		(3,129,280)	(2,130,177)	(2,074,278)	55,899	3%	
Materials and contracts		(3,143,867)	(2,170,948)	(1,933,809)	237,139	11%	▲
Utility charges		(341,558)	(227,912)	(208,246)	19,666	9%	
Depreciation		(2,706,950)	(1,804,632)	(1,624,371)	180,261	10%	▲
Finance Costs		(54,968)	(30,889)	(29,131)	1,758	6%	
Insurance		(226,419)	(226,369)	(227,069)	(700)	(0%)	
Other expenditure		(25,850)	(17,240)	(19,400)	(2,160)	(13%)	
Loss on disposal of assets	8	0	0	0	0	0%	
		(9,628,892)	(6,608,167)	(6,116,304)	491,863		
Non-cash amounts excluded from operating activities	2(b)	2,641,368	1,739,050	1,587,768	(151,282)	(9%)	
Amount attributable to operating activities		1,666,486	3,195,833	3,621,581	425,748		
INVESTING ACTIVITIES							
Inflows from investing activities							
Proceeds from capital grants, subsidies and contributions	10	4,278,677	563,192	532,562	(30,630)	(5%)	
Proceeds from disposal of assets	8	189,000	21,000	40,318	19,318	92%	▲
		4,467,677	584,192	572,880	(11,312)		
Outflows from investing activities							
Payments for property, plant and equipment	8	(1,664,009)	(826,309)	(838,122)	(11,813)	(1%)	
Payments for construction of infrastructure	8	(5,920,686)	(1,299,853)	(1,298,265)	1,588	0%	
		(7,584,695)	(2,126,162)	(2,136,387)	(10,225)		
Amount attributable to investing activities		(3,117,018)	(1,541,970)	(1,563,507)	(21,537)		
FINANCING ACTIVITIES							
Inflows from financing activities							
Transfer from reserves	4	515,555	211,963	211,963	0	0%	
		515,555	211,963	211,963	0		
Outflows from investing activities							
Repayment of borrowings	9	(369,416)	(183,061)	(183,061)	0	0%	
Transfer to reserves	4	(834,536)	32,000	(32,038)	(64,038)	200%	
		(1,203,952)	(151,061)	(215,099)	(64,038)		
Amount attributable to financing activities		(688,397)	60,902	(3,136)	(64,038)		
MOVEMENT IN SURPLUS OR DEFICIT							
Surplus of deficit at the start of the financial year	2(a)	2,110,832	2,110,832	2,110,832	(0)	(0%)	
Amount attributable to operating activities		1,666,486	3,195,833	3,621,581			
Amount attributable to investing activities		(3,117,018)	(1,541,970)	(1,563,507)			
Amount attributable to financing activities		(688,397)	60,902	(3,136)			
Surplus or deficit after imposition of general rates		(28,097)	3,825,597	4,165,771			

KEY INFORMATION

▲ ▼ Indicates a variance between Year to Date (YTD) Budget and YTD Actual data as per the adopted materiality threshold.

* Refer to Note 3 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 BODDINGTON
STATEMENT OF FINANCIAL POSITION
FOR THE PERIOD ENDED 29 FEBRUARY 2024

	30-06-2023	29 Feb 2024
	\$	\$
CURRENT ASSETS		
Cash and cash equivalents	8,009,668	9,255,096
Trade and other receivables	637,549	1,652,654
Other assets	7,883	7,883
TOTAL CURRENT ASSETS	8,655,100	10,915,633
NON-CURRENT ASSETS		
Trade and other receivables	23,375	23,375
Other financial assets	40,745	40,745
Property, plant and equipment	38,372,382	38,579,405
Infrastructure	62,263,508	62,564,789
TOTAL NON-CURRENT ASSETS	100,700,010	101,208,314
TOTAL ASSETS	109,355,110	112,123,947
CURRENT LIABILITIES		
Trade and other payables	913,531	571,396
Other liabilities	3,386,114	4,113,766
Borrowings	369,416	186,355
Employee related provisions	203,240	203,240
TOTAL CURRENT LIABILITIES	4,872,301	5,074,757
NON-CURRENT LIABILITIES		
Other liabilities	0	0
Borrowings	1,386,659	1,386,659
Employee related provisions	65,440	65,440
TOTAL NON-CURRENT LIABILITIES	1,452,099	1,452,099
TOTAL LIABILITIES	6,324,400	6,526,856
NET ASSETS	103,030,710	105,597,091
EQUITY		
Retained surplus	34,019,769	36,798,113
Reserve accounts	2,041,385	1,829,422
Revaluation surplus	66,969,556	66,969,556
TOTAL EQUITY	103,030,710	105,597,091

This statement is to be read in conjunction with the accompanying notes.

SHIRE OF BODDINGTON
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
FOR THE PERIOD ENDED 29 FEBRUARY 2024

1 BASIS OF PREPARATION AND SIGNIFICANT ACCOUNTING POLICIES

This prescribed financial report has been prepared in accordance with the *Local Government Act 1995* and accompanying regulations.

Local Government Act 1995 requirements

Section 6.4(2) of the *Local Government Act 1995* read with the *Local Government (Financial Management) Regulations 1996*, prescribe that the financial report be prepared in accordance with the *Local Government Act 1995* and, to the extent that they are not inconsistent with the Act, the Australian Accounting Standards. The Australian Accounting Standards (as they apply to local governments and not-for-profit entities) and Interpretations of the Australian Accounting Standards Board were applied where no inconsistencies exist.

The *Local Government (Financial Management) Regulations 1996* specify that vested land is a right-of-use asset to be measured at cost, and is considered a zero cost concessionary lease. All right-of-use assets under zero cost concessionary leases are measured at zero cost rather than at fair value, except for vested improvements on concessionary land leases such as roads, buildings or other infrastructure which continue to be reported at fair value, as opposed to the vested land which is measured at zero cost. The measurement of vested improvements at fair value is a departure from AASB 16 which would have required the Shire to measure any vested improvements at zero cost.

Local Government (Financial Management) Regulations 1996, regulation 34 prescribes contents of the financial report. Supporting information does not form part of the financial report.

Accounting policies which have been adopted in the preparation of this financial report have been consistently applied unless stated otherwise. Except for cash flow and rate setting information, the financial 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.

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 financial report.

All monies held in the Trust Fund are excluded from the financial statements.

Judgements and 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 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 balances, transactions and disclosures impacted by accounting estimates are as follows:

- estimated fair value of certain financial assets
- impairment of financial assets
- estimation of fair values of land and buildings, infrastructure and investment property
- estimation uncertainties made in relation to lease accounting
- estimated useful life of intangible assets

SIGNIFICANT ACCOUNTING POLICES

Significant accounting policies utilised in the preparation of these statements are as described within the 2023-24 Annual Budget. Please refer to the adopted budget document for details of these policies.

PREPARATION TIMING AND REVIEW

Date prepared: All known transactions up to 20 March 2024

SHIRE OF BODDINGTON
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
FOR THE PERIOD ENDED 29 FEBRUARY 2024

2 STATEMENT OF FINANCIAL ACTIVITY INFORMATION

		Adopted Budget Opening	Last Year Closing	Year to Date
	Note	30 June 2023	30 June 2023	29 Feb 2024
(a) Net current assets used in the Statement of Financial Activity				
Current assets				
Cash and cash equivalents	4	8,009,668	8,009,668	9,255,096
Rates receivables	5	300,227	300,227	580,642
Receivables	5	336,500	337,325	1,072,012
Inventories		0	0	0
Other current assets		7,883	7,883	7,883
Less: Current liabilities				
Payables	7	(789,786)	(913,531)	(571,396)
Borrowings	9	(369,416)	(369,416)	(186,355)
Capital grant/contribution liability	10	(3,236,207)	(3,086,114)	(3,813,766)
Lease Loan - retirement village		0	(300,000)	(300,000)
Provisions		(203,240)	(203,240)	(203,240)
Less: Total adjustments to net current assets	2(c)	(1,671,969)	(1,671,969)	(1,675,105)
Closing funding surplus / (deficit)		2,383,660	2,110,832	4,165,770

(b) Non-cash items excluded from operating activities

The following non-cash revenue and expenditure has been excluded from operating activities within the Statement of Financial Activity in accordance with Financial Management Regulation 32.

		Adopted Budget	YTD Budget (a)	YTD Actual (b)
	Notes	\$	\$	\$
Non-cash items excluded from operating activities				
Adjustments to operating activities				
Less: Profit on asset disposals	8	(65,582)	(65,582)	(36,603)
Add: Depreciation on assets		2,706,950	1,804,632	1,624,371
Total non-cash items excluded from operating activities		2,641,368	1,739,050	1,587,768

(c) Current assets and liabilities excluded from budgeted deficiency

The following current assets and liabilities have been excluded from the net current assets used in the Statement of Financial Activity in accordance with *Financial Management Regulation 32* to agree to the surplus/(deficit) after imposition of general rates.

		Adopted Budget Opening	Last Year Closing	Year to Date
		30 June 2023	30 June 2023	29 February 2024
Adjustments to net current assets				
Less: Reserves - restricted cash	4	(2,041,385)	(2,041,385)	(1,861,460)
Add: Borrowings	9	369,416	369,416	186,355
Add: Provisions - employee		0	0	0
Total adjustments to net current assets		(1,671,969)	(1,671,969)	(1,675,105)

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. Unless otherwise stated assets or liabilities are classified as current if expected to be settled within the next 12 months, being the Council's operational cycle.

SHIRE OF BODDINGTON
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
FOR THE PERIOD ENDED 29 FEBRUARY 2024

3 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 Actual materially.

The material variance adopted by Council for the 2023-24 year is \$10,000 or 9.95% whichever is the greater.

	Var. \$	Var. %	Explanation of Variances
	\$	%	
Revenue from operating activities			
Rates	7,566	0%	
Grants, subsidies and contributions	(3,199)	(1%)	
Fees and charges	74,353	8%	
Interest revenue	19,543	10%	
Other revenue	15,883	14%	▲ Permanent Variance - reimbursement for Workers Compensation payment higher than budget estimate.
Profit on disposal of assets	(28,979)	(44%)	▼ Timing - Vehicles still to be traded for new
Expenditure from operating activities			
Employee costs	55,899	3%	
Materials and contracts	237,139	11%	▲ Timing - delay in expenditure for projects
Utility charges	19,666	9%	
Depreciation	180,261	10%	▲ Permanent - As a result of review of depreciation rates for building & other infrastructure following asset revaluation for June 2023
Finance Costs	1,758	6%	
Insurance	(700)	(0%)	
Other expenditure	(2,160)	(13%)	
Loss on disposal of assets	0	0%	
Non-cash amounts excluded from operating activities.	(151,282)	(9%)	Permanent Variance - See above note regarding Depreciation variance
Inflows from investing activities			
Proceeds from capital grants, subsidies and contributions	(30,630)	(5%)	
Proceeds from disposal of assets	19,318	92%	▲ Permanent - trade in values on Ranger Ute & Digger higher than budget estimate
Proceeds from financial assets at amortised cost - self supporting loans	0	0%	
Outflows from investing activities			
Payments for financial assets at amortised cost - self supporting loans	0	0%	
Payments for property, plant and equipment	(11,813)	(1%)	
Payments for construction of infrastructure	1,588	0%	
Inflows from financing activities			
Proceeds from new debentures	0	0%	
Transfer to reserves	0	0%	
Outflows from financing activities			
Payments for principal portion of lease liabilities	0	0%	
Repayment of borrowings	0	0%	
Transfer to reserves	(64,038)	200%	
Surplus of deficit at the start of the financial year	(0)	(0%)	

SHIRE OF BODDINGTON
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
FOR THE PERIOD ENDED 29 FEBRUARY 2024

4 CASH AND FINANCIAL ASSETS

CASH AND INVESTMENTS

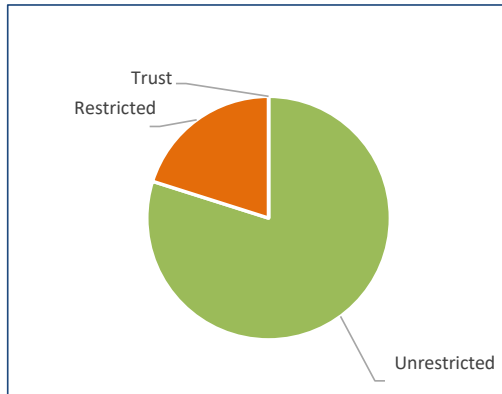
Description	Unrestricted	Restricted	Total Cash	Trust	Institution	Interest Rate	Maturity Date
	\$	\$	\$	\$			
Cash on hand							
Petty Cash & Floats	400	0	400			0.00%	On Hand
At Call Deposits							
Municipal Funds	295,394	0	295,394		NAB		At Call
Reserve Funds	0	0	0		NAB		At Call
Bonds & Deposits	148,195	0	148,195		NAB		At Call
Term Deposits & Overnight Cash Deposits							
Municipal Funds	6,949,647	0	6,949,647		Treasury	4.30%	Overnight
Reserve Funds	0	1,861,460	1,861,460		Treasury	4.30%	Overnight
Total	7,393,636	1,861,460	9,255,096	0			

KEY INFORMATION

Cash and cash equivalents include cash on hand, cash at bank, deposits available on demand with banks and other short term highly liquid investments with original maturities of three months or less 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 net current assets.

The local government classifies financial assets at amortised cost if both of the following criteria are met:

- the asset is held within a business model whose objective is to collect the contractual cashflows, and
- the contractual terms give rise to cash flows that are solely payments of principal and interest.



Total Cash	Unrestricted
\$9.26 M	\$7.39 M

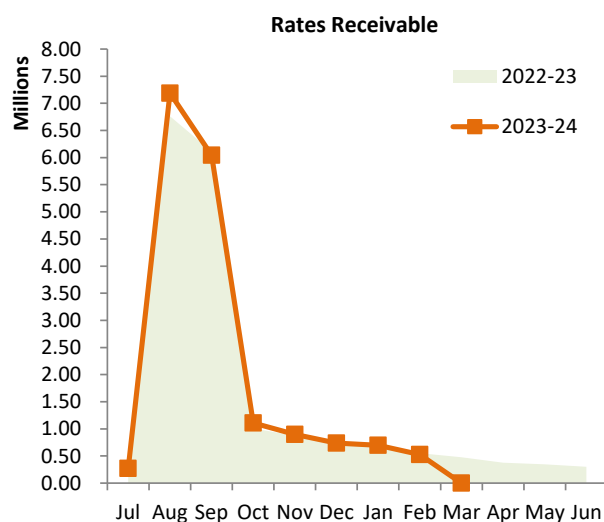
CASH BACKED RESERVES

Reserve name	Opening Balance	Budget Interest Earned	Actual Interest Earned	Budget Transfers In (+)	Actual Transfers In (+)	Budget Transfers Out (-)	Actual Transfers Out (-)	Budget Closing Balance	Actual YTD Closing Balance
	\$	\$	\$	\$	\$	\$	\$	\$	\$
Plant	276,078	11,043	4,835	50,000	0	(121,343)	0	215,778	280,913
Building	299,278	11,971	5,242	100,000	0	0	0	411,249	304,520
Community Facility Fund	81,509	3,260	1,427	10,000	0	0	0	94,769	82,936
Refuse Site	80,345	3,214	1,407	50,000	0	0	0	133,559	81,752
Aged Housing	212,850	8,514	3,728	25,000	0	(90,000)	0	156,364	216,578
Swimming Pool	221,471	8,858	3,878	76,359	0	0	0	306,688	225,349
River Crossing	88,701	3,550	1,553	0	0	(92,249)	0	2	90,254
Prepaid Conditional Grants	203,985	0	0	0	0	(203,985)	(203,985)	0	0
Unspent Conditional Grants	7,978	0	0	0	0	(7,978)	(7,978)	0	0
Public Open Space	318,132	12,725	5,571	250,000	0	0	0	580,857	323,703
Town Weir Reserve	251,058	10,042	4,397	200,000	0	0	0	461,100	255,455
	2,041,385	73,177	32,038	761,359	0	(515,555)	(211,963)	2,360,366	1,861,460

SHIRE OF BODDINGTON
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
FOR THE PERIOD ENDED 29 FEBRUARY 2024

5 RECEIVABLES

Rates receivable	30 June 2023	29 Feb 2024
	\$	\$
Opening arrears previous years	253,668	300,227
RATES - levied this year	5,227,323	6,538,971
RUBBISH - levied this year	253,247	297,869
ESL - levied this year	107,448	117,012
TOTAL levied this year	5,588,018	6,953,852
Less - collections to date	(5,541,459)	(6,673,437)
Equals current outstanding	300,227	580,642
Net rates collectable	300,227	580,642
% Collected	94.9%	92%



Receivables - general	Credit	Current	30 Days	60 Days	90+ Days	Total
		\$	\$	\$	\$	\$
Receivables - general	(4,837)	23,942	21,000	828,543	117,076	985,724
Percentage		2.4%	2.1%	84.1%	11.9%	
Balance per trial balance						
Sundry receivable						985,724
GST receivable						79,500
Increase in Allowance for impairment of receivables from contracts with customers						(4,873)
Other receivables - employee related provisions						11,661
Total receivables general outstanding						1,072,012

Amounts shown above include GST (where applicable)

KEY INFORMATION

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.

Trade receivables are recognised at original invoice amount less any allowances for uncollectable amounts (i.e. impairment). The carrying amount of net trade receivables is equivalent to fair value as it is due for settlement within 30 days.

Classification and subsequent measurement

Receivables which are generally due for settlement within 30 days except rates receivables which are expected to be collected within 12 months are classified as current assets. All other receivables such as, deferred pensioner rates receivable after the end of the reporting period as classified as non-current assets.

Trade and other receivables are held with the objective to collect the contractual cashflows and therefore the Shire measures them subsequently at amortised cost using the effective interest rate method.

6 RATE REVENUE

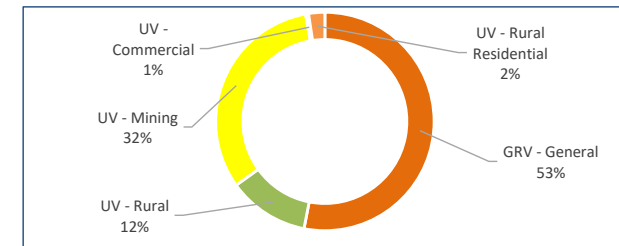
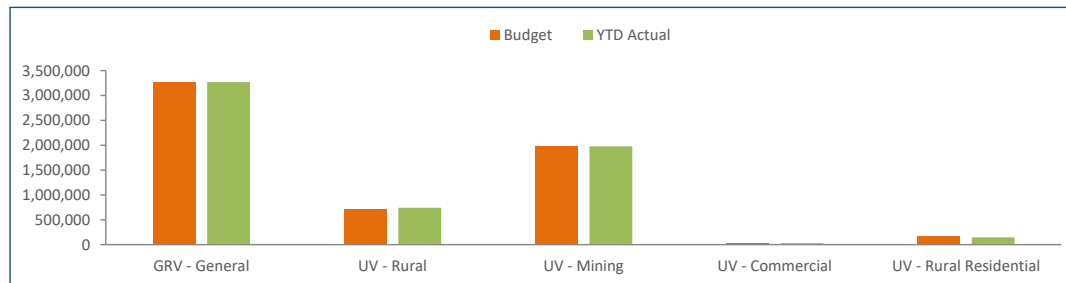
RATE REVENUE

General rate revenue	Budget						YTD Actual			
	Rate in \$ (cents)	Number of Properties	Rateable Value	Rate Revenue \$	Interim Rate \$	Total Revenue \$	Rate Revenue \$	Interim Rates \$	Back Rates \$	Total Revenue \$
RATE TYPE										
Gross rental value										
GRV - General	0.116774	561	28,017,281	3,271,690	1,000	3,272,690	3,271,690	0	0	3,271,690
Unimproved value										
UV - Rural	0.005205	135	138,105,000	718,837	1,000	719,837	718,837	22,229	0	741,066
UV - Mining	0.031027	128	63,725,776	1,977,220	0	1,977,220	1,977,220	0	0	1,977,220
UV - Commercial	0.021617	2	1,252,000	27,064	0	27,064	27,064	0	0	27,064
UV - Rural Residential	0.009397	127	15,719,000	147,711	20,000	167,711	147,711	0	0	147,711
Sub-Total		953	246,819,057	6,142,522	22,000	6,164,522	6,142,522	22,229	0	6,164,751
Minimum payment	Minimum \$									
Gross rental value										
GRV - General	945	129	239,881	121,905	0	121,905	121,905	0	0	121,905
Unimproved value										
UV - Rural	945	99	13,088,000	93,555	0	93,555	93,555	0	0	93,555
UV - Mining	945	42	193,745	39,690	0	39,690	39,690	0	0	39,690
UV - Commercial	945	0	0	0	0	0	0	0	0	0
UV - Rural Residential	945	126	10,767,500	119,070	0	119,070	119,070	0	0	119,070
Sub-total		396	24,289,126	374,220	0	374,220	374,220	0	0	374,220
Amount from general rates						6,538,742				6,538,971

KEY INFORMATION

Prepaid rates are, until the taxable event for the rates has occurred, refundable at the request of the ratepayer. Rates received in advance give rise to a financial liability. On 1 July 2020 the prepaid rates were recognised as a financial asset and a related amount was recognised as a financial liability and no income was recognised. When the taxable event occurs the financial liability is extinguished and income recognised for the prepaid rates that have not been refunded.

General Rates	
Budget	Actual
\$6.54 M	\$6.54 M



SHIRE OF BODDINGTON
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
FOR THE PERIOD ENDED 29 FEBRUARY 2024

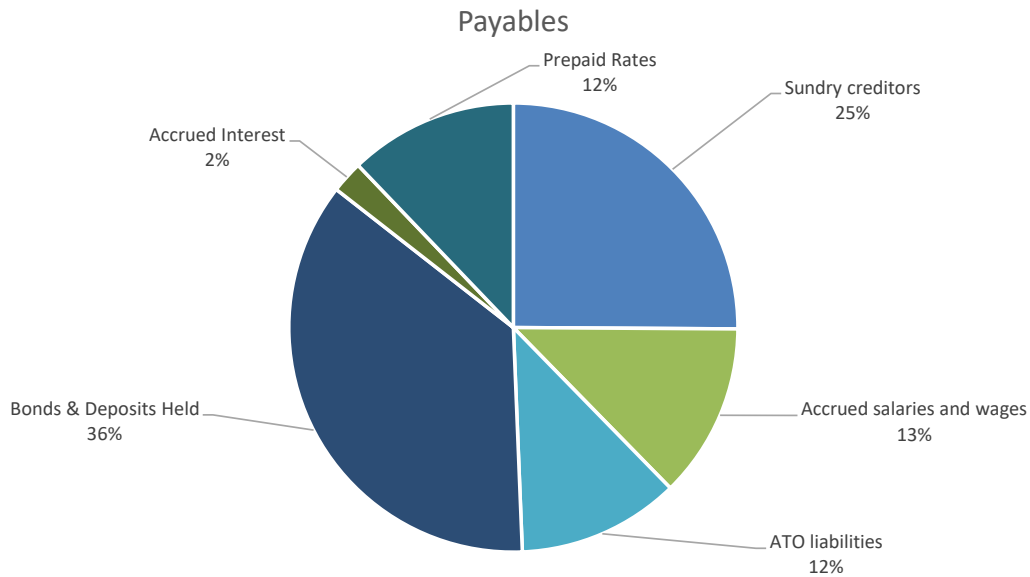
7 PAYABLES

Payables - general	Credit	Current	30 Days	60 Days	90+ Days	Total
	\$	\$	\$	\$	\$	\$
Payables - general	0	81,193	972	23,243	0	105,408
Percentage	0%	77%	0.9%	22.1%	0%	
Balance per trial balance						
Sundry creditors						105,408
Accrued salaries and wages						52,827
ATO liabilities						49,081
Bonds & Deposits Held						151,978
Accrued Interest						9,691
Prepaid Rates						51,024
Unclaimed Funds						490
Road Safety Alliance						150,897
Total payables general outstanding						571,396

Amounts shown above include GST (where applicable)

KEY INFORMATION

Trade and other payables represent liabilities for goods and services provided to the Shire 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.

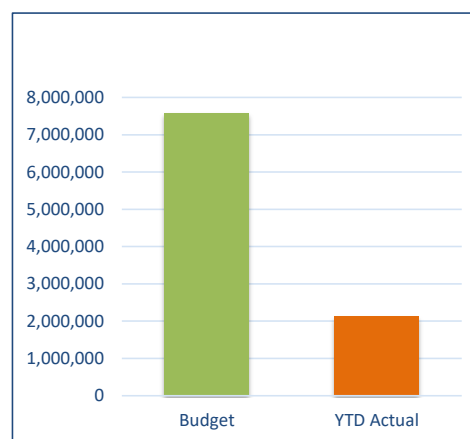


8 CAPITAL ACQUISITIONS

Capital acquisitions	Adopted		YTD Actual	YTD Actual Variance
	Budget	YTD Budget		
	\$	\$	\$	\$
Furniture and Equipment	49,039	29,839	29,057	(782)
Land and Buildings	899,700	599,700	604,797	5,097
Plant and Equipment	715,270	196,770	204,269	7,499
Road Infrastructure	1,701,844	587,500	587,592	92
Footpath Infrastructure	679,414	75,000	75,313	313
Drainage Bridges Culverts	827,000	317,000	316,591	(409)
Infrastructure - Parks, Gardens, Recreation Facilities	2,712,428	320,353	318,769	(1,584)
Total Capital Acquisitions	7,584,695	2,126,162	2,136,387	10,225
Capital Acquisitions Funded By:				
	\$	\$	\$	\$
Capital grants and contributions	4,278,677	563,192	532,562	(30,630)
Other (disposals & C/Fwd)	189,000	21,000	40,318	19,318
Cash backed reserves				
Aged Housing	100,000	0	0	0
Contribution - operations	3,017,018	1,541,970	1,775,470	233,500
Capital funding total	7,584,695	2,126,162	2,136,387	10,225

SIGNIFICANT ACCOUNTING POLICIES

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.



Acquisitions	Annual Budget	YTD Actual	% Spent
	\$7.58 M	\$2.14 M	28%

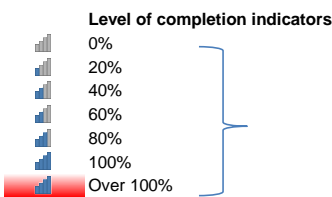
Capital Grants	Annual Budget	YTD Actual	% Received
	\$4.28 M	\$0.53 M	12%

8 CAPITAL ACQUISITIONS DETAILED

Capital Disposals

Asset description	Amended Budget			YTD Actual		
	Net Book Value	Proceeds	Profit / (Loss)	Net Book Value	Proceeds	Profit / (Loss)
Isuzu 4.5T Tipper	16,036	15,000	(1,036)	0	0	0
Hino 6T Truck	33,000	40,000	7,000	0	0	0
Ford Ranger Supercab	5,150	14,000	8,850	2,992	23,000	20,008
Mitsubishi Pajero	350	30,000	29,650	0	0	0
Dingo Digger	1,091	7,000	5,909	723	11,818	11,095
Road Broom	0	8,000	8,000	0	5,500	5,500
McConnel Flail Mower	40,855	40,000	(855)	0	0	0
Fuso Truck	26,936	35,000	8,064	0	0	0
Total	123,418	189,000	65,582	3,715	40,318	36,603

Capital Acquisitions




























Percentage Year to Date Actual to Annual Budget expenditure where the expenditure over budget highlighted in red.

Account Description	Current Budget	YTD Budget	YTD Actual	Variance Under/(Over)
IT Equipment	34,200	19,000	18,072	928
Councillor Tablets	4,000	0	0	0
CCTV Upgrades	10,839	10,839	10,985	(146)
Total Furniture & Equipment	49,039	29,839	29,057	782
Building Asset Renewal Program	120,000	57,000	16,519	40,481
Upgrade to Pavilion to accommodate Gym	239,000	239,000	279,433	(40,433)
Crib Room for Deport	150,000	136,000	135,358	642
Recreation Centre - Solar Panels	20,000	20,000	20,500	(500)
Doctors House - Solar Panels	5,000	5,000	6,950	(1,950)
Foreshore Toilet Block	100,000	2,000	2,040	(40)
Recreation Centre	17,500	17,500	21,026	(3,526)
Pound Complex	15,000	0	0	0
Depot	18,200	18,200	17,617	583
Visitor Centre	25,000	0	0	0
Upgrade Interpretive Centre	100,000	15,000	15,113	(113)
Land - Eucalypt Street	90,000	90,000	90,242	(242)
Total Land & Buildings	899,700	599,700	604,797	(4,854)
4.5 Tonne Tipper	60,000	0	0	0
6 Tonne Truck	270,000	0	0	0
Slip on Unit for Ranger Vehicle	27,270	27,270	27,270	0
Replace Ford Ranger Supercab	42,500	42,500	42,988	(488)
Replace Mitsubishi Pajero Sport	60,000	0	0	0
Dingo Mini Digger	35,000	35,000	41,450	(6,450)
Road Broom	62,000	62,000	62,196	(196)
Mitsubishi Fuso Tip Truck	110,000	0	0	0
Portable CCTV Trailer	30,000	30,000	30,364	(364)
Crossman Rd Standpipe	18,500	0	0	0
Total Plant & Equipment	715,270	196,770	204,269	(7,499)
RTR - Chalk Brook Road Crossing	161,639	54,000	54,649	(649)
Linemarking - Forrest Street	7,000	0	0	0
Gravel Sheeting	175,744	116,000	115,728	272
RRG - Crossman Rd - Surface treatment & Reseal	328,500	1,500	1,456	44
RRG - Harvey Quindanning Rd - improve geometry widen	848,962	416,000	415,758	242
RRG - Lower Hotham Rd - Reseal, shoulders, drainage	179,999	0	0	0
Total Road Infrastructure	1,701,844	587,500	587,592	(92)

8 CAPITAL ACQUISITIONS DETAILED (CONTINUED)

Capital Acquisitions (continued)

Account Description	Current Budget	YTD Budget	YTD Actual	Variance Under/(Over)
 Footpath renewal program	65,000	0	0	0
 Club Drive, Hadea Rd and Adam Street (east side)	104,414	75,000	75,313	(313)
 Mountain Bike Trail	510,000	0	0	0
Total Footpath Infrastructure	679,414	75,000	75,313	(313)
 Kerbing - Town Roads	10,000	0	0	0
 Improve Townsite Drainage	200,000	87,000	86,544	456
 Forrest Street Drainage	50,000	0	0	0
 William Street River Crossing	165,000	58,000	58,047	(47)
 Main Roads - Bridge Replacement	402,000	172,000	172,000	0
Total Drainage/Bridges & Culverts	827,000	317,000	316,591	409
 Street Art/Mural Project	35,000	0	0	0
 EV Charging Stations	33,906	33,906	35,767	(1,861)
 Lighting for Hotham Park	15,000	15,000	12,246	2,754
 Red Hill Reserve	5,203	4,300	4,216	84
 Bicycle Racks for Hotham Park	10,000	0	0	0
 Town Street Revitalisation	1,930,272	29,000	29,125	(125)
 Regional Destination Signage	80,000	0	0	0
 Standard Green, Blue & Brown Signage	20,000	2,000	1,903	97
 Community Club - Playground	93,600	0	0	0
 Install Bore at Hotham Park	86,500	84,000	83,287	713
 Resurface Bowling Green	100,947	100,947	101,261	(314)
 Niche Wall	10,000	0	0	0
 Darminning (Ranford Pool)	200,000	7,200	7,165	35
 Boddington Sign (Albany Hwy)	35,000	35,000	34,560	440
 Tennis Court - surface rejuvenation	12,000	9,000	9,238	(238)
 Marradong Fire Brigade	30,000	0	0	0
 Tennis Courts - retaining wall	15,000	0	0	0
Total Other Infrastructure	2,712,428	320,353	318,769	1,584
Grand Total	7,584,695	2,126,162	2,136,387	(9,983)

9 BORROWINGS

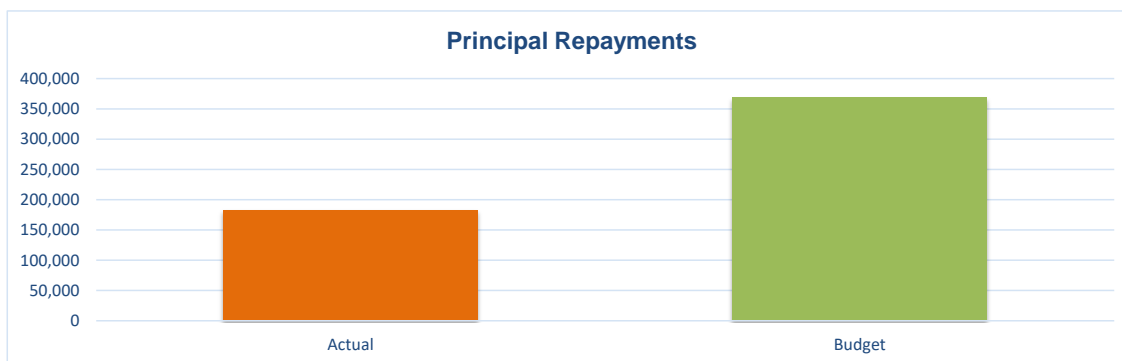
Repayments - borrowings

Information on borrowings Particulars	Loan No.	Interest %	1 July 2023	New Loans		Principal Repayments		Principal Outstanding		Interest Repayments	
				Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget
			\$	\$	\$	\$	\$	\$	\$	\$	
Governance											
Administration Centre	105	4.01%	148,485	0	0	73,506	148,485	74,979	0	2,977	10,206
Education and welfare											
Childcare Centre	100	6.42%	64,728	0	0	9,954	20,228	54,774	44,500	2,078	5,075
Housing											
3 Pecan Place	94	6.45%	147,872	0	0	8,523	17,321	139,349	130,551	4,769	10,328
34 Hill Street	97	6.45%	149,962	0	0	8,644	17,566	141,318	132,396	4,836	10,474
Recreation and culture											
Recreation Centre	106	3.36%	528,888	0	0	33,824	68,217	495,064	460,671	8,885	19,438
Recreation Centre	107	1.56%	716,140	0	0	48,610	97,599	667,530	618,541	5,586	12,298
Total			1,756,075	0	0	183,061	369,416	1,573,014	1,386,659	29,131	67,819
Current borrowings			369,416					186,355			
Non-current borrowings			1,386,659					1,386,659			
			1,756,075					1,573,014			

All debenture repayments were financed by general purpose revenue.

KEY INFORMATION

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.



Principal Repayments	\$183,061
Interest Earned	\$217,249
Interest Expense	\$29,131
Reserves Balance	\$1,861,460
Loans Due	\$1,573,014

SHIRE OF BODDINGTON
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
FOR THE PERIOD ENDED 29 FEBRUARY 2024

10 GRANTS, SUBSIDIES AND CONTRIBUTIONS

Provider	Unspent grants, subsidies and contributions liability				Grants, subsidies & contribution revenue		
	Liability	Increase in	Decrease	Liability	YTD	Adopted	YTD
	1 Jul 23	Liability	in Liability	29 Feb 24	Budget	Budget	Revenue
	\$	\$	(As revenue)	\$	\$	\$	Actual
Operating grants, subsidies and contributions							
General purpose funding							
Federal Grant - General Purpose	0	0	0	0	2,645	3,526	2,645
Federal Grant - Local Roads				0	9,932	13,243	9,932
Law, order, public safety							
DFES - Fire Brigade Operating Grant	0	0	0	0	64,584	79,880	64,818
Mitigation Activity Grant	0	0	0	0	13,000	19,500	11,000
DFES - SES Operating Grant	0	0	0	0	28,163	35,813	22,714
AWARE Grant Funding	0	0	0	0	9,050	9,050	9,050
Abandoned Vehicles	0	0	0	0	250	500	576
Education and welfare							
Seniors - Living Stronger/Longer	0	0	0	0	2,664	4,000	4,551
Welfare Grants	0	0	0	0	2,664	4,000	1,681
Recreation and culture							
South 32 - Events Contribution	0	0	0	0	25,000	25,000	25,000
Christmas Celebration	0	0	0	0	8,000	8,000	6,850
Australia Day Grant	0	0	0	0	2,500	2,500	8,000
Thank a Volunteer	0	0	0	0	2,000	3,000	1,100
Transport							
Main Roads - Direct Road Grant	0	0	0	0	63,776	63,776	63,776
Economic services							
Contributions Area Promotion & Tourism	0	0	0	0	664	1,000	0
South 32 Cultural Centre	1,905,059	0	0	1,905,059	100,000	100,000	0
	1,905,059	0	0	1,905,059	234,892	372,788	231,693
Non-operating contributions							
General purpose funding							
LRCI - Darminning Pool Upgrades	0	0	0	0	141,192	170,596	51,179
LRCI - Main Street Revitalisation	53,482	149,652	0	203,134	0	141,192	0
South 32 - Community Investment	227,864	750,000	0	977,864	0	0	0
Recreation and culture							
Community Gym	100,000	0	0	100,000	0	100,000	0
Mountain Bike Funding	0	0	0	0	0	490,000	0
Community Club - Playground	0	0	0	0	0	93,600	0
Bowling Club - Resurface Bowling Green	0	0	0	0	0	54,896	0
Peel Devt. Comm - Rail Trail Grant	13,414	0	0	13,414			
Transport							
Footpath Grant	0	0	0	0	0	50,000	17,500
Main Street Revitalisation Project	272,136	0	0	272,136	0	1,703,400	0
EV Charging Stations	0	0	0	0	0	17,513	0
Roads to Recovery Funding	0	0	0	0	0	161,639	7,883
Regional Road Group Funding	112,159	284,000	(284,000)	112,159	250,000	893,841	284,000
Special Bridge Funding	402,000	0	(172,000)	230,000	172,000	402,000	172,000
	1,181,055	1,183,652	(456,000)	1,908,707	563,192	4,278,677	532,562
TOTALS	3,086,114	1,183,652	(456,000)	3,813,766	798,084	4,651,465	764,255

SHIRE OF BODDINGTON
NOTES TO THE STATEMENT OF FINANCIAL ACTIVITY
FOR THE PERIOD ENDED 29 FEBRUARY 2024

11 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			Closing Surplus				0
3146209	Land Acquisition - Eucalypt Street	Res 100/23	Capital Expenses			(90,000)	(90,000)
8011482	Aged Housing Reserve	Res 100/23	Capital Revenue		90,000		0
3042100	Legal Expenses	Res 108/23	Operating Expenses			(16,000)	(16,000)
	Opening Surplus	Res 28/24				(272,828)	(288,828)
2033005	Interest On Municipal Funds	Res 28/24	Operating Revenue		120,000		(168,828)
3041020	Member Allowances	Res 28/24	Operating Expenses		9,096		(159,732)
3042015	Administration Salaries	Res 28/24	Operating Expenses		64,000		(95,732)
3042019	Administration Relief Staff	Res 28/24	Operating Expenses			(45,000)	(140,732)
3051001	Brigade Operations	Res 28/24	Operating Expenses			(39,000)	(179,732)
3051050	Fire Control Expenses	Res 28/24	Operating Expenses			(20,000)	(199,732)
2051001	DFES ESL Operating Grant	Res 28/24	Operating Revenue		18,690		(181,042)
2051015	Other Income Fire Services	Res 28/24	Operating Revenue		41,500		(139,542)
3053056	AWARE Grant Expenditure	Res 28/24	Operating Expenses			(9,050)	(148,592)
2053010	Grants & Contributions - AWARE	Res 28/24	Operating Revenue		9,050		(139,542)
2053010	ESL SES Operating Grant	Res 28/24	Operating Revenue		5,213		(134,329)
3121002	Engineer Contract Costs	Res 28/24	Operating Expenses		10,000		(124,329)
3121055	Street Tree Maintenance	Res 28/24	Operating Expenses		5,000		(119,329)
3121069	Road Maintenance - Unsealed Road	Res 28/24	Operating Expenses		37,387		(81,942)
3121070	Road Maintenance - Sealed Road	Res 28/24	Operating Expenses		35,000		(46,942)
3121076	Contributions to Main Roads	Res 28/24	Operating Expenses		7,000		(39,942)
3121085	Repairs to Bridges	Res 28/24	Operating Expenses		20,000		(19,942)
2121804	Special Bridge Funding	Res 28/24	Capital Revenue		402,000		382,058
	Main Roads Bridge Program	Res 28/24	Capital Expenses			(402,000)	(19,942)
3138010	Marketing/Tourism Consultant	Res 28/24	Operating Expenses		65,000		45,058
3141016	Internal Relief Staff	Res 28/24	Operating Expenses			(20,000)	25,058
3141020	Superannuation	Res 28/24	Operating Expenses		18,000		43,058
3112250	Upgrade to Foreshore Toilet Block	Res 28/24	Capital Expenses		20,000		63,058
3121710	South Crossman Road	Res 28/24	Capital Expenses			(113,155)	(50,097)
3132202	Standard Green, Blue & Brown Signage	Res 28/24	Capital Expenses		10,000		(40,097)
3113225	Tennis court surface rejuvenation	Res 28/24	Capital Expenses		20,000		(20,097)
3113056	Hotham Park - installation of Heart Sculpture	Res 24/24	Operating Expenses			(8,000)	(28,097)
				0	1,006,936	(1,035,033)	(28,097)

9.4 COMMUNITY AND ECONOMIC DEVELOPMENT

9.4.1 Boddington Swimming Pool Project Reference Group

File Reference:	3.0084
Applicant:	N/A
Previous Item:	Nil
Author:	Coordinator Community and Economic Development
Disclosure of Interest:	Nil
Voting Requirements:	Simple Majority
Attachments:	9.4.1A Draft Terms of Reference 9.4.1B Boddington Swimming Pool Asset Condition Report

Summary

Council is requested to nominate a Council Representative on the Boddington Swimming Pool Project Reference Group, and note a draft Terms of Reference to guide this process.

Background

At present, the Boddington Swimming Pool comprises a six lane outdoor 25m pool and undercover wading pool, surrounded by grass areas. The facility is open for six months per year from 15 October – 15 April, and operated by Contract Aquatic Services on behalf of the Shire.

Consultation to inform the Shire of Boddington's Council Plan 2022-32 indicated a need to explore possibilities to enclose or heat the facility so it can remain open all year. From a total of 40 services provided by the Shire, residents rated the Boddington Swimming Pool as the third highest performing service, however, this contrasted with also being flagged as the sixth highest priority to address. This indicated the broader community values the Boddington Swimming Pool, however, residents expect an expansion of current service provision to better meet their needs.

Quantitative feedback from the survey provided additional context in terms of local expectation of Boddington Swimming Pool. From a total of 40 services, Boddington Swimming Pool attracted the third highest number of open ended responses with 27 participants providing specific comments about the facility. A summary of the major themes is itemised below:

- Full year access with an indoor facility
- Improve and expand aquatic facilities
- Increase pool temperature
- Increase opening hours
- Improve and upgrade amenities, for example:
 - Showers with hot water
 - Better change facilities
 - Nonslip flooring

Additional feedback is received periodically from users regarding the need to improve and upgrade the amenities, as well as give consideration to disability access (in reference to the lap pool only containing step ladder and steps, as opposed to a ramp entry).

In 2023, the Shire arranged the completion of an asset condition report (Attachment 9.4.1A) for Boddington Swimming Pool, with the intention to clarify the anticipated lifespan of the existing facility and the suitability of embedding community aspirations at the existing site. The report identified the pool structure is in sound condition, however, the plant room requires a complete rebuild. The recommended options to consider include:

- Undertake minimum work to extend the life of the existing facilities by seven years which is estimated to cost \$60,000 (exclusive of GST) as a minimum and take approximately four-six weeks to complete.
- Complete upgrade of the existing facility to extend the life of the existing facilities by 20 years which is estimated to cost \$126,000 (exclusive of GST) as a minimum and take approximately six-eight weeks to complete.
- New like-for-like replacement of the pool at the present or a new site to provide a 40 year lifespan which is estimated to cost \$3,290,000 (exclusive of GST) as a minimum and take approximately six months to complete.

Comment

Due to the multifaceted nature of the project, deeper consultation with facility stakeholders is required to better understand current usage patterns and quantify anticipated future demand, to evidence the feasibility and progression of any of the aforementioned options, or alternative possibilities.

Establishing a Reference Group is viewed as the preferred engagement approach at this stage of the project, as broader community feedback is already captured and more specific operational feedback from frequent users of the facility is required. This will facilitate an opportunity for frequent users to be directly involved in shaping a recommendation and enable the Shire to work collectively with them to identify a preferred option to inform a future Council decision. Establishment of a reference group also supports Council's goal of working collaboratively to build a community informed and engaged in its future.

The Reference Group will not have decision making powers. Decisions relating to the final development of the Boddington Swimming Pool remain the responsibility of Council. The draft Terms of Reference (Attachment 9.4.1B) define the role of the Reference Group and provide a framework for its establishment and operation. All members of the Reference Group will be required to agree to these Terms of Reference.

Council is requested to consider appointing a Councillor to this Group.

Consultation

The need to identify future options for Boddington Swimming Pool was informed by community consultation to develop the Shire's Council Plan 2022-32.

Strategic Implications

Aspiration	People
Outcome 2	A healthy and active community
Objective 2.2	Grow participation in sport, recreation, and leisure activities.
Action 2.2.2	Explore future options for the Boddington Swimming Pool, including the possibility to enclose or heat the pool so it can remain open all year.

Legislative Implications

Nil

Policy Implications

Community Engagement

Financial Implications

No amendment to the existing budget allocation is proposed at this point in time.

Economic Implications

Investment in public aquatic facilities contribute to the economic vitality of communities by creating jobs, increasing property values, attracting visitors, supporting local businesses and reducing healthcare expenditure.

Social Implications

Public aquatic facilities provide a safe, supervised and accessible environment for people of all ages and abilities to engage in physical activity, foster social connection, and improve quality of life.

Environmental Considerations

Nil

Risk Considerations

Risk Statement and Consequence	The key risk arises from Council endorsing a direction that prevents a mechanism to establish an authentic community engagement outcome.
Risk Rating (prior to treatment or control)	Moderate
Principal Risk Theme	Reputational
Risk Action Plan (controls or treatment proposed)	Ongoing

Officer Recommendation

That Council:

- 1. Appoints Cr _____ to the Swimming Pool Project Reference Group as the Council Representative.**
- 2. Notes the draft Terms of Reference to be discussed and endorsed by the Reference Group.**



Boddington Swimming Pool Future Options Project

Reference Group Terms of Reference

This Terms of Reference define the role of the Boddington Swimming Pool Future Options Reference Group (RG) and provide a framework for its establishment and operation. All members of the RG will be required to agree to these Terms of Reference.

1. Purpose

The purpose of the RG is to ensure the perspectives of facility stakeholders and regular users inform the preferred future option for the Boddington Swimming Pool.

Establishment of a formal RG supports Council's goal of working collaboratively to build a community informed and engaged in its future.

Specific objectives of the RG are to:

- Actively engage with facility stakeholders and regular users to draw out and bring to the RG ideas and feedback to inform the recommended option for Council's consideration.
- Work collaboratively and cooperatively as a member of the RG to achieve the best outcomes for the greatest proportion of the community.
- Obtain local input and knowledge for the development of the preferred option from a range of diverse perspectives.

The establishment of the RG will enable the community to be directly involved in the development of a preferred option. Feedback provided by the RG will assist Council in making decisions that respond to community concerns and aspirations and have the best overall outcomes for the community.

The RG does not have decision making powers. Decisions relating to the final development of the Boddington Swimming Pool are the responsibility of the Council.

2. Key Options

The RG is anticipated to have input into:

- The scope of the project (identifying short term and longer term needs)
- Identification of key issues and constraints
- End user feedback

3. Membership

Membership of the group will comprise:

- One (1) Councillor who has nominated to participate in the RG.
- One (1) representative from Boddington Swimming Club.
- One (1) representative from Contract Aquatic Services.
- Up to three (3) community members who are representative of the key community and stakeholder groups who have an interest, or are impacted by the project.

An Expression of Interest (EOI) process will be conducted to appoint community representatives. The EOI will be publically advertised, and key stakeholder groups will be informed to encourage a broad range of nominations through the EOI process.

Assessment of EOI applications will be managed by the Chief Executive Officer. Where possible, key stakeholders will be selected to achieve a cross-section of age, gender and interest in the Boddington Swimming Pool.

4. Chairperson

Meetings will be chaired by a Shire of Boddington representative.

5. Staff and Stakeholder Representation

Shire staff and other key stakeholders may attend the meetings of the RG as required, to provide updates or technical and professional advice.

6. Quorum

The quorum of this group shall be three and include at least one councillor, and two community representatives.

7. Meeting Schedule

At the inaugural meeting of the RG, the Group will determine the meeting schedule and other considerations as relevant.

Meetings will ordinarily be held at the Shire of Boddington Administration Office – 39 Bannister Road Boddington.

8. Meeting Practices and Procedures

- Meetings will last a maximum duration of 2 hours
- Members will be provided with a meeting agenda and any background documentation two days prior to the meeting. To support informed participation in meetings and maximise use of scheduled meeting times, members are expected to consider background documentation provided prior to the meeting
- Minutes of the meeting will be distributed to all members within two (2) weeks of each meeting being held.
- If a member is unable to attend they must submit their apologies.
- Should a member of the working group miss two (2) consecutive meetings without submitting a prior apology, their membership of the RG will be subject to review.

9. Responsibilities of Members

All RG members are expected to:

- Act with honesty, good faith and integrity
- Abide by the Terms of Reference as set out in this document
- Actively participate in discussions
- Declare any actual or perceived conflicts of interest at the commencement of each meeting
- Represent the interests of their local community rather than individual interests or issues
- Maintain confidentiality of discussions within workshops
- Not use any information disclosed at workshops for personal purposes or gains for either themselves or others (including financial gains)
- Abide by the Council and Committee Members Code of Conduct as detailed at <https://www.boddington.wa.gov.au/council/our-council/code-of-conduct.aspx>
- Represent and communicate the views of the broader community they are representing.

Any material breach of the Responsibilities may result in immediate termination of membership on the RG.

10. Differing Views and Consensus

The aim of the RG is to represent a diversity of viewpoints. It is not a requirement, or anticipated, that consensus will always be reached among members on the topics discussed. Where members

hold a range of perspectives on a topic, the differing viewpoints will be noted and taken into consideration.

11. Privacy

All RG members will be required to provide the Shire with contact details (email required) to allow for distribution of workshop notes and communication before, between and after workshops.

All RG members are free to discuss the outcomes of the workshops with other people, however the specific views and opinions of other RG members are confidential and not to be shared outside the RG.



BODDINGTON SWIMMING POOL

Water Filtration System and Pool Structure Condition Assessment Report of 25m Lap and Children Pool



DATE: 25 October 2023

PROJECT NUMBER: 8652



www.jas-anz.org/register

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Built Environment Collective Pty Ltd ABN 22 152 885 393

Document Control

Job No.: 8652

Job Title: Boddington Swimming Pool

Document Title: 231025-8652[A]-Boddington Pool Report.docx

Document Control

Date	Document	Revision	Author	Reviewer
06/10/2023	231009-8652-Boddington Swimming Pool.docx	0	Arek Prasek	Geoff Nines
24/10/2023	231025-8652[A]-Boddington Pool Report.docx	A	Arek Prasek	Geoff Nines

Approval for Issue

Approved By	Approver Initials	Revision	Description	Date
Geoff Nines	GF	0	Condition Report	09/10/2023
Geoff Nines	GF	A	Condition Report	25/10/2023

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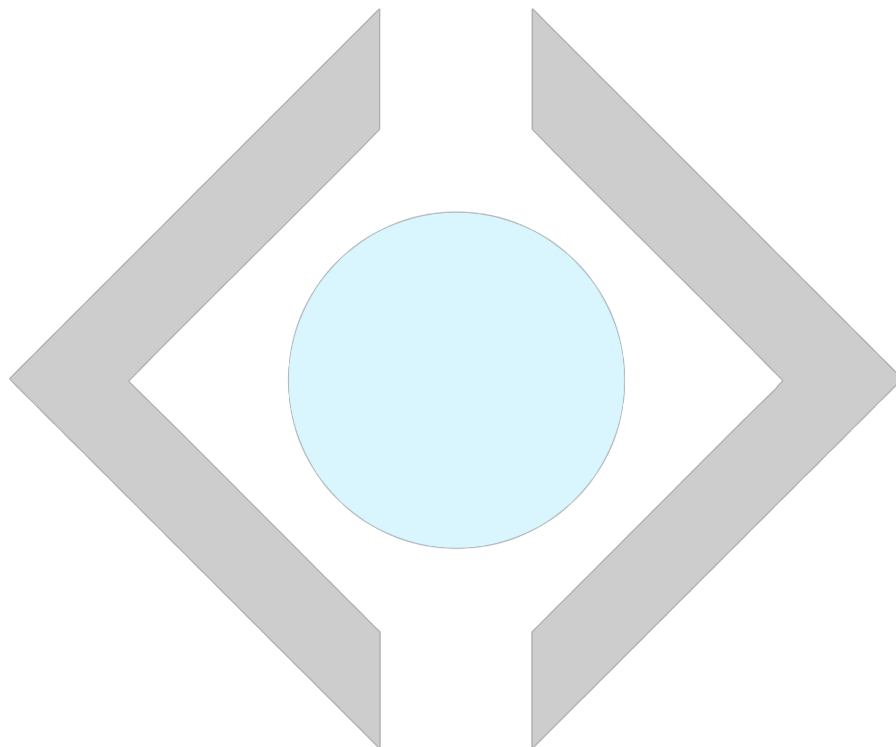
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RELIANCE ON DATA

In preparing this report, GNFP has relied upon data, surveys, analysis, designs, plans and other information provided by the Client and/or other individuals and organisations. Except as otherwise stated in the report, GNFP has not verified the accuracy or completeness of this data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report are based in whole or in part on the data, those conclusions are contingent upon the accuracy and completeness of the data. GNFP will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to GNFP. Any quantities provided are based on estimates provided or obtained during site investigations.

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The content of this report does not represent detailed design. Where detailed design works 'follows on' from this report, the designer must comply with WA Work Health and Safety (General) Regulations 2022 and Work Health and Safety Regulation 2011.

Where relevant, in undertaking detailed design, a Designer's duties are to:

- Ensure that a structure or work element is designed to be without risks to the health and safety of workers, end users and people in the vicinity;
- Provide a written safety report that identifies the hazards relating to the design so far as the designers are reasonably aware, to the Client.
- Make said information available if requested by persons who will use or handle substances, plant or structures at the workplace site for the purposes for which these were designed

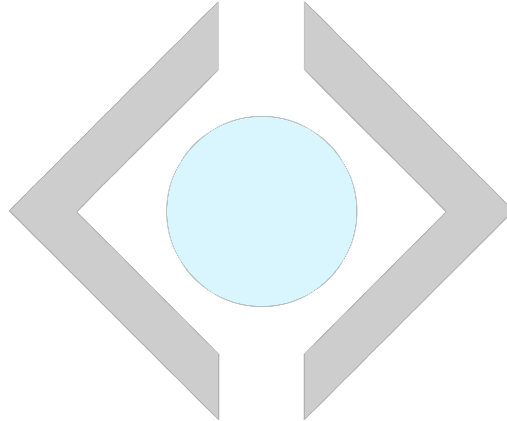
The Designer may need to:

- Prepare a written report at each defined stage of the commission to inform the Client of design related hazards that create health and safety risks to persons associated with construction and operation of the facility or work element.
- At contract documentation stage, append a detailed Work Health and Safety Design Review report to the specification for the purpose of informing the Contractor of the particular risks to health and safety identified by the designers of each element of the Works. It may be appropriate for said report should detail how construction and operating risks have been mitigated through design.

For further information refer to relevant legislation.

EXECUTIVE SUMMARY

Geoff Nannes and Arek Prasek inspect the above pool with Gavin Davies of *Oasis Filtration Services* on 20th September 2023. The following is a summary of the findings.



1. OUR SUMMARY

The 25m pool is 13m wide with off set steps and with shallow end 1m deep falling to 1.8m deep at the deep end. The pool is painted with a tiled wet deck and upstand, with a centre return of filtered water and side gutters 185mm wide and 230mm deep to return water to the suction sump in the plantroom.

No drawings of the pools or system exists, and we requested WA Department of Health to check their archive for any information they may have but none was available. Pool volume is 434m³.

A small fully tiled children's pool of octagon shape, 300mm deep and an area of 40.33m² and volume 12m³ is undercover. Both pools are on the same water treatment system. Wall/upstand is tiled with pool floor painted.

The 25m pool gutters are piped to the suction sump and this pipe is leaking near the pool substantially, with the adjacent ground very spongy.

The pool structures appear to be in good condition; however, we consider that the plant should be rebuilt. The existing operator of the plant is doing an excellent job keeping the plant going in very difficult circumstances.

1

1.1 WATER TREATMENT PLANT

There are major problems with the water treatment plant as set out in the *Oasis Filtration Services* report and a summary is as follows:

- ◆ It is not possible to read the pump information, but we expect the pool's turnover to be about 3 hours. The water flow into the pool gutter is very slow as back pressure from suction sump where pipes entering below sump water level.
- ◆ To evaluate the current flow rate to each pool will require an ultrasonic flow meter strapped to the pipework and the flow to the pool can be altered with the isolation valve to adjust the flow.
- ◆ The plant requires to be rebuilt as there are multiple problems. It currently has two different filters and the flow rates in each are different and neither filter is being adequately backwashed.
- ◆ The pipework to the face plumbing of the sand filter is hydraulically incorrect and filters are not only being improperly cleaned but there is high risk that the laterals will fail within the filters. So, two new Chadson filters, new pumps, and completely new face plumbing is required.
- ◆ The chemical treatment system is not working and needs new piping, new probes, and a full investigation. Connections to the controller are required. Refer to Oasis report attached.
- ◆ While the Procal chlorine dosing looks to be in good condition, it is missing its acid cleaning system and its injection into the filtered waterline is required and not into the soiled water line as current.
- ◆ The acid dosing system is in reasonable condition but needs a mixer and injection to the filtered waterline.

- ◆ There is low flow where the gutter pipework enters the balance tank as back pressure from outlets being under water. Currently the water level in the balance tank (suction sump really) is the same as the pools water level, so gutter outlet is about 500mm under water. The balance tank water requires lowering, if possible, to get water flow. However, the balance tank is much too small and requires a correctly sized tank with a water level well below pool water level to allow proper gutter flow. Estimated balance tank size is 4.5m x 4.5m x 2.8m deep.
- ◆ A backwash tank should be built of estimated size 5m x 2.5 x 2.0m deep. Balance tank: top level to below discharge of any gutter.

1.2 RECOMMENDATIONS

- ◆ The existing plant requires removal and redesign with two new Chadson filters (both the same) and shunt backwash.
- ◆ New chlorination/pH systems with correct injection into the face plumbing. (Upgrade existing Cal Hypo system)
- ◆ A new correctly sized balance tank is required with gutter pipe outlets above tank water level so no back pressure. (Estimated 4.5 x 4.5 x 2.8m deep)
- ◆ It is expected that the plant would be designed to the old WA Department of Health standards.
- ◆ The broken pipes from pool gutter to suction sump (location near the pool) requires excavation and repair.
- ◆ A new backwash tank is required to be built (5m x 2.5m x 2m deep) with pump out to sewer (2L/sec).
- ◆ The plantroom building requires renovation and maintenance to provide reasonable future life.
- ◆ It is suggested a more efficient solar heating system using vacuum tubes be investigated.
- ◆ No drawings of the pools or plant are available from Department of Health WA and Council.

2 IMPROVEMENT ACTION, TIMEFRAME AND BUDGET

2.1 MINIMUM WORK

The minimum amount of work required to extend the life of the pool for the next seven years required the design of an upgraded water treatment plant for sufficient operation and plant equipment modification, as listed below.

- ◆ Foot valve serviced or replaced
- ◆ Filter face plumbing to be replaced to enable correct back washing
- ◆ Chemical controllers serviced and new probes installed
- ◆ Electrical works to allow automatic chemical dosing
- ◆ Compensating valve removed and replaced with a new valve
- ◆ Controller sample lines, acid lines, and ProCal feed lines all replumbed to have their own supply

The Aquatic Design fee is \$15,000 +GST (excluding new Backwash and Balance tanks) and the estimated refurbishment cost is \$45,000 +GST. The prices do not include accommodation, travel, and living away allowance.

The process of design and renovation will take 4 to 6 weeks.

2.2 COMPLETE UPGRADE

The complete upgrade to the water treatment will extend the pool's life for the next twenty years. It is required to design water treatment to the current Code of Practice and upgrade (or replace with new) the plant equipment as listed below.

- ◆ Recirculation pump
- ◆ Hair and lint pot
- ◆ Foot valve
- ◆ 2 x Chadson sand filters
- ◆ Sand media
- ◆ Chemical controller
- ◆ Chlorine and acid dosing system
- ◆ Recirculation pipework, valves and fittings
- ◆ Electrical works

The Aquatic Design fee is \$28,000 +GST (excluding new Backwash and Balance tanks) and the estimated refurbishment cost is \$98,000 +GST. The prices do not include accommodation, travel, and living away allowance.

The process of design and renovation will take 6 to 8 weeks.

2.3 NEW 25M AND CHILDREN'S POOL

The design of the new 25m pool and Children's pool 'like-for-like' in a new location will guarantee 40 years of lifespan. The design will comply with the current West Australian Code of Practice and latest equipment models.

The full Aquatic Design would be \$90,000 +GST (excluding structural parts like Plant Rooms and Change Room) and the construction cost would be \$3,2mln. The prices are estimated only and do not include accommodation, travel, and living away allowance.

The design process would take 2 months and construction 3 - 4 months.

3 APPENDIX 1 – OASIS FILTRATION SERVICES REPORT

OASIS FILTRATION SERVICES

Boddington 25 meter pool site inspection

Report by Gavin Davies 0491276800

To: Geoff Ninnas
Geoff Ninnas Fong and partners (GNFP)

29/09/2023

Re: Condition Assessment report for the 25 meter and toddlers' pools water treatment plant.

Water treatment Plantroom inspection.

- The Recirculation pump needs to be replaced due to age and just from a visual inspection of water flowing over the pool gutters the flow rate seems to be very low at the moment. The 25 meter pool and smaller toddler pool require complying turnover time for the total volume of water for each pool.
- To find the current flow rate the system is doing now can be done by using an ultrasonic flow meter strapped to the pipework to read the flow of water inside the pipework, which can be hired for the day.
- The flow meter can also be used to get the correct flow to the toddler's pool. The flow meter will be strapped to the filtered water line feeding the toddler's pool, and then using the isolation valve installed on that line to adjust the flow to the correct amount. This test was not part of the visual inspection; however, it was noticed that flow was very poor due to back pressure of high water level in suction sump.
- If the pump has to be replaced a new pump will be sized to provide the required flow rate, but this will require a new balance tank and new filters.
- If not replaced the pump and pipework need to have better bracketing and supports installed.
- There is no flow protection for loss of prime. The pump should have a flow switch installed.
- The foot valve on the suction pipework for the recirculation pump needs to be replaced, not holding. This will make it very difficult for the operator to prime the recirculation pump.
- Sand filters are different sizes, different filters. The backwash rate and flow rate on each of the filters are different, they need to be the same, and balanced. At the moment one would be working harder than the other and each filter is not getting backwashed correctly.
- Pipework face plumbing to the sand filters has been installed hydraulically wrong, to backwash a filter the water has to first pass through one filter to then backwash the other filter. Having to pass through the 1st filter media cannot be giving the right flow rate to clean the 2nd filter and could cause the 1st filter to break laterals inside the filter. Face plumbing needs to be changed on each filter so that water comes straight from the pump and enters the filter to be backwashed. Photo attached below for the correct installation of filter face plumbing. Requires 2 filters the same size and make.
- The chemical dosing system is not working at the moment. The pipework supply water to each dosing system needs to be changed. At the moment there is one pump supplying water to all of the dosing systems and the heating which will not work and make it very confusing for the operator. Each system can take its own supply of water straight from the soiled water line, just need to install a new pipe for each system.
- The Chemical controller will need new probes and some investigation work needed to see how the system is set up electrically and how the chlorine/ Procal and acid pump are connected to the controller to allow automatic dosing.

- The chlorine dosing/ Procal looks in good condition but it is missing its acid cleaning system that should be installed. I would recommend installing a new boost pump and a 'Y' strainer to the inlet pipework. The injection of the chlorine solution back into the system needs to be changed to enter the pipework on the filtered water line, not the soiled water line. The dosing should enter the water treatment plant pipework last so it does not corrode/ damage other filtration equipment and also enters the pool water much better.
- Acid dosing looks in good condition. I would recommend a mixer to be installed in the acid storage tank. Again dosing injection point is to be moved to the filtered water line.
- Found that gutters are running very slow and full. Water is not flowing from the gutters back to the balance tank. There is no flow because where the pipework for the gutters enters the balance tank the outlets are under water. The outlets need to enter the tank above the water level of the balance tank. At the moment the water level in the balance tank is the same as the pool's water level making the gutters outlet about 500mm under water. The water level needs to be lowered to below the gutter outlets in the balance tank. At the moment this cannot be done due to the balance tank having a compensating valve installed that is broken. The balance tank requires enlarging with water level below inlet pipes so gutters can empty and gutter flow commence.

A compensating valve is used in small balance tanks that don't have enough water capacity to perform a backwash. This valve opens as the water drops in the balance tank allowing extra water into the tank from the pool to prevent running out of water. At the moment the valve is open and will not close which allows the water of the pool to enter. A new valve needs to be installed.

The compensating valve has a lot of complicated moving parts that will need regular servicing. A standard butterfly isolation valve with a custom-made handle installed so it can be opened and closed at the top of the balance tank by the operator during a backwash can be installed instead of the complicated compensating valve making it a much more reliable maintenance-free system to allow the extra the water needed for backwashing
- Pool water heating is the black matt type. A much more effective solar heating system using vacuum tubes is available and should be included in the redesign of the filtration plant.

RECOMMENDATION

1. Regarding The amount of work to correct all the pipe work in the plant room I would instead remove all existing plant and have a new water treatment plant installed, designed to provide the correct turnover flows for each pool.
2. A new larger balance tank with the volume needed for backwashing.
3. WA Health is checking if any information in its files of the original project but GNFP believes that they would allow redesign of the water treatment to old standards (which are about half current standards)
4. The soiled water line running from the gutters to the suction sump is damaged. Testing of pipework needed. The area adjacent to the pool shows evidence of this by spongy ground.
5. The building to the plantroom requires renovation and maintenance to give a reasonable life.

If there is a decision to build a new pool in a different location and the existing pool to be used until that is completed the chemical dosing & pipework, suction sumps compensating valve and a new recirculation pump should be fixed.



Filter face plumbing that needs to be changed and the left filter a Shenton filter the right a Chadson filter that you can just see. Both filters should be a Chadson filter

A two filter system installed showing the correct installation of filter face plumbing.



Toddler filtered water line (smaller pipe work) showing isolation valve that can be used to control the flow rate to that pool



Chemical dosing pipework needs to be changed so each system has its own supply

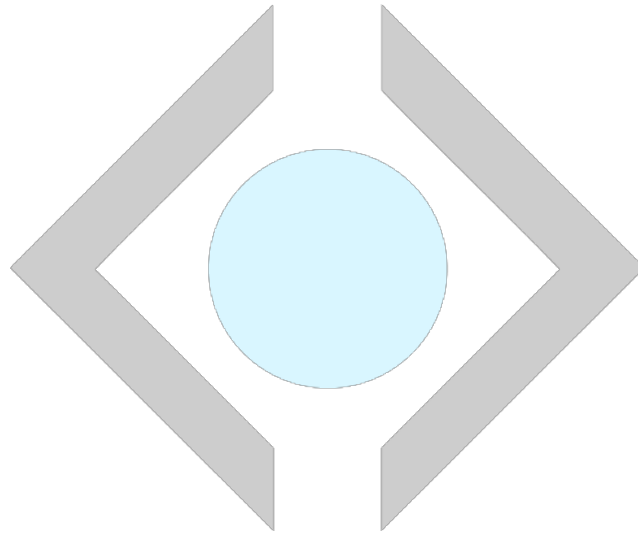


This is the balance tank looking down. 1st smaller pipe on the right is toddler's gutter return, larger pipe lower down in the centre is the compensating valve. The grey half-circle sticking out is the compensating valve stuck open. 25 meter gutter pipework return to balance tank top 2 pipes to the left/ top, the two pipes should be above water level so water can flow.



Gutters not flowing due to outlets under water in balance tank





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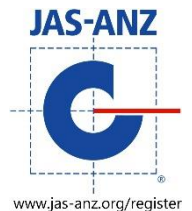
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9.4.2 2023/24 Business Assistance Grant

File Reference:	3.000624
Applicant:	Blue Wren Park
Previous Item:	Nil
Author:	Community Development Officer
Disclosure of Interest:	N/A
Voting Requirements:	Simple Majority
Attachments:	9.4.2A Business Assistance Grant application

Summary

Council is requested to consider financially supporting an application from Blue Wren Park for \$370 under the Business Assistance Grant funding.

Background

The Shire of Boddington's Business Assistance Grant (BAG) funding supports small businesses to develop and become more sustainable to strengthen economic outcomes.

The BAG has no specific funding rounds, and can be applied for throughout the year. The funding provides financial support for local businesses on a 50/50 basis with the Shire contributing either:

- up to \$500 for business improvement initiatives, or
- Up to \$1,500 in the case of shop front enhancement initiatives.

Eligibility is limited to businesses based primarily within the Shire which have an ABN. Funding is available for:

- Training in social media
- Website design or enhancement
- Customer service training
- Business coaching or mentoring
- Seminars
- Shop front enhancement
- Commissioning and acquisition of appropriate sculptures.

The Policy defines the selection criteria as:

- How the proposal is to improve business prospects,
- Capacity to fund 50% of the funds required,
- Whether the proposal is to proceed if less than the full amount is granted,
- That previous acquittals have been completed in full to a satisfactory standard,
- That it supports community projects and/or events, and
- That it meets all grant conditions of the funding program.

The recommended level of funding (as a percentage) is dependent on the number of selection criteria met:

- A high recommendation meets a minimum of four selection criteria points and 100% of funding can be allocated.
- A medium/high recommendation meets three selection criteria points and 75% of funding can be allocated.
- A medium recommendation meets two selection criteria points and 50% of funding can be allocated.

Comment

Blue Wren Park is seeking \$370 to design and print promotional material. Although outside of the suggested activities, the application does fit within the scope of supporting initiatives which improves the applicant's business prospects. The following recommendations align with the Business Assistance Grant Policy.

Applicant	Project	Requested Funding	Officer Recommendation
Blue Wren Park	Enhancing Business Presence	\$370	\$370

Assessment Criteria	Officer Comment	Rating
How the proposal is to improve business prospects.	<p>The proposal to enhance business presence will aid the development of cohesive and representative marketing across a diverse range of products, promoting customer retention and attracting new customers.</p> <p>The provision of informational pamphlets serves as a tool in educating customers and encouraging retention, while also facilitating the expansion of product offerings into more local businesses.</p> <p>Increasing stock at various locations not only broadens market reach but also has the potential to create opportunities for local employment.</p>	4/5
Capacity to fund 50% of the funds required.	Through discussions with Blue Wren Park it has been noted that to date the business is entirely self-funded with no loans or grant assistance. Blue Wren Park have grown at a pace they have been able to self-fund and this includes their 50% of the grant application.	4/5
Whether the proposal is to proceed if less than the full amount is granted.	The proposal would continue if a lesser amount was funded, however, this would potentially be at a reduced scope or delayed implementation of the project.	3/5
That previous acquittals have been completed in full to a satisfactory standard.	The applicant has no outstanding acquittals.	5/5
That it supports community projects and/or events.	Discussions with Blue Wren Park has clarified the business regularly attend the Boddington Community Markets and plan to continue to support this event.	2/5
That it meets all grant conditions of the funding program.	The application meets all grant conditions that can be determined prior to grant approval. The application requests 50% of total project costs. There are no other grants applications for this to be prioritised against. The grant application contains a commencement and completion	4/5

	date. There is no evidence to indicate a breach of the grant conditions.	
Total Score based on the project's alignment with Assessment Criteria		22/30

Consultation

Consultation occurred with Blue Wren Park as part of the application process.

Strategic Implications

Pillar 4 A thriving economy with good access to education and jobs for everyone;
An attractive destination for day trips and short stay visitors.

Legislative Implications

Nil

Policy Implications

Business Assistance Grant Policy.

Financial Implications

Budget allocation exists to fund this application.

Economic Implications

Supporting local business owners strengthens the local economy and incubates opportunity for start-up opportunities.

Social Implications

Nil

Environmental Considerations

Nil

Risk Considerations

Risk Statement and Consequence	The key risk is that the funding decision may be applied outside parameters of the policy.
Risk Rating (prior to treatment or control)	Minor
Principal Risk Theme	Reputation
Risk Action Plan (controls or treatment proposed)	The Business Assistance Program is being reviewed in 2023-24 as a Council Plan action, so approving this request won't create a precedent in the future.

Officer Recommendation

That Council approve an amount of \$370 under the Business Assistance Grant funding to Blue Wren Park.

Business Assistance Grant

Application Form 2023-24

Applications are accepted throughout the year.

Applications can be submitted by mail, email or hand delivered:

Shire of Boddington
39 Bannister Road
Boddington 6390
shire@boddington.wa.gov.au

Please note the outcome of the application will be advised within four weeks of the closing date.

Application Checklist

- Contacted the Community Development team to discuss the proposed project and eligibility for funding.
- Completed all questions in the application form.
- Ensured any attached documents to your application are clearly marked and are in a clear and easy to understand format:

Eligibility

The Applicant has an ABN.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
The Applicant is submitting an application for an eligible project: <ul style="list-style-type: none"> • training in social media, • website design or enhancement, • customer service training, • business coaching or mentoring, • seminars, or • shop front enhancement 	<input type="checkbox"/> Yes	<input type="checkbox"/> No
For applications to proceed to assessment they must: <ul style="list-style-type: none"> • be lodged on time; • be submitted on the appropriate form; • include the required information; • include agreement from the applicant to acknowledge the Shire if funding is successful; • ensure the applicant demonstrates its ability to manage the project; and • not be due to commence until after the notification date. 	<input type="checkbox"/> Yes	<input type="checkbox"/> No

If you answered 'No' to any of these questions, please contact the Community Development team.

Applicant Details

Organisation Details This is the business undertaking the project.

Legal Name of Organisation	Blue Wren Park
Organisation Name	
Postal Address	1099 Crossman Road Boddington WA 6390
ABN	74 237 598 910
Registered for GST	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Opening hours	Currently markets and sales through other businesses

Organisation Contact This is the person legally authorised to enter into contracts on behalf of the business.

Name	Joanne Perkins
Position	Owner
Telephone	
Mobile	0439 032 898
Email	Bluwrenpark1099@gmail.com

Background Please provide background information on your business including information such as how long the business has operated in the Shire of Boddington, staff numbers and plans for growth / expansion.

For the past four years, we have been engaged in cultivating and harvesting bush tucker, which we integrate into natural body products, condiments, as well as preserves. Our venture, situated in the Shire of Boddington, has facilitated the distribution of these offerings through various local and external outlets, including Burky's Patch in Bannister and the Kojonup Cultural Centre.

As a self-operated and self-funded enterprise, we have reviewed our business plan and are now poised to expand our operations. This expansion entails enhancing our products and services along with creating employment opportunities for local residents, such as gardeners and production assistants.

In pursuit of our growth objectives, we have sought grant funding to support our endeavours. Additionally, we are currently in discussions with the Good Grocer regarding the possibility of stocking our products, thereby broadening our market reach and increasing accessibility to our offerings.

Project Details

Which category best describes your community project?

- training in social media,
- website design or enhancement,
- customer service training,
- business coaching or mentoring,
- seminars, or
- shop front enhancement

Project name

Enhancing Business Presence

Provide a summary of the project

The proposed project, "Enhancing Business Presence," encompasses the creation and distribution of essential marketing materials including business cards, flyers, and a self-inking stamp. These tangible assets serve as crucial tools in bolstering the visibility and recognition of our growing enterprise while steadfastly promoting local products.

The creation of professionally designed business cards provides a tangible representation of our brand identity, facilitating networking opportunities and leaving a lasting impression on potential customers and collaborators. Flyers, strategically disseminated across targeted areas, serve as informative marketing collateral, conveying key messages about our products and services to a wider audience. Furthermore, the incorporation of a self-inking stamp streamlines administrative tasks and enhances brand consistency by effortlessly imprinting our logo and contact information on various documents and packaging materials.

By investing in these promotional materials, we aim to fortify our presence in the market, attract new customers, and foster continued support for local products. Additionally, as our business expands, these resources will play a pivotal role in maintaining cohesive branding and reinforcing our commitment to quality and community engagement.

The creation and distribution of business cards, flyers, and a self-inking stamp align with our overarching goal of enhancing business visibility and sustaining momentum in our growth trajectory. Through targeted marketing efforts and the promotion of local goods, we endeavour to cultivate lasting relationships with customers and stakeholders while contributing to the vitality of our community's economy.

Anticipated commencement date

April 2024

Anticipated completion date

April 2024

Describe how the project will benefit the business.

The project to enhance business visibility will yield numerous benefits for our enterprise. Primarily, it will significantly elevate the awareness and recognition of our business name and the diverse range of products we offer. By effectively spreading our brand message through the creation and distribution of business cards, flyers, pamphlets and a self-inking stamps, we will establish a stronger presence in the market and capture the attention of potential customers.

Improved visibility will translate into heightened brand awareness, fostering trust and familiarity among consumers. As our business name becomes more prominent and synonymous with quality and reliability, we anticipate an increase in enquiries, sales enquiries, and customer engagement. This heightened visibility will also enhance our credibility within the industry, positioning us as a reputable and established player in the market.

The project will facilitate greater reach and exposure to our target audience, enabling us to connect with new customers and expand our customer base. By effectively communicating the unique value proposition of our products through targeted marketing materials, we can effectively differentiate ourselves from competitors and attract customers seeking locally sourced goods.

The increase of sales and therefore growth within the business will justify being able to employ local looking at gardeners and production assistance, benefiting the business along with the community.

The Enhancing business visibility project will contribute to the sustainable growth and success of our business by driving brand recognition, customer engagement, and market expansion. Through strategic marketing efforts, we will amplify our presence in the marketplace and establish a strong foundation for long-term success and prosperity.

Describe how the need for the project been identified.

The identification of the project to enhance business visibility stemmed from a collaborative effort with the Kojonup Cultural Centre. Recognising the importance of providing informative resources to customers, the Cultural Centre highlighted the need for promotional and informational pamphlets. These materials were deemed essential in equipping individuals with the necessary knowledge for the correct use of products and inspiring them with recipe ideas, thereby enhancing their overall experience and increasing sales.

Furthermore, in discussions with the Kojonup Cultural Centre, it became evident that business cards would serve as valuable tools in facilitating connections between potential customers and our business. By providing a convenient means for individuals to access further information and explore additional products, business cards were identified as a key component in expanding our reach and fostering customer engagement.

Through this collaborative process, the project was identified as a strategic initiative to address the needs of both our business and our partners at the Kojonup Cultural Centre and Burky's Patch Bannister. By leveraging promotional materials such as pamphlets and business cards, we aim to enhance customer satisfaction, drive sales, and forge stronger connections within the community.

Describe the impact to the project if the funding amount requested is unsuccessful, or is less than the full amount requested

If the funding amount requested for the project to enhance business visibility is unsuccessful or is less than the full amount requested, several potential impacts may arise:

Reduced Scope: A shortfall in funding could necessitate scaling back certain aspects of the project, such as the quantity or quality of promotional materials produced. This could result in a less comprehensive marketing campaign and diminish the overall effectiveness of efforts to enhance business visibility.

Delayed Implementation: A shortfall in funding may lead to delays in the implementation of the project, as additional time may be required to fund the full project or reassess project priorities. Delays could hinder our ability to capitalise on timely marketing opportunities and potentially result in missed sales and growth opportunities.

Decreased Effectiveness: Inadequate funding may result in a less impactful marketing campaign, reducing the effectiveness of efforts to enhance business visibility. This could translate into slower growth, diminished brand recognition.

The impact of an unsuccessful or partially successful funding request for the project to enhance business visibility is likely to result in a reduced scope and effectiveness, or delayed implementation.

How will you acknowledge the Shire of Boddington's contribution to the project?

Put an article in Bodd News, thanking the Shire for their assistance.

Acknowledging of the Shire of Boddington's contribution towards this project is paramount to recognising their support and fostering ongoing positive relationships within the community. The Acknowledgement of the Shire's contribution would be through an advert in Bodd News.

Budget Details

Use the table below to list the expenses your project will incur, detail the income and in-kind that will cover the expenses, and identify their source.

Please note Shire of Boddington's contribution is limited to 50% of the total project, and no more than \$500 for business improvements initiatives, or \$1,500 for shop front enhancement initiatives.

Expenditure	
Expenditure Items	Amount
Design and Printing Promotional Materials	\$740.00
Total Project Expenditure	\$740
Grant Amount Requested	\$370

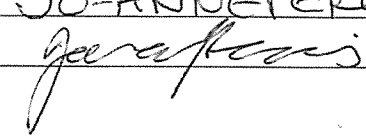
Has your organisation received any type of funding from the Shire of Boddington in the last 2 years? If yes, please provide details below.

No

Year	Amount	Purpose	Fully Acquitted
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No

Declaration

- I declare the organisation has read and understands the Business Assistance Grant Guidelines.
- I declare I am the authorised person to submit this application on behalf of my organisation and are authorised to sign legal documents on behalf of the organisation.
- I declare the information provided in this application and attachments is to the best of my knowledge true, correct.
- I understand false or misleading statements listed in this Business Assistance Grant Application can result in the application being rejected or the withholding of any funds that may be approved as result of this application.
- I declare the organisation applying for the grant funding will complete and submit a Business Assistance Grant Acquittal Form within 30 days following the project's completion.
- I declare the organisation submitting this form understands this is an application only.

Name	JO-ANNE PERKINS	Position	OWNER/OPERATOR
Signature		Date	11/3/24

9.4.3 Boddington District High School Facility Hire Waiver Request

File Reference: 3.0084
Applicant: Nil
Previous Item: Nil
Author: Coordinator Community and Economic Development
Disclosure of Interest: Nil
Voting Requirements: Absolute Majority
Attachments: 9.4.3A Request Letter

Summary

Council is requested to consider a request from Boddington District High School to waive entry fees and facility hire fees for the Faction Swimming Carnival and Interschool Swimming Carnival.

Background

Boddington District High School (School) has made a written request for the Shire of Boddington to waive fees associated with Faction Swimming Carnival held at Boddington Swimming Pool on Friday, 8 March 2024. Further to this, the School has made a verbal request of a similar nature for the Interschool Swimming Carnival held on Friday, 22 March 2024. Council is requested to consider the School's request, as it remains outside the parameters of the 2023-24 Fees and Charges.

The School hired Boddington Swimming Pool on both dates from 7.30am – 2.30pm. The facility hire fees relevant to the request are below:

Item	Description	Fee
Entry Fees	\$3 per child for 141 students	\$423
Lane Hire	\$10.50 per lane per hour, from 9am – 10am and 1pm – 2.30pm, for Lanes 1 - 6 inclusive.	\$157.50
After Hours	\$75 per hour from 10am – 1pm	\$225
Total		\$877.50

The cost of both Carnivals totalled \$1,755.

The Boddington Swimming Pool charges entry fees to attempt recovery of operational expenditure including staffing, chemicals, cleaning and utilities.

The facility comprises one lap pool featuring six lap lanes. Lane hire is charged during public opening hours to provide the hirer with guaranteed, exclusive use for a predetermined number of lanes. The fee also recognises the consequence incurred for reducing or preventing community access to a public facility. The Shire's Fees and Charges do contain provision to waive facility hire for the Intraschool (Faction) Swimming Carnival, so this could be implied as lane hire for the Faction Swimming Carnival, though not the Interschool Swimming Carnival.

On Friday the Boddington Swimming Pool closes from 10am – 1pm. The afterhours fee enables the Shire to staff and operate the facility during this period.

Comment

Charging entry fees imply use of the facility like a regular patron, however the School students are participating in an event and their access is dependent on the program of activities

established by the School. On this basis it would be reasonable to waive entry fees for both dates.

The lane hire and afterhours fees are justified, as the facility is being provided exclusively to the School at a time of their choosing and inevitably requires resourcing to provide this service. The facility hire in this instance also prevents the public from accessing the Pool during times it would normally be available.

Due to the Shire’s Schedule Fees and Charges identifying that there is no charge for the lane hire correlated to the Intraschool (Faction) Swimming Carnival, it would only be the Interschool Swimming Carnival which is recommended to charge lane hire. Below is a summary of what is recommended:

	Faction Swimming Carnival	Interschool Swimming Carnival
Entry Fees	Waive	Waive
Lane Hire	Waive	Decline to waive
After Hours	Decline to waive	Decline to waive

Of the total chargeable fees of \$1,755, this would see \$1,230 waived and the School responsible for \$525.

Local government funding WA State government activities presents a challenge in terms of setting a precedent. In a verbal conversation, the School has indicated their capacity to pay the relevant fees if they are made aware of them prior to the annual budget being prepared. Therefore, approving a partial waiver in this instance would serve as a compromise and interim measure until their next budget is adopted.

The Shire has its own set of responsibilities and budgetary constraints that require foresight and commitment to be followed through. Continuing to subsidise the School’s facility hire will blur the lines of accountability and create confusion over who is responsible for WA government functions, as well as restrict the availability of Shire resources to deliver whole of community benefit to residents and ratepayers. For instance, Shire resources could be used to open Boddington Swimming Pool for additional hours during summer, or periods of extreme heat.

The recommendation to waive a significant portion of the fees associated with the two events, provides a compromise by supporting the local school and families, and ensuring that the Shire is not subsidising the direct costs involved with additional staffing.

Consultation

Consultation has occurred with Boddington District High School.

Strategic Implications

Aspiration	People
Outcome 2	A healthy and active community
Objective 2.2	Grow participation in sport, recreation, and leisure activities.

Legislative Implications

Local Government Act 1995
Section 6.12 Power to defer, grant discounts, waive or write off debts

Policy Implications

Nil

Financial Implications

No income from the Boddington District High School was anticipated, and therefore, the recommendation will have no financial impact on the 2023/24 Budget.

Economic Implications

Nil

Social Implications

Participation in active recreation contributes to an individual's mental and physical wellbeing, and the development of strong networks and support structures within the community.

Environmental Considerations

Nil

Risk Considerations

Risk Statement and Consequence	Approving the request to waive facility entry fees may create an unintentional precedent for other organisations to seek a waiver for delivering services from Shire owned facilities.
Risk Rating (prior to treatment or control)	Medium
Principal Risk Theme	Reputational
Risk Action Plan (controls or treatment proposed)	Nil

Officer Recommendation

That Council:

- 1. Approves the request to waive entry fees for the 2024 Faction Swimming Carnival and 2024 Interschool Swimming Carnivals.**
- 2. Declines the request to waive lane hire fees for the 2024 Interschool Swimming Carnival.**
- 3. Declines the request to waive after hours fee for the 2024 Faction Swimming Carnival and 2024 Interschool Swimming Carnival.**



25 Pollard Street Boddington 6390
PH: 08 9884 2900

8 March 2024

Dear Boddington Shire

I am writing this letter to seek your support with our school's swimming carnival which is due to be held on Friday 8-March -2024. We have completed and submitted the required booking forms and have been informed that the school will be charged as follows:

1. \$3 entry per child (this will cost the school approx. \$510).
2. \$75 per hour after hours fee (this will cost the school \$210).
3. Lane hire fee \$10.50 per hour (this will cost the school \$157.50)

Approx. cost to school is \$877.50

In previous years the Shire has supported this important school event by not charging the school any fees. This along with the Shire's support in reducing the cost of our annual swimming lessons has been greatly appreciated. We have shown our appreciation of this by informing our school community of the Shire's generosity in our newsletters, community updates and publicly.

We understand that the additional costs involved in opening the pool for the swimming carnival should not be the responsibility of the Shire, and that the school is responsible for paying for these costs. We would like to request that the school is only charged for the additional running costs involved, making it a not-for-profit event. We believe that we have a great relationship with the Shire where we both support each other in the programs and initiatives we wish to deliver. The swimming carnival is an important event for our school, and one that is heavily supported by our parents and families. We hope that the Shire will continue to work with Boddington DHS so we can continue to deliver such an important event.

If you wish to discuss this matter further, please contact me on 9884 2900 or Danielle.Roache@education.wa.edu.au

Kind Regards

Danielle Roache
Principal

9.5 INFRASTRUCTURE SERVICES

Nil

10. ELECTED MEMBERS' MOTION OF WHICH PREVIOUS MOTION HAS BEEN GIVEN

Nil

11. URGENT BUSINESS WITHOUT NOTICE WITH THE APPROVAL OF THE PRESIDENT OR MEETING

12. CONFIDENTIAL ITEMS

Nil

13. CLOSURE OF MEETING