

# ENVIRONMENTAL IMPACT STATEMENT

## PORTERS BRIDGE ROAD QUARRY

PORTERS BRIDGE ROAD, EXTON

WALTERS CONTRACTING PTY LTD



Van Diemen Consulting Pty Ltd

PO Box 171  
Brighton, Tasmania, 7030

T: 0438 588 695 E: [rwbarnes73@gmail.com](mailto:rwbarnes73@gmail.com)

This document has been prepared in accordance with the scope of services agreed upon between Van Diemen Consulting (VDC) and the Client.

To the best of VDC's knowledge, the report presented herein represents the Client's intentions at the time of completing the document. However, the passage of time, manifestation of latent conditions or impacts of future events may result in changes to matters that are otherwise described in this document. In preparing this document VDC has relied upon data, surveys, analysis, designs, plans and other information provided by the client, and other individuals and organisations referenced herein. Except as otherwise stated in this document, VDC has not verified the accuracy or completeness of such data, surveys, analysis, designs, plans and other information.

No responsibility is accepted for use of any part of this document in any other context or for any other purpose by third parties.

This document does not purport to provide legal advice. Readers should engage professional legal advisers for this purpose.

#### Document Status

REV	Author	Review/Comments	Date
1	R Barnes C McCoull	R Barnes	28-6-2025
1		Walters Contracting Pty Ltd	30-6-2025
1		EPA comments	15/7/2025 and 4/8/2025
2	R Barnes C McCoull	R Barnes	19-8-2025
2		Walters Contracting Pty Ltd	10-9-2025

**Contents**

<b>STATEMENT BY PROPONENT</b> .....	<b>5</b>
<b>INTRODUCTION</b> .....	<b>6</b>
<b>PART A – INTRODUCTION</b> .....	<b>10</b>
A-1 PROPONENT DETAILS.....	10
A-2 CONSULTANT DETAILS.....	10
A-3 QUARRY INFORMATION.....	11
A-4 TIMEFRAME AND LONGEVITY OF DEVELOPMENT.....	12
A-5 PROJECT RATIONALE AND ALTERNATIVES.....	12
A-5-1 PROJECT RATIONALE.....	12
A-5-2 PROJECT ALTERNATIVES.....	12
A-6 ENVIRONMENTAL LEGISLATION, STANDARDS AND GUIDELINES.....	16
A-6-1 STATUTORY REQUIREMENTS.....	16
A-6-2 EXTRACTIVE INDUSTRY RELEVANT GUIDELINES AND BEST PRACTICE PRINCIPLES.....	16
A-6-3 STATE POLICIES.....	17
A-7 PUBLIC AND STAKEHOLDER CONSULTATION.....	21
A-7-1 MEANDER VALLEY COUNCIL.....	21
A-7-2 ENVIRONMENT PROTECTION AUTHORITY.....	21
A-7-3 ABORIGINAL HERITAGE TASMANIA.....	21
A-7-4 PUBLIC PARTICIPATION IN THE PLANNING PROCESS.....	22
A-7-5 MINERAL RESOURCES TASMANIA.....	22
<b>PART B - PROJECT DESCRIPTION</b> .....	<b>23</b>
B.1 PROPOSED ACTIVITY.....	23
B.2 DESCRIPTION OF SITE AND SURROUNDS.....	37
<b>PART C – POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES</b> .....	<b>40</b>
PROBABILITY (ALSO KNOWN AS ‘LIKELIHOOD’).....	40
IMPACT (ALSO KNOWN AS ‘CONSEQUENCE’).....	41
RISK LEVEL.....	42
C-1 AIR EMISSIONS – DUST.....	42
C-1-1 EXISTING CONDITIONS.....	42
C-1-2 PERFORMANCE REQUIREMENTS.....	43
C-1-3 SOURCES OF DUST EMISSIONS AND POTENTIAL IMPACTS.....	44
C-1-4 RISK ASSESSMENT, AND AVOIDANCE AND MITIGATION MANAGEMENT.....	46
C-1-5 ASSESSMENT OF NET IMPACTS.....	49
C-2 SURFACE WATER.....	50
C-2-1 EXISTING CONDITIONS.....	50
C-2-2 PERFORMANCE REQUIREMENTS.....	53
C-2-3 RISK ASSESSMENT AND POTENTIAL IMPACTS.....	55
C-2-4 IMPACT AVOIDANCE AND MITIGATION MANAGEMENT.....	56
C-2-5 ASSESSMENT OF NET IMPACTS.....	58
C-3 NOISE EMISSIONS.....	61
C-3-1 EXISTING CONDITIONS.....	61
C-3-2 PERFORMANCE REQUIREMENTS.....	64

C-3-3 NOISE MODELLING AND FINDINGS .....	65
C-3-4 GROUND VIBRATION AND ABO MODELLING AND FINDINGS.....	71
C-3-5 RISK ASSESSMENT AND POTENTIAL IMPACTS OF NOISE AND VIBRATION .....	71
C-3-5 IMPACT AVOIDANCE AND MITIGATION MANAGEMENT.....	72
C-3-6 ASSESSMENT OF NET IMPACTS.....	73
C-4 NATURAL VALUES .....	74
C-4-1 EXISTING CONDITIONS .....	74
C-4-2 PERFORMANCE REQUIREMENTS .....	83
C-4-3 OVERVIEW AND POTENTIAL IMPACTS .....	85
C-4-4 IMPACT MITIGATION AND MANAGEMENT.....	86
C-4-5 OFFSETTING UNAVOIDABLE ADVERSE IMPACTS.....	88
C-5 WASTE .....	98
C-5-1 EXISTING CONDITIONS .....	98
C-5-2 PERFORMANCE REQUIREMENTS .....	98
C-5-3 POTENTIAL IMPACTS.....	98
C-5-4 IMPACT AVOIDANCE AND MITIGATION MANAGEMENT .....	100
C-5-5 ASSESSMENT OF NET IMPACTS.....	101
C-5-6 OFFSETTING UNAVOIDABLE ADVERSE IMPACTS.....	101
C-6 DANGEROUS GOODS AND ENVIRONMENTALLY HAZARDOUS SUBSTANCES.....	101
C-6-1 EXISTING CONDITIONS .....	101
C-6-2 PERFORMANCE REQUIREMENTS .....	101
C-6-3 POTENTIAL IMPACTS .....	102
C-6-4 IMPACT AVOIDANCE AND MITIGATION MANAGEMENT .....	103
C-6-5 ASSESSMENT OF NET IMPACTS.....	104
C-6-6 OFFSETTING UNAVOIDABLE ADVERSE IMPACTS.....	104
C-7 GROUNDWATER .....	104
C-7-1 EXISTING CONDITIONS .....	104
C-7-2 PERFORMANCE REQUIREMENTS .....	105
C-7-3 POTENTIAL IMPACTS .....	105
C-7-4 IMPACT AVOIDANCE AND MITIGATION MANAGEMENT .....	106
C-7-5 ASSESSMENT OF NET IMPACTS.....	107
C-7-6 OFFSETTING UNAVOIDABLE ADVERSE IMPACTS.....	107
C-8 INFRASTRUCTURE AND OFF-SITE ANCILLARY FACILITIES.....	107
C-8-2 POTENTIAL IMPACTS.....	107
C-8-3 IMPACT AVOIDANCE AND MITIGATION MANAGEMENT.....	108
C-8-5 ASSESSMENT OF NET IMPACTS.....	108
C-8-6 OFFSETTING UNAVOIDABLE ADVERSE IMPACTS.....	108
C-9 MONITORING AND REVIEW .....	109
C-10 GREENHOUSE GASES AND OZONE DEPLETING SUBSTANCES.....	110
C-10-1 EXISTING CONDITIONS .....	110
C-10-2 PERFORMANCE REQUIREMENTS .....	110
C-10-3 POTENTIAL IMPACTS.....	110
C-10-4 AVOIDANCE AND MITIGATION MEASURES.....	110
C-10-5 ASSESSMENT OF NET IMPACTS.....	111
C-10-6 OFFSETTING UNAVOIDABLE ADVERSE IMPACTS.....	111

C-11 SOCIO-ECONOMIC ISSUES .....	111
C-12 FIRE RISK .....	112
C.12.1 EXISTING CONDITIONS.....	112
C-12-2 PERFORMANCE REQUIREMENTS .....	113
C-12-3 POTENTIAL IMPACTS.....	113
C-12-4 AVOIDANCE AND MITIGATION MEASURES .....	113
C-12-5 ASSESSMENT OF NET IMPACTS.....	115
C-12-6 OFFSETTING UNAVOIDABLE ADVERSE IMPACTS .....	115
C-13 DECOMMISSIONING AND REHABILITATION .....	115
C-13-1 PROGRESSIVE REHABILITATION .....	115
C-13-2 PERMANENT CLOSURE PLANNING.....	117
C-13-3 FINAL LANDFORM .....	117
<b>PART D – MANAGEMENT MEASURES SUMMARY .....</b>	<b>119</b>
<b>PART E – CONCLUSION .....</b>	<b>130</b>
<b>PART F - REFERENCES .....</b>	<b>131</b>
<b>PART G – ATTACHMENTS .....</b>	<b>132</b>
ATTACHMENT 1. CERTIFICATE OF TITLES .....	133
ATTACHMENT 2. 5 YEAR MINING PLAN – TECHNICAL DRAWINGS .....	134
ATTACHMENT 3. PORTERS BRIDGE ROAD QUARRY NATURAL VALUES ASSESSMENT V1 MAY 2025.....	135
ATTACHMENT 4. PROPOSED STOCKPILE LAYOUT AND BUILDING SPECIFICATIONS .....	136
ATTACHMENT 5. PORTERS BRIDGE ROAD QUARRY INTENSIFICATION ENVIRONMENTAL NOISE, GROUND VIBRATION AND AIR BLAST OVERPRESSURE ASSESSMENT.....	137
ATTACHMENT 6. TRAFFIC IMPACT ASSESSMENT – HUBBLE TRAFFIC .....	138
ATTACHMENT 7. PBRQ - WEED AND PATHOGEN MANAGEMENT PLAN, AUGUST 2022 .....	139
ATTACHMENT 8. PLANNING PERMIT - PRECOAT MACHINE PORTERS BRIDGE ROAD QUARRY .....	140
ATTACHMENT 9. SEDIMENT BASIN LOCATION AND DIMENSION CALCULATIONS.....	141
ATTACHMENT 10. DRAFT NOISE MANAGEMENT PLAN FOR OUT-OF-HOURS OPERATIONS.....	142

**TABLES**

Table 1. Details of the Proponent	10
Table 2. Details of the Consultant	10
Table 3. Physical details and planning related matters of the Porters Bridge Road Quarry	11
Table 4. Extractive Industry relevant best practice guidelines and manuals	16
Table 5. Quarry relevant water quality policy considerations and associated management source	19
Table 6. Risk assessment for fugitive dust emissions from the Quarry and associated activities and proposed control measures	47
Table 7. Site-Specific Dust Mitigation Controls	49
Table 8. Risk assessment for stormwater emissions from the Quarry and associated activities and proposed control measures	59
Table 9. TASVEG 4.0 mapping categories recorded in the Survey Area	75
Table 10. Threatened fauna species range boundary intersection with the Mining Lease	76
Table 11. Threatened fauna species where habitat is present in or near the Mining Lease	77

Table 12. Declared Weeds observed in or near the Mining Lease	79
Table 13. Pasture and environmental weeds observed in the Mining Lease	80
Table 15. Controlled Waste potential production source at Pit and disposal method	99
Table 15. Environmental monitoring regimes for the Porters Bridge Road Quarry	109
Table 16. Environmental Management Measures for Porters Bridge Road Quarry	120

## PLATES

Plate 1. Risk Assessment Matrix for environmental matters relevant to the Porters Bridge Road Quarry	40
Plate 2. Wind rose for the Exton area	45
Plate 3. Location and proposed dimensions and form of the sediment basin and drains at the ESA	57
Plate 4. Environmental noise measurement and model receiver positions used by TE	63
Plate 5. Environmental noise monitoring locations used by TE for the noise modelling	66
Plate 6. Overall sound power levels and data source information used by TE for noise modelling	67
Plate 7. 1/1-octave band sound power level spectra	68
Plate 8. Existing Model Scenario – extraction area	68
Plate 9. Existing Model Scenario – full access road and extraction area	69
Plate 10. Predicted noise emission levels	70
Plate 11. Predicted ground vibration	72

## FIGURES

<b>Figure A-1</b>	Location of Porters Bridge Road Quarry
<b>Figure A-2</b>	Location of Porters Bridge Road Quarry and Land Titles
<b>Figure A-3</b>	Topography (AHD) at the Porters Bridge Road Quarry Development Area (Topography as at Sep 2024)
<b>Figure B-1</b>	Access to Porters Bridge Road Quarry and surrounding roads
<b>Figure B-2</b>	Site Development Areas
<b>Figure E-1</b>	Zone Map - Meander Valley Local Provisions Schedule
<b>Figure E-2</b>	General Overlays - Meander Valley Local Provisions Schedule
	Code Overlays - Meander Valley Local Provisions Schedule
<b>Figure E-3a</b>	<ul style="list-style-type: none"> <li>- Flood-prone Hazard Areas</li> <li>- Landslip Hazard Area</li> </ul>
	Code Overlays - Meander Valley Local Provisions Schedule
<b>Figure E-3b</b>	<ul style="list-style-type: none"> <li>- Waterway and coastal protection area</li> <li>- Priority Vegetation Area</li> </ul>

<b>Figure E-4a</b>	Land Tenure Classification around Porters Bridge Road Quarry
<b>Figure E-4b</b>	Public and Private Reserves around Porters Bridge Road Quarry
<b>Figure E-5</b>	Nearest residences from activities at the Porters Bridge Road Quarry
<b>Figure E-6</b>	Geological bedrock (MRT – Scale 1:25,000) in and around the Mining Lease
<b>Figure E-7</b>	Existing regional drainage lines and catchments
<b>Figure E-8a</b>	Vegetation communities (TASVEG 4.0) in the Porters Bridge Road Quarry
<b>Figure E-8b</b>	Vegetation communities (TASVEG 4.0) along the Porters Bridge Road Quarry Access
<b>Figure E-9</b>	Known (NVA) and observed threatened flora at the Porters Bridge Road Quarry
<b>Figure E-10a</b>	Weeds (observed) in and around the Porters Bridge Road Quarry – Declared weeds
<b>Figure E-10b</b>	Weeds (observed) in and around the Porters Bridge Road Quarry - Environmental weeds
<b>Figure E-11</b>	NVA Records (Threatened Fauna) around the Porters Bridge Road Quarry
<b>Figure E-12</b>	Nearest known (NVA) raptor nests to the Porters Bridge Road Quarry

ABBREVIATIONS	
<b>DA</b>	Development Application
<b>DNRET</b>	Department of Natural Resources and Environment Tasmania
<b>DPIPWE (now DNRET)</b>	Department of Primary Industries, Parks, Water and Environment
<b>EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
<b>EMPCA</b>	<i>Environmental Management and Pollution Control Act 1994</i>
<b>EMPCS</b>	Environmental Management and Pollution Control System objectives to be found in Schedule 1 of EMPCA
<b>EPA</b>	Environment Protection Authority
<b>ESA</b>	means the Expanded Stockpile Area
<b>LUPAA</b>	<i>Land Use Planning and Approvals Act 1993</i>
<b>ML</b>	Mining Lease, being ML 2097P/M or another Mining Lease number(s) for the same spatial location and extent which may be generated by Mineral Resources Tasmania through the consolidation, or partial surrender, of Mining Lease(s).
<b>MRT</b>	Mineral Resources Tasmania
<b>MVC</b>	Meander Valley Council
<b>NC Act</b>	<i>Nature Conservation Act 2002</i>
<b>NSP</b>	means Noise Sensitive Premise
<b>PEV</b>	means Protected Environmental Value
<b>QCP</b>	means the <i>Quarry Code of Practice 2017 (3<sup>rd</sup> edition)</i>
<b>RMPS</b>	Resource Management and Planning System objectives to be found in Schedule 1 of EMPCA
<b>WSP</b>	Weed Spraying Program

<b>GLOSSARY</b>	
<b>Air EPP</b>	means the <i>Environment Protection Policy (Air Quality) 2004</i>
<b>Best practice environmental management</b>	<p>Per EMPCA s(4) -</p> <p>(1) For the purposes of this Act, the best practice environmental management of an activity is the management of the activity to achieve an ongoing minimization of the activity's environmental harm through cost-effective measures assessed against the current international and national standards applicable to the activity.</p> <p>(2) In determining the best practice environmental management of an activity, regard must be had to the following measures:</p> <ul style="list-style-type: none"> <li>(a) strategic planning by the person carrying out, or proposing to carry out, the activity;</li> <li>(b) administrative systems implemented by the person, including staff training;</li> <li>(c) public consultation carried out by the person;</li> <li>(d) product and process design;</li> <li>(e) waste prevention, treatment and disposal.</li> </ul> <p>(3) Subsection (2) does not limit the measures to which regard may be had in determining the best practice environmental management of an activity.</p>
<b>Controlled Waste</b>	<p>Per EMPCA s(3) -</p> <p>(a) a substance that is controlled waste within the meaning of –</p> <ul style="list-style-type: none"> <li>(i) the National Environment Protection Measure entitled the Movement of Controlled Waste Between States and Territories made by the National Environment Protection Council on 26 June 1998, as amended from time to time; or</li> <li>(ii) any National Environment Protection Measure substituted for the Measure referred to in paragraph (a), as amended from time to time; and</li> </ul> <p>(b) a substance that is prescribed by the regulations to be controlled waste;....</p>
<b>diffuse source pollution</b>	means pollution which enters the receiving waters via a number of entry points or arises from a large number of dispersed sources.
<b>(the) Development</b>	<p>The Development is to -</p> <p>(1) intensify the production of aggregates and rock extraction from the Quarry to 200,000 cubic metres per annum – the equivalent of approximately 320,000 tonnes – and to extract all the rock material within the Maximum Quarry Extent, and to continue to use the pre-coat machine in a comparable way as approved by PA\25\0032 (<b>Attachment 8</b>) in an area of the Expanded Stockpile Area (see <b>Attachment 4</b>); and</p> <p>(2) Install the following buildings and ancillary infrastructure at the Expanded Stockpile Area to support the Quarry including an Office, toilets (staff amenities), workshop, self-bunded diesel fuel tank (20,000 litres maximum capacity), weighbridge, and diesel-powered generator.</p>

	Expansion of the stockpile area (the ‘Expanded Stockpile Area’) is proposed to receive and store material post-production in the Quarry.
<b>Development Area</b>	means the spatial area within which the Development is to occur, being ML2097P/M and the areas shown in <b>Figure B-2</b> .
<b>Disturbed Area</b>	means the area disturbed (without rehabilitation) by the operation of the Pit in the Land and includes access roads and tracks.
<b>Expanded Stockpile Area</b>	means the area where the following buildings and ancillary infrastructure is to be located to support the Quarry including an Office, toilets (staff amenities), workshop, self-bunded diesel fuel tank (20,000 litres maximum capacity), weighbridge, and diesel-powered generator – see <b>Figure B-2</b> , DRAWING NUMBER: 1011/102 in <b>Attachment 2</b> , and <b>Attachment 4</b> .
<b>EIS Guidelines</b>	means the <i>Environmental Impact Statement Guidelines, Walters Contracting Pty Ltd, Porters Bridge Road Quarry Intensification, 190 Porters Bridge Road, Reedy Marsh</i> issued by the EPA on 16 September 2024.
<b>Groundwater</b>	means any water contained in or occurring in a geological formation.
<b>Maximum Quarry Extent</b>	means the area from which rock and gravel is to be extracted by drill and blast, ripping etc. to liberate rock and gravel for the purpose of extraction and then crushing/screening – see <b>Figure B-2</b> DRAWING NUMBER: 1011/103 in Attachment 2.
<b>Mining Lease</b>	means Mining Lease 2097P/M or another Mining Lease number(s) for the same spatial extent which may be generated by Mineral Resources Tasmania through the consolidation, or partial surrender, of Mining Lease(s).
<b>Noise EPP</b>	means the <i>Tasmanian Environment Protection Policy (Noise) 2009</i>
<b>Noise Sensitive Premise</b>	means residences and residential zones (whether occupied or not), schools, hospitals, caravan parks and similar land uses involving the presence of individual people for extended periods, except in the course of their employment or for recreation (EPA supplied definition in the PSG’s).
<b>PA\25\0032</b>	The permit issued by Meander Valley Council for a pre-coat machine to be located and operated within the Quarry (see <b>Attachment 8</b> ).
<b>Planning Authority</b>	means the Meander Valley Council
<b>pollutant</b>	has the meaning ascribed to it in Section 3 of EMPCA.
<b>Point source pollution</b>	means pollution, which is emitted at a discrete, identifiable location, usually via a discharge pipe or outfall, and which can be readily measured.
<b>Proponent</b>	means Walters Contracting Company Pty Ltd

<b>Protected Environmental Value</b>	means the value or use for which it has been determined that a given area of the environment should be protected. There can, and often will be, more than one protected environmental value for a given area. A list of potential protected environmental values is given in clause 7.1 of the STATE POLICY ON WATER QUALITY MANAGEMENT 1997.
<b>Quarry</b>	means Porters Bridge Road Quarry (located within ML 2097P/M, granted and in force)
<b>(the) Scheme</b>	Tasmanian Planning Scheme and Meander Valley LPS.
<b>State Policy or State Policies</b>	means a State Policy made and is in force under the <i>State Policies and Projects Act 1993</i> .
<b>stormwater</b>	In the context of stormwater management, means water traversing the surface of the as a result of rainfall but does not include wastewater.
<b>treated water</b>	In the context of stormwater management, wastewater that has been captured and treated (by gravity removal) for sediment removal.
<b>Watercourse</b>	means a natural depression carrying perennial or intermittent flows of surface water for part or all of the year in most years. Consisting of a defined channel, with banks and a bed along which water may flow (QCP definition).
<b>wastewater</b>	In the context of stormwater management, means water used or contaminated during carrying out the activity, including polluted stormwater.

## STATEMENT BY PROPONENT

---

This Environmental Impact Statement (the 'EIS') has been prepared on behalf of Walters Contracting Pty Ltd (the 'Proponent') by Van Diemen Consulting Pty Ltd.

The Proponent acknowledges and accepts the following:

1. The contents of this Document are true and correct to the best of its knowledge and accurately reflect the intentions of the Proponent for the proposed use/development when VDC completed the Document;
2. The Document accurately describes the proposed development/use; and
3. VDC prepared the Document using the use/development relevant information provided by the Proponent.

Name Mr Will Bryan, General Manager, Walters Contracting Pty Ltd

Signature



Date 26 August 2025

## INTRODUCTION

This Environmental Impact Statement (EIS) contains supporting information for a Development Application made by Walters Contracting Pty Ltd to the Meander Valley Council for the Development.

The Development is to –

- (1) intensify the production of aggregates and rock extraction from the Quarry to 200,000 cubic metres per annum – the equivalent of approximately 320,000 tonnes – and to extract all the rock material within the Maximum Quarry Extent, and to continue to use the pre-coat machine in a comparable way as approved by PA\25\0032 (**Attachment 8**) in an area of the Expanded Stockpile Area (see **Attachment 4**); and
- (2) Install the following buildings and ancillary infrastructure to support the Quarry (**Attachment 4**) and include –
  - Office, toilet (staff amenities), workshop, self-bunded diesel fuel tank (20,000 litres maximum capacity), weighbridge, and diesel-powered generator; and the
  - Expansion of the stockpile area (the ‘Expanded Stockpile Area’) to receive and store material post-production in the Pit, including additional car parking spaces and drainage systems including settling ponds. The Expanded Stockpile Area will also be used to operate a pre-coat machine that is approved for use in the Quarry by PA\25\0032 – see **Attachment 4** for the current location and proposed location area for its use.

## LEVEL 2 ACTIVITY STATUS

The Quarry includes two activities listed Schedule 2 of the *Environmental Management and Pollution Control Act 1994* (‘EMPCA’) –

- ‘5. Extractive Industries.
  - (a) Quarries: the extraction of 5,000 cubic metres or more of rock or gravel per year if the extraction –
    - (i) is the subject of, or requires, a mining lease under the *Mineral Resources Development Act 1995*; or
    - (ii) is carried out at a quarry in a State forest, within the meaning of the *Mineral Resources Development Act 1995*.
- ‘6. Materials Handling. (a) Crushing, Grinding or Milling: processing (by crushing, grinding, milling, or separating into different sizes by sieving, air elutriation or in any other manner) of ... (ii) rock, ores or minerals at a rate in excess of 1 000 cubic metres per year’

Level 2 Activities must be referred by the Planning Authority (in this case, Meander Valley Council) to the Environment Protection Authority (the ‘EPA’), for assessment under the EMPCA.

The Environmental Impact Statement (EIS) has been prepared to support a Development Application to the Meander Valley Council (as the Planning Authority) for the establishment and operation of the use.

The EIS and associated assessments have considered impacts from the Activity within the Mining Lease and specifically the extraction of material from within the Development Area.

**FUNCTION OF THE ENVIRONMENTAL IMPACT STATEMENT**

The key function of the EIS is to provide sufficient information on the environmental impacts for the Board to make informed decisions about the proposal. The Board considers the EIS, as well as other relevant information, against the objectives of the RMPS and EMPCS objectives. These objectives focus on the concept of sustainable development, which requires consideration of the economic and social needs of people now and in the future, while sustaining the environment and avoiding or mitigating adverse effects.

The Board will consider the objectives and endeavour to make the decision which best furthers them, when considered together. That decision may be to approve the proposal with conditions, or in some cases, the Board may decide the objectives cannot be upheld and the proposal is rejected.

Pursuant to s25(2), given the Activity includes Level 2 Activities prescribed by Schedule 2 of EMPCA, the following is noted for the assessment of environmental matters, such as noise, dust, biodiversity etc.:

- ‘(f) the planning authority, notwithstanding any enactment to the contrary, is not required to assess any matter addressed in the Board’s assessment under paragraph (a); and
- (g) if, despite paragraph (f), the planning authority does its own assessment of a matter addressed in the assessment under paragraph (a), it is not entitled to recover the cost of its assessment from the applicant, the Crown or any other person.’

**GUIDANCE FROM THE EPA BOARD ON THE CONTENT OF THE EIS**

EMPCA requires the Board of the Environment Protection Authority to provide guidance to an applicant about what should be included in an EIS. The Board has authorised EPA Tasmania (EPA) to establish the information base to inform decision making on its behalf. The EPA requires the EIS to be prepared using a risk-based approach. Not all issues nominated in the guidelines will have the same degree of relevance to an activity. Depending on the nature of the proposed activity and its location, some of the issues may be more relevant than others, and some may not be applicable at all. The level of detail provided on each issue should be appropriate to the level of significance of that environmental issue to the proposal.

**SPECIALIST STUDIES**

The EIS is supported by specialist studies which are listed below and each document provided as an Attachments to the EIS: -

Report name and author	EIS Attachment Number
<b>Stormwater and sediment control measures</b>	
5 Year Mining Plan. <i>Van Diemen Consulting Pty Ltd. May 2025</i>	<b>3</b>

<b>Flora/Fauna</b>	
Porters Bridge Road Quarry, Exton – Natural Values Assessment. <i>Van Diemen Consulting Pty Ltd. May 2025</i>	<b>3</b>
<b>Noise and vibration</b>	
Porters Bridge Road Quarry intensification environmental noise, ground vibration and air blast overpressure assessment. <i>Tarkarri Engineering, June 2025 (REV 0)</i>	<b>6</b>

## STRUCTURE OF THE EIS

The EIS contains the following components –

Part	Description
<b>Part A</b>	<i>Proponent information</i> to the proposed development/activity including details for example of the proponent and activity location, rationale of the proposed activity, relevant environmental legislation standards and guidelines (including State Policies), and consultation conducted so far by the Proponent.
<b>Part B</b>	<i>Proposal Description</i> including details of the volume extracted, extraction process, bunding, machinery, and equipment to be used and timeframe for the activity.  <i>Existing environment</i> information including climatic (temperature, rainfall, wind), catchment, geological and biodiversity information.
<b>Part C</b>	<i>Potential environmental impacts and their management</i> including an assessment of each relevant impact, its likelihood of occurrence, mitigation measures and net impact.
<b>Part D</b>	<i>A summary of the proposed management measures</i> for the activity to avoid or mitigate potential environmental impacts from the activity.
<b>Part E</b>	<i>Conclusion</i> about the proposed activity.
<b>Part F</b>	<i>References</i> cited in the EIS.

<b>Part G</b>	<i>Attachments</i> referenced in the EIS.
---------------	---

## PART A – INTRODUCTION

### A-1 PROPONENT DETAILS

The proponent is Walters Contracting Pty Ltd. Details of this entity are provided in **Table 1**.

**Table 1. Details of the Proponent**

Item	Description
Name of proponent	Walters Contracting Pty Ltd
Registered address of proponent	11 East Goderich Street Deloraine TAS 7304
Postal address of proponent	PO Box 257 Deloraine TAS 7304
ACN	131 840 652
Contact person's details	Will Bryan, General Manager Walters Contracting Pty Ltd 03 6362 3782, 0409 567 368 Email: <a href="mailto:will@walterscontracting.net.au">will@walterscontracting.net.au</a>

### A-2 CONSULTANT DETAILS

The contact details for the consultant engaged to prepare the assessment are provided in **Table 2**.

**Table 2. Details of the Consultant**

Item	Description
Van Diemen Consulting Pty Ltd	Contact – Dr Richard Barnes Postal Address – PO Box 1 New Town 7008 Mobile – 0438 588 695 Email – <a href="mailto:rwbarnes73@gmail.com">rwbarnes73@gmail.com</a>

### A-3 QUARRY INFORMATION

The details for the Quarry's location, zoning and land tenure are provided in **Table 3**.

**Table 3. Physical details and planning related matters of the Porters Bridge Road Quarry**

Item	Description	Figure
<b>Physical address</b>	The address for the activity is 190 Porters Bridge Rd Exton TAS 7304. Access is from Porters Bridge Road with road connections to the Bass Highway via Meander Valley Road.	<b>A-1</b>
<b>Mining Lease</b>	2097P/M (granted and in force) - 33.3 hectares	<b>A-1, A-2</b>
<b>Land Titles</b>	<p>The Land is private freehold other than Crown Land (land part of Porters Bridge Road owned and maintained by Council, and a section of reserved road covered by a Mining Lease). An informal reserve on other public land occurs to the north of the access from Porters Bridge Road.</p> <p>The following Certificates of Title apply –</p> <ul style="list-style-type: none"> <li>• 39477/1 – Council (Porters Bridge Road);</li> <li>• 157238/1, 157238/2, 157238/3, 157238/4, 157238/5 – private freehold;</li> <li>• Reserved Road – The Crown.</li> </ul>	<b>A-2</b>
<b>Zoning</b>	Rural Zone	<b>E-1</b>
<b>Use Class and Permissibility</b>	The activity is in the Extractive Industry <sup>1</sup> Use Class; Permitted in the Rural zone.	<b>NA</b>
<b>Planning overlays</b>	<p>Tasmanian Planning Scheme – Meander Valley</p> <ul style="list-style-type: none"> <li>- Waterway and Coastal Protection Area</li> <li>- Landslip Hazard</li> <li>- Priority Vegetation Area</li> </ul>	<b>E-2, E-3a to E-3d</b>
<b>Land tenure</b>	The land is private freehold for most of the ML, with some intersections of road reserves.	<b>E-4a and E-4b</b>

<sup>1</sup> means use of land for extracting or removing material from the ground, other than Resource development, and includes the treatment or processing of those materials by crushing, grinding, milling, or screening on, or adjoining the land from which it is extracted. Examples include mining, quarrying, and sand mining.

Item	Description	Figure
	A public reserve within the meaning of the <i>Crown Lands Act 1976</i> is located northwards of the access to the ML from Porters Bridge Road (the public reserve is not covered by the ML, and it will not be disturbed by the Development).	

#### **A-4 TIMEFRAME AND LONGEVITY OF DEVELOPMENT**

It is anticipated that the activity will commence in the second quarter of the 2025-26 financial year (i.e., October to December 2025).

#### **A-5 PROJECT RATIONALE AND ALTERNATIVES**

##### *A-5-1 PROJECT RATIONALE*

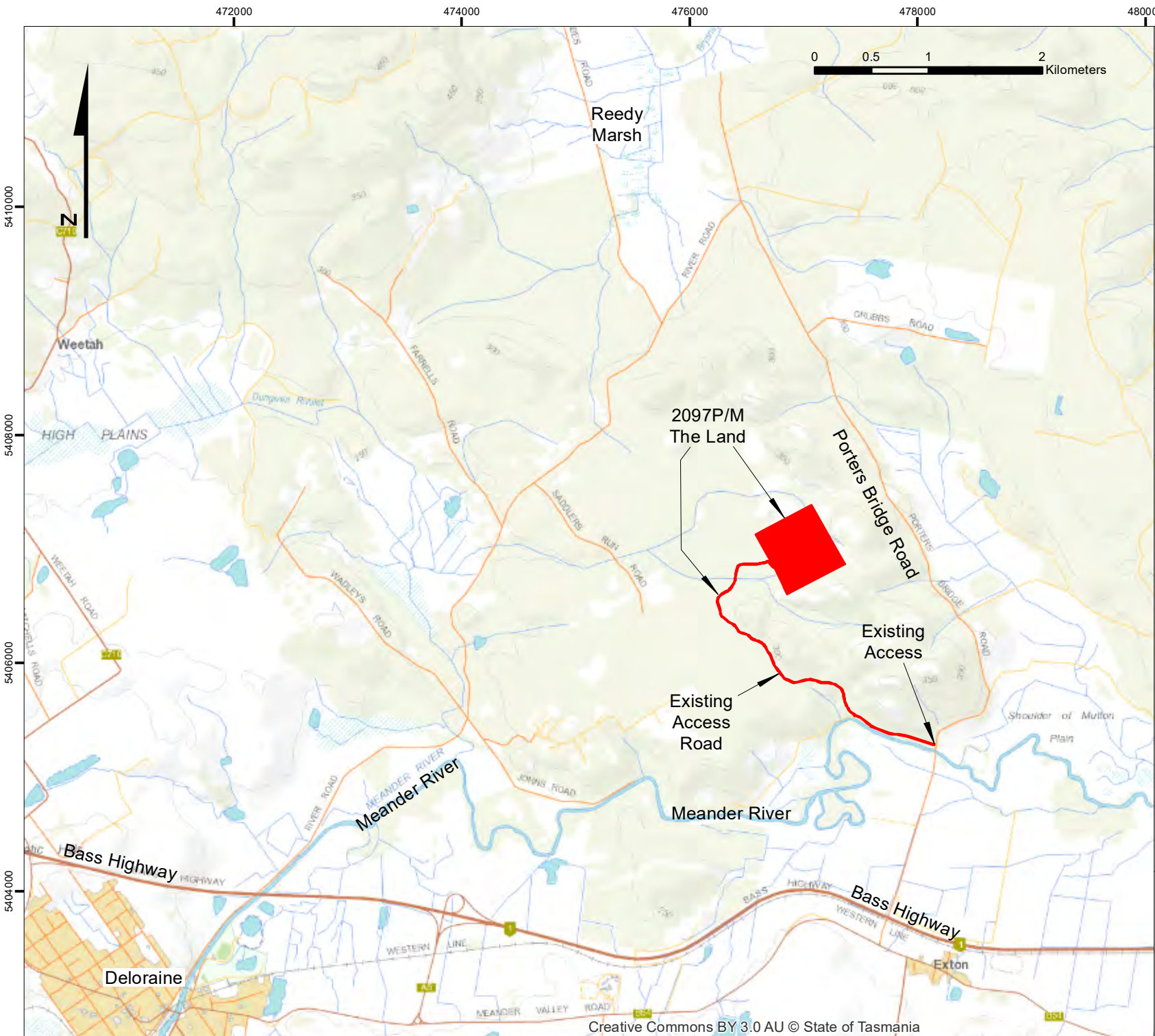
Dolerite bedrock is suitable to produce aggregates for use in various products for roadworks, and other construction works.

The Quarry provides a large resource of dolerite bedrock that can be readily accessed from a state highway (Bass Highway) to provide a centralised location for the delivery of material to customers including Local Councils, State Government agencies, private enterprises, and private landowners.

The Quarry complements the other quarry assets owned and operated by the Proponent, and with increased demand for the product approval is sought to increase production levels to meet demand.

##### *A-5-2 PROJECT ALTERNATIVES*

Several sites in the area around Porters Bridge Road were examined when the quarry was initially proposed, and a permit sought in 2021. This site was selected because it provides a high-quality product, there is existing formed access via forestry standard roads/tracks, there are few local natural values of significance, and the landowner has agreed to the Mining Lease.



# PORTERS BRIDGE ROAD QUARRY

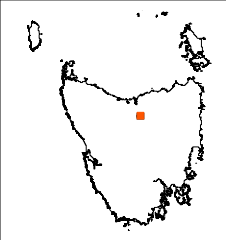
## ENVIRONMENTAL IMPACT STATEMENT (EIS)

Figure A-1: Location of Porters Bridge Road Quarry

**TASMAP:**  
DELORAINE  
4640

**LGA:**  
MEANDER  
VALLEY

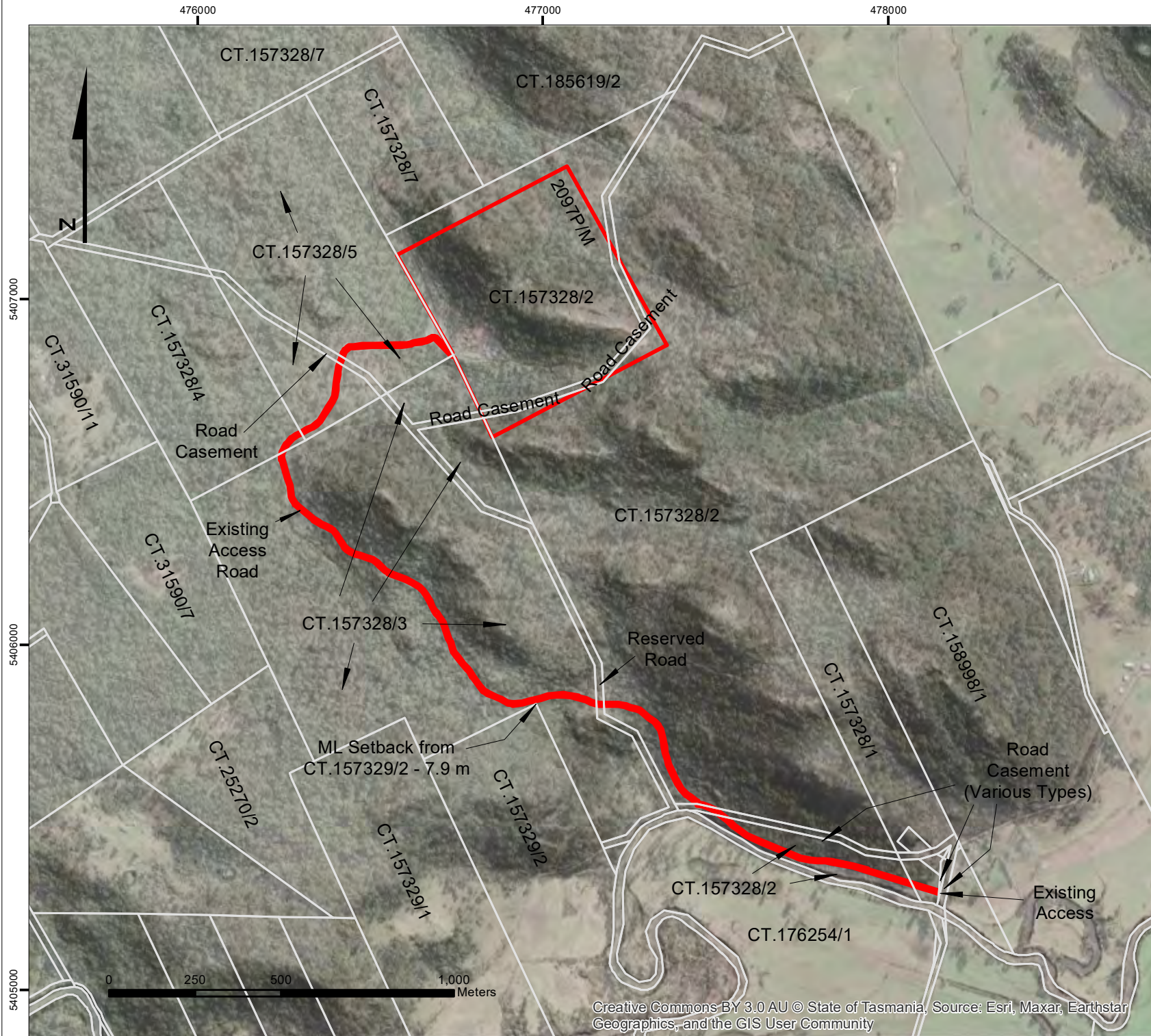
Base data by TASMAP. © State of Tasmania  
Base image by TASMAP. © State of Tasmania



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025



# PORTERS BRIDGE ROAD QUARRY

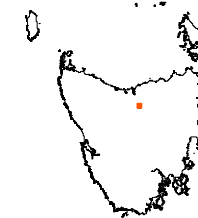
## ENVIRONMENTAL IMPACT STATEMENT (EIS)

Figure A-2: Location of Porters Bridge Road Quarry and Land Titles

**TASMAP:**  
DELORAINÉ  
4640

**LGA:**  
MEANDER VALLEY

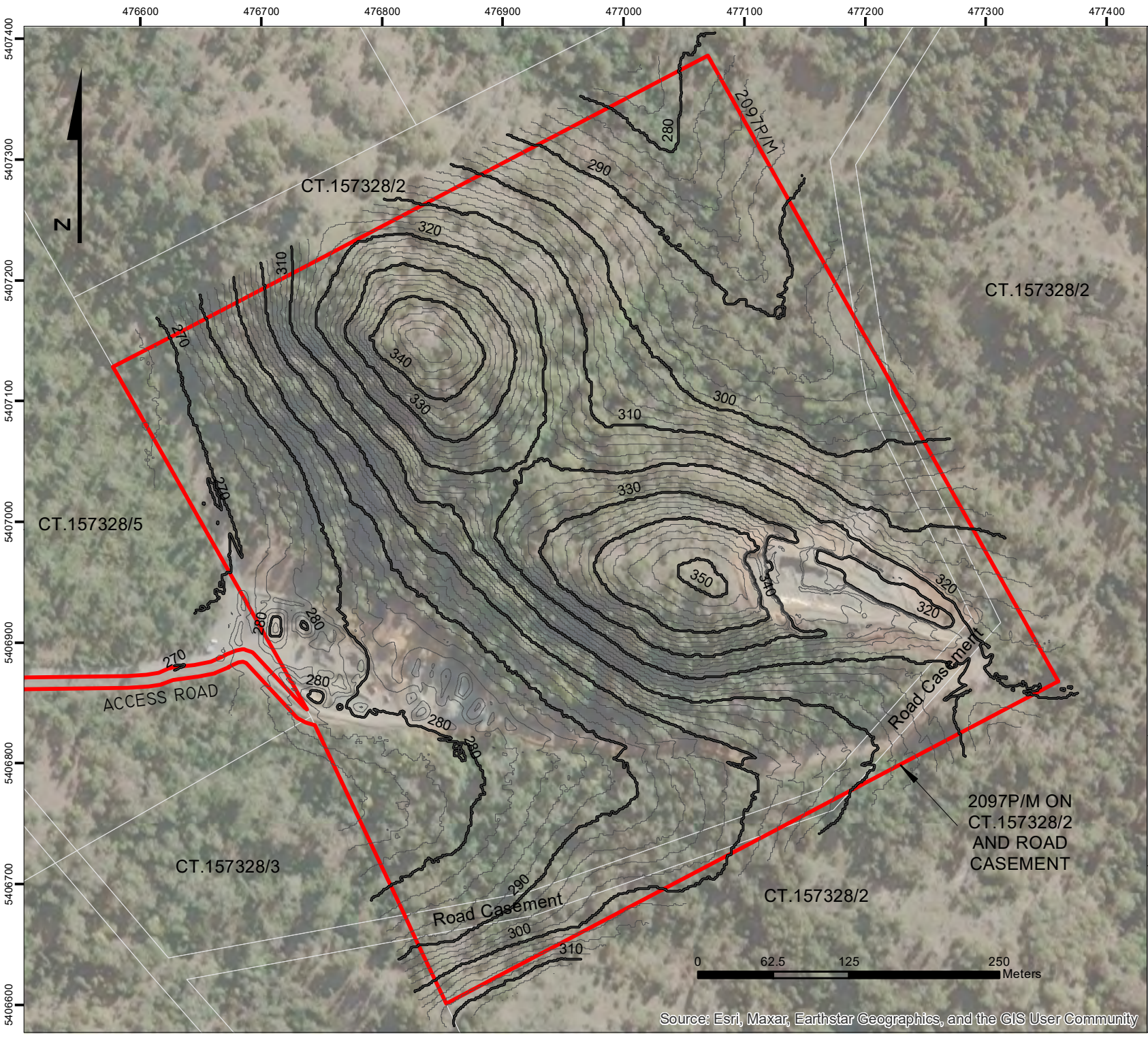
Base data by TASMAP. © State of Tasmania  
Base image © ESRI



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025



# PORTERS BRIDGE ROAD QUARRY

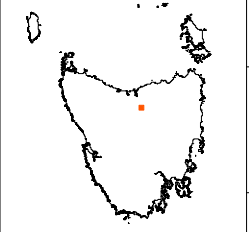
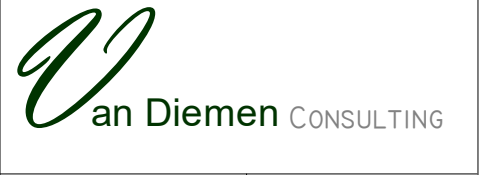
## ENVIRONMENTAL IMPACT STATEMENT (EIS)

Figure A-3: Topography (AHD) at the Porters Bridge Road Quarry Development Area (Topo at Sep 2024)

**TASMAP:**  
DELORAINE  
4640

**LGA:**  
MEANDER VALLEY

Base data by TASMAP. © State of Tasmania  
Base image © ESRI



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

## A-6 ENVIRONMENTAL LEGISLATION, STANDARDS AND GUIDELINES

The Proponent will conduct the operation in compliance with relevant legislation, policies, codes of practice, and standards.

### A-6-1 STATUTORY REQUIREMENTS

Relevant or ancillary legislation includes –

- *Environmental Management and Pollution Control Act 1994 (EMPCA)*
- *Land Use Planning and Approvals Act 1993*
- *Mineral Resources Development Act 1995*
- *Threatened Species Protection Act 1995*
- *Environment Protection and Biodiversity Conservation Act 1999*
- *Road and Jetties Act 1935*
- *State Policies and Projects Act 1993*
- *Local Government (Highways) Act 1982*
- *Nature Conservation Act 2002*
- *Forest Practices Act 1985 and Forest Practices Regulations 2017*

Relevant regulations made under EMPCA include –

- *Environmental Management and Pollution Control (General) Regulations 2017*
- *Environmental Management and Pollution Control (Noise) Regulations 2016*

### A-6-2 EXTRACTIVE INDUSTRY RELEVANT GUIDELINES AND BEST PRACTICE PRINCIPLES

There are several extractive industry relevant guidelines for the management of environmental practices and pollution control. Some of these are guidelines and codes have been developed by industry or the regulatory authorities of extractive industries to provide guidance on the expectations of environmental management and best practice.

**Table 4** provides a summary of the documents considered in the preparation of this EIS.

**Table 4. Extractive Industry relevant best practice guidelines and manuals**

Document/Name	Focus/Content	Publisher
Tasmanian Quarry Code of Practice, 3 <sup>rd</sup> Edition, May 2017	Provides detailed guidelines for the quarry industry covering planning through to site rehabilitation.	Tasmanian EPA (2017)

<b>Decommissioning &amp; Rehabilitation Plan (DRP)</b> <b>A guideline for the Tasmanian mining industry</b>	A guideline for the preparation of a decommissioning and rehabilitation plan for the Tasmanian mining industry.	Tasmanian EPA (2011)
<b>Bunding and Spill Management Guidelines</b>	Provides guidance on best practice environmental management to operators of activities likely to store and handle environmentally hazardous substances.	Tasmanian EPA (2015)
<b>Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania.</b>	These guidelines establish a standard for washdown and a guide to prescribing its application where codes of practice or other environmental management plans are not in place.	DPIPWE (2015)
<b>The Waterways and Wetlands Works Manual</b> <b>Primarily Guidelines 1, 2 and 3</b>	The Waterways and Wetlands Works Manual provides environmental best practice guidelines for undertaking works in these sensitive areas. Guidelines are available on practical strategies to minimise environmental harm when undertaking works on waterways and wetlands in Tasmania.	DPIPWE (2003)
<b>Best Practice Erosion and Sediment Control</b>	Contains the necessary strategies and techniques to assist erosion and sediment control practitioners to reduce the degradation of land and water from uncontrolled erosion and sedimentation.	International Erosion and Sediment Control (Australasia), IECA (2008)
<b>Forest Practices Code 2020</b>	Provides a practical set of guidelines and standards for the management of forest practices	Forest Practices Authority, 30 Patrick Street, Hobart
<b>MINE REHABILITATION</b> <b>Leading Practice Sustainable Development Program for the Mining Industry</b>	Provides guidance on best practice environmental management for rehabilitation and mine closure planning, implementation, and monitoring.	Australian Government (2016)

#### A-6-3 STATE POLICIES

A State Policy is a statutory document which is intermediate between the provisions of an Act and the lesser policies and provisions of planning schemes and other mechanisms identified in the relevant legislation comprising the System.

The *State Policies and Projects Act 1993* determines the functions of a State Policy and what it can contain:

S.5(1) A State Policy -

(a) must seek to further the objectives set out in Schedule 1; and

- (b) may be made only where there is, in the opinion of the Minister, a matter of State significance to be dealt with in the State Policy; and
- (c) must seek to ensure that a consistent and coordinated approach is maintained throughout the State with respect to the matters contained in the State Policy; and
- (d) must incorporate the minimum amount of regulation necessary to obtain its objectives.

The central objective of any State Policy is sustainable development. This means that it must address the use, development, and protection of natural and physical resources together with the objectives relating to public involvement and the sharing of responsibility in resource management and planning as well as those relating to economic development.

The following State Policies are made under the *State Policies and Projects Act 1993*:

- State Policy on the Protection of Agricultural Land 2009,
- State Policy on Water Quality Management 1997,
- Tasmanian State Coastal Policy 1996, and
- National Environmental Protection Measures (NEPMS).

#### State Policy on Protection of Agricultural Land 2009

The policy aims to conserve and protect agricultural land so that it remains available for the sustainable development of agriculture, recognising the importance of Prime Agricultural Land<sup>2</sup>. Specific objectives are to enable the sustainable development of agriculture by minimising: (a) conflict with or interference from other land uses; and (b) non-agricultural use or development on agricultural land that precludes the return of that land to agricultural use.

The Land is classified as Agricultural land<sup>3</sup> under the State Policy for the Protection of Agricultural Land. This matter is dealt with by the Scheme because it is not an environmentally relevant consideration for the EIS.

#### State Coastal Policy 1996

The purpose of these Policy principles is to guide the outcomes of the Tasmanian State Coastal Policy. The State Coastal Policy does not apply because the Quarry is not within the Coastal Zone to which the policy applies.

#### State Policy on Water Quality Management 1997

The policy is designed to achieve the sustainable management of Tasmania's surface water and groundwater resources by protecting or enhancing their qualities while allowing for sustainable development in accordance

---

<sup>2</sup> "Prime agricultural land" means agricultural land classified as Class 1, 2 or 3 land based on the class definitions and methodology from the Land Capability Handbook, Second Edition, C J Grose, 1999, Department of Primary Industries, Water and Environment, Tasmania.

<sup>3</sup> "Agricultural land" means all land that is in agricultural use or has the potential for agricultural use, that has not been zoned or developed for another use or would not be unduly restricted for agricultural use by its size, shape and proximity to adjoining non-agricultural uses.

with the objectives of Tasmania’s Resource Management and Planning System (Schedule 1 of the *State Policies and Projects Act 1993*).

The objectives of the State Policy on Water Quality Management 1997 are to:

- (a) focus water quality management on the achievement of water quality objectives which will maintain or enhance water quality and further the objectives of Tasmania’s Resource Management and Planning System;
- (b) ensure that diffuse source and point source pollution does not prejudice the achievement of water quality objectives and that pollutants discharged to waterways are reduced as far as is reasonable and practical by the use of best practice environmental management;
- (c) ensure that efficient and effective water quality monitoring programs are carried out and that the responsibility for monitoring is shared by those who use and benefit from the resource, including polluters, who should bear an appropriate share of the costs arising from their activities, water resource managers and the community;
- (d) facilitate and promote integrated catchment management through the achievement of objectives (a) to (c) above; and
- (e) apply the precautionary principle to Part 4 of this Policy.

Clause 12 of the State Policy on Water Quality Management 1997 requires that in giving effect to the policy, governments and other decision-makers must examine the most appropriate mix of regulatory measures, economic instruments, and communications strategies to achieve the objectives of the policy.

The Quarry is a *point source pollution*<sup>4</sup> because stormwater and treated water discharging to the environment will be at discrete locations associated with discharge points at sediment basins and/or ponds. The discharge is unavoidable like any extractive industry that has drainage systems to capture, treat and then allow to be discharged treated water (primarily for sediment removal). Engineered and appropriately sized sediment basins have been installed in some locations already by the existing activity, and additional sediment basins will be installed for the Expanded Stockpile Area (see **Figure B-2**, DRAWING NUMBER: 1011/102 in **Attachment 2**, and **Attachment 4**).

The most relevant provisions of the policy to the Quarry can be found in Division 3 of the policy. **Table 5** provides the Quarry relevant policy considerations taken from Division 3 and the associated management source document or guideline.

**Table 5. Quarry relevant water quality policy considerations and associated management source**

Division 3 item number and description	Primary management Document/Guidelines
<u>31. Control of erosion and stormwater runoff from land disturbance</u>	

<sup>4</sup> means the pollution which is emitted at a discrete, identifiable location, usually via a discharge pipe or outfall, and which can be readily measured.

<p>31.1 Planning schemes should require that development proposals with the potential to give rise to off-site polluted stormwater runoff which could cause environmental nuisance or material, or serious environmental harm should include, or be required to develop as a condition of approval, stormwater management strategies including appropriate safeguards to reduce the transport of pollutants off-site.</p>	<ul style="list-style-type: none"> <li>• Planning Scheme</li> <li>• Quarry Code of Practice</li> </ul>
<p>31.2 Stormwater management strategies required pursuant to clause 31.1 should address both the construction phase and operational phase of the development and use of land and have the maintenance of water quality objectives (where these have been defined) as a performance objective.</p>	<ul style="list-style-type: none"> <li>• Quarry Code of Practice</li> <li>• Bunding and Spill Management Guidelines</li> <li>• Specialist advice</li> </ul>
<p>31.3 To assist with the preparation of stormwater management strategies, the Board should facilitate the development or adoption of a code of practice or guidelines describing best practice environmental management for the control of erosion and stormwater runoff from construction activities, including roadworks.</p>	<ul style="list-style-type: none"> <li>• Quarry Code of Practice</li> </ul>
<p>31.4 Codes of practice or guidelines required by this Policy in respect of specific activities with the potential to impact on stream-side land should pay specific attention to defining appropriate stream-side buffer strips and acceptable management practices within these strips. Strategies and incentives, including economic instruments, to encourage the retention and/or improved management of streamside vegetation should be investigated.</p>	<ul style="list-style-type: none"> <li>• Quarry Code of Practice</li> <li>• Waterways and Wetlands manual</li> </ul>
<p>31.5 Planning schemes must require that land use and development is consistent with the physical capability of the land so that the potential for erosion and subsequent water quality degradation is minimised.</p>	<ul style="list-style-type: none"> <li>• Planning Scheme</li> </ul>
<p><u>35. Road construction, maintenance and drainage</u></p>	
<p>35.1 Road construction and maintenance operations will be carried out in accordance with the guidelines or code of practice developed pursuant to clause 31.3 of this Policy or employ other measures consistent with best practice environmental management, to prevent erosion and the pollution of streams and waterways by runoff from sites of road construction and maintenance.</p>	<ul style="list-style-type: none"> <li>• Quarry Code of Practice</li> <li>• Waterways and Wetlands manual</li> <li>• Forest Practices Code</li> </ul>

National Environmental Protection Measures (NEPMs)

In Tasmania, NEPMs are State Policies in accordance with section 12A of the *State Policies and Projects Act 1993*. They are generally not directly enforceable and are implemented using a variety of mechanisms and approaches depending on the contents of each NEPM.

Current NEPMs include:

- Air Toxics NEPM
- Ambient Air Quality NEPM
- Assessment of Site Contamination NEPM

- Diesel Vehicle Emissions NEPM
- Movement of Controlled Waste between States and Territories NEPM
- National Pollutant Inventory (NPI) NEPM
- Used Packaging Materials NEPM

Relevant NEPMs have been considered when addressing matters of air quality, diesel vehicle emissions and site contamination.

### **Relevant Environment Protection Policies (EPP's)**

EPPs are designed specifically to give effect to the objectives of EMPCA and define environmental objectives with programs to achieve them.

The following EPPs have been made and apply –

- Environment Protection Policy (Air Quality) 2004, and
- Environment Protection Policy (Noise) 2009.

A Specialist study was conducted for noise (**Attachment 6**) which addressed the objectives and requirements of the Environment Protection Policy (Noise) 2009.

## **A-7 PUBLIC AND STAKEHOLDER CONSULTATION**

The Meander Valley Council and the Environment Protection Authority (EPA) are some of the parties who have been contacted about the Activity.

### *A-7-1 MEANDER VALLEY COUNCIL*

The Development Application was lodged with Council and the associated fee paid. The Development Application was deemed a valid application by the Council per the *Land Use Planning and Approvals Act 1993*. A Request for Further Information was subsequently issued by Council.

### *A-7-2 ENVIRONMENT PROTECTION AUTHORITY*

The Development Application was referred by the Council (acting as the Planning Authority) to the EPA given the environmentally relevant activity includes two Level 2 activities.

### *A-7-3 ABORIGINAL HERITAGE TASMANIA*

The Proponent has been advised indirectly by MRT (MRT undertook consultation with AHT when the ML was being assessed for granting by the Minister administering the MRDA) to implement the *Unanticipated Discovery Plan* procedure issued by AHT.

**A-7-4 PUBLIC PARTICIPATION IN THE PLANNING PROCESS**

The public will have an opportunity to provide written representation of the project when it is advertised under the relevant provisions of the *Land Use Planning and Approvals Act 1993*.


**A-7-5 MINERAL RESOURCES TASMANIA**

MRT has been consulted in relation to the proposed intensification and a new mining plan developed for approval.

## PART B - PROJECT DESCRIPTION

### B.1 PROPOSED ACTIVITY

<p><b>Intensification of an existing activity</b></p>	<p>The Quarry currently operates under a Permit granted by the MVC; Permit No. PA\21\0267 which contains Permit Part B, Permit Conditions - Environmental (PCE) No. 10885.</p> <p>A pre-coat machine is already approved for use in the Quarry by an existing permit issued by the MVC (PA\25\0032).</p> <p>The Development is to –</p> <ul style="list-style-type: none"> <li>(i) intensify the production of aggregates and rock extraction from the Quarry to 200,000 cubic metres per annum – the equivalent of approximately 320,000 tonnes – and to extract all the rock material within the Maximum Quarry Extent (see <b>Figure B-2</b> DRAWING NUMBER: 1011/103 in <b>Attachment 2</b>); and</li> <li>(ii) install the following buildings and ancillary infrastructure at the Expanded Stockpile Area (the ‘Expanded Stockpile Area’, see <b>Figure B-2</b> and DRAWING NUMBER: 1011/102 in <b>Attachment 2</b>) to support the Quarry including an Office, toilets (staff amenities), workshop, self-bunded diesel fuel tank (20,000 litres maximum capacity), weighbridge, and diesel-powered generator.</li> </ul> <p>Expansion of the stockpile area (the ‘Expanded Stockpile Area’) is proposed to receive and store material post-production in the Quarry ready for collection and transport by truck.</p> <p>The Expanded Stockpile Area will also be used to operate the pre-coat machine that is approved for use in the Quarry by PA\25\0032 – see DRAWING NUMBER: 1011/102 in <b>Attachment 2</b> and <b>Attachment 8</b> for the current location and the proposed area for its use at the Expanded Stockpile Area.</p>
<p><b>Material to be extracted</b></p>	<p>The material to be extracted is Jurassic dolerite which will be crushed/screened into variously sized aggregates.</p> <p>The activity has a lifespan of at least 15 years if full production levels are achieved every year from the commencement of the activity.</p>
<p><b>Maximum extraction quantity</b></p>	<p>320,000 tonnes per annum (equivalent is 200,000 cubic metres per annum).</p> <p>Loose bulk density ratio is taken to be 1.6.</p> <p>Material is likely to be transported in greater volumes in spring and summer which coincide with peak roadwork activities.</p>
<p><b>Maximum Quarry Extent</b></p>	<p>The Maximum Quarry Extent (see <b>Figure B-2</b> DRAWING NUMBER: 1011/103 in <b>Attachment 2</b>) from where rock will be drilled and blasted and ripped/extracted for processing using crushing/screening techniques is about 10.32 hectares in size.</p>

<p><b>Maximum processing quantity</b></p>	<p>Crushing/screening of up to 320,000 tonnes per annum (equivalent is 200,000 cubic metres per annum).</p> <p>Loose bulk density ratio is taken to be 1.6.</p>
<p><b>Area of disturbance</b></p>	<p>The area of disturbance, without rehabilitation, would be 8 hectares.</p>
<p><b>Material extraction and processing</b></p>	<p>Extraction and processing would be undertaken in the following manner:</p> <ul style="list-style-type: none"> <li>• Removal/harvesting of vegetation;</li> <li>• Clearing over burden with an excavator or dozer;</li> <li>• Drill and blast based on a pattern designed by blast contractor (currently a blast is done 2 to 3 months on average, which will increase to about 1 blast each month on average depending upon the MIC and blast design which are guided by production requirements and relevant environmental permit conditions);</li> <li>• Crush and screen material using crushers and screens (mechanised/vibratory);</li> <li>• Stockpile material; and</li> <li>• Loading into trucks with a wheel loader.</li> </ul> <p>A pre-coat machine is already approved by an existing permit issued by the MVC (PA\25\0032) for use in the Quarry. Aggregate is fed into the machine, where it is coated and then conveyed up the conveyor to drop into a stockpile where it is collected by trucks for haulage to road work sites.</p>  <p>The machine is not based in the Quarry full-time; it is used for up to 9 months per annum, of which it may not be in the Quarry for that entire time. It is removed from time to time to go to another</p>

	<p>location to be used there (the time spent in this Quarry would be subject to the amount of volume needing to be coated, and the demand for product from other quarries owned and/or operated by the applicant).</p> <p>The Expanded Stockpile Area will also be used to operate the pre-coat machine that is approved for use in the Quarry by PA\25\0032 – see DRAWING NUMBER: 1011/102 in <b>Attachment 2</b> and <b>Attachment 8</b> for the current location and the proposed area for its use at the Expanded Stockpile Area.</p>																																																																				
<p><b>Transport</b></p>	<p>All traffic will enter and exit from Porters Bridge Road (<b>Figure B-1</b>). Outward movements would use Meander Valley Road to access the Bass Highway or delivery site.</p> <p>The existing traffic profile of the internal road network from the ROM pad to Porters Bridge Road is provided below –</p> <table border="1"> <thead> <tr> <th rowspan="2">Vehicle type</th> <th colspan="2">Worst case scenario</th> <th colspan="2">Based on average day</th> </tr> <tr> <th>Daily</th> <th>Peak Hour</th> <th>Daily</th> <th>Peak Hour</th> </tr> </thead> <tbody> <tr> <td>Laden truck and trailer</td> <td>29</td> <td>6</td> <td>7</td> <td>2</td> </tr> <tr> <td>Un-laden truck and trailer</td> <td>29</td> <td>6</td> <td>7</td> <td>2</td> </tr> <tr> <td>Service vehicles (maximum one)</td> <td>2</td> <td>0</td> <td>2</td> <td>0</td> </tr> <tr> <td>Employees (maximum four)</td> <td>8</td> <td>4</td> <td>8</td> <td>4</td> </tr> <tr> <td><b>Total</b></td> <td><b>68</b></td> <td><b>16</b></td> <td><b>24</b></td> <td><b>8</b></td> </tr> </tbody> </table> <p>The likely traffic profile of the internal road network from the ROM pad to Porters Bridge Road is provided below –</p> <table border="1"> <thead> <tr> <th rowspan="2">Vehicle type</th> <th colspan="2">Worst case scenario</th> <th colspan="2">Based on average day</th> </tr> <tr> <th>Daily</th> <th>Peak Hour</th> <th>Daily</th> <th>Peak Hour</th> </tr> </thead> <tbody> <tr> <td>Laden truck and trailer</td> <td>43</td> <td>8</td> <td>42</td> <td>8</td> </tr> <tr> <td>Un-laden truck and trailer</td> <td>43</td> <td>8</td> <td>42</td> <td>8</td> </tr> <tr> <td>Service vehicles (maximum two)</td> <td>4</td> <td>2</td> <td>4</td> <td>2</td> </tr> <tr> <td>Employees (maximum seven)</td> <td>14</td> <td>7</td> <td>14</td> <td>7</td> </tr> <tr> <td><b>Total</b></td> <td><b>104</b></td> <td><b>25</b></td> <td><b>102</b></td> <td><b>25</b></td> </tr> </tbody> </table> <p>Up to 200 truck movements (100 rock-laden dump trucks) could occur from the active pit to the ROM pad during a 12-hour working day, however this number is typically 100 truck movements (50 rock-laden dump trucks) and the working day is typically 8 to 10 hours (not 12).</p> <p>The local road network is suitable for the traffic movements and size of vehicles (see Traffic Impact Assessment, <b>Attachment 6</b>) proposed by the intensification of use.</p> <p>The TIA found that from a traffic engineering and road safety perspective, additional traffic generated from this development is not expected to create any adverse safety, or traffic efficiency problems, as:</p> <ul style="list-style-type: none"> <li>• the increase in the amount of traffic generated by the development is considered moderate, and there is sufficient traffic capacity along the surrounding road network to absorb the increase in traffic movements, without causing a deterioration in traffic efficiency;</li> <li>• reported crash data signifies the surrounding road network is suitable to accommodate the increase in heavy vehicles generated by the development, without causing adverse impact to other users;</li> </ul>	Vehicle type	Worst case scenario		Based on average day		Daily	Peak Hour	Daily	Peak Hour	Laden truck and trailer	29	6	7	2	Un-laden truck and trailer	29	6	7	2	Service vehicles (maximum one)	2	0	2	0	Employees (maximum four)	8	4	8	4	<b>Total</b>	<b>68</b>	<b>16</b>	<b>24</b>	<b>8</b>	Vehicle type	Worst case scenario		Based on average day		Daily	Peak Hour	Daily	Peak Hour	Laden truck and trailer	43	8	42	8	Un-laden truck and trailer	43	8	42	8	Service vehicles (maximum two)	4	2	4	2	Employees (maximum seven)	14	7	14	7	<b>Total</b>	<b>104</b>	<b>25</b>	<b>102</b>	<b>25</b>
Vehicle type	Worst case scenario		Based on average day																																																																		
	Daily	Peak Hour	Daily	Peak Hour																																																																	
Laden truck and trailer	29	6	7	2																																																																	
Un-laden truck and trailer	29	6	7	2																																																																	
Service vehicles (maximum one)	2	0	2	0																																																																	
Employees (maximum four)	8	4	8	4																																																																	
<b>Total</b>	<b>68</b>	<b>16</b>	<b>24</b>	<b>8</b>																																																																	
Vehicle type	Worst case scenario		Based on average day																																																																		
	Daily	Peak Hour	Daily	Peak Hour																																																																	
Laden truck and trailer	43	8	42	8																																																																	
Un-laden truck and trailer	43	8	42	8																																																																	
Service vehicles (maximum two)	4	2	4	2																																																																	
Employees (maximum seven)	14	7	14	7																																																																	
<b>Total</b>	<b>104</b>	<b>25</b>	<b>102</b>	<b>25</b>																																																																	

	<ul style="list-style-type: none"> <li>• the existing access with Porters Bridge Road will be upgraded from a gravel surface to a bitumen surface for the first 30 metres, to be completed during the summer 2024;</li> <li>• truck warning signs on Porters Bridge Road will be installed;</li> <li>• there is sufficient sight distance at the existing access for the prevailing operating speed of approaching vehicles, allowing vehicles to enter and leave the development site in a safe and efficient manner; and</li> <li>• the private access road to the quarry is considered fit for purpose, with users expected to be familiar with the nature and conditions of the road.</li> </ul>
<p><b>Stockpiling</b></p>	<p>The materials expected to be stockpiled include for example -</p> <ul style="list-style-type: none"> <li>• 7mm/10mm/20mm aggregate</li> <li>• 20mm Base A</li> <li>• 40mm Subbase</li> <li>• 65mm Class 4</li> <li>• 40/75 drainage aggregate</li> <li>• 100mm aggregate</li> <li>• Gabion Rock</li> <li>• Armour rock</li> </ul> <p>Other products as required to meet market demand.</p>
<p><b>Major equipment</b></p>	<p>The equipment likely to be used at some stage (ie not all the below listed equipment would be used concurrently) of the quarry operation is as follows:</p> <ul style="list-style-type: none"> <li>• Crushers / vibratory screens. wheel loaders, excavators;</li> <li>• Dozer D9N;</li> <li>• Drill rig (drilling contractor to provide as required);</li> <li>• Off-road haul trucks and transport trucks (medium combination truck &amp; trailer);</li> <li>• Pre-coat machine on compacted aggregate hardstand (DRAWING NUMBER: 1011/102 in <b>Attachment 3</b>);</li> <li>• 15,000L capacity water cart truck; and</li> <li>• Light vehicles for worker transport</li> </ul>
<p><b>Existing Infrastructure</b></p>	<p>The Quarry currently has the installed infrastructure and buildings –</p> <ul style="list-style-type: none"> <li>• an existing road/track into the extraction area which connects to the stockpile area (crushing/screening, stockpiling of finished material, and loading of trucks);</li> <li>• drains, culverts, and sediment ponds associated with the existing stockpile area and the working face; and</li> <li>• a portaloo (approximately 1 x 1 m in floor dimension and 2.5 m tall) is already provided at the Quarry.</li> </ul>

	<p>A mobile crib room (5.8 m long, 2.3 m wide and 2.3 m high). The crib room is used to store paperwork and safety equipment and the first aid station.</p>																				
<p><b>Proposed additional infrastructure</b></p>	<p>The following buildings and ancillary infrastructure are proposed to be installed to support the Quarry and include –</p> <ul style="list-style-type: none"> <li>• Office, toilet (staff amenities), workshop, self-bunded diesel fuel tank (20,000 litres maximum capacity), weighbridge (<b>Attachment 2</b>), and diesel-powered generator.</li> <li>• Expansion of the stockpile area (Expanded Stockpile Area, <b>Figure B-2</b>) to receive and store material post-production in the Pit, including additional car parking spaces and drainage systems including settling ponds.</li> </ul> <p>The Expanded Stockpile Area will cater for crushing/screening and stockpiling of finished material and truck loading and turning.</p> <p>Additional drains, and culverts will be installed to direct surface water flows to settling ponds.</p>																				
<p><b>Proposal timeline</b></p>	<p>It is anticipated that the activity will commence in the second quarter of the 2025-26 financial year (i.e., October to December 2025).</p>																				
<p><b>Operating hours</b></p>	<p>The following operating hours are proposed for the Quarry which are the same as those approved for the existing use.</p> <p>The operating hours align with the standard operating hours listed in the QCP <b>except</b> for a 0600 hrs start from Monday to Friday (excluding public holidays gazetted statewide) which is already approved for the activity.</p> <p>There is <b>no change</b> to the operating hours of the Quarry by the new application (operating hours remain unchanged from the current approval).</p> <table border="1"> <thead> <tr> <th>Clearing vegetation, ripping, stockpiling and associated earthworks</th> <th>Crushing and/or vibratory screening</th> <th>Loading and carting of product</th> <th>Drilling and blasting</th> </tr> </thead> <tbody> <tr> <td>0700 to 1900 hrs Monday to Friday</td> <td>0700 to 1900 hrs Monday to Friday</td> <td>0600 to 1900 hrs Monday to Friday</td> <td><u>Drilling</u> 0700 to 1900 hrs Monday to Friday</td> </tr> <tr> <td>0800 to 1600 hrs Saturday</td> <td>0800 to 1600 hrs Saturday</td> <td>0800 to 1600 hrs Saturday</td> <td>0800 to 1600 hrs Saturday</td> </tr> <tr> <td colspan="4">Not on Sunday and public holidays gazetted statewide</td> </tr> <tr> <td colspan="4"><u>Blasting</u> 1000 to 1600 hrs Monday to Friday</td> </tr> </tbody> </table> <p style="text-align: center; background-color: #fce4d6;"><b>No activity on Sunday and public holidays gazetted statewide</b></p>	Clearing vegetation, ripping, stockpiling and associated earthworks	Crushing and/or vibratory screening	Loading and carting of product	Drilling and blasting	0700 to 1900 hrs Monday to Friday	0700 to 1900 hrs Monday to Friday	0600 to 1900 hrs Monday to Friday	<u>Drilling</u> 0700 to 1900 hrs Monday to Friday	0800 to 1600 hrs Saturday	0800 to 1600 hrs Saturday	0800 to 1600 hrs Saturday	0800 to 1600 hrs Saturday	Not on Sunday and public holidays gazetted statewide				<u>Blasting</u> 1000 to 1600 hrs Monday to Friday			
Clearing vegetation, ripping, stockpiling and associated earthworks	Crushing and/or vibratory screening	Loading and carting of product	Drilling and blasting																		
0700 to 1900 hrs Monday to Friday	0700 to 1900 hrs Monday to Friday	0600 to 1900 hrs Monday to Friday	<u>Drilling</u> 0700 to 1900 hrs Monday to Friday																		
0800 to 1600 hrs Saturday	0800 to 1600 hrs Saturday	0800 to 1600 hrs Saturday	0800 to 1600 hrs Saturday																		
Not on Sunday and public holidays gazetted statewide																					
<u>Blasting</u> 1000 to 1600 hrs Monday to Friday																					

476000

477000

478000

5407000

5406000

5405000

# PORTERS BRIDGE ROAD QUARRY

## ENVIRONMENTAL IMPACT STATEMENT (EIS)

Figure B-1: Access to Porters Bridge Road Quarry and Surrounding Roads

**TASMAP:**  
DELORAINE  
4640

**LGA:**  
MEANDER  
VALLEY

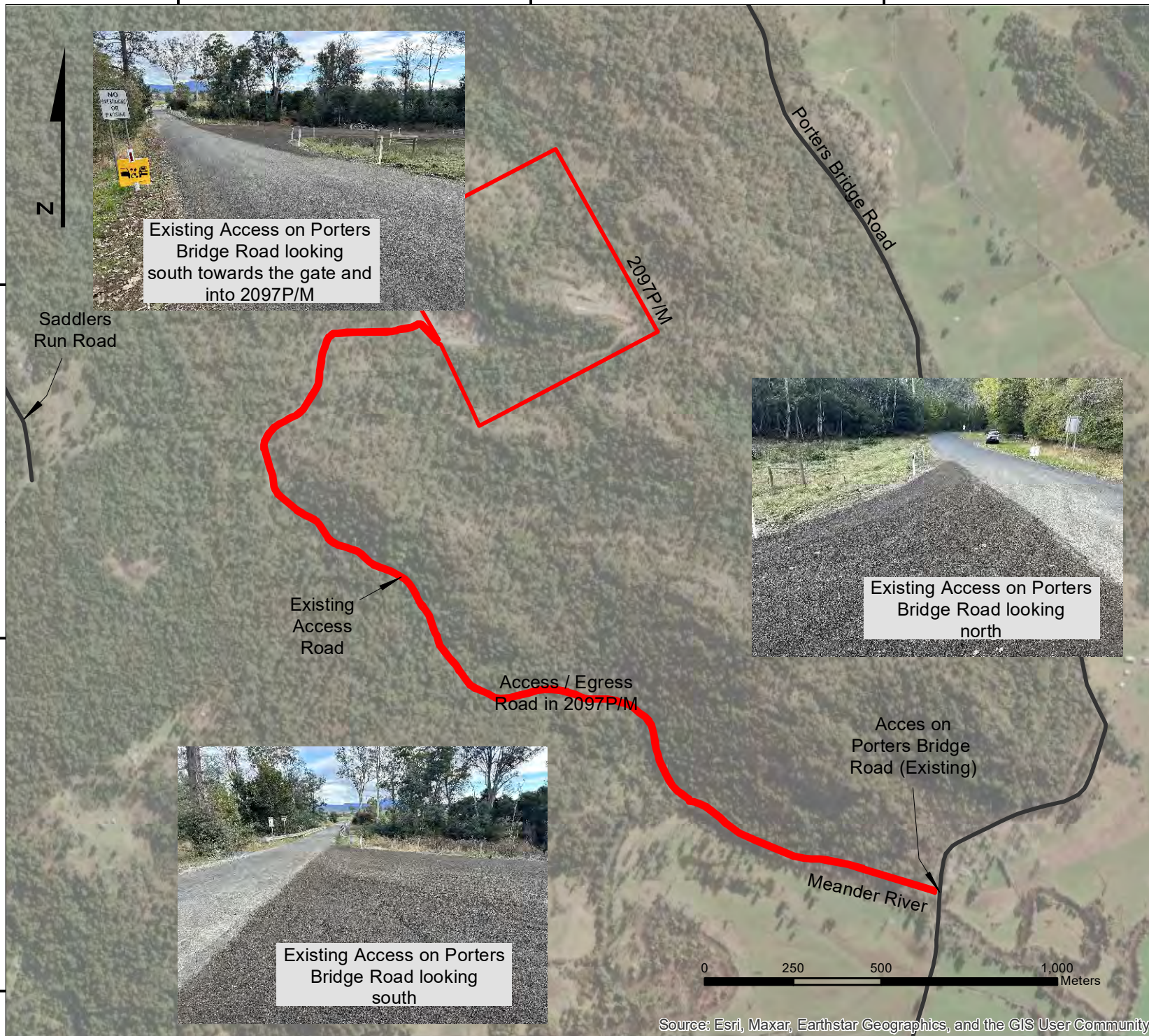
Base data by TASMAP. © State of Tasmania  
Base image by © ESRI



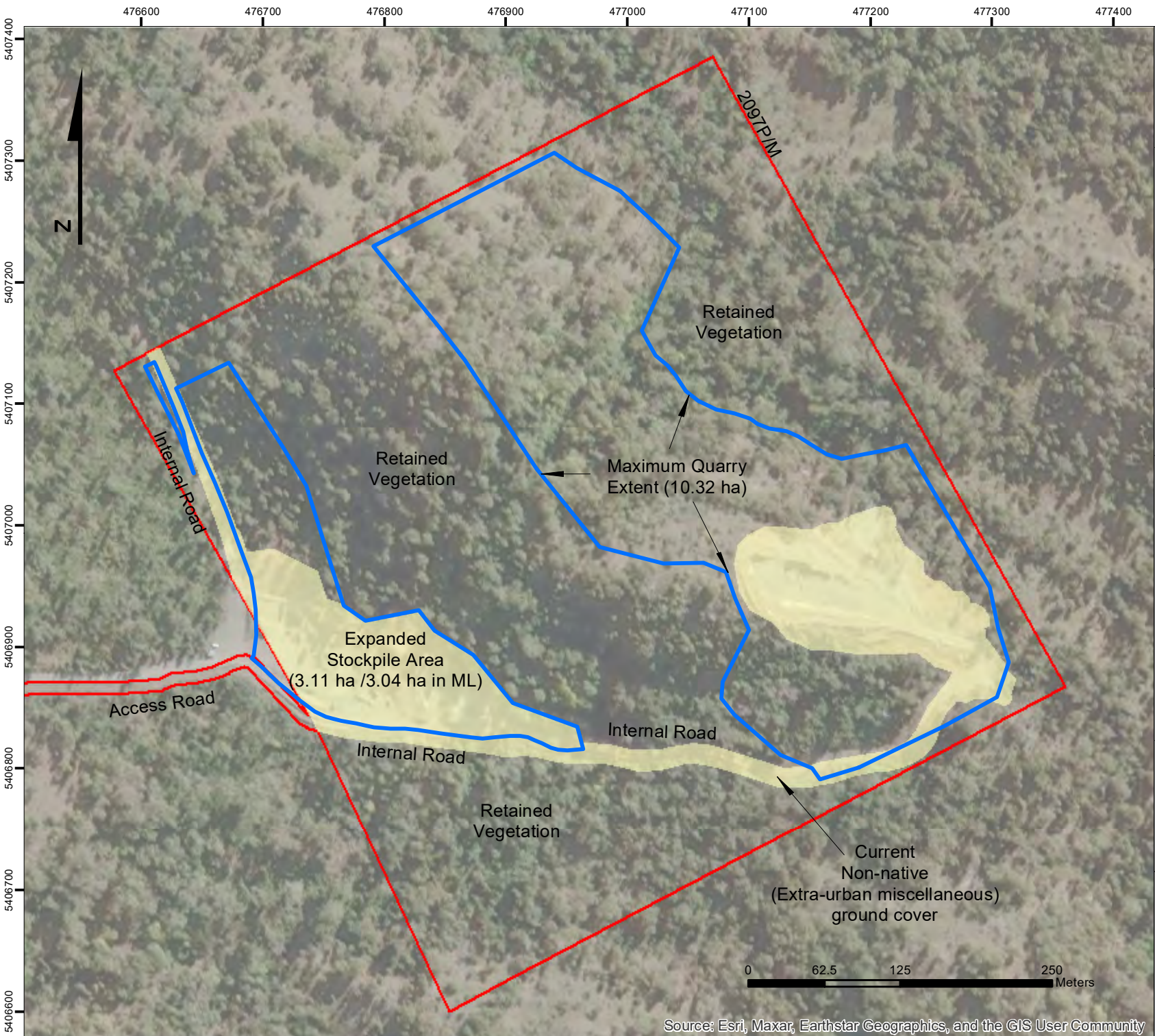
DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



# PORTERS BRIDGE ROAD QUARRY

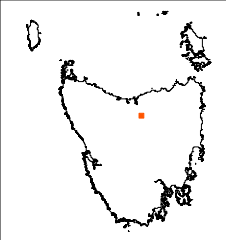
## ENVIRONMENTAL IMPACT STATEMENT (EIS)

Figure B-2: Site Development Areas

**TASMAP:**  
DELORAINÉ  
4640

**LGA:**  
MEANDER VALLEY

Base data by TASMAP. © State of Tasmania  
Base image by © ESRI



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS CONTRACTING PTY LTD

DATE: 5 APR 2025

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

476000

477000

478000

# PORTERS BRIDGE ROAD QUARRY

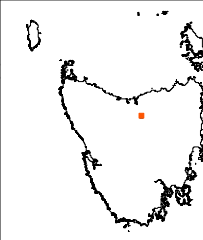
## ENVIRONMENTAL IMPACT STATEMENT (EIS)

Figure E-1: Zone Map - Meander Valley Local Provisions Schedule

**TASMAP:**  
DELORAINE  
4640

**LGA:**  
MEANDER  
VALLEY

Base data by TASMAP. © State of Tasmania  
Base image by TASMAP. © State of Tasmania



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

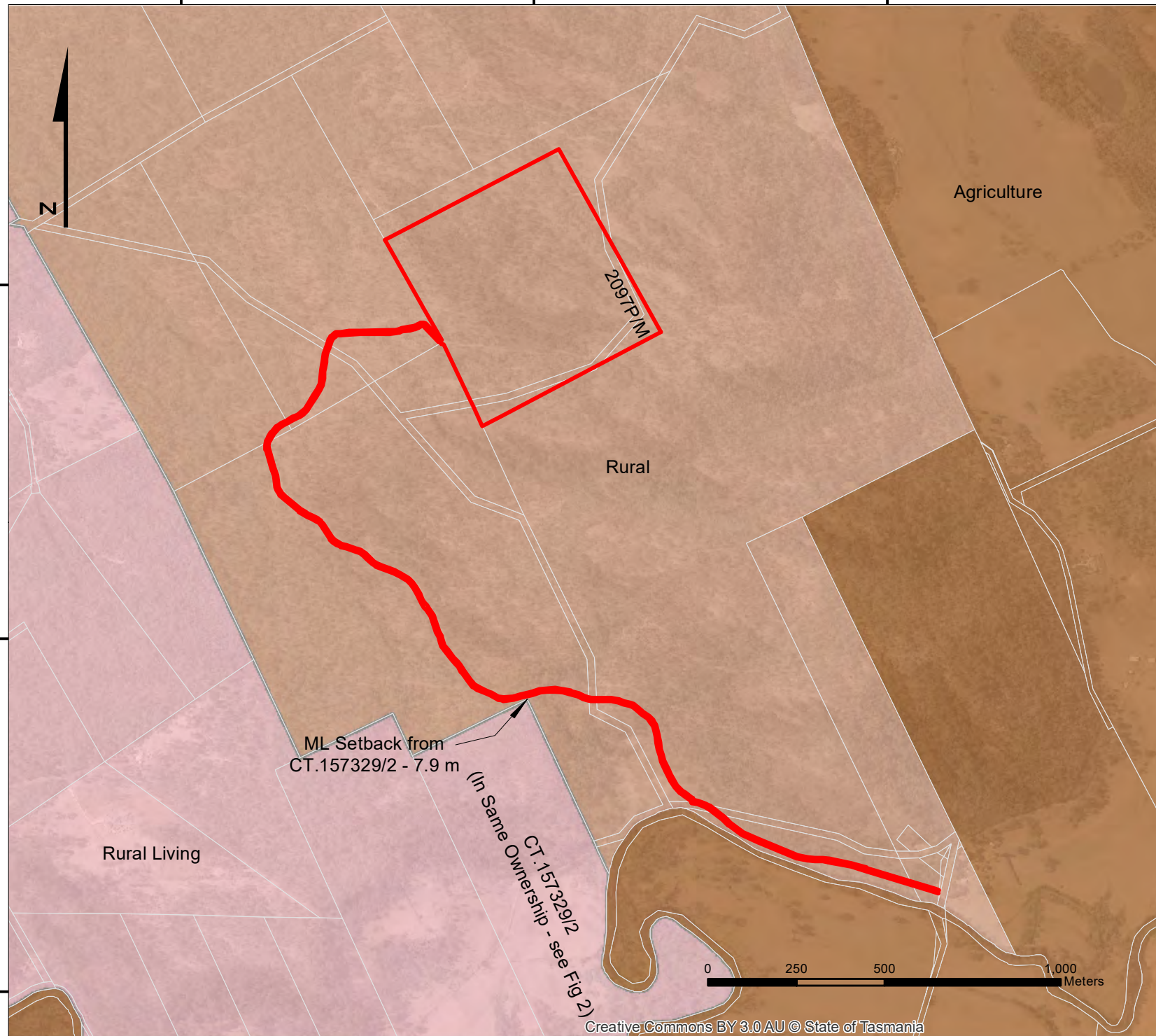
CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025

5407000

5406000

5405000



476000

477000

478000

# PORTERS BRIDGE ROAD QUARRY

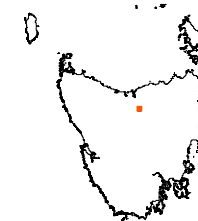
## ENVIRONMENTAL IMPACT STATEMENT (EIS)

Figure E-2: General Overlays - Meander Valley Local Provisions Schedule

**TASMAP:**  
DELORAINE  
4640

**LGA:**  
MEANDER  
VALLEY

Base data by TASMAP. © State of Tasmania  
Base image by © ESRI



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025

5407000

5406000

5405000

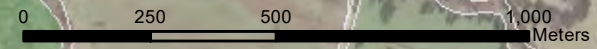
N

2097P/M

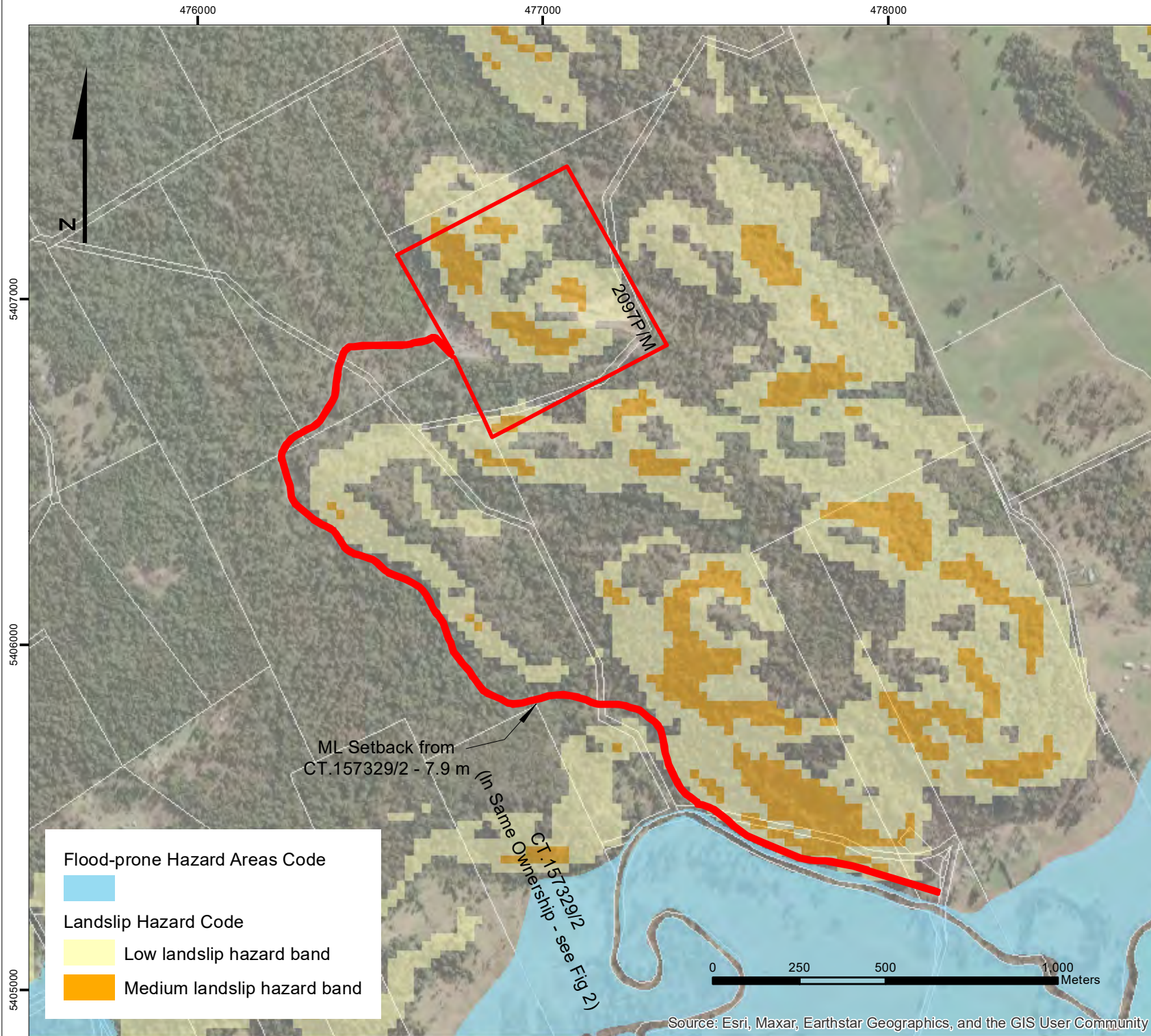
ML Setback from  
CT.157329/2 - 7.9 m

(In Same Ownership - see Fig 2)  
CT.157329/2

Reedy Marsh  
Specific Area Plan



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



# PORTERS BRIDGE ROAD QUARRY

## ENVIRONMENTAL IMPACT STATEMENT (EIS)

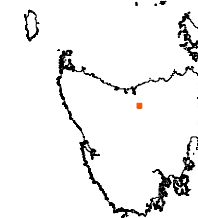
Figure E-3a: Code Overlays - Meander Valley Local Provisions Schedule

**TASMAP:**  
DELORAINE  
4640

**LGA:**  
MEANDER  
VALLEY

Note:  
Entire map area is:  
Bushfire-prone Areas Code  
Bushfire-prone area

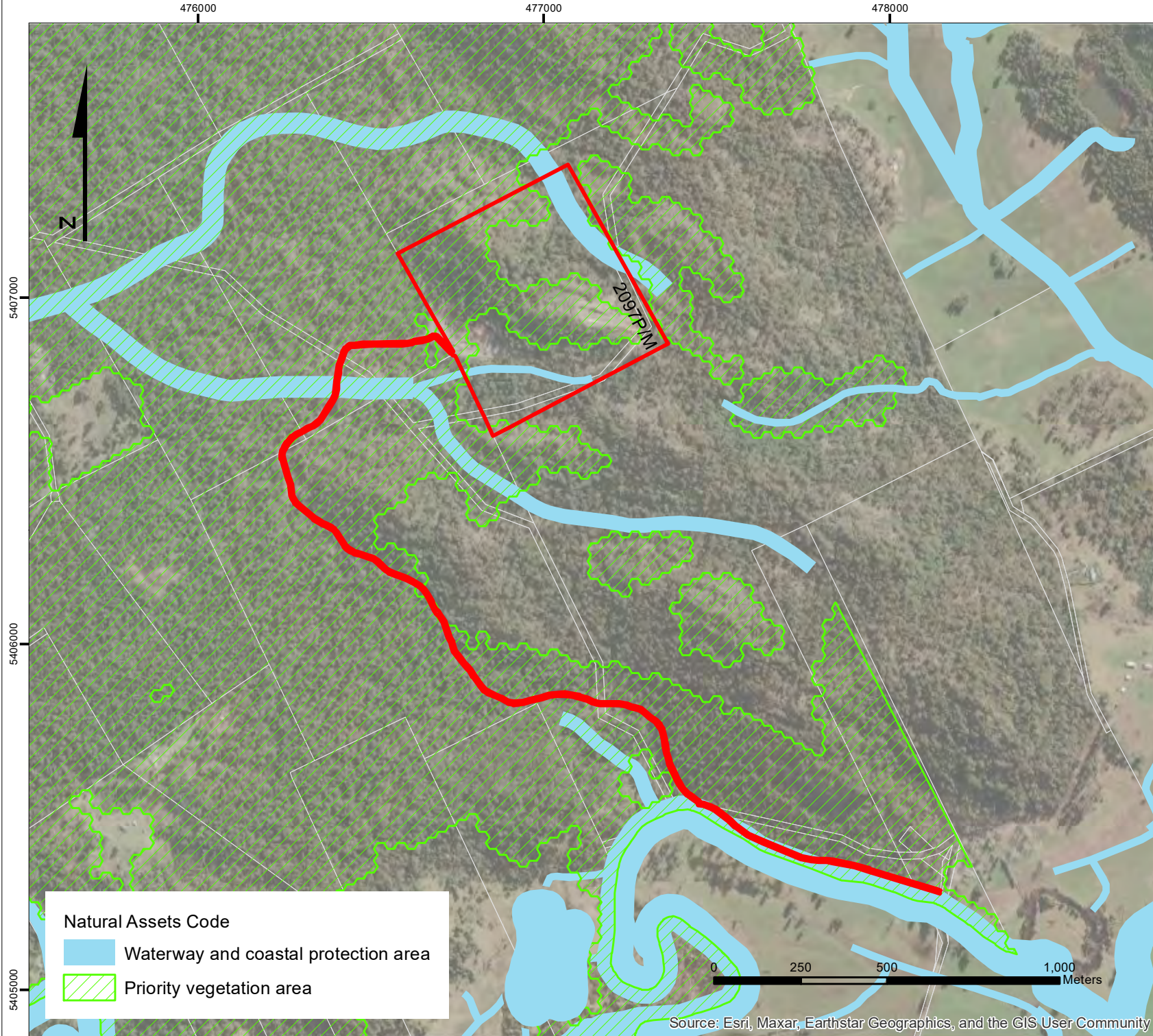
Base data by TASMAP. © State of Tasmania  
Base image © ESRI



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025



**Natural Assets Code**

- Waterway and coastal protection area
- Priority vegetation area

# PORTERS BRIDGE ROAD QUARRY

## ENVIRONMENTAL IMPACT STATEMENT (EIS)

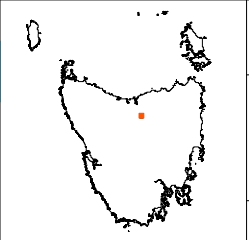
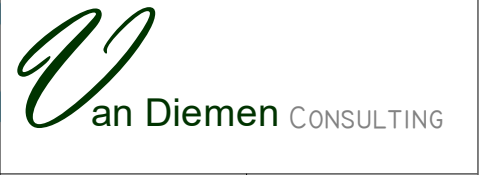
Figure E-3b: Code Overlays - Meander Valley Local Provisions Schedule

**TASMAP:**  
DELORAINE  
4640

**LGA:**  
MEANDER VALLEY

**Note:**  
Entire map area is:  
Bushfire-prone Areas Code  
Bushfire-prone area

Base data by TASMAP. © State of Tasmania  
Base image © ESRI

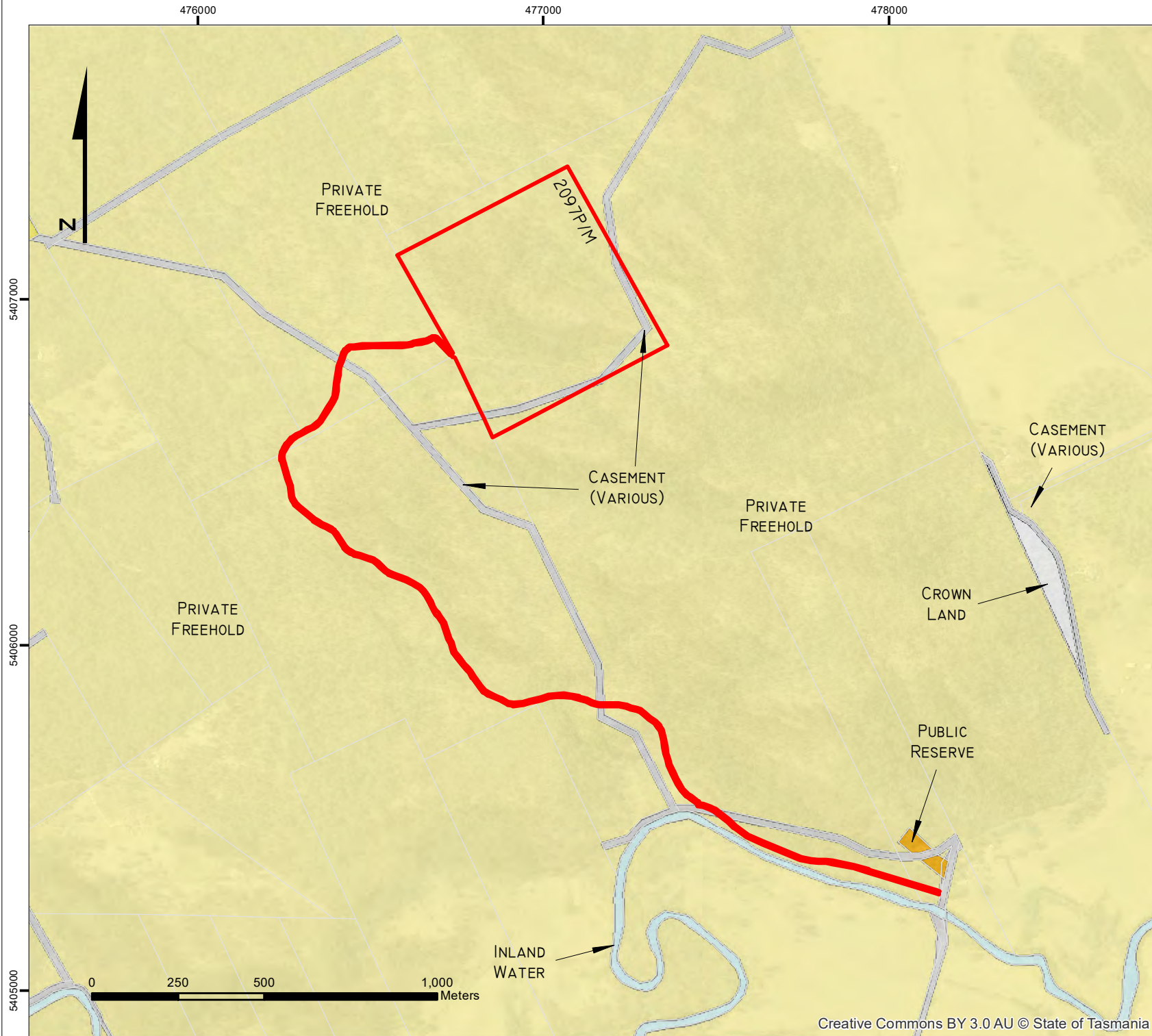


DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS CONTRACTING PTY LTD

DATE: 5 APR 2025

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



# PORTERS BRIDGE ROAD QUARRY

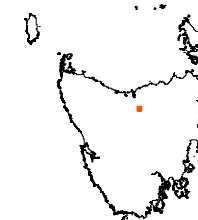
## ENVIRONMENTAL IMPACT STATEMENT (EIS)

Figure E-4a: Land Tenure Classification around Porters Bridge Road Quarry

**TASMAP:**  
DELORAINÉ  
4640

**LGA:**  
MEANDER VALLEY

Base data by TASMAP. © State of Tasmania  
Base image by TASMAP. © State of Tasmania



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

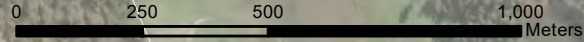
CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025

476000

477000

478000



# PORTERS BRIDGE ROAD QUARRY

## ENVIRONMENTAL IMPACT STATEMENT (EIS)

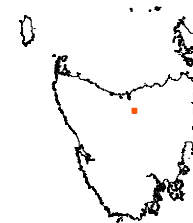
Figure E-4b: Public and Private Reserves around Porters Bridge Road Quarry

**TASMAP:**  
DELORAINE  
4640

**LGA:**  
MEANDER  
VALLEY

Base data by TASMAP. © State of Tasmania  
Base image by © ESRI

INFORMAL RESERVE  
ON OTHER PUBLIC LAND



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025

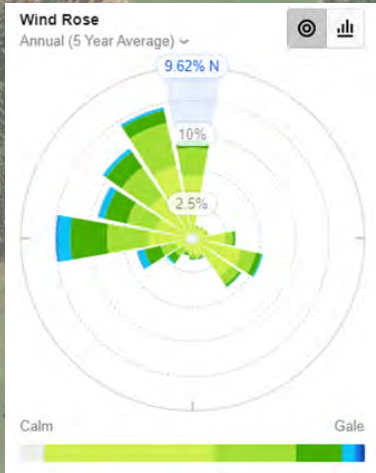
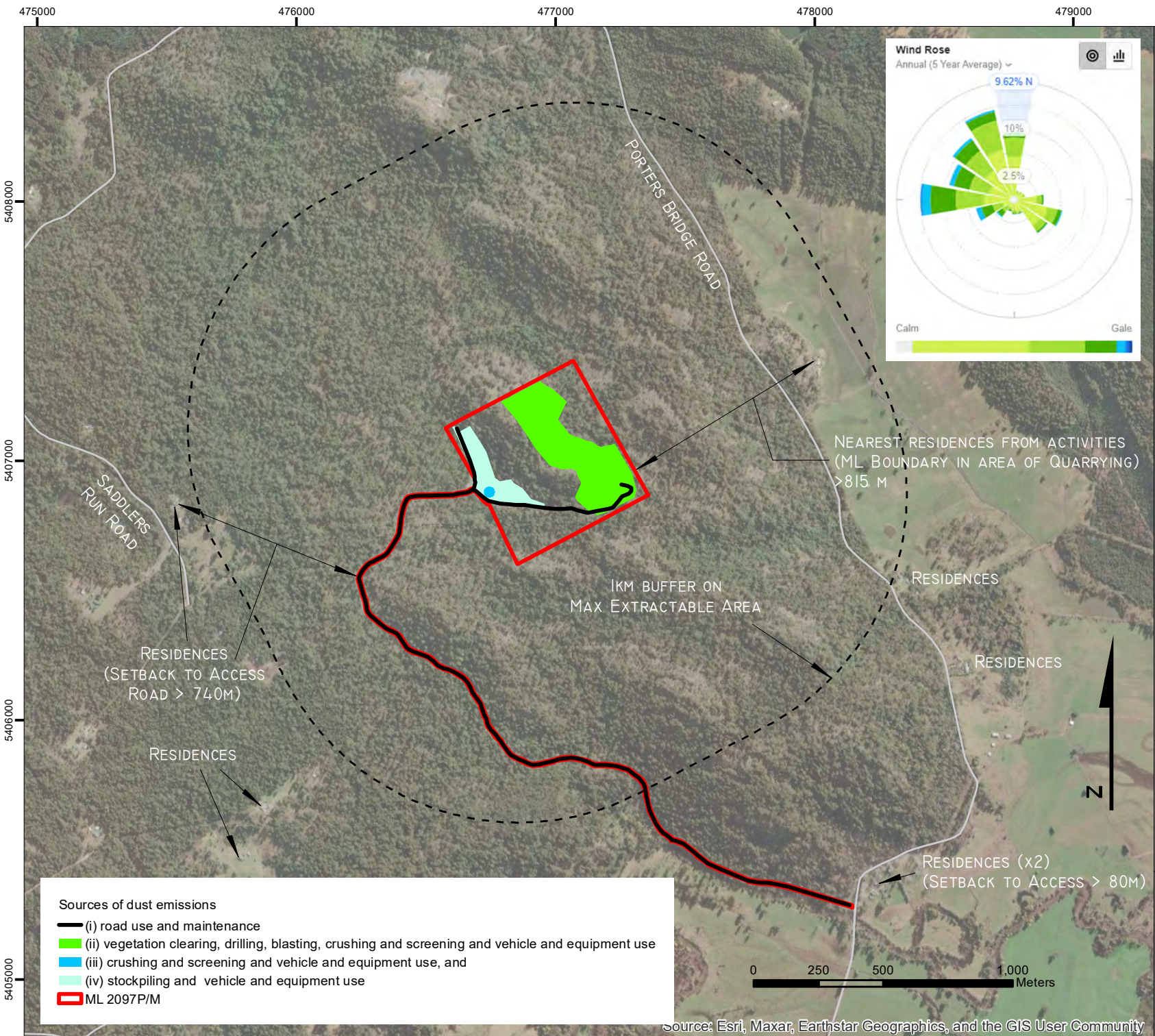
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

5407000

5406000

5405000

N



# PORTERS BRIDGE ROAD QUARRY

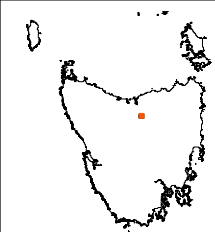
## ENVIRONMENTAL IMPACT STATEMENT (EIS)

Figure E-5: Nearest residences from activities at the Porters Bridge Road Quarry

**TASMAP:**  
DELORAINÉ  
4640

**LGA:**  
MEANDER VALLEY

Base data by TASMAP. © State of Tasmania  
Base image © ESRI



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS CONTRACTING PTY LTD

DATE: 5 APR 2025

- Sources of dust emissions**
- (i) road use and maintenance
  - (ii) vegetation clearing, drilling, blasting, crushing and screening and vehicle and equipment use
  - (iii) crushing and screening and vehicle and equipment use, and
  - (iv) stockpiling and vehicle and equipment use
  - ML 2097P/M

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

**B.2 DESCRIPTION OF SITE AND SURROUNDS**

<b>Land Use and surrounding Land Use</b>	<p>The current land use is forestry (native forest silviculture) and some livestock grazing. Large areas of the land on which the ML is located is retained native vegetation and silvicultural regrowth (selectively harvested forest).</p> <p>Surrounding land use is agriculture (mainly livestock grazing, forestry), conservation (private reserves), rural residential and other extractive industries.</p>
<b>Topography and Catchments</b>	<p>The main portion of the Land where extraction activities are to occur is formed by two dolerite hills with a small saddle between them. The hills are generally aligned north-west to south-east and have steep south-west facing slopes.</p> <p>Drainage lines (<b>Figure E-7</b>) occur south and north-east of the Maximum Quarry Extent. Two minor un-named tributaries occur in the main section of the Mining Lease and flow to the west and north-west of the Maximum Quarry Extent. All drainage from the extraction point in the Mining Lease eventually reports to Dungiven Rivulet via two minor un-named tributaries. Water passes through about 5.5 kms of waterway prior to reporting at the Meander River to the south-west of the Maximum Quarry Extent.</p>
<b>Climate</b>	<p>Mean annual rainfall: 927 mm</p> <p>Mean February max.-min. temperature: 22.5 °C, 8.7 °C</p> <p>Mean July max.-min. temperature: 10.4 °C, 0.9 °C</p>
<b>Geology and soils</b>	<p>The basement geology is Jurassic dolerite which outcrops as the hills in the Porters Bridge Road region (<b>Figure E-6</b>). The flats associated with the Meander River valley system are Quaternary alluvium deposits.</p> <p><i>Kd - Krasnozems on dolerite<sup>5</sup></i></p> <p>Ferrosol. Deep red or brown rocky clayey soils developed on Jurassic Dolerite on moderately steep (10-32%) hillslopes. The two main occurrences of these soils are northeast of Deloraine and southeast of Meander. Slopes are generally moderate to steep, and rock outcrop is common.</p>
<b>Natural Values</b>	<p>A summary of detailed natural value information in <b>Attachment 3</b> is provided here:</p> <p>Forest types and other land use categories in the Development Area (<b>Figure E-8A and E-8B</b>) are:</p> <ul style="list-style-type: none"> <li>• <i>Eucalyptus amygdalina</i> forest and woodland on dolerite</li> <li>• <i>Eucalyptus ovata</i> forest and woodland</li> <li>• Extra Urban Miscellaneous (access road)</li> <li>• Regenerating cleared land</li> </ul>

<sup>5</sup> QUAMBY SOIL REPORT. Reconnaissance Soil Map Series of Tasmania. A Revised Edition by Stacey Spanswick & Peter Zund. Department of Primary Industries, Water and Environment. Tasmania. 1999 of Divisional Report 9/58 Quamby By K.D Nicolls C.S.I.R.O Division of Soils, Adelaide, 1959.

	<p>Forest types bordering the existing access road:</p> <ul style="list-style-type: none"> <li>• <i>Eucalyptus amygdalina</i> forest and woodland on dolerite</li> <li>• <i>Eucalyptus ovata</i> forest and woodland</li> <li>• <i>Eucalyptus viminalis</i> grassy forest and woodland</li> <li>• <i>Eucalyptus viminalis</i> wet forest</li> </ul> <p>Threatened flora species (in and near the Development Area):</p> <ul style="list-style-type: none"> <li>• <i>Pimelea curviflora</i> subsp. <i>gracilis</i> (curved riceflower) – r/-</li> </ul> <p>Threatened fauna species (within 500 metres of the Development Area):</p> <ul style="list-style-type: none"> <li>• <i>Aquila audax</i> ssp. <i>fleayi</i> (wedge-tailed eagle) - nest</li> </ul> <p>Threatened fauna species (range boundaries):</p> <ul style="list-style-type: none"> <li>• <i>Pseudemoia pagenstecheri</i> (tussock skink)</li> <li>• <i>Aquila audax</i> ssp. <i>fleayi</i> (wedge-tailed eagle)</li> <li>• <i>Tyto novaehollandiae</i> ssp. <i>castanops</i> (masked owl (Tasmanian))</li> <li>• <i>Litoria raniformis</i> (green and gold frog)</li> <li>• <i>Dasyurus maculatus</i> ssp. <i>maculatus</i> (spotted-tailed quoll)</li> <li>• <i>Perameles gunnii</i> (eastern barred bandicoot)</li> <li>• <i>Lathamus discolor</i> (swift parrot)</li> <li>• <i>Galaxias fontanus</i> (swan galaxias)</li> <li>• <i>Accipiter novaehollandiae</i> (grey goshawk)</li> <li>• <i>Sarcophilus harrisi</i> (Tasmanian devil)</li> <li>• <i>Prototroctes maraena</i> (Australian grayling)</li> <li>• <i>Haliaeetus leucogaster</i> (white-bellied sea-eagle)</li> <li>• <i>Catadromus lacordairei</i> (three-lined beetle)</li> </ul>						
<p><b>Nearest residences</b></p>	<p>The table below provides distances to single sensitive receptors relevant to the Quarry (<b>Figure E-5</b>) and some comments about the potential for noise nuisance.</p> <table border="1"> <thead> <tr> <th>Feature and comments</th> <th>Distance to ML (m)</th> </tr> </thead> <tbody> <tr> <td>Single dwelling (existing) in other ownership nearest to an extraction area is east of the Quarry; the intervening hills provide topographic shielding to it. Given the topographic shielding and distance between source and receptor it is unlikely that noise (including drilling and blasting) would cause an environmental nuisance.</td> <td>&gt;815 m</td> </tr> <tr> <td>Part of the access road is located at its western extent near a residential dwelling</td> <td>&gt;740m</td> </tr> </tbody> </table>	Feature and comments	Distance to ML (m)	Single dwelling (existing) in other ownership nearest to an extraction area is east of the Quarry; the intervening hills provide topographic shielding to it. Given the topographic shielding and distance between source and receptor it is unlikely that noise (including drilling and blasting) would cause an environmental nuisance.	>815 m	Part of the access road is located at its western extent near a residential dwelling	>740m
Feature and comments	Distance to ML (m)						
Single dwelling (existing) in other ownership nearest to an extraction area is east of the Quarry; the intervening hills provide topographic shielding to it. Given the topographic shielding and distance between source and receptor it is unlikely that noise (including drilling and blasting) would cause an environmental nuisance.	>815 m						
Part of the access road is located at its western extent near a residential dwelling	>740m						

	<p>Two dwellings (existing) owned by the owner of the Land nearest to the junction of access road and Porters Bridge Road. The dwellings are located east of Porters Bridge Road, and north of the access into the Quarry from Porters Bridge Road. The dwellings are already subject to other road/traffic noise. Traffic noise is intermittent and variable, and given the distance is unlikely to cause environmental nuisance.</p>	80
--	--	----

**PART C – POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

The following sections describe and assess the potential environmental impacts that may be caused by the Development.

For each potential environmental impact that has a risk to cause environmental harm or nuisance, such as dust and noise, the risk matrix provided in **Plate 1** was used to assess the risk of prior to and then after the implementation of controls.

**Plate 1. Risk Assessment Matrix for environmental matters relevant to the Porters Bridge Road Quarry**

<b>RISK MATRIX</b>		<b>IMPACT</b>				
		NEGLECTIBLE	MINOR	MODERATE	MAJOR	CATASTROPHIC
<b>PROBABILITY</b>	ALMOST CERTAIN	LOW MED	MEDIUM	MED HIGH	HIGH	HIGH
	LIKELY	LOW	LOW MED	MEDIUM	MED HIGH	HIGH
	POSSIBLE	LOW	LOW MED	MEDIUM	MED HIGH	MED HIGH
	UNLIKELY	LOW	LOW MED	LOW MED	MEDIUM	MED HIGH
	VERY UNLIKELY	LOW	LOW	LOW MED	MEDIUM	MEDIUM

**PROBABILITY (ALSO KNOWN AS ‘LIKELIHOOD’)**

The first step is to assess the probability of a hazard (in this case an ‘impact’) causing harm, or the risk happening. Probability is based on what is known, or should be known, about the hazard and the way circumstances and activities affect the hazard. This can be done in different ways and will dictate the precision of the assessment, but the most common way to rate the likelihood of a risk is using five level descriptors:

1. **Very Unlikely** - could happen but probably never will, or only in exceptional circumstances;
2. **Unlikely** - not likely to happen in normal circumstances;
3. **Possible** - may happen at some time in the future;
4. **Likely** - will probably happen at some time; and
5. **Almost certain** - expected to happen under normal circumstances.

The following information can be useful when estimating the probability of a risk:

- Previous occurrences in the business or across the industry can give a good indication about likelihood, such as incidents and near misses;

- Controls that are already in place and how effective they are (usually obtained by audits, reviews, and advice received from regulators and other experts as to the type of possible controls and their performance when implemented). This also often considered when reassessing risks that have been reduced (or residual risks);
- Frequency of a specific hazard (impact). The more often the hazard is present, the greater the likelihood that it will cause harm;
- Changes in operation conditions that could eventually influence likelihood of a hazard causing harm, which in the case of an extractive industry include may for example weather conditions; and
- Staff behaviour and familiarity with existing processes and procedures.

### **IMPACT (ALSO KNOWN AS ‘CONSEQUENCE’)**

The second step is to work out the harm (or damage) that each hazard could cause to both the environment and human health, and how severe this harm could be. This process should consider existing controls and how effective they are, as well as the degree of harm if no controls were in place. There are many kinds of harm, and a single incident might cause multiple types of impact. For example, the same incident might cause harm to both the environment as well as human health. As well as the probability (likelihood) rating system, the description for consequence can be done in different ways, using a quantitative approach or qualitative categories from low to severe.

The following five levels can be used to assess and describe consequence of harm to the environment and human health:

1. **Negligible** - no or minimal environmental impact, or no health and wellbeing impacts. Environmental harm is limited to a localised area with rapid recovery without effort.
2. **Minor** - low environmental impact / low potential for health and wellbeing impacts. Minimal environmental harm recognised at the local and regional level and/or localised but minor instances of environmental harm that can be reversed with minimal efforts.
3. **Moderate** - medium level of harm to health and wellbeing or the environment over an extended period. Moderate environmental harm recognised at the state level and/or semi-permanent loss of environmental value and risk of continuing environmental harm.
4. **Major** - serious environment harm / high-level harm to health and wellbeing. Major environmental harm recognised at the national level and/or loss of impairment to an ecosystem or species recognised at the state or regional level and/or difficulty recovering from environmental damage and stemming ongoing environmental harm.
5. **Catastrophic** - permanent or long-term serious environmental harm / life threatening or long-term harm to health and wellbeing. Severe damage and/or significant loss and/or impairment and/or permanent destruction of ecosystems or species recognised at the local, regional, state or national level and/or permanent and widespread loss of environmental value and progressive irrecoverable environmental harm.

The consequence described should be in its most normal form and not the extreme form. Using extreme form of the consequences does not add value to the process as all risks would end up in the ‘extreme’ and ‘high’ levels of risks, which would make it difficult to prioritise control measures and further action where required.

**RISK LEVEL**

After the consequences and likelihood of the risk have been considered, these must be looked at together to determine the overall risk level (or risk rating). A rating system normally consists of four or five level descriptors for both likelihood and consequence. The simplest way to calculate the risk level is to apply the following formula: Risk level = likelihood x consequence.

The rating system applied in this EIS is outlined below.

Risk Level	Description
Low	Acceptable level or risk. Attempt to eliminate risk but higher risk levels take priority.
Low – Medium	Acceptable level or risk. Attempt to eliminate risk but higher risk levels take priority.
Medium	Can be acceptable if controls are in place. Attempt to reduce to low.
Medium – High	Unacceptable level of risk. Controls must be put in place to reduce to lower levels.
High	Totally unacceptable level of risk. Stop work and/or act immediately.

Mitigation (‘control’) measures are described in this section for each environmental theme to mitigate or manage the identified risks of causing environmental nuisance.

**C-1 AIR EMISSIONS – DUST**

*C-1-1 EXISTING CONDITIONS*

The primary air emission associated with quarry operations is dust. Dust can be a nuisance to neighbours and may be a safety hazard to quarry employees. Generally, according to the QCP the emission of visible dust should be confined within the boundary of the premises, except in remote areas where the effects beyond the site may not cause an environmental nuisance or harm.

There are existing sources of dust emissions in the surrounding landscape, including agricultural uses (ploughing, cropping, harvesting), gravel roads, forestry related activities and other quarry activities.

The nearest sensitive uses are dwellings identified in **Figure E-5**. The closest residence to the point of extraction (MEA) is 815m to the north-east of the Quarry while the closest residence to the actual access road into the Quarry is about 740m to the north-west.

There have been no complaints about dust emissions received via the EPA or directly by the existing Quarry operator/owner (the Proponent for the Development).

C-1-2 PERFORMANCE REQUIREMENTS

Document	Requirements/Guidance
<p><b>Environment Protection Policy (Air Quality) 2004</b></p>	<p style="text-align: center;"><b>Part 5 - MANAGING DIFFUSE SOURCES OF AIR CONTAMINANTS</b></p> <p><b>Management of diffuse sources of air pollution</b></p> <p><b>16. (1)</b> Regulatory authorities should manage and regulate diffuse sources of air pollution that have the potential to cause material or serious environmental harm or an environmental nuisance in such a manner as will protect the environmental values identified in this Policy.</p> <p><b>(2)</b> Diffuse sources of air pollution should be managed using best practice environmental management so as to:</p> <p style="padding-left: 20px;"><b>(a)</b> minimise emissions; and</p> <p style="padding-left: 20px;"><b>(b)</b> manage those emissions that are unavoidable in a manner that minimises impacts on health, safety or amenity.</p> <p><b>(3)</b> Diffuse sources of air pollution should be managed in accordance with any relevant guidelines published, adopted or endorsed by the Board for the purposes of this clause.</p> <p><b>(4)</b> Diffuse sources of air pollution must be managed in accordance with any regulations made under the Act.</p> <p>The Air EPP is supported by the EPA Board Statement January 2022 ‘Update to Air Pollutant Design Criteria used in the Environmental Impact Assessment Process’ which clarifies how the EPA Board uses and implements the Environment Protection Policy (Air Quality) 2004 (Air EPP) during the environmental impact assessment (EIA) process and provides important updates to air pollutant design criteria.</p> <p>The EPA did not require atmospheric dispersion modelling for the Development which indicates that the emission of air pollutants from the Activity is unlikely to cause environmental harm or nuisance.</p>
<p><b>Quarry Code of Practice</b></p>	<p>Key considerations include:</p> <ul style="list-style-type: none"> <li>• Dust should not normally be visible crossing the boundary of the premises.</li> <li>• Environmental factors, such as wind conditions, may on occasion, make the retention of all visible dust on the site impossible. In such cases, the operator must take all reasonable actions to ensure that the emission of dust from the premises is minimised.</li> <li>• Roads within the boundary of the premises must be watered or sealed when necessary or when directed by the approval authority, to minimise environmental nuisance.</li> <li>• Trucks must utilise effective dust control measures such as tarpaulins, load dampening when travelling by public roads and carrying loads containing a significant quantity of material that passes a 4-millimetre sieve.</li> <li>• Dust produced by the operation of the Pit or by transport, crushing and screening plant must be effectively controlled to the satisfaction of the approval authority.</li> </ul>

### C-1-3 SOURCES OF DUST EMISSIONS AND POTENTIAL IMPACTS

The risk of dust emissions from the Development causing environmental nuisance is low due to the lack of any nearby sensitive premise (**Figure E-5**) and any other area where people congregate.

#### Sources of fugitive emissions

The most likely sources of fugitive dust are from the use of the unsealed part of the access road (Quarry internal roads and the access road through to Porters Bridge Road) and the act of crushing and screening material. These are typical activities for any hard-rock quarry generating aggregates and are assessed to be of very low to low risk given the distances to Nearest Sensitive Premises relative to the prevailing wind and other climatic patterns (see **Figure E-5, Plate 2**).

Other potential sources of fugitive dust at the Quarry are from:

- Blasting, drilling, and ripping of rock during dry windy conditions (especially in the summer months);
- The stripping and stockpiling of topsoil (limited as the amount of topsoil is low);
- The movement of rock and gravel by machinery within the Quarry;
- Crushing and/or vibratory screening of rock material;
- Use of the diesel generator;
- Use of pre-coat machine;
- Road (gravel) uses in and out of the Quarry; and
- Stockpiled gravel and fines.

#### Health Impacts and Environmental Nuisance

Human health effects of dust tend to be associated with particles with an aerodynamic diameter of 10 µm or less ( $\leq PM_{10}$ ). These smaller particles tend to remain suspended in the air for longer periods and can penetrate the lungs. The  $PM_{10-2.5}$  fraction (coarse fraction) is termed “thoracic particles”. These particles are inhaled into the upper part of the airways and lung.  $PM_{2.5}$  particles are fine particles that are inhaled more deeply and lodge in the gas exchange region (alveolar region) of the human lung and are termed “respirable dust”. Further, if contaminated, these fine particles may pose a further health risk through absorption of the chemicals on the particles in the blood stream.

The World Health Organisation (WHO) and United States Environmental Protection Agency (USEPA) indicate that numerous scientific studies have linked particle pollution exposure to various health effects, including: -

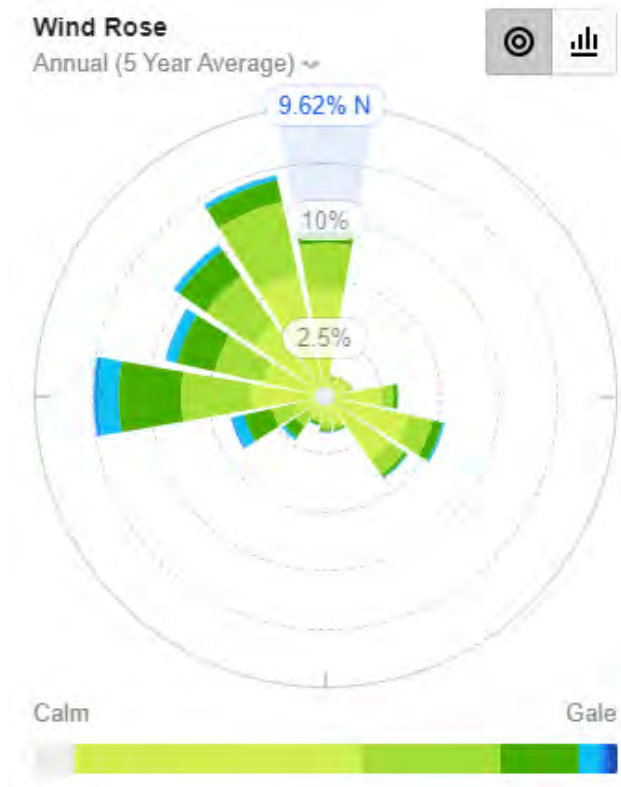
- increased respiratory symptoms, such as irritation of the airways, coughing, aggravated asthma, development of chronic bronchitis, and breathing difficulty through decreased lung function;
- irregular heartbeat and non-fatal heart attacks; and
- premature death in people with heart or lung disease.

The nearest sensitive uses are dwellings identified in **Figure E-5**.

The closest residence to the point of extraction (MEA) is 815m to the north-east of the Quarry while the closest residence to the actual access road into the Quarry is about 740m to the north-west. Wind direction is predominantly from the west through to the north-west and north (**Plate 2**) which would carry any dust emitted by the activity eastwards and southwards. Easterlies to south easterlies are not very common in this region, and when they do occur, they tend to be of low wind speed and associated with easterly rainfall events, mitigating any dust emissions.

The access into the Land (being the Mining Lease) is to the west of dwellings near Porters Bridge Road (a sealed road). The access is sealed where it meets Porters Bridge Road to minimise dust generation (and the dragging of dirt onto the sealed road surface where it may become dust generating when dry). The access through to the Quarry is tree-lined, being native forest with well-developed midstorey and understorey layers. Native vegetation continues from the access along the full length of the road into the point of extraction and associated Expanded Stockpile Area. The immediate junction of the access road with Porters Bridge Road and part of the unsealed access road is shielded topographically by a hill to the north-west which mitigates the west and north-west dry winds that may otherwise direct dust emissions towards the dwellings.

**Plate 2. Wind rose for the Exton area**



Dust can have a general nuisance impact through its deposition on buildings and associated infrastructure such as solar panels and sensitive equipment. The actual visibility of dust emissions leaving a site can have a negative response from the broader community even if it does not represent a danger to health. Dust

generated using the unsealed road is of low volume and localised in its spread given the low speed of trucks using the road and low dust potential of the road surface material (both existing and the material to be used to improve the road surface); the use of passing bays and call-up procedures keeps truck traffic slow along the entire access road.

Dust can have an impact on vegetation too, both physically and chemically. When dust settles, it often does so on trees, plants and crops. This settling can restrict plants' natural processes: photosynthesis, respiration and transpiration. It may block sunlight and hinders the movement of gases and water, ultimately harming plant growth and crop yield. Dust emitted onto native vegetation is unlikely to have any material or long-lasting impact given the high rainfall experienced by the area. The effect of dust on agricultural activities, even from additional truck movements along the access road, is unlikely to have any significant effect to crop yield or pasture growth.

#### *C-1-4 RISK ASSESSMENT, AND AVOIDANCE AND MITIGATION MANAGEMENT*

Dust emissions will be managed to the extent necessary to prevent environmental nuisance. **Table 6** provides a risk assessment of the potential impacts caused by fugitive dust emissions from the Development. The risk assessment is conducted before and after the implementation of control measures, with mitigation measures described.

The Quarry implements and will continue to implement a range of site-specific operational management protocols with allocated responsibilities for the 'day-to-day' control of air emissions (refer to **Table 7**). The control of air emissions through this range of protocols will minimise disturbances offsite. The mitigation measures outlined in **Table 6** will be specifically implemented, and these are consistent with the measures applied for the existing activity approved by the Permit.

Measures used to **suppress dust** include the following extractive industry standard environmental practices:

- Retention of vegetation along the access road corridor;
- Retention of vegetation around the Quarry working area to reduce the likelihood of strong winds liberating fine particles into the air;
- Utilisation of slash/mulch obtained from cleared areas to stabilise the soil surface and to limit wind action on dust generation at the soil/sand surface;
- Covering of trucks with tarpaulins and/or load dampening; and
- Minimising the geographic extent of areas of exposed soil.

Water can be accessed from the on-site sediment basins, Meander River supply, and/or a groundwater bore that may be installed in the future via a permit under the *Water Management Act 1999*.

**Table 6. Risk assessment for fugitive dust emissions from the Quarry and associated activities and proposed control measures**

Location	Activity	Pre-Control Risk Assessment	Control Measures	Final Risk Assessment
Development Area	<ul style="list-style-type: none"> <li>The clearing of trees and other vegetation and the stripping of topsoil (limited as the amount of topsoil is low).</li> <li>Excavation and loading of rock into trucks for transport to the crushing/screening area and the movement of material in the Quarry by machinery.</li> <li>Stockpiles of material, and the loading of material into trucks from the stockpiles.</li> </ul>	<p><b>Medium</b> (Likely – Moderate)</p>	<ul style="list-style-type: none"> <li>Minimising the geographic extent of areas of exposed soil (maximum disturbed area of 8 hectares).</li> <li>Retention of vegetation along the access road corridor and around the Quarry working area.</li> <li>Utilisation of slash/mulch obtained from cleared areas to stabilise the soil surface and to limit wind action on dust generation at the soil surface.</li> </ul>	<p><b>Low</b> (Possible – Negligible)</p>
	<ul style="list-style-type: none"> <li>Drilling and Blasting.</li> <li>Crushing and screening.</li> </ul>	<p><b>Med High</b> (Almost Certain – Moderate)</p>	<ul style="list-style-type: none"> <li>Dampen material prior to crushing and/or to utilise the installed sprayers on the output chute to minimise dust emissions from an otherwise dry product .</li> <li>Crushers to have sprayers installed and the use of a dedicated water tanker.</li> </ul>	<p><b>Low</b> (Unlikely – Negligible)</p>
	<ul style="list-style-type: none"> <li>Wind erosion.</li> </ul>	<p><b>Medium</b> (Likely – Moderate)</p>	<ul style="list-style-type: none"> <li>Road dampening, progressive rehabilitation, minimising the geographic extent of areas of exposed soil.</li> </ul>	<p><b>Low</b> (Unlikely – Negligible)</p>
Transport	<ul style="list-style-type: none"> <li>Dust emissions from loads in trucks.</li> </ul>	<p><b>Low Med</b> (Possible – Minor)</p>	<ul style="list-style-type: none"> <li>Tarpaulins and load dampening.</li> </ul>	<p><b>Low</b> (Unlikely – Negligible)</p>

Location	Activity	Pre-Control Risk Assessment	Control Measures	Final Risk Assessment
	<ul style="list-style-type: none"> <li>Access road (gravel) use in and out of the Pit</li> </ul>	<p><b>Low Med</b> <b>(Possible – Minor)</b></p>	<ul style="list-style-type: none"> <li>Road dampening during campaigns.</li> <li>Speed limit of 40km/hr on access road.</li> </ul>	<p><b>Low</b> <b>(Unlikely – Negligible)</b></p>

**Table 7. Site-Specific Dust Mitigation Controls**

Control Measure	Implementation	Responsibility
Reviewing meteorological conditions regularly to guide quarry operations	Daily	Quarry Manager
Overburden haulage and placement will be guided by ambient weather conditions	Daily	Quarry Manager
Reviewing meteorological conditions prior to blasting and amendment of plans if excessive dust generation is anticipated	Prior blasting	Quarry Manager
Topsoil stripping when it is moist either naturally or through the application of water	Overburden Stripping	Quarry Manager
Traffic limited to haul routes and laydown areas	Throughout Operations	Quarry Manager
Progressive rehabilitation of bunds, non-trafficable areas, and spoil dumps	Throughout Operations	Quarry Manager
Restrictions on speed of vehicles on site (20km/hr limit)	Ongoing	Quarry Manager
Cleaning up of areas which could become sources of wind erosion dust due to build-up of settled fine material	As required	Quarry Manager
Education of staff to dust mitigation measures through the induction process	As required	Quarry Manager
Onsite water cart to wet roads and other dust generating surfaces including the below, or their equivalent – <ul style="list-style-type: none"> <li>- Level 2 watering (&gt;2 l/m<sup>2</sup>/hr) of the processing and stockpile area.</li> <li>- Level 1 watering (&lt;2 l/m<sup>2</sup>/hr) of unsealed haul roads when dust is visible.</li> </ul>	As required	Quarry Manager

**C-1-5 ASSESSMENT OF NET IMPACTS**

The overall net impacts of dust emissions on local air quality are assessed to be low because emissions can be actively managed through mitigation and avoidance strategies. The measures to be applied are proven to be effective by their successful implementation at the existing activity authorised to operate by the Permit.

The mitigation measures outlined in **Table 7** and **Table 6** are consistent with the intent of Part 5 of the Air EPP; primarily, clauses 2(a) and (b).

The risk of dust emissions from the Development causing environmental nuisance is low due to the following combined factors –

1. the large distance to all Nearby Sensitive Premises (dwellings) from any extraction areas (**Figure E-5**);
2. where dwellings occur nearer the access road the prevailing wind patterns are from directions where topographic shielding would mitigate strong winds, such as the two dwellings located eastwards of the sealed junction of Porters Bridge Road and the access road (**Figure E-5**);
3. the reduction of risk by progressive rehabilitation works and the minimisation of the disturbed area to not exceed 8 hectares; and
4. implementation of mitigation measures (**Table 7** and **Table 6**).

## C-2 SURFACE WATER

### Specialist Assessment – Stormwater Assessment and Management

Van Diemen Consulting Pty Ltd (VDC) was engaged by the Proponent to carry out a stormwater analysis to design a drainage and sediment basin system for the Quarry as part of the mining plan. The Quarry has existing drains and stormwater management systems which were designed using engineering techniques to comply with the existing Permit; most of the Permit conditions will likely be the same or similar for the Development if a permit is granted. The stormwater assessment evaluated current stormwater management structures and drainage patterns, and the sediment generation potential of the new Development to recommend drains (and their size) and sediment basin locations to manage stormwater runoff, mitigate erosion, control sediment dispersion, and to broadly ensure compliance with local environmental regulations to minimise the impact of extraction operations on the surrounding environment. The engineering drawings form part of this EIS and are in **Attachment 2** - the following section, which should be read in conjunction with the drawings.

#### C-2-1 EXISTING CONDITIONS

##### Existing Natural Drainage Patterns

Two minor un-named tributaries occur in the main section of the Mining Lease that flow to the west and north-west of the Maximum Extraction Area (**Figure E-7** and also DRAWING NUMBER: 1011/300 in **Attachment 2**). These merge west of the Mining Lease with the single watercourse then reporting to Dungiven Rivulet.

All watercourses and drainage lines that are within the Mining Lease are ephemeral; all have been observed to have been dry during the summer and start of autumn months. As they progress westwards, the watercourses (or part thereof for braided systems) may become perennial.

The watercourses in the Mining Lease are vegetated with typically 'swampy ground' vegetation including broad-leaf shrubs (e.g., *Pomaderris apetala*), ferns, and canopy trees including *Melaleuca ericifolia*, *M. squarrosa*, *Acacia melanoxylon*, *A. dealbata*, *Eucalyptus ovata*, *E. viminalis*).

The access road itself crosses a few minor drainage depressions and is adjacent to the Meander River where it commences at Porters Bridge Road; some drainage is direct to the Meander River while most is via the two un-named tributaries that flow to Dungiven Rivulet.

There are existing culverts and roadside drains installed along the access road (as required by the Forest Practices Code) which was established when the native forest on the property was harvested.

### Conservation of Freshwater Ecosystem Values (CFEV)

The Conservation of Freshwater Ecosystem Values (CFEV) program aims to ensure that priority freshwater values are appropriately considered in the development, management and conservation of the state's water resources. The program undertook an assessment of the conservation management priorities (CMP) of all freshwater ecosystems throughout the state. It generated the first Comprehensive, Adequate and Representative (CAR) assessment of freshwater ecosystems conducted in Australia.

The CFEV assessment framework (see flowchart below; DPIPW 2014) is driven by three main components (Naturalness (N), Representativeness (R) and Distinctiveness (D)) and consisted of two key steps – the Statewide audit and conservation evaluation. Every river section, wetlands, waterbody, saltmarsh, estuary, and karst system in the state was 'put through' the framework in the following way to be assigned a Representative Conservation Value (RCV), Integrated Conservation Value (ICV) or Conservation Management Priority (CMP) ranking. The Statewide audit consisted of two assessments being conducted simultaneously. A classification was conducted to describe the pre-European physical and biological characteristics of all the ecosystem spatial units. This provided an indication of the feature's Representativeness. The condition (or Naturalness) assessment involved a range of physical and biological variables used to determine the extent to which the ecosystem feature had changed from its pre-European or natural condition.

The results of the classification and condition assessment were combined and input to the conservation evaluation. This process involved ranking each ecosystem spatial unit based on their conservation value. Conservation value was determined by using the results of the statewide audit in a spatial selection process to identify freshwater areas that are highly representative of its kind (as described by up to seven separate classifications), with a preference for the most natural examples. These ecosystem spatial units were given the highest Representative Conservation Value (RCV) ranking.

A second conservation value ranking was assigned to the ecosystem spatial units that took into account the presence of unique and distinct values at or near the sites (an assessment of Distinctiveness). Distinctive features of an ecosystem include a diverse assortment of 'Special Values', such as threatened flora and fauna species, important bird sites, species with important evolutionary life traits. These values were considered alongside the RCV to give an Integrated Conservation Value (ICV) ranking.

The last step of the conservation evaluation results in a Conservation Management Priority being assigned to the ecosystem spatial units. This process re-orders the conservation value rankings by including an assessment of current and future land and water management practices. For example, sites deep within National Parks are less of a priority for urgent conservation management than coastal saltmarshes on private land.

The following information and comments are made about the existing watercourses/waterways of relevance to the Development:

#### *Site – Tributaries of Dungiven Rivulet*

The Mining Lease includes two tributaries (at or near the headwaters) of Dungiven Rivulet which are both identified as ICF - High (**Figure 13** in **Attachment 3**). The identified (mapped by CFEV) tributary channel is not well defined on ground when it reaches the broad flat areas west of the Mining Lease; there become multiple channels of various sizes that fill and flow with water subject to the amount of rainfall that has occurred and the subsequent drainage rates through the soil and low-relief terrain. Vegetative buffers from extraction and associated activities exist with the tributaries and these will be maintained, so it is unlikely that there would

be any impact to the watercourses which feed into the larger Dungiven Rivulet before it reports to the Meander River.

#### *Site – Other waterways*

The Meander River section located near the Mining Lease is recorded as ICF - High (**Figure 13** in **Attachment 3**). Native vegetation exists along the section of riverbank where it is adjacent to the access road and is dominated by eucalypt wet forest (see **Figure E-8b**). The access road is existing and will be maintained in accordance with best practice unsealed road management practices. A vegetative buffer exists between the river edge and road surface and associated infrastructure including culverts and drains.

#### Quarry Drainage Patterns and Sediment Basins

Watercourses are generally dominated by intact native vegetation but in some locations are affected by tracks and roads that cross them, and with some impacts from fire and possibly drought.

All drainage from the existing extraction and stockpile locations in the Mining Lease eventually reports to Dungiven Rivulet via these two minor un-named tributaries. Water passes through about 5.5 kms of waterway (and broad drainage flats) prior to reporting at the Meander River to the south-west of the Maximum Extraction Area. This drainage arrangement will not change through the Development, as all water will still report to the Meander River (and Dungiven Rivulet) catchment.

#### *Existing sediment basins and drains*

There are two sediment basins associated with the existing Quarry, with one being located at the extraction area and one at the active pit. The pit also has an in-pit stormwater collection pond which is used to extract water for the pit activities. DRAWING NUMBER: 1011/101 (**Attachment 2**) identifies the location of each of these sediment basins, and Attachment 9 provides the designed size of each – basins which are currently undersize will be reconstructed to the required size/dimensions. Seepage from the active pit (rock wall) is to the pit and then to the sediment basin which is directed there by drains and bunds.

Images of existing drainage systems are provided below and include rock lined drains, open drains and bunds, and sediment basins and stormwater capture sumps -





The immediate receiving watercourse environment from all existing sediment basins is slightly modified, being native forest that has been logged but with streamside reserves established (i.e., 10m wide SSRs required by the Forest Practices Code).

*Additional sediment basins and drains*

Another two sediment basins will be constructed (**Attachment 9**) to bring the number within the site to four. One basin is proposed for the northern end of the Expanded Stockpile Area and a further basin proposed for an area to be opened soon (to the south south-east of the existing extraction pit) for extraction.

**C-2-2 PERFORMANCE REQUIREMENTS**

Document	Requirements/Guidance
<p><b>Quarry Code of Practice</b></p>	<p><u>Drainage</u> – The requirements outlined in Section 7.9.2.1 of the QCP</p> <ul style="list-style-type: none"> <li>• Cut-off drains, contour drains and diversion banks shall be installed where necessary.</li> <li>• Machine movements should not be through water courses.</li> <li>• Minimise exposed areas and ensure access tracks have well maintained table drains and culverts.</li> </ul>

	<ul style="list-style-type: none"> <li>• Drainage works will, when possible, seek to mimic natural drainage patterns and utilise natural drainage lines with retained vegetation.</li> <li>• Contour banks and contour drains may be used, if necessary, to capture and slow down water that would otherwise gather momentum as it travels down the slope.</li> <li>• Working areas will be kept in as dry condition as possible (mud areas should be avoided), and machinery should avoid be driven through flowing water.</li> <li>• Rate of run-off increases dramatically following vegetation removal, hence the total area exposed will be kept to a minimum.</li> <li>• Tracks and the access road will be constructed to control the grade, have table drains installed, and with regular cross drains or culverts installed. Culverts should discharge into natural drainage lines that are stable and vegetated via properly constructed spillways, ripraps, or culverts.</li> </ul> <p><u>Sediment Control</u> – The requirements outlined in Section 7.9.2.2 of the QCP</p> <ul style="list-style-type: none"> <li>• Run-off from working areas should be collected in settling ponds before discharging.</li> <li>• Settlement ponds should be utilised to remove sediment in run-off.</li> <li>• Run-off should be directed through existing vegetation where possible.</li> <li>• Sediment ponds are to be maintained as necessary to remove sediment build-up.</li> <li>• Sediment ponds should discharge into natural drainage lines.</li> </ul> <p><u>Water Quality</u> – The requirements outlined in Section 7.9.2.3 of the QCP</p> <ul style="list-style-type: none"> <li>• Discharge should be visibly free of oil and grease.</li> <li>• Onsite reuse of stormwater run-off can be used for watering roads, washing, promoting revegetation etc.</li> </ul>
<p><b>Best Practice Erosion &amp; Sediment Control</b></p>	<p>The <u>Best Practice Erosion &amp; Sediment Control</u> (IECA, 2008) guidelines suggest capacity of drainage networks should be capable of conveying run-off from storms with a recurrence interval up to 1 in 10 years.</p>
<p><b>State Policy on Water Quality Management 1997</b></p>	<p>The most relevant matters are prescribed at –</p> <ul style="list-style-type: none"> <li>• 31. Control of erosion and stormwater runoff from land disturbance</li> <li>• 35. Road construction, maintenance and drainage</li> </ul>
<p><b>Tasmanian Waterways and Wetlands Works Manual (2003)</b></p>	<p>Aspects of this manual are relevant, especially the following points –</p> <ul style="list-style-type: none"> <li>• 2.2 Minimise sediment disturbance and control erosion,</li> <li>• 3.7 Protect stream-entry points, and</li> <li>• 3.9 Revegetate.</li> </ul>

### C-2-3 RISK ASSESSMENT AND POTENTIAL IMPACTS

**Table 8** provides a risk assessment of the potential impacts that may be caused by stormwater emissions from the Development. The assessment is conducted on a before and after basis of the implementation of control measures. There are no watercourses in the MEA or ESA so the risk of watercourses being directly polluted by sediment or hydrocarbons from the Development is low to very low.

#### Polluted (sediment and hydrocarbons) Stormwater

Disturbed areas (unvegetated) have the potential to generate sediment in runoff during heavy (high intensity) and/or sustained periods of rainfall. Sources of sediment from uncontrolled or high-volume surface runoff including for example unsealed roads and tracks, partly rehabilitated or areas under rehabilitation, and the Quarry which includes the active working surface, unsealed roads and the ESA.

The surface of the access road from Porters Bridge Road is unsealed (gravel surface). Being a gravel road, it has the potential to contaminate stormwater with sediment. The access road has been built to Forest Practices Code standards because it has been used, and will likely again be used, for native forest silviculture on the property (including the Land). The access road is sufficiently wide or has passing bays present for trucks and other vehicles to pass. Like any gravel road, there will be some maintenance now and ongoing to ensure drains are kept unblocked and that culverts are working. The erosion/sedimentation risk profile of the existing road, which is very low, will be comparable to that of the Quarry activity.

Operations may also be a source of hydrocarbons that if unmanaged or poorly managed could enter waterways and impact aquatic life. Accidental releases or seepages of environmentally harmful substances like hydrocarbons (such as fuels, oils, and lubricants), herbicides, or different types of waste streams pose a risk to ground and surface waters either directly or through stormwater drainage, or seepage when not appropriately handled. When these substances enter water bodies in substantial concentrations, they can cause severe harm to aquatic plants and animals, either through direct toxicity or by adversely affecting water quality and habitat through secondary effects.

Hydrocarbons are currently used at the Quarry (e.g., oils, fuel, lubricants) as they are at most extractive industry activities and will continue to be used by the Development. A new self-bunded fuel tank to be located on a concrete pad at the western end of the ESA near the proposed workshop (DRAWING NUMBER: 1011/102 in **Attachment 2**) where oils, grease, and lubricants will be stored for use in machinery and equipment at the Quarry.

#### Sediment Basin discharge

When overflowing, the sediment basins would not *directly* discharge to a watercourse because there are none to discharge to. Rather, the discharge locations will be to overland flow areas which lead into swampy areas where surface flow is broad, rather than naturally restricted to a well-defined surface channel or channels. The environmental risk from the proposed stormwater discharge arrangement is two-fold:

1. Establishment of a concentrated flow of stormwater when the sediment basins do discharge to the environment that may cause surface erosion, scouring and/or displacement of leaf litter from the sand surface (if present) below the outlet structure; and/or
2. Sediment accumulation on vegetation below the outlet structure(s).

Practically, if the discharged stormwater contained suspended sediment (which is unlikely after being ‘treated’ by the sediment basin) its overland flow through vegetation (primarily grassy, sedgy or scrubby swamp forest to scrub vegetation) and not into a receiving waterway minimises then risk of potential harm. The risk of any harm to the extant vegetation by some sediment drop-out on its passage through the vegetation is negligible to nil given the species composition of the vegetation, and the naturally occurring processes on which the vegetation’s occurrence is based (i.e. swampy flats that naturally accumulate deposited sediment over time).

#### Liquid waste (toilet/shower)

The installation of a waste storage system (of 6,000l) is proposed (**Attachment 4**) which is located under the toilet/shower bundle also proposed to be installed. The alarm system, combined with regular checking of waste capacity, will provide the basis for the emptying of the system using an authorised waste disposal service (waste would be disposed of at a TasWater accredited wastewater management system).

#### Liquids – hydrocarbon based products and herbicides

A self-bunded diesel fuel tank (20,000 litres maximum capacity) will be located on the ESA, and hydrocarbon based products will be stored in the workshop; upwards of two 1,000 litre intermediate bulk containers (IBC) holding oils may be stored in the workshop, with a further two IBC’s for waste oil. Other hydrocarbon based materials such as grease and lubricant would also be stored on site but these would likely be less than 100 litres combined.

Herbicides may be stored at the workshop for weed prying activities (e.g., a 40l drum of a glyphosate based product) but it is more likely a weed spraying contractor would enter the site to conduct weed spraying activities and then leave so that no herbicides are held on the site.

All hydrocarbon based products, and other potentially hazardous chemicals, will be stored in accordance with the manufacturer’s specifications and the *Bunding and Spill Management Guidelines*<sup>6</sup>.

#### Water Tanks

A tank will be installed (likely to be 50,000 litres) to capture rainwater from the office structure which will provide water to the crib room, toilet/shower bundle and office. Overflow from the tank will be directed to the drains proposed to be installed as part of the construction of the ESA.

### *C-2-4 IMPACT AVOIDANCE AND MITIGATION MANAGEMENT*

Stormwater emissions will be controlled and managed to remove pollutants (by gravity) to the extent necessary to prevent environmental nuisance. Measures available to prevent and/or manage sediment loss from the Quarry and associated access road include for example the minimisation of areas of disturbance; minimisation of stormwater ingress and sediment mobilisation using perimeter drains, cut-off drains and bunding; sediment basins to capture entrained sediment; and vegetated discharge zones to remove fine suspended sediment.

---

<sup>6</sup> EPA Tasmania (2015) *Bunding and Spill Management Guidelines*, Published on behalf of the EPA by the EPA Division, Department of Primary Industries, Parks, Water and Environment, Tasmania.

The mitigation measures in **Table 8** will be implemented, as are most now at the existing activity approved by the Permit.

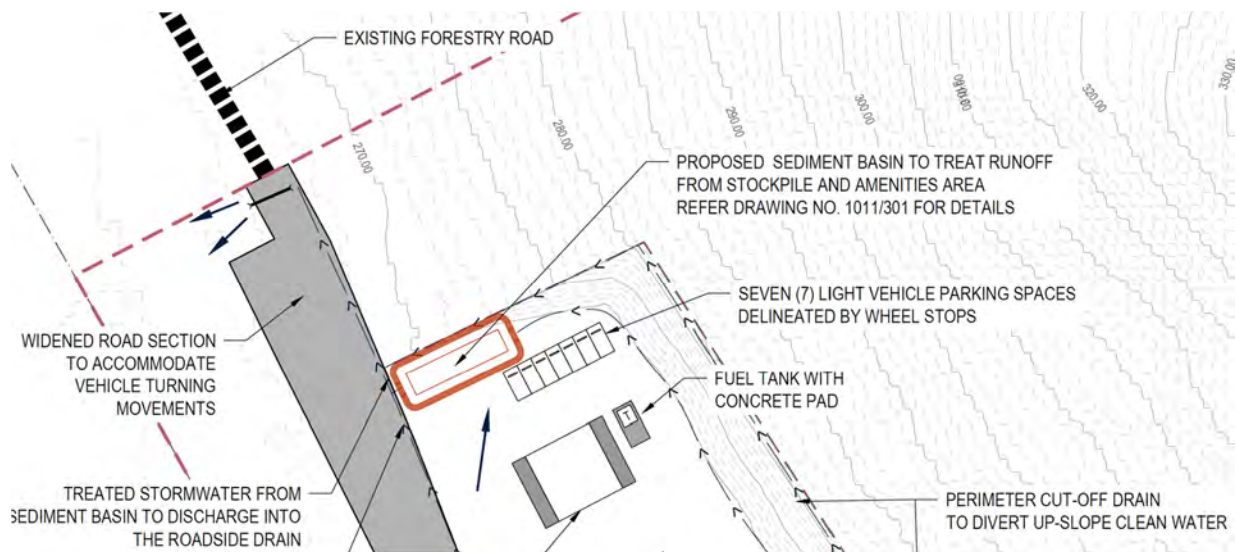
### Sediment Basins

All rainfall that falls onto disturbed areas will be collected into sediment basins, treated for sediment removal (gravitational removal treatment only, no use of flocculants or other additives is proposed), and subsequently discharged to the environment if basins overflow. The stormwater runoff accumulated in basins may be repurposed for operational activities within the Quarry, including for example road dampening.

A set of Technical Drawings illustrate the sediment basins and other drainage features to be installed and existing (see **Attachments 2 and 9**). A new sediment basin (with drains) is specifically proposed for the ESA as shown in DRAWING NUMBER: 1011/301 of Attachment 2 (see also **Plate 3**).

Given sediment release from the activity can be managed via drains and sediment ponds, there is likely to be negligible impact to the receiving environment. There is also unlikely to be any cumulative effects to the receiving environment from the activity and other activities occurring in the area such as native forest silviculture.

**Plate 3. Location and proposed dimensions and form of the sediment basin and drains at the ESA**



### Monitoring structures and basin discharges

Regular visual monitoring (at least monthly, and possibly weekly or daily during or after high rainfall or sustained rainfall events) is to be undertaken to ensure the effectiveness of the installed stormwater management and sediment control structures. Repairs and remedial works (including basin cleaning) are to be performed to maintain sediment settling zones to those required and ensure that stormwater is entering and leaving the basin as planned.

The effect on vegetation and the soil surface from basin runoff is to be monitored, and remedial actions taken if the soil surface becomes scoured or vegetation becomes covered by discharged sediment. Remedial works

include for example, the expansion of the outlet structure (additional rock), and/or the installation of surface protection measures like jute mesh, and/or vegetation slash.

Formal water quality testing is not proposed.

#### *C-2-5 ASSESSMENT OF NET IMPACTS*

The overall net impacts of dust emissions on local air quality are assessed to be low because emissions can be actively managed through mitigation and avoidance strategies. The measures to be applied are proven to be effective by their successful implementation at the existing activity authorised to operate by the Permit.

The development and use of the Quarry will not disturb the Meander River, which is the main surface waterbody flowing near any area proposed to be used (or continued to be used) for the Quarry. The access road is existing and has been for many years prior to the Quarry having received its Permit. The Dungiven Rivulet tributaries are not proposed to be rock extracted; they are protected or are to be protected by buffers of native vegetation and drainage measures applied to discharge points to ensure sedimentation risks are mitigated.

The risk of uncontrolled and/or polluted stormwater emissions from the Development causing environmental nuisance is low due to the following combined factors –

1. Cut-off drains and drains around and internal to the Quarry will be maintained and additional drains constructed (see DRAWING NUMBER: 1011/301, and 1011/201 to 1011/204 in **Attachment 2** and also **Attachment 9**) where required to direct catchment runoff around the Quarry;
2. Access road drains, culverts, spoon-drains, and other water shedding devices will be checked quarterly and maintained as required to minimise sediment release into stormwater; and
3. Sediment accumulation rates in the sediment ponds will be monitored and the maintenance program revised as required – conducted monthly. Accumulated sediment will be reused as part of the saleable product or for application onto disused areas as part of site rehabilitation;
4. The reduction of risk by progressive rehabilitation works and the minimisation of the disturbed area to not exceed 8 hectares; and the
5. Implementation of mitigation measures (**Table 8**).

On balance, it is reasonable to say that the Quarry is unlikely to compromise or prejudice the PEVs in the Meander River and tributaries of Dungiven Rivulet such that there should be negligible to the broader Tamar Estuary. Furthermore, there is unlikely to be any cumulative impact to PEV's, or other natural values associated with water quality and quantity, because of the proposed stormwater and other water management measures. Therefore, the Development is consistent with the State Policy on Water Quality Management 1997.

**Table 8. Risk assessment for stormwater emissions from the Quarry and associated activities and proposed control measures**

Location	Activity or action that may cause impact	Pre-Control Risk Assessment	Control Measures	Final Risk Assessment
Development Area	<ul style="list-style-type: none"> <li>The clearing of vegetation that increases the area of exposed soil susceptible to water erosion.</li> <li>Uncontrolled discharge of polluted stormwater.</li> </ul>	<p><b>Medium</b> <b>(Likely – Moderate)</b></p>	<ul style="list-style-type: none"> <li>Minimising the geographic extent of exposed soil (disturbed area to be a maximum of 8 hectares).</li> <li>Establishment of additional sediment basins, diversion drains, and other drainage systems at the Development.</li> </ul>	<p><b>Low</b> <b>(Possible – negligible)</b></p>
	<p><u>Sediment Basins</u></p> <p>Establishment of a concentrated flow of stormwater when the sediment basins do discharge to the environment that may cause surface erosion, scouring and/or displacement of leaf litter from the sand surface (if present).</p>	<p><b>Medium</b> <b>(Likely – Moderate)</b></p>	<ul style="list-style-type: none"> <li>Sediment basin designed to have outlet structure inclusive of rock to disperse overland flow.</li> <li>Utilisation of slash obtained from cleared areas or other product (jute mesh) to stabilise the soil surface, and to limit the spread of sediment.</li> <li>Visual monitoring of flow and the effects of high concentration flow including scouring and displacement of soil below the basin outlet.</li> </ul>	<p><b>Low</b> <b>(Possible – negligible)</b></p>
	<p><u>Sediment Basins</u></p> <p>Sediment accumulation on vegetation below the discharge outlet caused by high flows, and/or failure of basin to trap sediment.</p>	<p><b>Low</b> <b>(Possible – negligible)</b></p>	<ul style="list-style-type: none"> <li>More frequent cleaning and visual monitoring of the sediment settling zone, enlargement of sediment basin if required.</li> <li>Utilisation of slash obtained from cleared areas to stabilise the soil surface, and to limit the spread of sediment.</li> </ul>	<p><b>Low</b> <b>(Possible – negligible)</b></p>

Location	Activity or action that may cause impact	Pre-Control Risk Assessment	Control Measures	Final Risk Assessment
	Contamination of groundwater by the infiltration of spilled hydrocarbon products	<p style="text-align: center;"><b>Low</b> <b>(Possible – negligible)</b></p>	<ul style="list-style-type: none"> <li>• Readily available spill kits on site (workshop, office, in vehicles at working face and at ESA).</li> <li>• Store products in suitably sized bunded containers.</li> <li>• Train personnel to use spill kits and establish emergency procedures in the event of a spill.</li> <li>• Refuel only in bunded and/or hardstand area or using temporary bunding solution with spill kit available.</li> <li>• Daily pre-start checks on machinery to minimise the risk of spills; ensure machinery and equipment is functional, hoses are correctly fitted and secure, and caps on fluid tanks are tightened.</li> </ul>	<p style="text-align: center;"><b>Low</b> <b>(Possible – negligible)</b></p>

### C-3 NOISE EMISSIONS

#### Specialist Report

Tarkarri Engineering (TE) was commissioned by Van Diemen Consulting on behalf of Walter Contracting Pty Ltd to conduct an environmental noise, ground vibration and air blast overpressure assessment in relation to the Development. Specifically, the potential impacts of haulage, drilling and blasting, and crushing/screening, were considered in the assessment and mitigation measures recommended as required by the EIS Guidelines. The results of the TE assessment are provided here and incorporated into the impact mitigation measures proposed.

The assessment report prepared by TE forms part of this EIS and is in **Attachment 5**.

#### C-3-1 EXISTING CONDITIONS

##### Existing Landscape Noise Sources

Noise sources in the landscape surrounding the land where the activity will occur have been identified as follows:

- farm machinery on the property and adjacent properties,
- forestry related activities (native forest and plantation silviculture) including the user of tree felling machinery, chainsaws, trucks and loaders, planting machinery to plough, fertilise and replant tubestock,
- nearby Creswell's Quarry,
- vehicles and trucks using nearby roads,
- winds in shelterbelts and remnant trees, and
- bird and insect life.

##### Existing Quarry Noise Sources

The Quarry includes activities that have the potential to cause noise and vibration emissions beyond the boundaries of the Land. Such activities include drilling and blasting, crushing/screening and carting material within and from the Quarry.

The major noise sources from the Quarry are as follow:

- drill rig operation and associated blasting operations;
- clearing vegetation and stripping/stockpiling of soil and overburden into bunds using an excavator;
- ripping, crushing, and screening of rock into aggregate;
- use of ancillary equipment - excavators, crushers, screens (vibratory/mechanised), loader; and
- truck movements.

The Quarry location was chosen in part to maximise distances to sensitive receptors, including dwellings (existing), land use zones where residential use is permitted (e.g., Rural Living zone) and raptor nests (wedge-tailed eagles). The topography of the Land which contains the Maximum Extraction Area (which remains

unchanged from the existing Permit) and Expanded Stockpile Area relative to the mining extraction plan provides topographic shielding to areas south through north-west. The Expanded Stockpile Area has been specifically designed to be low in the landscape, so noise generated by the activity passes through native vegetation over a large distance prior to reaching any dwelling or residential zone.

### Sensitive Receptors

#### *Rural Living Zone*

The Scheme has land zoned Rural Living<sup>7</sup> to the west of the Land (**Figure E-1**). Rural Living zoned land is nearest to the existing Access Road (7.9 m) on relatively flat ground at its south-western extent. The adjoining Certificates of Title 157392/2 and 157392/1 are owned by the same entity that owns the land upon which the Mining Lease occurs – a compensation agreement is in place with the owner as required by the *Mineral Resources Development Act 1995*.

Certificates of Title 157392/2 and 157392/1 are only partly covered by a 1,000 m distance applied to the edge of the Expanded Stockpile Area and Maximum Extraction Area.

#### *Dwellings*

The Porters Bridge Road area is characterised by open agricultural land with intermittent dwellings and sheds, plantation estate for silvicultural practices (mainly hardwood), native forest estate (often managed for silvicultural pursuits) and occasional residential use in a bushland setting.

TE provides a detailed map and geographic data for the location of dwellings used for noise modelling which is reproduced in **Plate 4**.

---

<sup>7</sup> Rural Living is a zone where residential use, including a single dwelling, is a primary objective of land use.

**Plate 4. Environmental noise measurement and model receiver positions used by TE**

Environmental noise model receiver positions					
Number	Location	Coordinates (MGA94, Zone 55 G)		Distance to activity (km)	
				Processing	Extraction
R1	190 Porters Bridge Rd	478222	5405320	2.2	1.9
R2	304 Porters Bridge Rd	478576	5406195	2.0	1.6
R3	340 Porters Bridge Rd	478326	5406553	1.6	1.2
R4	420 Porters Bridge Rd	478010	5407375	1.4	1.0
R5	550 Porters Bridge Rd	477880	5408353	1.9	1.6
R6	610 River Rd	474915	5407607	2.0	2.4
R7	75 Saddlers Run Rd	475217	5407136	1.5	2.0
R8	130 Saddlers Run Rd	475238	5406457	1.6	2.0
R9	155 Saddlers Run Rd	475719	5406329	1.2	1.6
R10	119 Silver Wattle Dr	475242	5405561	2.0	2.4
R11	197 Silver Wattle Dr	475888	5405663	1.5	1.8
R12	184 Johns Rd	476330	5404795	2.1	2.3
R13	115 Saddlers Run Rd	475526	5406869	1.2	1.6

Table 2-1: Environmental noise measurement and model receiver positions.

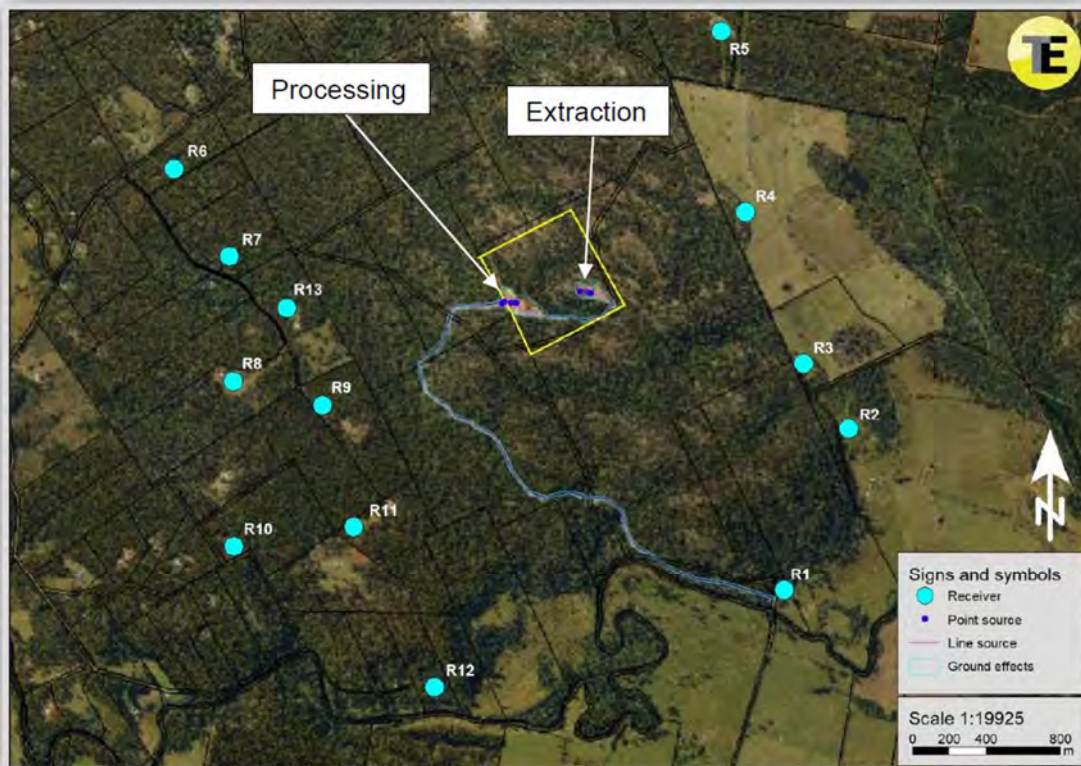


Figure 2-2: Aerial view of Porters Bridge Road Quarry and surrounds with environmental noise model receivers marked.

C-3-2 PERFORMANCE REQUIREMENTS

Document	Requirements/Guidance
<p><b>Tasmanian Environment Protection Policy (Noise) 2009</b></p>	<p>The objectives of this policy are –</p> <ul style="list-style-type: none"> <li>(a) to further the objectives of the Act as they relate to the acoustic environment; and</li> <li>(b) to protect the environmental values specified in clause 7.</li> </ul> <p>The environmental values to be protected under the Noise EPP are the qualities of the acoustic environment that are conducive to:</p> <ul style="list-style-type: none"> <li>• the wellbeing of the community or a part of the community, including its social and economic amenity; or</li> <li>• the wellbeing of an individual, including the individual's – <ul style="list-style-type: none"> <li>- health; and</li> <li>- opportunity to work and study and to have sleep, relaxation and conversation without unreasonable interference from noise.</li> </ul> </li> </ul> <p>The following Quarry relevant provisions and clauses are reproduced below from the policy.</p> <p><i>PART 4 – TRANSPORT INFRASTRUCTURE</i></p> <p>The policy recognises that although the operation or use of public roads, railways, ports or airports may prejudice protection of the environmental values, the function the transport network serves is necessary for the community’s economic, environmental and social wellbeing. Notwithstanding this, it is intended that –</p> <ul style="list-style-type: none"> <li>(a) transport planning initiatives for freight and passenger movement and new transport infrastructure be developed in a systematic way to achieve an optimal balance of economic, environmental and social benefits and costs with a major criterion of minimising the number of people exposed to noise levels that would prejudice protection of the environmental values; and</li> <li>(b) where environmental values are acutely prejudiced, existing transport infrastructure noise should be reduced to the greatest extent that is reasonably practical, consistent with achieving an optimal balance of economic, environmental and social benefits and costs.</li> </ul> <p><i>PART 5 – COMMERCIAL AND INDUSTRIAL ACTIVITIES</i></p> <p>Regulatory authorities should assess, manage and regulate proposed commercial and industrial activities that are sources of noise with the objective of protecting the environmental values. Best practice environmental management should be employed in every activity to reduce noise emissions to the greatest extent that is reasonably practical. Dominant or intrusive noise characteristics of noise emissions from an activity should be reduced to the greatest extent that is reasonably practical.</p>
<p><b>Quarry Code of Practice</b></p>	<p>Key considerations in the QCP include –</p> <ul style="list-style-type: none"> <li>• Under certain circumstances, it is appropriate for the regulatory authority to differentiate between certain activities taking place on the land.</li> </ul>

	<ul style="list-style-type: none"> <li>• Enclosures may be required around crushing and screening plants.</li> <li>• Solid barriers, such as bund walls and topographical features, provide the most effective 'in line' reduction of sound levels. Reliance on a barrier of vegetation alone will result in only marginal reduction in noise levels.</li> <li>• Access tracks and haul roads should be well maintained to prevent corrugation that contributes to truck noise, and truck drivers should be encouraged, where possible, to use access roads which have the least impact on the community.</li> <li>• Machinery should be well maintained and lubricated. Modern equipment is generally quieter than ageing machinery.</li> <li>• Compressors, noisy engines, generators, and exhausts should be fitted with silencers.</li> </ul> <p>Noise emission limits set by the QCP are:</p> <p>Noise from quarrying and associated activities, including equipment maintenance, when measured at any neighbouring sensitive use must not exceed the greater of:</p> <ul style="list-style-type: none"> <li>• the A-weighted 10 minute L<sub>90</sub>, excluding noise from the quarry, plus 5 dB(A), or</li> <li>• the following levels:             <ul style="list-style-type: none"> <li>▪ 45 dB(A) from 0700 to 1900 hours (daytime)</li> <li>▪ 40 dB(A) from 1900 to 2200 hours (evening), and</li> <li>▪ 35 dB(A) from 2200 to 0700 hours the following day (night time)</li> </ul> </li> </ul> <p>when measured as a 10 minute L<sub>eq</sub>.</p>
--	--

### C-3-3 NOISE MODELLING AND FINDINGS

#### Assessment Criteria

Criteria for the assessment of environmental noise emissions (limits) from existing Quarry operations were taken by TE from the existing Permit Conditions - Environmental (PCE) No. 10885.

#### Existing Noise Levels

Environmental noise monitoring was conducted by TE at three locations (M1, M2, M3) surrounding the PBRQ (**Plate 5**).

Unobserved monitoring was conducted by TE at measurement positions M 1 and M2 logging 10-minute equivalent continuous (L<sub>eq</sub>) and L1, L10, L50, L90 and L99 A-weighted sound pressure levels between 21 January and 3 February 2025. At setup or decommissioning sound measurements were observed and short duration (approx. 1-minute) 1/3-octave band and narrow band measurements were taken. Narrow band measurements were be taken across the following range: Narrow band data 0 to 1000 Hz (0.15625 Hz resolution).

The unattended monitoring system at position M3 was stolen during the measurement period and consequently extended unobserved data isn't available for this position. Instead, 1-hour of observed 10-minute statistic data was collected as an alternative and are provide in tabular format.

Further information about each of the three locations and the results obtained can be found in Section 3.2 of **Attachment 5**.

**Plate 5. Environmental noise monitoring locations used by TE for the noise modelling**



#### Model Input Data

Input sound power (SWL) spectra were determined from measurements conducted at the PBRQ and from Tarkarri Engineering library data.

**Plate 6** presents overall SWLs and equipment details as presented by TE while **Plate 7** presents 1/1-octave band SWL spectra.

#### Model Settings and Scenarios

In the TE study the following atmospheric conditions for propagation condition was considered:

- ISO 9613-2:2024<sup>8</sup>
- CONCAWE worst case propagation (wcv): CONCAWE<sup>9</sup> models atmospheric attenuation using Pasquill stability indices in combination with vector wind speed and direction to determine appropriate

---

<sup>8</sup> ISO 9613-2:2024 Acoustics — Attenuation of sound during propagation outdoors Part 2: Engineering method for the prediction of sound pressure levels outdoors

<sup>9</sup> CONCAWE The oil companies' international study group for conservation of clean air and water – Europe (est. 1963) report 4/81.

frequency dependent attenuation/amplification This condition considers all receiver points to be downwind with a Pasquill stability class F and a vector wind speed of 2 m/s. Under these conditions noise contours will typically represent the highest predicted noise levels at any location.

A relative humidity of 70 %, air pressure of 1013.3 mbar and temperature of 10 °C was modelled.

Ground absorption was modelled at 0.3 for all quarry surfaces.

The following operational scenarios were modelled as day operation covering approx. the next 15 yrs of production through to full extraction:

- **Existing:** Crusher and Screen, FEL and Excavator (loading the crusher) operating at the ROM . Drill and Excavator operating at the pit. Mine trucks operating between the pit and ROM and Road trucks operating on the quarry access road at 25 km /hr. – see **Plate 8** and **Plate 9**.
- **Stage 2:** As above for the Establishment scenario with altered pit topography.
- **Stage 4:** As above for the Establishment scenario with altered pit topography.
- **Stage 5:** As above for the Establishment scenario with altered pit topography.
- **Stage 6:** As above for the Establishment scenario with altered pit topography.

The surface models are based on the extraction plans broadly illustrated in DRAWING NUMBER: 1011/103 of **Attachment 3**, specifically Stages 2 (DRAWING NUMBER: 1011/202), and 4 (DRAWING NUMBER: 1011/204), and possibly conceptual Stages 5 and 6.

**Plate 6. Overall sound power levels and data source information used by TE for noise modelling**

Overall sound power levels (dBA)		
Source	SWL (L <sub>Aeq</sub> )	Comment
Crushers and Screens	121	From measurements conducted at PBRQ.
Excavators	104	Tarkarri Engineering library data CAT 345B Excavator.
FEL	99	From measurements conducted at Nook Quarry on CAT 950K Front End Loader (FEL).
Trucks (pit to ROM)	103* <sup>h</sup>	From measurements conducted at Nook Quarry on CAT articulated mine truck (25 t). <b>NB:</b> X2 Trucks at high engine revs
Trucks (ROM to road)	106* <sup>h</sup>	Tarkarri Engineering library data for a Road Truck. <b>NB:</b> X2 trucks at high engine revs.
Drill	Engine	105
	Drilling	110*
	Rattling	112*

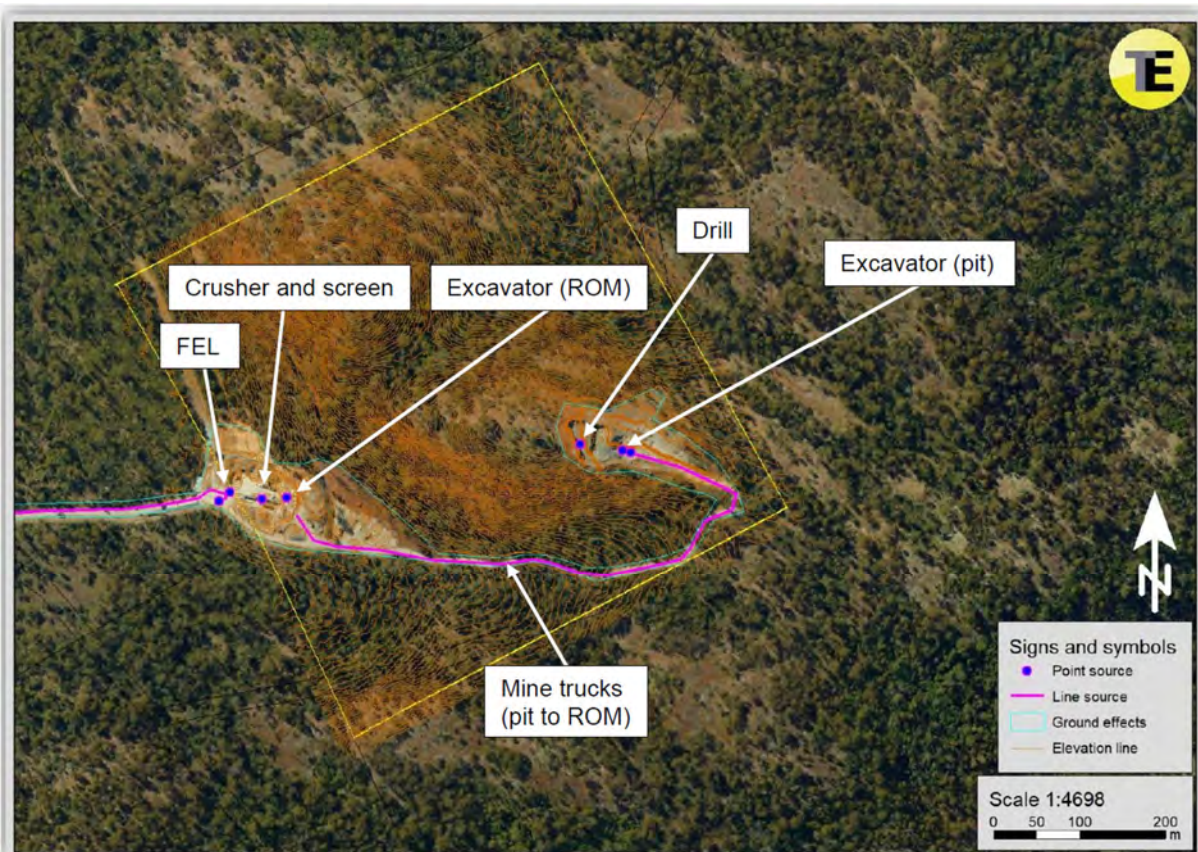
\* SWL presented has been scaled for time of operation in a 10-minute period.

<sup>h</sup> A point source representing a 2-minute period of engine idle while being loaded is modelled at the beginning of each line source (SWL data for these point sources isn't presented).

**Plate 7. 1/1-octave band sound power level spectra**

1/1-octave band sound power levels spectra (dBA) L <sub>Aeq</sub>										
Source	Frequency (Hz)									Total
	31.5	63	125	250	500	1k	2k	4k	8k	
Crusher and Screen	74	99	103	107	115	116	114	109	99	<b>121</b>
Excavator	70	78	91	92	99	98	98	92	84	<b>104</b>
FEL	57	80	84	88	95	92	92	86	77	<b>99</b>
Trucks (pit to ROM)	58	78	86	91	95	99	97	92	85	<b>103</b>
Trucks (ROM to road)	62	81	90	94	98	102	101	96	88	<b>106</b>
Drill	Engine	56	83	88	84	93	97	100	93	<b>105</b>
	Drilling	58	81	90	88	96	102	105	100	<b>110</b>
	Rattling	48	66	78	79	93	99	107	107	<b>112</b>

**Plate 8. Existing Model Scenario – extraction area**



**Plate 9. Existing Model Scenario – full access road and extraction area**



Results - Activities conducted within standard QCP operating hours


**Plate 10** presents predicted  $L_{Aeq}$  noise emission levels at the thirteen receiver locations for each of the operational model scenarios. Where predicted noise levels exceed the day noise emission criterion the cells are highlighted.

TE noted the following from the modelled results –

- The predicted noise emission levels presented above are all below the day criterion limit of 45 dBA under both prediction algorithms;
- The highest predicted noise levels are at –
  - (i) receiver R1 where the predicted noise level is controlled by truck traffic on the Quarry access road; and
  - (ii) receivers R9 and R13 where the noise level is controlled by crushing and screening activity; and
- At other receiver locations predicted noise levels don't exceed 39 dBA, 6 dBA below the day criterion (crushing and screening activity is the highest contributing noise source at all remaining receiver locations).

**Plate 10. Predicted noise emission levels**

Predicted sound pressure levels (dBA)												
Receiver	Existing		Stage 2		Stage 4		Stage 5		Stage 6		Tonal adj (dB)	
	ISO	wcw	ISO	wcw	ISO	wcw	ISO	wcw	ISO	wcw	ISO	wcw
R1	39	42	39	42	39	42	39	42	39	42	1.3	0.9
R2	31	26	31	17	31	18	31	18	30	17	1.5	0.5
R3	27	20	25	20	24	20	25	20	26	20	1.4	0.8
R4	20	19	20	17	20	19	20	19	21	17	1.2	0.7
R5	31	28	30	26	31	26	31	26	31	28	1.5	0.7
R6	36	36	36	36	36	36	36	36	36	36	1.5	0.8
R7	39	37	39	37	39	37	39	37	39	37	1.2	0.7
R8	35	34	36	34	35	34	35	34	35	34	3.6	0.7
R9	42	36	42	36	42	36	42	36	42	36	0.9	0.6
R10	35	31	35	32	35	31	35	31	35	31	1.6	0.8
R11	39	29	39	30	39	29	39	29	39	29	1.3	0.6
R12	21	14	23	14	22	14	22	14	21	14	1.7	0.8
R13	42	38	42	38	42	38	42	38	42	38	0.7	0.7

 Exceeds day noise emission criterion limit.

TE provides at pages 33 to 42 of **Attachment 6** a visualisation of noise propagation from the PBRQ site to the surrounding environment with predicted noise contours (at 1.5 m above ground height) for the following model scenarios are presented:

- **Existing** operations under ISO
- **Existing** operations under CONCAWE worst case weather
- **Stage 2** operations under ISO
- **Stage 2** operations under CONCAWE worst case weather
- **Stage 4** operations under ISO
- **Stage 4** operations under CONCAWE worst case weather
- **Stage 5** operations under ISO
- **Stage 5** operations under CONCAWE worst case weather
- **Stage 6** operations under ISO
- **Stage 6** operations under CONCAWE worst case weather

Loading and carting out of standard QCP operating hours

Loading and carting material is proposed to occur within the full operating period of 0600 -1700 Monday to Saturday and 0700-1600hrs Sundays and Statewide public holidays. All other activities (crushing, screening, loading, clearing topsoil etc.) will occur within the standard QCP hours of Monday to Friday 0700 to 1900hrs, Saturday 0800 to 1600hrs.

The modelling of carting and loading outside the standard QCP hours by Tarkarri Engineering (Tarkarri Engineering report 5582\_AC\_R, September 2021) demonstrated that it is possible to conduct such works and maintain noise emission levels at sensitive locations below the Night (the period 2200 to 0700 hrs inclusive) criterion of 35 dBA stipulated by the QCP. Therefore, loading and carting of materials outside of the material processing hours at the Quarry wasn't considered again by TE in the 2025 study.

#### *C-3-4 GROUND VIBRATION AND ABO MODELLING AND FINDINGS*

##### Assessment Criteria

Ground vibration and air blast overpressure predictions were assessed against the applicable conditions in PBRQ's Permit Conditions - Environmental (PCE) No. 10885.

##### Air blast overpressure and ground vibration calculations

Prediction of ground vibration and air blast overpressure was conducted using scaled regression equations developed by the Office of Surface Mining Reclamation and Enforcement[4] (OSMRE), a bureau of the United States Department of the Interior.

Predictions are made to residence up to approx. 2 km from the quarry (receivers R1 – R12, see **Plate 4**) with the distances to receiver locations used the minimum distances from the boundary of the mining lease. A maximum charge mass/delay of 162 kg is assumed based on records of recent blasting at the Quarry.

Predicted ground vibration and air blast overpressure contours are provided for a blast located at MGA coords. 477246, 5407026 (GDA94). This location is the closest position within the Quarry extent to any residential premises (specifically receiver R4).

The predicted values of PPV are provided in **Plate 11**.

The TE predicted ground vibration levels from the 'average' OSMRE regression are well below the 5 mm/s limit and are also below 5 mm/s under the 'upper bound' OSMRE regression.

The TE predicted ground vibration levels from the 'average' OSMRE regression are below the regulatory goal level of 2 mm/s and only exceed at receiver R4 under the 'upper bound' OSMRE regression by 0.7 mm/s.


#### *C-3-5 RISK ASSESSMENT AND POTENTIAL IMPACTS OF NOISE AND VIBRATION*

All earth-moving operations including a quarry or extraction pit have the potential to produce noise. Where residences exist adjacent to a quarry (excluding an access to a public road network), which is not the case here, precautions are to be taken to reduce the impact of noise and vibration.

The primary risks associated with noise emissions are provided in Error! Reference source not found. with mitigation measures recommended to reduce the overall risk associated with the potential emission.

**Plate 11. Predicted ground vibration**

Predicted ground vibration (mm/s) PPV for 162 kg charge mass/delay			
Receiver	Regression constant	Min distance to receiver (km)	Predicted PPV
R1	Average	1.78	0.5
	Upper bound		1.3
R2	Average	1.37	0.7
	Upper bound		1.8
R3	Average	1.04	1.0
	Upper bound		2.7
R4	Average	0.82	1.4
	Upper bound		3.7
R5	Average	1.25	0.8
	Upper bound		2.1
R6	Average	1.73	0.5
	Upper bound		1.3
R7	Average	1.36	0.7
	Upper bound		1.9
R8	Average	1.55	0.6
	Upper bound		1.6
R9	Average	1.15	0.9
	Upper bound		2.3
R10	Average	1.93	0.4
	Upper bound		1.1
R11	Average	1.35	0.7
	Upper bound		1.9
R12	Average	1.88	0.4
	Upper bound		1.2

 exceeds 5 mm/s.

**C-3-5 IMPACT AVOIDANCE AND MITIGATION MANAGEMENT**

The Quarry is ideally located in an area without nearby NSP such that there is limited potential for any impact arising from noise and vibration (including ABO) generated by the Activity, including the haulage of material to the road network.

Mitigation measures associated with crushing/screening, material carting, and drill/blast are as follow: -

- Blasting is only to occur Monday to Friday 1000 to 1600 hrs;
- Trucks using the Access Road near the Rural Living zone (100 m either side of the nearest point of the road to the zone) would travel at no more than 10 km/hr and avoid using engine brakes unless required for safety or an emergency;
- Trucks using the Access Road within 100 m of its junction with Porters Bridge Road should avoid using engine brakes unless they are required for safety or an emergency; and the
- Implementation of the **Noise Management Plan** for out-of-hours operations (**Attachment 10**) which contains the following details:

- a) a description of all potential sources of nuisance noise that may arise during out of hours operations;
- b) a description of all control measures that will be employed in relation to the activity to minimise nuisance noise during out of hours operations;
- c) roles and responsibilities relating to noise management for quarry personnel;
- d) a step-by-step process for accessing the quarry outside standard operating hours defined in the Quarry Code of Practice;
- e) communication protocols for managing truck access to the quarry including protocols for communication with the resident of receiver R1 to provide notification of upcoming out of hours works;
- f) a map with a clearly marked park-up area to be used by trucks when waiting for access to the quarry;
- g) noise monitoring protocols for residences within 100 m of the junction of the quarry access road and Porters Bridge Rd, to demonstrate compliance with noise limits.

#### C-3-6 ASSESSMENT OF NET IMPACTS

Measured noise levels (by TE) at locations surrounding the Quarry demonstrate existing operations are compliant with the PBRQ's PCE conditions for noise. Quarry operations weren't audible at locations to the east (M1 and M2) except for at M1 where trucks arriving or departing from the Quarry were audible at times. To the west at position M3 truck movements on the entry/exit road where audible and crushing and screening was faintly audible from the stockpile/processing area, however, the noise environment was controlled by other noise sources including leaf rustle from wind movement through nearby foliage and distant Bass Highway traffic.

The predicted noise emission results demonstrate that noise emission levels from the PBRQ are compliant with the sites existing noise emission conditions. The predicted levels are generally more than 5 dB below the criterion limit of 45 dBA (*Quarry Code of Practice* limit of 45 dBA for works within standard hours as defined by the code (i.e. 0700 to 1900 hrs Monday to Friday and 0800 to 1600 hrs Saturdays)). The highest predicted noise emission levels are at R1; approx. 80 m from the access road entry (Porters Bridge Road – Quarry access junction) and noise levels from operations at this location are controlled by truck traffic on the access road to the quarry; and R9 and R13 which are the closest receivers to the west of the processing area. Topography within the mining lease and surrounds, and buffer distances provide the attenuation required to maintain compliance with noise criteria.

It should be noted (as previously stated in Tarkarri Engineering report 5582\_AC\_R) that receiver R1 is owned and occupied by the land owner on which the Porters Bridge Road Quarry is located. A Compensation Agreement between the owner (and resident of R1) and Walters Contracting giving permission for Walters Contract to extract materials from the quarry land is in place. As such, it is not expected that the resident of R1 would object to management of 'out of hours'<sup>10</sup> works (loading and carting) as detailed above.

---

<sup>10</sup> Loading and carting from 0600 to 0700 hrs Monday to Friday, excluding public holidays gazetted statewide.

Intrusive characteristics from the PBRQ are not expected to be significant with excessive low frequency noise only predicted were A-weighted predicted levels are very low and adjustments for tonality (which don't include the influence of ambient noise) generally around 1 dB.

TE noted that the intensification of operations isn't expected to add additional acoustic energy to the environment with operations remaining unchanged and the progression of the extraction pit remaining well shielded from dwellings such that noise levels at sensitive locations are not increased over time.

The Environment Protection Policy (Noise) 2009 (Noise EPP) (made under section 96K of the *Environmental Management and Pollution Control Act 1994*) is a framework for noise management in Tasmania through the setting out of objectives and principles for noise control with human health as a value to be protected. The environmental values identified in the Noise EPP are the qualities of the acoustic environment that are conducive to:

- the wellbeing of the community or a part of the community, including its social and economic amenity; or
- the wellbeing of an individual, including the individual's –
  - health; and
  - opportunity to work and study and to have sleep, relaxation and conversation without unreasonable interference from noise.

Under the intensification in activity proposed for the PBRQ the environmental values of the surrounding noise sensitive residential locations are well protected.

## C-4 NATURAL VALUES

### Specialist Report – Natural Values Assessment

VDC was engaged by the Proponent to carry out a Natural Values Assessment to survey, assess, and document for example, the occurrence and status of vegetation communities and habitat for threatened flora and fauna species in the Development Area and relevant surrounds. The VDC (2025) report forms part of this EIS and is in **Attachment 3** and should be read in conjunction with this section.

#### C-4-1 EXISTING CONDITIONS

The natural values present in the Mining Lease and relevant surrounds to the Development (e.g. the location of eagle nests) were assessed and documents by Van Diemen Consulting Pty Ltd (2025; **Attachment 3**).

#### Vegetation Communities

**Table 9** provides a list of the TASVEG 4.0 codes mapped in the Mining Lease which includes the road access through to Porters Bridge Road (**Figures E-8A and E-8B**).

**Table 9. TASVEG 4.0 mapping categories recorded in the Survey Area**

DESCRIPTION	TASVEG CODE	Extent in the Site (hectares)	Area to be cleared (hectares)
<b>Forest and other categories in and adjacent to the Maximum Quarry Extent (Figure E-8A)</b>			
<i>Eucalyptus amygdalina</i> forest and woodland on dolerite	DAD	25.03	9.26
<i>Eucalyptus ovata</i> forest and woodland # *	DOV	3.10	0.0 <sup>11</sup>
Extra Urban Miscellaneous (roads, stockpile area and pit)	FUM	NA	NA
<b>Forest types bordering the access road (Figure E-8B)</b>			
<i>Eucalyptus viminalis</i> wet forest # *	WVI	NA	0
<i>Eucalyptus ovata</i> forest and woodland	DOV	NA	0
<i>Eucalyptus viminalis</i> grassy forest and woodland	DVG	NA	0
<i>Eucalyptus amygdalina</i> forest and woodland on dolerite	DAD	NA	0

# Threatened native vegetation communities are those listed in Schedule 3A of the *Nature Conservation Act 2002*; \* Ecological community equivalent listed under section 181 of the *Environment Protection and Biodiversity Conservation Act 1999*.

### Threatened Flora Species

One flora species protected by a statutory mechanism were observed during the surveys of the Mining Lease and surrounds (**Figure E-9**); curved riceflower (*Pimelea curviflora*). Curved riceflower is obvious when in flower (bright yellow tubular flowers), as it was during the surveys in 2020 and 2024, despite its small and cryptic stature amongst grass tussocks, bracken-fern and on rocky scree slopes.

VDC recorded 61 plants in the Mining Lease (the Site) during surveys in 2022 (the survey was required by an EPA imposed condition in the existing permit) with 13 plants having been removed to facilitate quarry initiation and expansion via a permit issued by NRE (DA22308 granted on 14 April 2022).

A further 27 plants are proposed to be taken over the life of the Development, which will leave at least 21 plants unaffected by the activity within the Mining Lease. The loss of 27 plants is scheduled to occur as a long-term requirement to facilitate the extraction of the identified resource. Of the population within the Mining Lease, there are no patches occupied by the species to be completely removed by the Development.

There are additional known occurrences of curved riceflower outside of the Mining Lease (the Site) as is evident from the mapped NVA data displayed in **Figure 8**; the higher density of observations in the Site is

<sup>11</sup> Areas of this forest type occur adjacent to the Maximum Quarry Extent.

reflective of the survey effort applied to that area (required by an EPA imposed condition in the existing permit).

An additional survey should be conducted of the area within 1 km of the Site and in the Site itself to further record plants of the species prior to an application for the taking of the curved riceflower plants is made to NRE. A curved riceflower survey of areas to be cleared of native vegetation for expansion of the quarry could be done with the pre-clearance surveys conducted for dens and masked owl potential nest trees.

No flora species listed on the *Environment Protection and Biodiversity Conservation Act 1999* were observed in the Mining Lease.

#### Threatened Fauna Species

No fauna species listed on the *Threatened Species Protection Act 1995* or *Environment Protection and Biodiversity Conservation Act 1999* were directly observed in the Mining Lease during the surveys.

**Table 10** provides a list of NVA identified fauna species that were considered in the VDC (2025) assessment of habitat in the Mining Lease with the type of range class (potential or core range; see FPA 2023).

**Table 10. Threatened fauna species range boundary intersection with the Mining Lease**

Group	Species Name	Common name	TSPA/EPBC	Range Class
Insects	<i>Catadromus lacordairei</i>	green-lined ground beetle	r/-	Potential
Mammals	<i>Sarcophilus harrisi</i>	Tasmanian devil	e/EN	Potential
	<i>Dasyurus maculatus</i> subsp. <i>maculatus</i>	spotted-tailed quoll	r/VU	
	<i>Dasyurus viverrinus</i>	eastern quoll	-/EN	Core and Potential
	<i>Perameles gunnii gunnii</i>	eastern barred bandicoot	-/VU	Core and Potential
Fish	<i>Galaxias fontanus</i>	Swan galaxias	e/EN	Potential
	<i>Prototroctes maraena</i>	Australian grayling	v/VU	Potential
Lizards and Frogs	<i>Pseudemoia rawlinsoni</i>	glossy grass skink	r/-	Potential
	<i>Pseudemoia pagenstecheri</i>	tussock skink	r/-	Potential
	<i>Litoria raniformis</i>	green and golden frog	v/VU	Potential
Birds	<i>Accipiter novaehollandiae</i>	grey goshawk	e/-	Potential
	<i>Lathamus discolor</i>	swift parrot	e/EN	N and W Potential
	<i>Aquila audax</i> subsp. <i>fleayi</i>	wedge-tailed eagle	e/EN	Potential

	<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle	v/-	Potential
	<i>Neophema chrysostoma</i>	blue wing parrot	-/VU	Potential
	<i>Tyto novaehollandiae</i> subsp. <i>castanops</i>	masked owl	e/VU	Core and Potential

Fauna species for which there is habitat present are listed in **Table 11** with comments about the type of occurrence of the species and its habitat and potential impact pathways.

Terrestrial mammals such as the Tasmanian devil, eastern quoll, and spotted-tailed quoll are likely or known to use the Mining Lease and habitats in the broader landscape. No dens of any of these species were recorded during the surveys of the Mining Lease.

Wedge-tailed eagle nests are known to occur near the Meander River to the north of the access from Porters Bridge Road, but the access road is not visible at those nests. A nest search was conducted of the Site across two survey periods – April and August 2021 and no nests were found. Another search was conducted in April 2025, and no additional nests were found. Foraging habitat is present. RND193 and RND3462 are located within 1,000m of the access road however the access road is not within line-of-sight (**Figures E-10 and E-11**); the nests are located on the eastern to south-eastern side of a hillock where the viewfield is blocked by the landform to the west that provides wind protection to the nests. RND125 is located more than 1km from any part of the Site and in April 2025 was found to be absent at the NVA recorded coordinates (RND125 has a poor level of accuracy; **Figure E-12**); no new or alternate nest was located around the area despite searching.

**Table 11. Threatened fauna species where habitat is present in or near the Mining Lease**

Species	Habitat comments
<b>eastern barred bandicoot</b>	In the core range of the species, and a component of significant habitat is present (dense tussock grass - sagg - sedge sward and there are some piles of coarse woody debris). The loss of this habitat compared to the very large extent of comparable habitat that is not being disturbed is unlikely to cause a significant impact to the species.
<b>Tasmanian devil</b>	<p>Potential denning habitat (i.e., areas of burrowable, well-drained soil, log piles or sheltered overhangs) is present but very localised in its occurrence. No dens were observed during surveys, and none are likely to be present given the paucity of denning opportunities (e.g., skeletal soils, few suitable rock overhangs). Given the transient nature of devils, there is a possibility that a den has gone undetected and/or new dens may be formed in the future.</p> <p>The existing traffic levels in the existing approval for the operating hours of 0600 to 1900 hrs Monday to Friday and 0800 to 1600hrs Saturday on each of those days is unlikely to substantially change, it is the number of days per year of carting that will increase.</p> <p>Monitoring in accordance with the existing Condition FF1 of the Permit demonstrated that no wildlife has been impacted by the traffic on the access road, within the Quarry, or associated with the use of Porters Bridge Road from the access to the Exton township despite operating in the</p>

	<p>approved operating hours. Devils and quolls have been observed on the access road from time to time by truck and light vehicle drivers, but none have been impacted by the traffic using it. Accordingly, the risk to all wildlife remains as it is now (at a negligible level), especially given that no additional trucks can access the quarry during the period of 1 hr before dusk, and 1 hour after dawn; that is, there is physically no ability to get more trucks into the quarry, have them loaded, and then depart beyond what current levels are within each hour of that 1 hr before dusk, and 1 hour after dawn period.</p>
<p><b>Spotted-tailed quoll</b></p>	<p>In the potential (but not core) range of the species. Significant habitat is absent because the area is outside the species' core range, but potential habitat is present. The spotted tailed quoll may sporadically occur in the area to forage and move. Potential denning habitat (i.e., areas of burrowable, well-drained soil, log piles or sheltered overhangs) is present but very localised in its occurrence. No dens were observed during the surveys. Given the transient nature of the spotted-tailed quoll, there is a possibility that a den has gone undetected and/or new dens may be formed in the future.</p>
<p><b>Masked owl</b></p>	<p>No trees were observed that support a nest. There are some dead trees which have hollows, or possible hollows, of &gt;15cm diameter but none were found to be associated with a chamber or larger hollow formation that could accommodate a masked owl for breeding purposes (verified with a drone); none of these trees are in the area proposed to be cleared for Quarry operations.</p> <p>Trees outside the MQE, such as further to the north and along the Meander River to the west, support larger trees which could at some stage support a nest. Roosting habitat (mainly native cherry – <i>Exocarpos cupressiformis</i>) is present but sparse where rock is to be extracted. Native cherry that occurs on the south-west facing slope of the main section of the Quarry could also be used as a roost site, but these are in an area not designated for rock extraction activities.</p>
<p><b>Swift parrot</b></p>	<p>There are no swift parrot observations in the NVA for the Reedy Marsh, Exton, and Westbury areas. The Reedy Marsh area, of which the Site is a broader part, is well-studied for its bird diversity. No swift parrots (nor nests) were observed in the Site during surveys (some were conducted in the swift parrot breeding season including 2021, 2022 (September), 2024 (October, November), and in 2025 (January).</p> <p>The nearest NVA swift parrot observations are from Parkham, Elizabeth Town and Deloraine, with a known breeding colony utilising forest on the north-eastern slopes of the Gog Range. The Site is about 18 kms from the Gog Range breeding area, which is more than the 10km 'foraging range' of the species noted in the Recovery Plan.</p> <p>There are sporadic trees with some nest potential locations within their trunk or on secondary branches across the Site, with most of these being <i>Eucalyptus obliqua</i>. The Site does support <i>Eucalyptus ovata</i> forest and woodland, and there are large stands of this forest type in the broader Reedy Marsh area (e.g. around Larcombes Road, and to the west of the Mining Lease towards Saddlers Run Road). There is no naturally occurring or planted <i>E. globulus</i> in this area. It is possible that swift parrots over-fly or use the area to move through the landscape on their migration to and from breeding areas (whether they are the east coast, south-east or north-west known breeding areas such as the Gog Range to the west). It is also possible (but unlikely) that there are undetected swift parrot nest locations within the Reedy Marsh area. It is very unlikely that there would be any impact to the species despite the removal of a few trees with small hollows within their trunk or on secondary branches.</p>

<b>Blue winged parrot</b>	Foraging habitat is present, being forest and woodland dominated by eucalypts. The species may utilise the habitat present but there are no observations of the species, and no recorded nesting locations. The species may utilise the area to forage but is unlikely to breed there due to the poor quality of nesting habitat present; vertical hollows are absent, and most ‘hollows’ are where dead trees have lost limbs but there has not been any subsequent hollow development (verified with a drone).
<b>Wedge-tailed eagle</b>	There are several raptor nests in the local region attributed to wedge-tailed eagle – see <b>Figure E-12</b> . Significant habitat is present because native forest and native non-forest vegetation occurs within 500m or 1 km line-of-sight of known nest sites (where the nest tree is still present); this applies to RND193 and RND3462 only. The significant habitat is not being cleared or converted because a road already exists (it is road use and maintenance not clearance of vegetation for road construction), and there is no intersection with Quarry specific activities like crushing, drilling and blasting, screening, and stockpiling. ‘Habitat critical to the survival of the species’ as defined in the Recovery Plan is absent. No impact to the species is anticipated.
<b>Grey goshawk</b>	Within the potential range for the species, and the species may at some stage be present in or use the Meander River for foraging. The use and maintenance of the existing access road is not likely to affect the habitat for this species in the adjacent Meander River. No impact to the species is anticipated.

### Weeds

Several species listed as a Declared Weed on the Tasmanian *Biosecurity Act 2019 (Biosecurity Regulations 2022)* were recorded in the Site.

The declared weeds listed in **Table 12** were observed in or near the Mining Lease (also **Figure E-10A**).

The pasture and environmental weeds listed in

Table 13 were observed in the Site (see also **Figure E-10B**).

**Table 12. Declared Weeds observed in or near the Mining Lease**

Common name	Species name	Meander Valley Municipality Status	Comments
-------------	--------------	------------------------------------	----------

<b>blackberry</b>	<i>Rubus fruticosus</i> agg.	Zone B	Common along the riparian zone of the Meander River and at the Porters Bridge Road access.
<b>Californian thistle</b>	<i>Cirsium arvense</i>	Zone B	Widespread and dense patches in canopy gaps (caused by dead white gums/fallen trees from flood damage) in the riparian zone of the Meander River. Localised patches along disused roadside/logging landing in main area of the Land.
<b>Gorse</b>	<i>Ulex europaeus</i>	Zone B <sup>12</sup>	Occasional patches in the roadside margin in the riparian zone of the Meander River. Localised plants along disused roadside/logging landings in main area of the Land.
<b>Horehound</b>	<i>Marrubium vulgare</i>	Zone A <sup>13</sup>	Single localised infestation at a roadside location where dirt/bricks have been dumped.
<b>Ragwort</b>	<i>Senecio jacobea</i>	Zone B	Occasional on disturbed ground/bare soil near the access from Porters Bridge Road and along Porters Bridge Road.
<b>Scotch broom</b>	<i>Cytisus scoparius</i>	Zone B	Occasional on disturbed ground/bare soil near access from Porters Bridge Road and along Porters Bridge Road.
<b>slender thistle</b>	<i>Carduus pycnocephalus</i>	Zone B	Occasional patches in canopy gaps (caused by dead white gums/fallen trees from flood damage) and roadside margin in the riparian zone of the Meander River. Localised plants along disused roadside/logging landing in main area of the Land.
<b>Spanish heath</b>	<i>Erica lusitanica</i>	Zone B	Single, localised but dense infestation at a roadside location and adjacent previous logging landings.

**Table 13. Pasture and environmental weeds observed in the Mining Lease**

<b>Common name</b>	<b>Species name</b>	<b>Comments about occurrence and within Mining Lease distribution</b>
<b>Blue periwinkle</b>	<i>Vinca major</i>	Occasional in canopy gaps (caused by dead white gums/fallen trees from flood damage) in the riparian zone of the Meander River.
<b>Euphorbia</b>	<i>Euphorbia lathyris</i>	Occasional on disturbed ground/bare soil near access from Porters Bridge Road.

<sup>12</sup> Containment within municipal boundaries, protection of specified areas within municipal boundaries, prevention of spread to Zone A municipalities. This applies to all Zone B municipalities.

<sup>13</sup> Implement integrated control program for eradication and prevent future occurrences. This applies to all Zone A municipalities.

<b>Franchet's cotoneaster</b>	<i>Cotoneaster franchetii</i>	Common along the riparian zone of the Meander River mainly near the Porters Bridge Road access.
<b>Great mullein</b>	<i>Verbascum thapsus</i>	Occasional in canopy gaps (caused by dead white gums/fallen trees from flood damage) in the riparian zone of the Meander River.
<b>Spear thistle</b>	<i>Cirsium vulgare</i>	Occasional along existing road alignment, previous logging landings, disused tracks, and near Porters Bridge Road access.
<b>Sycamore</b>	<i>Acer pseudoplatanus</i>	Common along the riparian zone of the Meander River.
<b>Wild teasel</b>	<i>Dipsacus fullonum</i>	Occasional on disturbed ground/bare soil near the access from Porters Bridge Road and along the riparian zone of the Meander River.
<b>Hemlock</b>	<i>Conium maculatum</i>	Occasional on disturbed ground/bare soil near the access from Porters Bridge Road.

### Pathogens

#### *Phytophthora cinnamomi*, PC

Root-rot fungus (*Phytophthora cinnamomi*, PC) is a soil borne pathogen that causes death in a wide range of native plant species often leading to floristic and structural changes in susceptible plant communities.

PC evolved in tropical areas, and it requires warm moist soils for at least some time of the year to produce sporangia and release zoospores (Rudman 2005). Only those areas of the State that are below an altitude of about 700m above sea level have soils sufficiently warm for this to occur (Podger *et al* 1990). Vegetation types below 700m elevation may not be wholly or partly susceptible if closed canopies keep soil temperatures cool during the summer months, such as tall wet eucalypt forests over rainforest species, or rainforest communities.

PC can be spread through the movement of infected soil or plant material by people or animals and can even be transported by water percolating through soil or via surface water, such as in creeks and other drainage lines. Transport of PC to new areas is usually through soil/dirt adhering to vehicles and machinery. Transport into non-roaded areas of high human usage is mainly via bushwalking items such as tents or footwear but can also occur by bird activity.

The fungus is not always evident in the landscape as it attacks root systems of susceptible species, usually causing death in new growth or the yellowing of leaves followed by loss of vigour and, in most cases, death. The fungus can inhabit the root systems of resistant species without any visible signs of infection within the host plant.

The Mining Lease is not within a PC Management Area<sup>14</sup>. Samples to detect PC were not collected. Instead, areas within and around the Site were inspected in detail for signs of infection by PC which included areas of water accumulation such as spoon drains, culverts, and other drainage features associated with the tracks and road lines. No plant ‘symptom’ evidence of the pathogen was observed, probably because there are few susceptible species present (none exhibited PC symptoms), and that dry forest and woodland (with occasional wet forest patches) occurs across the Mining Lease.

#### *Myrtle Wilt*

Myrtle wilt, caused by a wind-borne fungus (*Chalara australis*), occurs naturally in rainforest where myrtle beech (*Nothofagus cunninghamii*) is present. The fungus enters wounds in the tree, usually caused by damage from wood-boring insects, wind damage and forest clearing. The incidence of myrtle wilt often increases forest clearing events such as windthrow and wildfire. *Nothofagus cunninghamii* is not present within or adjacent to the Site; no special management is considered warranted.

#### *Myrtle Rust*

Myrtle rust is a disease limited to plants in the Myrtaceae family. This plant disease is a member of the guava rust complex caused by *Austropuccinia psidii*, a known significant pathogen of Myrtaceae plants outside Australia. Infestations are currently limited to NSW, Victoria, Queensland, and Tasmania.

No evidence of myrtle rust was observed.

#### *Chytrid fungus and other freshwater pathogens*

The freshwater pests and pathogens *Batrachochytrium dendrobatidis* (chytrid frog disease), *Mucor amphibiorum* (platypus mucor disease) and the freshwater algal pest *Didymosphenia geminata* (didymo) pose a threat to native freshwater species and habitat and can be spread via contaminated water, mud, gravel, soil and plant material or infected animals are moved between sites. Contaminated materials and animals are commonly transported on boots, equipment, vehicles tyres and during road construction and maintenance activities.

Chytrid fungus causes the disease known as chytridiomycosis or chytrid infection. The fungus infects the skin of frogs destroying its structure and function and can ultimately cause death. Sporadic deaths occur in some frog populations, and 100 per cent mortality occurs in other populations. The disease is difficult to positively confirm within the landscape as mouth-swab samples need to be collected from tadpoles at a site to enable testing to be conducted (PCR testing).

The disease has been positively confirmed within the Meander River catchment. Didymo was not observed in waterways (i.e., the access road adjacent Meander River).

#### Geoconservation

The nearest geoconservation site is the Deloraine Eocene fossil site (ID 2509) which is located to the west of the Meander River just to the north of Deloraine (about 5.4 kms to the south-west of the Site). The Mining

---

<sup>14</sup> See Schahinger, R., Rudman T., and Wardlaw, T. J. (2003). Conservation of Tasmanian Plant Species & Communities threatened by *Phytophthora cinnamomi*. Strategic Regional Plan for Tasmania. Technical Report 03/03, Nature Conservation Branch, Department of Primary Industries, Water and Environment, Hobart

Lease does not overlap with, or occur adjacent to, **any** geoconservation sites listed on the Tasmanian Geoconservation Database. Hence, the Quarry will not have any impact to a listed geoconservation site.

The Quarry will exploit a large area of Jurassic dolerite that would otherwise have a very slow natural rate of erosion and decomposition. Natural sediment loads into the Meander River would not be altered by the Quarry (i.e., untreated [for sediment removal] polluted stormwater will not be directed to Meander River from the Quarry). Sediment generated by the Quarry from open areas of bare ground would be managed near source using sumps and small sediment traps (as they currently are for the Approval), with water treatment occurring through the sediment pond system for the Quarry. The access road has existed for many years (prior to the Quarry), and has drains, culverts, and sumps to catch water prior to its discharge to the Meander River.

#### Reserved Lands

No land reserved under the *Nature Conservation Act 2002* is adjacent to or covered by the Mining Lease.

#### Wilderness

The EIS Guidelines require consideration of high-quality wilderness areas identified in the Tasmanian Regional Forest Agreement in or within the vicinity of the site. To assess this matter, the Wilderness layer available through TheLIST was accessed, in conjunction with background reports<sup>15</sup> to provide context of the mapping.

The Wilderness layer is the result of a wilderness mapping project that was undertaken by the Parks and Wildlife Service in the mid 1990's. The scope of the project was the landmass of Tasmania including the Bass Strait islands. The project driver was to complete work to contribute to the 1997 Tasmanian Regional Forest Agreement (RFA). The methodology followed the guidelines of the National Wilderness Inventory (NWI) which was developed by the Australian Heritage Commission in the late 1980s and early 1990s to identify wilderness quality across Australia. A NWI 12 was used for RFA processes as the threshold of high wilderness quality.

The Quarry (and Mining Lease) is not identified as having any Wilderness value (i.e. no NWI), and its operation does not and will not affect any high-quality wilderness.

### *C-4-2 PERFORMANCE REQUIREMENTS*

#### Native Vegetation Cover

##### *Tasmanian Regional Forest Agreement (RFA)*

The Tasmanian Regional Forest Agreement (RFA) is a bilateral agreement between the Tasmanian and Australian governments, first signed on 8 November 1997. It is a framework document that is underpinned by Tasmania's forest management system (including legislation, policies, codes, plans and management practices). The 1997 Tasmanian Regional Forest Agreement was varied on 18 August 2017 by the Australian and Tasmanian governments to establish a 20-year rolling extension.

---

<sup>15</sup> Tasmanian Public Land Use Commission (1996). Tasmanian - Commonwealth Regional Forest Agreement: supplement to Environment & Heritage report vol V.- background report part C. Tasmanian Public Land Use Commission, Hobart. Lesslie, R and Maslen, M. (1995). National Wilderness Inventory - Handbook of Procedures, Content and Usage, 2nd Edition. Australian Heritage Commission, Canberra.

The RFA covers both public and privately owned forests, and provides for:

- the long-term stability of forests and forest industries,
- a comprehensive, adequate, and representative reserve system (CAR reserve system), and
- the ongoing ecologically sustainable management and use of forested areas in Tasmania.

The assessment and approval of the vegetation impacts proposed to be the net result of the Quarry activity are consistent with the intent and implementation of the RFA.

#### *Permanent Native Forest Estate Policy*

The Tasmanian Government has had a formal Permanent Native Forest Estate Policy (the Policy) since 1996. The primary driver for establishing the Policy was to regulate the extent to which native forests could be cleared and converted to other land uses, as part of the development of the first Tasmanian Regional Forest Agreement (the RFA) between the Commonwealth of Australia and the Tasmanian Government.

The Policy is implemented by the Forest Practices Authority in accordance with the *Forest Practices Act 1985*. The FPA monitors the progressive total of all areas of native forest approved for conversion under Forest Practices Plans. The 1996 CRA native forest area is the best estimate of forest extent available at that time and, as agreed in the Supplementary Regional Forest Agreement 2005, and is the baseline against which implementation of the Policy will be measured. To monitor the Policy, the net areas of forest converted as recorded in the Forest Practices Plan data base apply.

The clearance and conversion of native forest associated with the Quarry does not disturb the Policy because it is not reliant on a Forest Practices Plan - an exemption to needing a Forest Practices Plan would be provided by s4(i)(i) of the *Forest Practices Regulations 2007* when, and if, a permit is granted by the Planning Authority under the *Land Use Planning and Approvals Act 1993*.

#### Weeds and pathogens

All Declared Weed species observed in and adjacent to the Mining Lease are identified in their respective Statutory Weed Management Plans for the Meander Valley Municipality as a **Zone B Municipality - Containment is the principal management objective**<sup>16</sup>.

The establishment of the Quarry may provide the opportunity for invasion or spread of noxious weeds. The Quarry is to be managed so that: -

- the requirements of the relevant statutory Weed Management Plan are applied;
- the Quarry does not become a source of Declared weeds, plant diseases and pest animals; and

---

<sup>16</sup> Containment is the most appropriate management objective for Zone B municipalities which have problematic infestations but no plan and/or resources to undertake control actions at a level required for eradication. The management outcome for Zone B municipalities is ongoing prevention of the spread of [the declared weed] from existing infestations to areas free or in the process of becoming free of [the declared weed].

- to prevent their [Declared weeds, plant diseases and pest animals] introduction throughout establishment, operation, and rehabilitation phases of the Quarry.

#### Products of native fauna

The taking of products of native fauna, specifically dens or burrows of native fauna, will require a permit to take issued under the *Nature Conservation Act 2002* and *Nature Conservation (Wildlife) Regulations 2021*.

### C-4-3 OVERVIEW AND POTENTIAL IMPACTS

#### Vegetation

The vegetation present is typical of the lowland flats and dolerite hills around Deloraine and Exton; the forest type to be cleared is *Eucalyptus amygdalina* forest and woodland on dolerite (TASVEG Code – DAD; see **Figure E-8A**). Two threatened vegetation communities (both NC Act and EPBC Act listed) were identified and mapped, and impacts to these can be avoided or mitigated.

Approximately 9.3 hectares of native vegetation (TASVEG Code – DAD; **Figure E-8A**) is proposed to be cleared over the life of the Quarry. A maximum Disturbed Area of 8 hectares is proposed for the Development.

#### Threatened Flora Species

A single flora species was identified and mapped within the Site; *Pimelea curviflora* (curved riceflower). Upwards of 27 curved riceflower (*Pimelea curviflora*) plants will be taken by the Development based on existing plant locations and numbers. The species is widespread in the Deloraine region, and plants occur elsewhere in the Mining Lease where they will not be taken or disturbed (see **Figure E-9**).

#### Threatened Fauna Species

No fauna species listed on the *Threatened Species Protection Act 1995* or *Environment Protection and Biodiversity Conservation Act 1999* were directly observed in the Mining Lease during the surveys.

Terrestrial mammals such as the Tasmanian devil, eastern quoll, and spotted-tailed quoll are likely or known to use the area and habitats in the broader landscape. No dens of any of these species were recorded during surveys. Material is likely to be carted, and other vehicle movements could occur to and from the Quarry, between one hour prior to sunset until one hour after sunrise – noting that operating hours are 0700 to 1900 hrs (with carting and loading from 0600 to 0700hrs).

Wedge-tailed eagle nests are known to occur near the Meander River to the north of the access from Porters Bridge Road (**Figure E-12**), but the access road is not visible at those nests. A third recorded nest was not relocated during searches and is confirmed as absent from the NVA held coordinates.

Lighting is to be provided in the workshop and office, and to illuminate the weighbridge. Machinery, vehicles, and other road-using equipment will be fitted with lights as required by law.

#### Weeds and pathogens

Declared and environmental weeds typical of the Deloraine region were recorded, with most being associated with weedy vegetation along the Meander River (e.g., gorse, scotch broom, sycamore, wild teasel, blackberry, ragwort) and access road (e.g., Spanish heath, horehound).

### CAR Reserve System and International Migratory Bird Agreements

There is to be no impact to designated conservation areas that are part of the CAR Reserve System (e.g., lands proclaimed as reserves under the *Nature Conservation Act 2002*), or those areas relating to the requirements of international treaties (e.g., Japan-Australia and China-Australia Migratory Bird Agreements (JAMBA/CAMBA) and Ramsar (wetlands) Convention), or wetlands listed in A Directory of Important Wetlands in Australia.

The potential impact of the Quarry to migratory bird species listed under Japan-Australia and China-Australia Migratory Bird Agreements (JAMBA/CAMBA), such as the fork-tailed swift (*Apus pacificus*), white-throated needletail (*Hirundapus caudacutus*), satin flycatcher (*Myiagra cyanoleuca*), Australasian bittern (*Botaurus poiciloptilus*) and great crested grebe (*Polycephalus cristatus ssp. cristatus*), is negligible.

### *C-4-4 IMPACT MITIGATION AND MANAGEMENT*

Recommendations based on the best practice management approach of ‘avoid, mitigate, and offset’ are provided by VDC (2025) and are summarised below for each natural value theme.

#### Vegetation

- A suitably qualified person will mark the boundary of the *Eucalyptus ovata* forest and woodland (DOV) with the Maximum Quarry Extent in the field to define the activity boundary prior to any operations near that area. Exclusion fencing and signage (‘Exclusion Zone – Do Not Enter’) or an earthen bund to physically exclude machinery and vehicles will be installed by the operator, staff advised of the area through the site induction process to prevent as far as possible any accidental incursion of machinery and vehicles, and areas shown on the site map;
- Where vegetation comprises *Eucalyptus viminalis* wet forest or *Eucalyptus ovata* forest and woodland, disturbance of vegetation on the sides of the access road associated with the use of the Quarry must be restricted to that extent necessary for road maintenance or to ensure the safety of road users;
- The Proponent will include as part of its induction and operational management system a process for staff, management and contractors working at the Quarry to mark clearing and working areas to identify permitted operational areas and exclusion zones.

No offsets are proposed for the clearing of native vegetation.

#### Threatened Flora Species

- A Permit to Take is to be sought from the Department of Natural Resources and Environment Tasmania to ‘take’ up to 27 curved riceflower (*Pimelea curviflora*) plants.
- An additional survey should be conducted of the area within 1 km of the Site and in the Site itself to further record plants of the species prior to an application for the taking of the curved riceflower plants is made to NRE. A curved riceflower survey of areas to be cleared of native vegetation for expansion of the quarry could be done with the pre-clearance surveys conducted for dens and masked owl potential nest trees.

## Threatened Fauna Species

### *Terrestrial Mammals*

The following management approach is to be applied for **dens and potential dens** –

- Areas to be cleared of vegetation for Quarry activities is to be surveyed by a suitably qualified person to identify if dens or woodpiles supporting dens are present. The pre-clearance surveys must be completed by a suitably qualified person(s) and any dens or suspected dens removed via a procedure approved by the EPA; and
- If dens or potential dens are observed or suspected during operations a 50 m no machinery buffer will be applied to the den or suspected den and expert advice sought.

The following management approach will be applied for **internal road use and maintenance** –

- Undertake education and awareness training for drivers accessing the Quarry;
- Limit internal road speed to 20 km/hr from dusk to dawn;
- Liaise with drivers to identify high-risk road sections (i.e., areas where animals are often seen by drivers) and install advisory signage; and
- Where practicable, and noting relevant controls and identified high-risk areas, clear vegetation on roadsides (at least 3m from road edge) in high-risk areas to enhance view field for drivers.

### *Masked Owl*

While no impact to the species is anticipated, measures are to be applied.

A suitably trained and qualified person will conduct a pre-clearance survey of any area to be cleared of trees and vegetation.

Hollow(s) in a tree that could possibly be used by masked owl to nest, or roost will be inspected using the following hierarchy of assessment methods –

1. Initial Inspection: Inspect trees for any signs of nesting or roosting, such as regurgitated pellets, whitewash or feathers at the base of the tree within the tree's dripline. The absence of these signs does not rule out the presence of a nest, but their presence can strongly indicate nesting activity. Ground-based and aerial (drone) inspection methods may be used to determine whether a tree contains hollows with an entrance hole  $\geq 15$  cm, though these methods are not suitable for conducting hollow inspections.
2. Observation of hollows: Observe hollows from sunset to several hours after to detect owls exiting from hollows. A camera should record the hollow during the observations to minimise observer error, ideally using night vision or heat detection capabilities.
3. Hollow Inspection: Use an action camera on a pole to inspect inside the hollow to attempt determining if the hollow has been used as either a nest or roosting hollow.
4. Invasive Methods: If the above, less-invasive methods are inconclusive, trees should be tapped firmly using a hammer or heavy stick etc to see if an owl is flushed from the hollow.

Where clearing operations occur near to (within 50m) or involve the removal of trees with hollows that are of a size and form that could be used as a nest site by masked owl, smaller nearby or adjacent trees will be felled first to allow noise disturbance to flush out any masked owls from trees; if a bird is flushed from a tree hollow then that tree is to be considered a nest or roost site pending further investigations and advice from the EPA.

If at any point a tree is thought to contain a nest (through flushing birds or physical evidence), works will cease works within 150 m will cease, and the EPA contacted for further advice. Furthermore, if a masked owl is observed exiting a tree hollow, work within 150 m will cease, and the EPA contacted for further advice.

#### Weed Management

A Weed and Pathogen Management Plan (WPMP) approved by the EPA already exists for the Permit. The EPA approved WPMP has been adopted as the 'weed management plan' for the Development and accordingly it is submitted with the EIS (**Attachment 7**).

#### Geoconservation

No management measures are proposed.

#### Reserved Lands

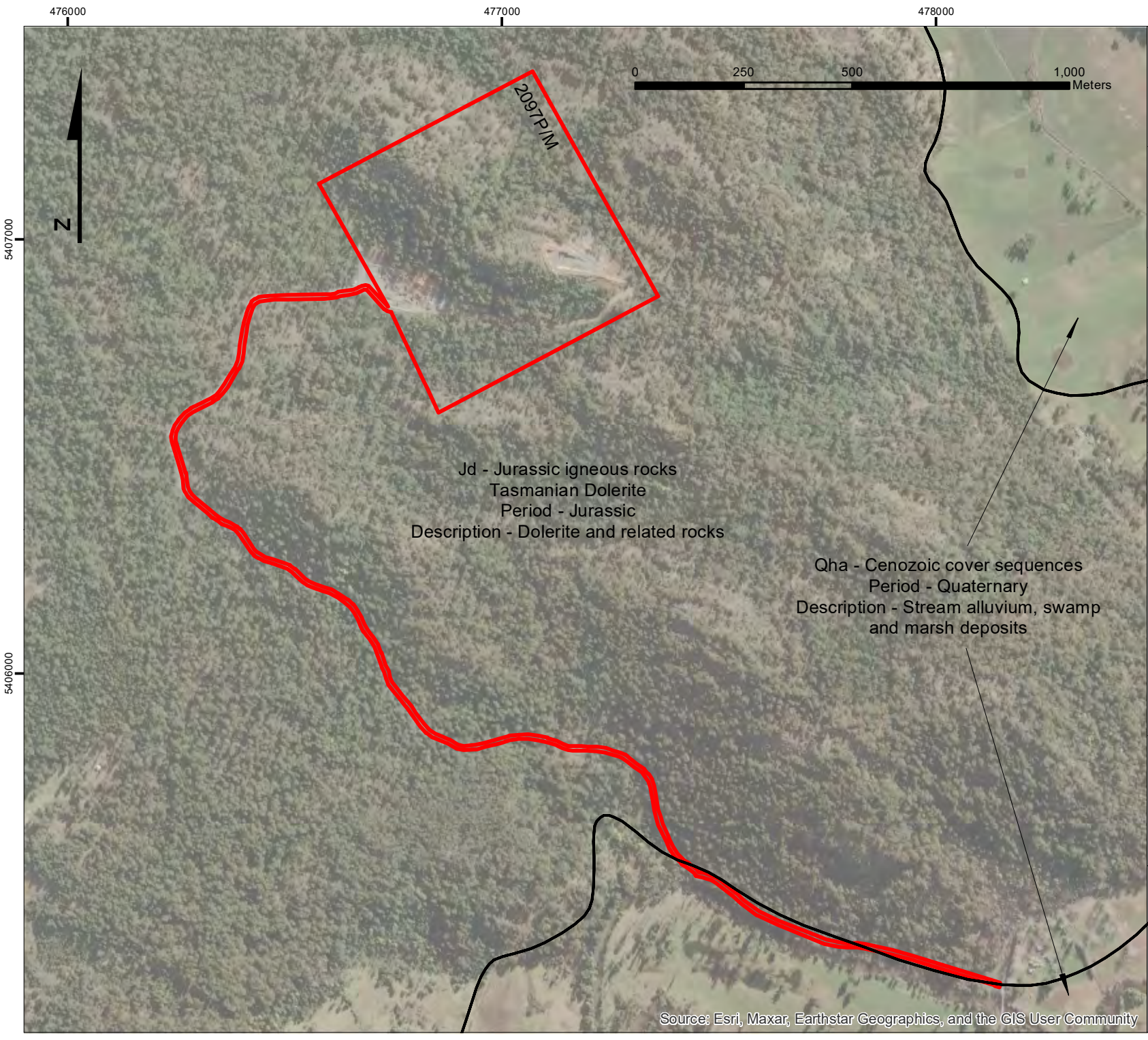
No management measures are proposed.

#### Wilderness

The Quarry (and Mining Lease) is not identified as having any Wilderness value (i.e. no NWI), and its operation does not and will not affect any high-quality wilderness. No management measures are proposed.

#### *C-4-5 OFFSETTING UNAVOIDABLE ADVERSE IMPACTS*

No offsets are proposed as no adverse impacts are anticipated to natural values after implementation of the avoidance and mitigation measures.



# PORTERS BRIDGE ROAD QUARRY

## ENVIRONMENTAL IMPACT STATEMENT (EIS)

Figure E-6: Geological bedrock  
(MRT – Scale 1:25,000) in  
and around the Mining Lease

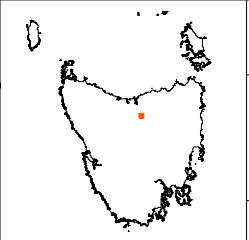
**TASMAP:**  
DELORAINE  
4640

**LGA:**  
MEANDER  
VALLEY

Jd - Jurassic igneous rocks  
Tasmanian Dolerite  
Period - Jurassic  
Description - Dolerite and related rocks

Qha - Cenozoic cover sequences  
Period - Quaternary  
Description - Stream alluvium, swamp  
and marsh deposits

Base data by TASMAP. © State of Tasmania  
Base image © ESRI



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

475500 476000 476500 477000 477500

0 250 500 1,000 Meters

2097P/M is within the Meander River Sub-Catchment



5407500

5407000

5406500

5406000

# PORTERS BRIDGE ROAD QUARRY

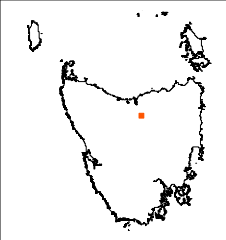
## ENVIRONMENTAL IMPACT STATEMENT (EIS)

Figure E-7: Existing regional drainage lines and catchments

**TASMAP:**  
DELORAINÉ  
4640

**LGA:**  
MEANDER  
VALLEY

Base data by TASMAP. © State of Tasmania  
Base image © ESRI

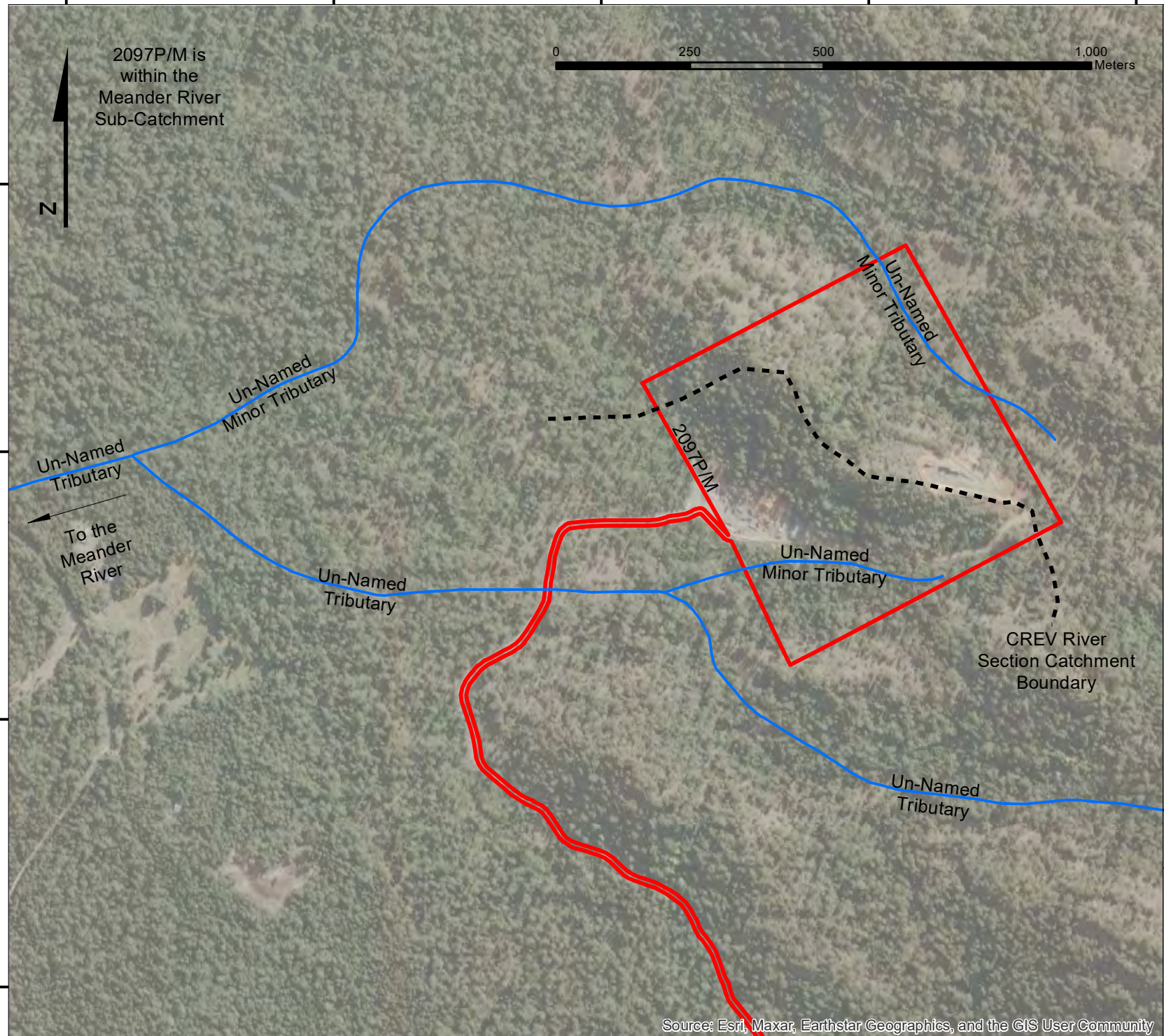


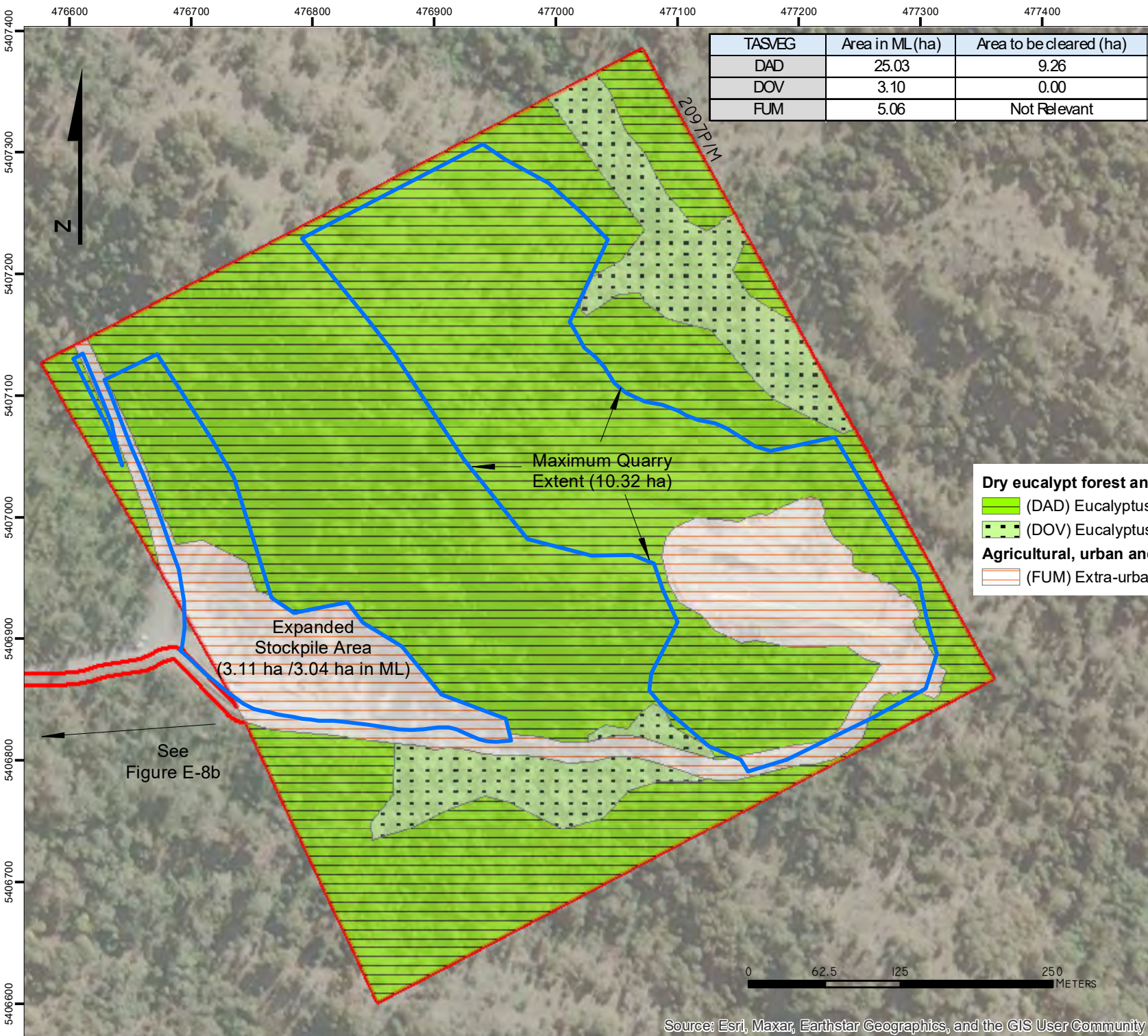
DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community





TASVEG	Area in ML (ha)	Area to be cleared (ha)
DAD	25.03	9.26
DOV	3.10	0.00
FUM	5.06	Not Relevant

# PORTERS BRIDGE ROAD QUARRY

## ENVIRONMENTAL IMPACT STATEMENT (EIS)

Figure E-8a: Vegetation communities (TASVEG 4.0) in the Porters Bridge Road Quarry

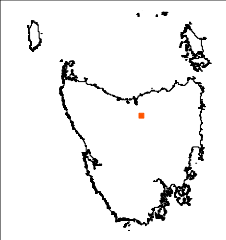
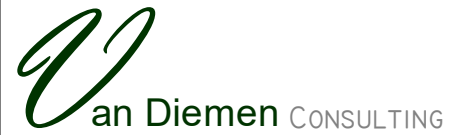
**TASMAP:**  
DELORAINÉ  
4640

**LGA:**  
MEANDER VALLEY

- Dry eucalypt forest and woodland**
- (DAD) Eucalyptus amygdalina forest and woodland on dolerite
  - (DOV) Eucalyptus ovata forest and woodland
- Agricultural, urban and exotic vegetation**
- (FUM) Extra-urban miscellaneous

Note  
DOV - E. ovata forest and woodland (e/CR)  
DAD - E. amygdalina forest (-/-)

Base data by TASMAP. © State of Tasmania  
Base image © ESRI



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025

476000

477000

478000

# PORTERS BRIDGE ROAD QUARRY

## ENVIRONMENTAL IMPACT STATEMENT (EIS)


### Figure E-8b: Vegetation communities (TASVEG 4.0) along the Porters Bridge Road Quarry Access

**TASMAP:**  
DELORAINE  
4640

**LGA:**  
MEANDER  
VALLEY

**Note**

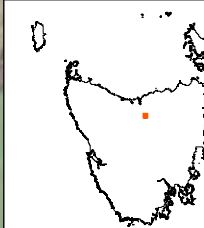
- WVI - E. viminalis wet forest (e/-)
- DOV - E. ovata forest and woodland (e/CR)
- DAD - E. amygdalina forest (-/-)
- DVG - E. viminalis grassy forest (-/-)

 Section of Existing Road going through Threatened Native Forest

**Note:**

Vegetation along road will not be removed

Base data by TASMAP. © State of Tasmania  
Base image © ESRI



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025



5407000

5406000

5405000

(DOV) Eucalyptus ovata forest and woodland

Existing Road End

See Figure E-8a

2097P/M

Existing Access Road

Remainder of Access Road is (DAD) Eucalyptus amygdalina forest and woodland on dolerite

(WVI) Eucalyptus viminalis wet forest

(DVG) Eucalyptus viminalis grassy forest and woodland

(WVI) Eucalyptus viminalis wet forest

Existing Road Start

0 250 500 1,000 Meters

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

476000

477000

478000

5407000

5406000

5405000

# PORTERS BRIDGE ROAD QUARRY

## ENVIRONMENTAL IMPACT STATEMENT (EIS)

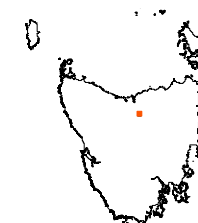
Figure E-9: Known (NVA) and observed threatened flora at the Porters Bridge Road Quarry

**TASMAP:**  
DELORAINE  
4640

**LGA:**  
MEANDER  
VALLEY

**Note:**  
27 *Pimelea curviflora* var. *gracilis* to be taken during clearing for quarry and stockpile expansion

Base data by TASMAP. © State of Tasmania  
Base image © ESRI



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025



*Pimelea curviflora* var. *gracilis* (r/-)  
(Observed / NVA)

Expanded  
Stockpile Area  
(3.11 ha /3.04 ha in ML)

Maximum Quarry  
Extent (10.32 ha)

*Pimelea curviflora* var. *gracilis* (r/-) (NVA records)



0 250 500 1,000  
Meters

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

476000

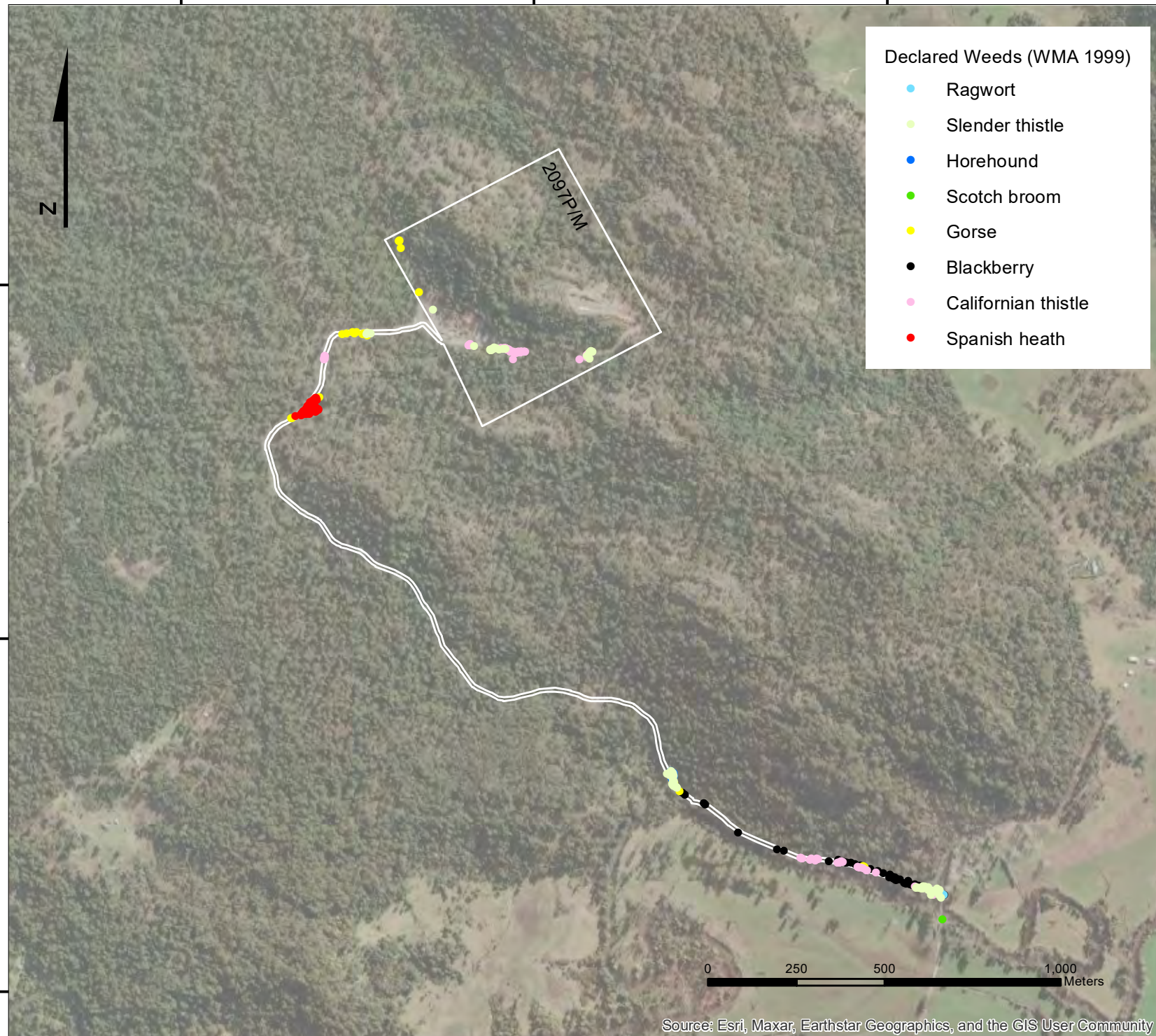
477000

478000

5407000

5406000

5405000



- Declared Weeds (WMA 1999)
- Ragwort
  - Slender thistle
  - Horehound
  - Scotch broom
  - Gorse
  - Blackberry
  - Californian thistle
  - Spanish heath

# PORTERS BRIDGE ROAD QUARRY

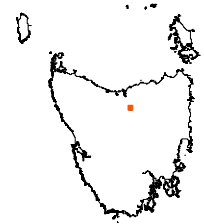
## ENVIRONMENTAL IMPACT STATEMENT (EIS)

Figure E-10a: Weeds (observed) in and around the Porters Bridge Road Quarry

**TASMAP:**  
DELORAINE  
4640

**LGA:**  
MEANDER  
VALLEY

Base data by TASMAP. © State of Tasmania  
Base image © ESRI



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

476000

477000

478000

5407000

5406000

5405000



- Environmental weeds
- Franchet's Cotoneaster
  - Euphorbia
  - Great Mullein
  - Hemlock
  - Wild teasel
  - Blue periwinkle
  - Sycamore

# PORTERS BRIDGE ROAD QUARRY

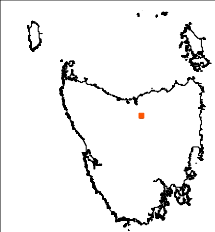
## ENVIRONMENTAL IMPACT STATEMENT (EIS)

Figure E-10b: Weeds (observed) in and around the Porters Bridge Road Quarry

**TASMAP:**  
DELORAINE  
4640

**LGA:**  
MEANDER  
VALLEY

Base data by TASMAP. © State of Tasmania  
Base image © ESRI



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

476000

477000

478000

# PORTERS BRIDGE ROAD QUARRY

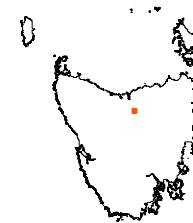
## ENVIRONMENTAL IMPACT STATEMENT (EIS)

Figure E-11: NVA Records (Threatened Fauna) around the Porters Bridge Road Quarry

**TASMAP:**  
DELORAINE  
4640

**LGA:**  
MEANDER  
VALLEY

Base data by TASMAP. © State of Tasmania  
Base image © ESRI



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025



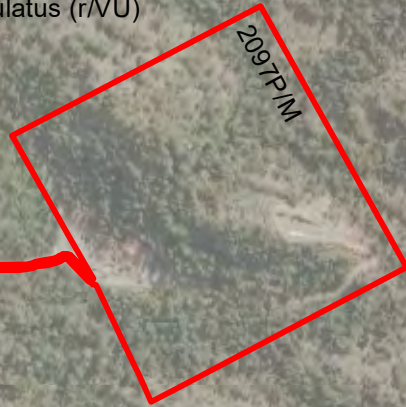
5407000

5406000

5405000

Sarcophilus harrisii (e/EN)  
(Tasmanian Devil)

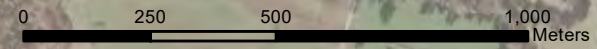
Dasyurus maculatus subsp. maculatus (r/VU)  
(Spotted-tailed Quoll)



Sarcophilus harrisii (e/EN)  
(Tasmanian Devil)

Aquila audax subsp. fleayi (e/EN)  
(Tasmania Wedge-tailed Eagle)  
Nests and Bird Observations

Dasyurus maculatus subsp. maculatus (r/VU)  
(Spotted-tailed Quoll)



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

476000

477000

478000

5408000

5407000

5406000

5405000



RND 125  
Aquila audax subsp. fleayi (e/EN)  
Position Accuracy 1 km

2097PM



RND 193 & 3462  
Aquila audax subsp. fleayi (e/EN)  
Position Accuracy 50 & 10 m

0 250 500 1,000  
Meters

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

# PORTERS BRIDGE ROAD QUARRY

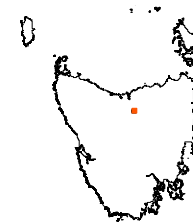
## ENVIRONMENTAL IMPACT STATEMENT (EIS)

Figure E-12: Nearest known (NVA) raptor nests to the Porters Bridge Road Quarry

**TASMAP:**  
DELORAINE  
4640

**LGA:**  
MEANDER  
VALLEY

Base data by TASMAP. © State of Tasmania  
Base image © ESRI



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 5 APR 2025

## **C-5 WASTE**

### *C-5-1 EXISTING CONDITIONS*

The Development already generates solid wastes of two main streams –

1. a typical ‘domestic’ stream such as food scraps, wrappers and other wastes from the office/crib room and food consumption by workers in their working day; and
2. a semi-industrial stream typical of an extractive industry including for example empty drums (e.g., motor oils, hydraulic and brake fluid, other machinery, and brake oil), plastics (wrapping on parts, replacement belts, etc.), and rags (may be contaminated with oils, fuel, grease or other hydrocarbon-based product and batteries).

Machinery related ‘solid wastes’, such as oil filters, are generally not produced at the Quarry because machinery/equipment servicing is not done at the Quarry (except for emergency repairs or service requirements).

All waste is collected in suitably labelled bins/containers and then removed from the Quarry.

### *C-5-2 PERFORMANCE REQUIREMENTS*

Waste management measures must be in accordance with the following hierarchy of waste management, arranged in decreasing order of desirability: -

1. Avoidance
2. Reuse
3. Treatment/stabilisation for reuse
4. Recycling
5. Energy recovery
6. Repository storage (for future treatment/recovery)
7. Treatment/stabilisation for disposal
8. Disposal/permanent containment.

### *C-5-3 POTENTIAL IMPACTS*

#### Solid and General Wastes

Domestic stream wastes such as food scraps, wrappers and other wastes from the office/amenities block if not collected, stored, and disposed of appropriately could cause an unnecessary localised nuisance from attracting vermin, native animals (possums), feral cats, and potential odour.

Other solid wastes such as machinery filters (not in the Controlled Waste category – includes for example engine air filters, fan belts, conveyor belts, HDPE air filters for machinery cabs), PPE (e.g., disposable ear plugs), and office type waste streams (e.g., electronics, paper, other consumables) will be generated. These items if allowed to accumulate beyond reasonable levels could create habitat for vermin and represent an elevated fire risk to assets if a fire were to occur in or approach the Quarry.

### Liquid Wastes

The only liquid wastes generated by the Quarry are those described in Controlled Waste (i.e., oils, hydraulic fluids) and via the toilet/shower bundle with its purpose-built waste storage tank (**Attachment 5**).

### Controlled Waste

Tasmania has adopted the terminology of the *National Environment Protection (Movement of Controlled Waste between States and Territories) Measure 1998* (Controlled Waste NEPM) which uses the term Controlled Waste.

Controlled waste is the most hazardous category of waste and includes those wastes that exhibit toxicity, chemical or biological reactivity, environmental persistence, or the ability to bio-accumulate or enter the food chain. The handling of controlled waste (production, receipt, storage, reuse, recycling, reprocessing, salvage, incineration, treatment, disposal or use for energy recovery) requires approval in accordance with the *Environmental Management and Pollution Control (Waste Management) Regulations 2020*.

**Table 14** provides a list of the potential Controlled Waste categories generated from time to time at the Quarry, the possible source of that generation and the disposal method.

**Table 14. Controlled Waste potential production source at Pit and disposal method**

Code	Description	Potential source at Pit	Disposal Method
J120	Waste oil/water, hydrocarbons/water mixtures or emulsions	Hydraulic oils and engine oils	Disposed of at the Council operated Westbury Waste Depot (179 Cluan Road, Westbury) or Deloraine Waste Depot (54 Tip Road, Deloraine).
K130	Sewage sludge, sewage residue, nightsoil or sludge from an on-site wastewater management system	Toilets and shower	Captured and stored by the purpose built toilet/shower bundle tank ( <b>Attachment 5</b> ) and then collected and disposed by an authorised septic tank pumping company for disposal to a TasWater sewage treatment facility.
N100	Containers which are contaminated with residues of substances referred to in this list	Containers that are used to collect and store Waste oil/water, hydrocarbons/water mixtures or emulsions (J120)	Disposed of at the Council operated Westbury Waste Depot (179 Cluan Road, Westbury) or Deloraine Waste Depot (54 Tip Road, Deloraine).
N120	Soils contaminated with a controlled waste	Soils that may have been the subject of a spill of hydrocarbons, oils or hydraulic fluid	Contaminated site handling facility; likely the Dulverton Waste Management facility at Latrobe.

<b>N140</b>	Fire debris and fire washwaters	Only if a fire event occurs	Contaminated site handling facility; likely the Dulverton Waste Management facility at Latrobe.
<b>T140</b>	Tyres	Waste tyres will be generated as old tyres are replaced	Disposed of at the Council operated Westbury Waste Depot (179 Cluan Road, Westbury) or Deloraine Waste Depot (54 Tip Road, Deloraine).

#### C-5-4 IMPACT AVOIDANCE AND MITIGATION MANAGEMENT

Waste will be managed in accordance with the following for each waste stream: –

##### General Refuse

Waste generated by workers from general refuse (e.g., lunch wrappers) will be collected in waste bins provided on-site – at the amenities/crib room. The bins will be emptied at least once per fortnight and the material disposed of at a permitted refuse disposal site. Waste bins that receive food scraps will be fitted with preventative access measures to discourage native animals and feral cats attending the Quarry.

##### On-site Machinery and Equipment Servicing Waste

Waste will be generated at the Quarry (primarily by activities at the workshop) from the repair of equipment breakdowns, general replacement of filters (air and oil) and conveyor belts (screen) or emergency repairs/maintenance.

Waste bins will be located at the Quarry and labelled with the types of waste each bin is to receive. Waste will be sorted based on the classification of the type of waste, with Controlled Waste (see **Table 14**) separated from all other waste streams and disposed of at least monthly at a Meander Valley Council operated facility (e.g., Westbury Waste Depot (179 Cluan Road, Westbury) or Deloraine Waste Depot (54 Tip Road, Deloraine)).

##### Off-site Machinery and Equipment Servicing Waste

Waste generated by maintenance works, repairs and/or schedule servicing of equipment and machinery **external to** the Quarry location will be managed by the service provider at the location where they have been engaged by the Proponent to complete the required works. This in most cases will be a machinery workshop, truck/equipment repair facility or tyre facility.

##### Liquid waste (septic)

The installation of a waste storage system (of 4,000l) is proposed using the modular system provided by Ausco Modular (**Attachment 5**) which is located under the toilet/shower bundle also proposed to be installed. The alarm system, combined with regular checking of waste capacity, will provide the basis for the emptying of the system using an authorised waste disposal service (waste would be disposed of at a TasWater accredited wastewater management system).

#### *C-5-5 ASSESSMENT OF NET IMPACTS*

No adverse impacts that cannot be prevented or managed if they were to occur are anticipated from waste management procedures and practices after the implementation of the identified avoidance and mitigation measures.

#### *C-5-6 OFFSETTING UNAVOIDABLE ADVERSE IMPACTS*

No offsets are proposed as no adverse impacts are anticipated from the management of wastes after the implementation of the identified avoidance and mitigation measures.

### **C-6 DANGEROUS GOODS AND ENVIRONMENTALLY HAZARDOUS SUBSTANCES**

The Quarry will utilise diesel fuel, and other hydrocarbons such as lubricants and oils, and herbicides for weed control as it does now under the Permit. Hazardous materials are known to pose serious risks if released to the environment.

#### *C-6-1 EXISTING CONDITIONS*

The existing Quarry utilises and manages diesel fuel, and other hydrocarbons such as lubricants and oils. There is no existing permanent fuel store at the Quarry because it is brought in using a mobile tanker fitted onto a trailer. Workers attending the Quarry also use 100-200l portable diesel tanks that fit into the tray of a 4WD utility. These pods/tanks have become mainstream and are now best-practice for small volume fuel transport to refill machinery at quarries, mines, and other work sites.

Herbicides are used at the existing quarrying activity for weed control.

Explosives are used at the Quarry but are **not stored** at the Quarry; when in the Quarry they are under the direct control of an authorised contractor.

#### *C-6-2 PERFORMANCE REQUIREMENTS*

The management of hazardous materials will include the appropriate storage of these materials, and preparation for accidental leaks and spills to ensure that the risk of hazardous materials being released into the environment is minimised. The storage, handling and transport of dangerous goods, explosives and dangerous substances must comply with the requirements of relevant State Acts and any regulations and relevant Codes thereunder, including:

- *Work Health and Safety Act 2012* and subordinate regulations,
- *Explosives Act 2012* and subordinate regulations,
- *Dangerous Goods (Road and Rail Transport) Act 2010* and subordinate regulations,
- EPA Tasmania's *Bunding and Spill Management Guidelines December 2015*,
- Australian Dangerous Goods Code (7<sup>th</sup> edition), and
- Relevant Australian Standards (e.g., AS 1940 and AS 3780).

### Diesel Vehicle Emissions NEPM

The objective of this NEPM is to reduce exhaust emissions from diesel vehicles, by facilitating compliance with in-service emissions standards for diesel vehicles. This NEPM is applied to vehicles sold in the country.

### Volume limitations for storage

The volume of stored hazardous chemicals on the site will not exceed the manifest quantity as specified in the *Work Health and Safety Regulations 2012*.

### Chemicals (Herbicides)

The use, storage, and disposal of chemicals for weed spraying (herbicides) must be in accordance with the *Agricultural and Veterinary Chemicals (Tasmania) Act 1994* and the *Agricultural and Veterinary Chemicals (Control of Use) Act 1995*.

## C-6-3 POTENTIAL IMPACTS

### Hydrocarbon storage and use

Most heavy machinery and mobile plant are diesel driven and utilise hydraulic power systems. Below is a list of possible incidents that may cause hydrocarbons to be released into the environment during Quarry operations.

1. Poor onsite storage of hydrocarbons,
2. Machine refuelling,
3. Machine breakdowns and/or failures,
4. Onsite machine maintenance, and
5. Unexpected hydraulic hose blow outs or failures.

As all hydrocarbons have a lower density compared to that of water, hydrocarbon spills can be carried away in stormwater runoff to drains, sediment basins and then into waterways. Aquatic life can be detrimentally affected by hydrocarbons occurring in the water column.

### Chemicals for weed spraying

Chemicals for weed spraying used and stored in the Quarry may enter waterways through leakage, accidental spillage, or inappropriate use and/or disposal by staff or contractors. Aquatic life can be detrimentally affected by hydrocarbons occurring in the water column.

### Other chemicals and substances

Drilling and blasting techniques are used to liberate the hard rock for subsequent processing by crushing and screening. Explosive agents such as ammonia nitrate and water gel are already used in the Quarry. These activities are performed under controlled conditions and by an experienced team. The possibility of any explosive agent entering any waterway is negligible but if they were to leach to a watercourse it may cause elevated nitrogen levels in the water column.

#### C-6-4 IMPACT AVOIDANCE AND MITIGATION MANAGEMENT

Contamination of the environment by the release of fuels, lubricants and/or hazardous will be prevented as far as reasonable to do so by the application of effective, industry standard avoidance and mitigation management measures.

##### Hydrocarbon storage and use

All fuels, lubricants and/or hazardous materials are stored in accordance with the relevant requirements of AS 1940:2004 *The Storage and Handling of Flammable and Combustible Liquids*.

An industry standard self-bunded diesel fuel storage tank (20,000L – maximum storage capacity) is proposed to be installed at the Quarry (see DRAWING NUMBER: 1011/102 in **Attachment 3**). When the fuel store is installed, a geofabric layer will be imbedded into the gravel layer to capture any hydrocarbon spillage that may soak through.

Refuelling activities will only occur when machinery/equipment is within a bunded/hardstand area at the Quarry; bunding may be a temporary structure where the machine/equipment being refuelled is not being refuelled at the fuel store (e.g., it is being refuelled by a mobile diesel pod in a light vehicle).

Hazardous materials storage areas will be managed in accordance with EPA Tasmania's *Bunding and Spill Management Guidelines December 2015* and the following principles –

- Design and install bunding and surface sealing of fuel storage areas.
- Provide high-performance grease traps and oil traps near workshops and places where vehicles and machinery are parked.
- Locate storage areas away from waterways and areas prone to flooding.
- Install bund walls or diversion drains to divert surface water away from areas dedicated for the storage of hazardous materials.
- Line bunded storage areas with impervious material.
- The volume of bunded areas must be at least 125 per cent of the maximum volume of the fuel and lubricant capable of being stored.
- Bund heights will be at least 150 millimetres.
- Bunded areas will be drained to a sump if the volume of the hydrocarbons exceeds 1,200 litres.

##### Other chemicals

Chemicals for weed spraying be used and stored in the Quarry. They will be handled, used, and disposed of in accordance with the manufacturer's directions and relevant regulations. The potential for herbicides to enter waterways is minimal because of the rigid framework around their use near waterways, the very limited volumes being applied, infrequency of application and the occurrence of spraying when rainfall is not forecast. A spill kit will be stored with chemicals in case it is needed to respond to a spill.

##### Spill and leak prevention and response

The Proponent will ensure that spill prevention and clean-up equipment is readily available and accessible in the vicinity of all plant and machinery, including mobile and fixed fuel storages.

Spill prevention and clean-up procedures will be in accordance with the following principles –

- Minimise the volume of hazardous substances kept onsite.
- Develop contingency plans to address spills and leaks.
- Install trays, thick plastic mats or similar beneath stationary machinery to protect the soil from oil or fuel spills and leaks.
- Install spill trays immediately if there is any potential for, or evidence of, leakage.
- Ensure that appropriate clean-up equipment is readily accessible.
- Maintain a supply of oil-absorbent material.
- Contain and treat spills and leaks.
- Notify relevant authorities of significant spills or leaks.
- Ensure that drainage from areas where spills may occur like a refuelling area is diverted through a sump or interceptor trap to remove hydrocarbon contamination.

#### *Spill kits*

A spill kit is already available at key locations at the Quarry, and in some light vehicles that are used in the Quarry. As spill kits are used, they are replenished. The locations of spill kits in the Quarry are highlighted in the staff/contractor induction process.

#### *Oil/Fuel Boom*

A fuel/oil boom will be stored at the Quarry in case an oil or fuel spill occurs in or near a waterway or waterbody (including sediment basins). They are designed to contain and absorb hydrocarbon spill on water surfaces. A fuel/oil boom is made from super absorbent polypropylene micro fibres for maximum oil and fuel absorbency. This material also repels water, so it continues to float even when saturated with oil.

#### *C-6-5 ASSESSMENT OF NET IMPACTS*

No adverse impacts that cannot be prevented or managed if they were to occur are anticipated from hazardous goods management procedures and practices after the implementation of the identified avoidance (control) and mitigation measures.

#### *C-6-6 OFFSETTING UNAVOIDABLE ADVERSE IMPACTS*

No offsets are proposed as no adverse impacts are anticipated from the management of hazardous goods after the implementation of the identified avoidance (control) and mitigation measures.

### **C-7 GROUNDWATER**

#### *C-7-1 EXISTING CONDITIONS*

The landform is a dolerite hillock system comprised of two ‘peaks’ with a small gully between them (see **Figure A-3**). There are no natural seepage points for groundwater, nor any Watercourses that are fed by or

groundwater emergent from the ground. The shallow rock surfaces of the hill, where trees and shrubs are sparse and stunted or absent, reflect the skeletal nature of the soils and the hard competent<sup>17</sup> nature of the dolerite bedrock – this is what makes it an attractive resource to extract.

Groundwater currently seeps intermittently to the quarry floor via cracks in the rock wall that have been generated by the benching system installed by drilling and blasting techniques. The seepage is very minor (i.e., it presents as a surface covering of vertical rock walls rather than a flow) and strongly related to rainfall events and rapidly disappears even after heavy rainfall. No groundwater seeps from/into or is emergent at the existing Stockpile Area, access road and haul road from the Stockpile Area through to the extraction face.

#### C-7-2 PERFORMANCE REQUIREMENTS

The quality of groundwater in Tasmania is protected under the state Policy on Water Quality Management 1997 (SPWQM 1997). It defines a range of protected environmental values (PEVs) for defined segments based on groundwater salinity (TDS) as follows:

- Maintenance of ecosystems default protection regardless of TDS;
- Potable water supply (desirable) <501 mg/L;
- Potable water supply (acceptable) 501-1,000 mg/L;
- Agriculture, parks and gardens <3,500 mg/L;
- Stock watering <13,000 mg/L; and
- Industrial use <13,000 mg/L.

The SPWQM (1997) applies the water quality management approach recommended by the National Water Quality Management Strategy (NWQMS) and the management framework in the Australian New Zealand Guideline for Fresh and Marine Water Quality 2018 (ANZG 2018).

The Quarry's management of groundwater, if intersected, will be consistent with the objectives and requirements of all relevant water management policies and legislation, including the *Water Management Act 1999* and the State Policy on Water Quality Management 1997.

#### C-7-3 POTENTIAL IMPACTS

##### Potential groundwater discharge at the Quarry

Groundwater discharge to the Quarry will primarily occur at the western face, as groundwater discharges from the retained hill system to the west. The hill itself on the eastern and northern side will likely be progressively dewatered as the Quarry expands westwards; the likely occurrence of and the volume of groundwater in the hill is low as the dolerite is competent with limited fracturing and weathered zones (it is a hard rock formation which makes it ideal for extraction and use in aggregates). Furthermore, the limited 'catchment' above the proposed and existing workings that could generate groundwater is low to negligible.

---

<sup>17</sup> Competent rock, in the context of groundwater, generally refers to rock formations that are relatively intact and strong, with minimal fracturing, and thus, limited permeability.

#### Potential groundwater drawdown near the Quarry

The elevation of the hill and the actual landform lacks connecting sources of groundwater other than the hill system itself (of which part is proposed to be extracted). The risk of occurrence of groundwater is likely to be low to negligible except possibly during the winter/spring months when rainfall inputs are higher. The vegetation on the hill is not groundwater dependent, and there are no visible (or evident from unique 'groundwater' supplied vegetation associations) springs, soaks, or discharges to watercourses, wetlands or other waterway around the hill feature.

#### Dewatering impacts to surface waters

There are no farm dams or water storages located anywhere near to or at the Quarry that could be affected by any potential or actual drawdown.

#### Contamination and Contaminants of Potential Concern

Groundwater may become contaminated with hydrocarbons used at the Quarry if these are poorly stored and handled at the Quarry.

The following activities and related potential contaminants of concern are present at the Quarry, noting that this assessment focuses solely on groundwater:

- Blasting – blasting residues from ammonium nitrate and fuel oil, or ANFO, as it is commonly referred to, can result in elevated nitrogen in surface and groundwater. The Proponent will use best practise procedures while handling ANFO, however the risk remains. Potential contaminants of concern are nitrate, nitrite, ammonia, and total nitrogen; and
- Fuel and oil spills – spill kits exist on site, and best practise procedures exist at the existing activity to clean-up spills if they occur. However, spills remain a potential source of water contamination; Potential contaminants of concern are total recoverable hydrocarbons and benzene, toluene, ethylbenzene, xylenes, and naphthalene (BTEXN),

#### Social or economic impacts

There are no registered groundwater bores near the Quarry. No adverse social or economic impacts are anticipated from the intersection with groundwater or its subsequent management at the Quarry.

### *C-7-4 IMPACT AVOIDANCE AND MITIGATION MANAGEMENT*

#### Management of pollution sources

Potential sources of pollution to groundwater include hydrocarbons (e.g., fuels, oils and lubricants) and herbicides. The handling and management of these are generally described in Section C-6 DANGEROUS GOODS AND ENVIRONMENTALLY HAZARDOUS SUBSTANCES.

#### Unexpected Groundwater Intersection

Groundwater is expected to seep into the Quarry from more elevated areas than the quarry floor; this is not unusual as the rock can be cracked or become cracked during blasting such that water can infiltrate to surface.

In addition, there is the possibility with any extractive industry that groundwater may be intersected. Given the elevation of the hill and the actual landform which lacks connecting sources of groundwater other than

the hill system itself (of which part is proposed to be extracted) the occurrence of groundwater is likely to be low to negligible except possibly during the winter/spring months when rainfall inputs are higher. In the very unlikely event that significant volumes of groundwater were to be intersected, then in-pit drainage lines and channels would be installed to manage the surface expression of the water in the same manner as an existing surface drain would be managed.

Intersected groundwater would likely be captured and stored for use in the Quarry. For example, water may be directed to in-pit ponds or to the existing farm dam for subsequent use in the wetting of roads, use in crushing/screening equipment, rehabilitation works and other Quarry related uses<sup>18</sup>.

#### *C-7-5 ASSESSMENT OF NET IMPACTS*

The net likely impact to groundwater is low to negligible.

#### *C-7-6 OFFSETTING UNAVOIDABLE ADVERSE IMPACTS*

No offsets are proposed as no adverse impacts are anticipated to Groundwater after implementation of the avoidance and mitigation measures.

### **C-8 INFRASTRUCTURE AND OFF-SITE ANCILLARY FACILITIES**

No significant off-site impacts are anticipated.

Trucks generated by the Activity will be travelling on the public road network and their presence will be constrained by the stipulated operating hours. Machinery and equipment may be taken to another facility owned and operated by the Proponent, or to another facility to be repaired or serviced when required.

The public road network is 'fit for purpose' for the Development based on the findings of a Traffic Impact Assessment (see **Attachment 6**).

#### *C-8-2 POTENTIAL IMPACTS*

##### Noise Emissions

Trucks can cause excessive noise on uneven road surfaces; emissions can affect dwellings if they are located close to the road. The impact of noise emissions from light vehicles on an unsealed road is substantially less. These matters are further discussed in *Section C-3 NOISE*.

---

<sup>18</sup> At present, under the *Water Management Act 1999* the owner or occupier of land may take groundwater from the land for any purpose without a water licence, unless:

- a) the land is situated in a Groundwater Area appointed by the Minister and a licence is required in that Groundwater Area, or
- b) the land is situated in a water management plan area and a licence is required by the Water Management Plan, or
- c) the taking would cause, either directly or indirectly, material environmental harm or serious environmental harm.

### Dust Emissions

Trucks can cause dust plumes from the use of unsealed roads; emissions can affect dwellings if they are located close to the road. The impact of dust emissions from light vehicles on an unsealed road is substantially less. Fugitive dust emissions can also be generated because of poorly covered or dry product in a truck tray. These matters are further discussed in *Section C-1 AIR EMISSIONS – DUST*.

### Biodiversity

Indirect potential impacts of traffic comprise road mortality of fauna (i.e. vehicle strikes). These matters are further discussed in *C-4 NATURAL VALUES*.

## *C-8-3 IMPACT AVOIDANCE AND MITIGATION MANAGEMENT*

### Noise Emissions

Equipment will be well maintained and late model machines with proprietary exhaust silencers fitted to ensure noise emissions are as low as possible. These matters are further discussed in *Section C-3 NOISE*.

### Dust Emissions

Loads in trucks will be covered with a tarpaulin or dampened to reduce the risk of fugitive dust emissions during transport. Unsealed roads internal to the Pit will be dampened during campaigns. These matters are further discussed in *Section C-1 AIR EMISSIONS – DUST*.

### Biodiversity

On public roads all wildlife speed reduction warning signs will be obeyed, and education and awareness training will be provided to drivers. These matters are further discussed in *C-4 NATURAL VALUES*.

## *C-8-5 ASSESSMENT OF NET IMPACTS*

The net negative impact to infrastructure is assessed to be low to negligible.

## *C-8-6 OFFSETTING UNAVOIDABLE ADVERSE IMPACTS*

No offsets are proposed because no adverse impacts that cannot be mitigated to acceptable levels are anticipated.

## C-9 MONITORING AND REVIEW

The Proponent will conduct regular and routine monitoring to ensure compliance with environmental conditions. The monitoring program is to be managed by the Quarry Manager. The broad environmental monitoring program for the Development is provided in **Table 15**.

**Table 15. Environmental monitoring regimes for the Porters Bridge Road Quarry**

Theme	Monitoring tasks
<b>Stormwater Infrastructure</b>	<p>The Operator will observe the level of accumulated sediment in the sediment basins and drainage channels. Once the level of accumulated sediment in the traps or drains has risen to half the full water level the sump and drains are to be cleaned out. The spoil gathered from clearing the sediment basins and drains will be stored with rehabilitation materials for use in future rehabilitation activities.</p> <p>Sediment basin outlets will be monitored (at least monthly) for scouring, and excessive volumes of sediment in the discharged water.</p>
<b>Weeds</b>	<p>The <i>Weed and Pathogen Management Plan (Attachment 8)</i> provides details for weed and pathogen monitoring and plan review.</p>
<b>Dust and air quality impacts</b>	<p>The Quarry Manager will observe dust emissions/conditions in dry and windy conditions during extractive activities (e.g., drill and blast) or processing campaigns. If dust emissions are excessive then suppression activities will be implemented including:</p> <ul style="list-style-type: none"> <li>• Water cart deployed on trafficked surfaces;</li> <li>• Ceasing quarrying activities until the weather conditions improve so dust suppression measures are effective, or temporarily ceasing aspects of the Quarry (e.g., temporarily suspend crushing/screening activities).</li> </ul>
<b>Environmentally hazardous substances</b>	<p>Ongoing inspection of the storage and handling of environmentally hazardous substances and the use/replenishment of spill kits.</p> <p>Ongoing inspection and management of wastes stored at the Quarry, and their disposal at regular intervals.</p>
<b>Rehabilitation</b>	<p>Rehabilitated areas (and those under rehabilitation) will be monitored for –</p> <ol style="list-style-type: none"> <li>a. weed infestation,</li> <li>b. germination success and growth in seed distributed species, and</li> <li>c. landform stability.</li> </ol>

## **C-10 GREENHOUSE GASES AND OZONE DEPLETING SUBSTANCES**

### *C-10-1 EXISTING CONDITIONS*

Operation of mobile plant, trucks, and associated activities at the existing quarrying activity causes greenhouse gas emissions from the burning of hydrocarbon-based fuels. Greenhouse gas emissions also arise directly from blasting and indirectly by the production and transport of explosives. This situation applies to all extractive industries which operate hydrocarbon-based fuel machinery and equipment and conduct blasting activities.

### *C-10-2 PERFORMANCE REQUIREMENTS*

The impacts of climate change and greenhouse gas emissions and targets are set in the *Climate Change State Action Act 2008* and *Climate Change Action Plan 2017 – 2021*. The *Climate Change (State Action) Act 2008* sets a limit of 60% below the 1990 greenhouse gas emissions baseline by 2050<sup>19</sup>.

The Quarry does not meet the thresholds for reporting under the *National Greenhouse and Energy Reporting Act 2007*.

### *C-10-3 POTENTIAL IMPACTS*

#### Environmental Impacts

The operation of mobile plant, trucks and associated activities will cause greenhouse gas emissions from the burning of hydrocarbon-based fuels. The use of ships to export material from Tasmania will also utilise fuel, however sea-based transport is a fuel-efficient mode of transport. Greenhouse gas emissions also arise directly from blasting (chemical reaction) and indirectly by the production and transport of explosives. This applies to all extractive industries which conduct blasting activities.

The Proponent recognises that its activities product greenhouse gas emissions which contribute to local, regional, and global air sheds.

#### Social Impacts

Exhaust emissions will generate greenhouse gasses within the proposal area and the road corridors approaching the area of proposed operations. Impacts include respiratory effects on workers and surrounding residents.

### *C-10-4 AVOIDANCE AND MITIGATION MEASURES*

The following guiding principles will be used by the Proponent in operating the Quarry to minimise and/or reduce greenhouse gas emissions when economically and practical to do so. This is in keeping with the goal of *best practice environmental management* practices.

#### Energy efficiency

There is potential to save energy in comminution through the following options: more crushing, less grinding, using more energy-efficient crushing technologies, removing minerals and gangue from the crushing stage, optimizing the particle size feed for grinding mills from crushing mills, selecting target product size(s) at each

---

<sup>19</sup> The State's 2050 target under this Act is to reduce, by 31 December 2050, greenhouse gas emissions in Tasmania to at least 60% below 1990 levels.

stage of the circuit, using advanced flexible comminution circuits, using more efficient grinding equipment, and by improving the design of new comminution equipment<sup>20</sup>.

Machinery owned and operated by the Proponent will be modern and well maintained, which will ensure that emissions of greenhouse gases per operating hour of machinery/equipment use will be minimised.

The Proponent will consider greenhouse gas emissions when procuring new equipment and machinery, as well as engaging other entities for access to a truck fleet, to preferentially adopt low energy (and low emission) options where cost effective to do so relative to the environmental risk reduction those options provide.

#### Emissions efficiency

Substitution of onsite fossil fuel electricity generators with renewable energy is an important mitigation strategy however this goal is currently not a realistic one for extractive industry related machinery and equipment. The use of fuel-efficient trucks, loaders and light vehicles with regular maintenance schedules will work towards the goal of lower emissions per operating hour.

#### Material efficiency

Delivering services with less new material is a significant opportunity for industrial emissions abatement, that has had relatively little attention to date possibly because it has limited application in a quarry setting. For example, in the extraction of metal ores, one of the greatest challenges for energy efficiency enhancement is that of the recovery ratio, which refers to the percentage of valuable ore within the total mine material. Lower grades inevitably require greater amounts of material to be moved per unit of product.

The Quarry will generate various grades of material including crusher dust which is a potential low-demand product that can be used to blend with other aggregates. The use of low demand products through blending and integration into product ranges is important to maximise the effectiveness of the energy used to extract and process materials.

#### *C-10-5 ASSESSMENT OF NET IMPACTS*

The measures outlined above should ensure that the potential effects from greenhouse gas emissions and ozone depleting substances is managed appropriately, monitored, and are a low risk to cause environmental harm.

#### *C-10-6 OFFSETTING UNAVOIDABLE ADVERSE IMPACTS*

No offsets are proposed after the implementation of the identified avoidance and mitigation measures.

### **C-11 SOCIO-ECONOMIC ISSUES**

Dolerite bedrock is suitable to produce aggregates for use in various products for roadworks, and other construction works. The Quarry provides a large resource of dolerite bedrock that can be readily accessed from a state highway (Bass Highway) to provide a centralised location for the delivery of material to customers including Local Councils, State Government agencies, private enterprises, and private landowners.

---

<sup>20</sup> Smith H. M. (2012). The Mining Sector—Energy Efficiency Best Practice Guide for the Australian Federal and State Government Energy Efficiency Exchange. Available at: <http://eex.gov.au/industry-sectors/mining/>.

The Quarry complements the other quarry assets owned and operated by the Proponent, and with increased demand for the product approval is sought to increase production levels to meet demand. Several sites in the area around Porters Bridge Road were examined when the quarry was initially proposed, and a permit sought in 2021. This site was selected because it provides a high-quality product, there is existing formed access via forestry standard roads/tracks, there are few local natural values of significance, and the landowner has agreed to the Mining Lease.

The workforce is sourced locally, with many workers living in local towns, through to major centres such as Launceston and Devonport. The workforce is largely existing, and contains specialised skills such as diesel mechanics, crushing/screening operators, and .

There are no clearly defined construction and operational phases of the Development because the installation of buildings and the ESA will be progressive and utilise for the most part existing staff with support from local specialist providers and contractors.

The Quarry will have a net positive impact on other industries which rely upon rock (including aggregates) for their construction and operational phases. The beneficiaries of the Quarry location could include for example, upgrades to the Bass Highway, further development of industrial and residential estates in the Meander Valley Municipality and adjacent municipalities and use by Councils. None of the product is proposed to be exported from the State.

The primary raw materials for the Development, such as fuels, lubricants and oils, are to be sourced locally (e.g., local distributors, wholesalers). Some equipment may need to be purchased from mainland Australia, or overseas where machinery and equipment is manufactured, which includes the acquisition of spare and replacement parts for machinery and equipment.

## **C-12 FIRE RISK**

### *C.12.1 EXISTING CONDITIONS*

The risk of fire starting at the Quarry though its activities are very low. The nature of quarry operations on site are unlikely but possible to provide an ignition source, primarily associated with drilling and blasting.

There are several potential ignition sources for a fire at the Quarry or surrounds include for example: -

- Ignition of machinery, or equipment;
- Ignition by drilling and blasting activities;
- Ignition caused by vegetation combustion during harvesting and clearing related activities;
- Ignition caused by lightning strike;
- Ignition by arson; and
- Ignition by unextinguished or poorly disposed cigarettes or another smoking item.

It is unlikely that a fire would become uncontrolled or extensive if attended machinery or equipment caught fire or caused a fire (e.g., an excavator being operated) as those items will have with them a fire extinguisher and attendee to operate the extinguisher. Unattended machinery or equipment, such as diesel pumps, while representing a very low risk of occurrence has a higher risk of ignition and subsequent spread of fire.

There are several potential ignition sources that could cause the Quarry to be subjected to an uncontrolled fire event: -

- Ignition of a vehicle or truck from a vehicle accident on the Bass Highway or Porters Bridge Road;
- Ignition caused by lightning strike off the Quarry which then results in a wildfire;
- Ignition by arson off Quarry which then results in a wildfire;
- Uncontrolled bushfire resulting from burning off/fuel reduction burn by neighbours or other land managers, especially from the residential uses to the west; and
- Ignition by unextinguished or poorly disposed cigarettes.

#### *C-12-2 PERFORMANCE REQUIREMENTS*

The Quarry is required to comply with the *Fire Services Act 1979*, *Workplace Health and Safety Act 2012* and *Workplace Health and Safety Regulations 2012*.

#### *C-12-3 POTENTIAL IMPACTS*

##### Fire originating In the Quarry

A fire originating from the Quarry has the potential to affect the surrounding biodiversity values, property, and agricultural income potential and endanger lives. The impact to the Quarry itself may include the loss of machinery, buildings, infrastructure (e.g., pipework, pumps) and equipment, endangerment of lives to those at the Quarry, and hazardous material spills (e.g., oil and fuel leakage from machinery that may be ignited or damaged by fire).

##### Fire originating external to the Quarry

Like fires that may originate within the Quarry, a fire originating from outside the Quarry has the potential to affect the surrounding biodiversity values, property, and agricultural income potential and endanger lives.

#### *C-12-4 AVOIDANCE AND MITIGATION MEASURES*

The general steps to manage a fire that originates in the Quarry are described below: -

- Assess the risk to site personnel;
- Where safe, attempt to extinguish the fire with appropriate extinguisher;
- Call 000;
- Call site management and enact an Emergency Response Plan; and
- Evacuate equipment if safe to do so.

Site activities will cease, and the Quarry will be evacuated if a wildfire is in the region and expected to pass within a one-kilometre radius of the Quarry. The origination of a fire external to the Quarry is difficult to manage as it is impossible to predict in its timing, and ferocity if it were to occur.

### *Quarry Manager or nominated person in charge*

The Quarry Manager or their nominated person in charge is to ensure that the induction process for staff/contractors at the Quarry, and daily pre-start checks are to include the identification of the evacuation route from the Quarry and the Muster/Emergency Assembly Point.

In the event of a fire emergency the Quarry Supervisor or their nominated person in charge will assume initial control of the incident until emergency services arrive on site. Any response to fire is TIME CRITICAL and where there is an approaching fire threat the plan should be to leave early to the nearest Evacuation Centre, or any alternative deemed a safe location.

Other responsibilities are as follows: -

- An Emergency is notified via the UHF radio as: EMERGENCY – EMERGENCY – EMERGENCY stating type of emergency and location;
- Direct tasks to the initial fire response effort for the duration of the incident or until such time the relevant emergency services assume control of the situation;
- If practical, ensure emergency services are met at the site entrance for escort to the Quarry;
- Communicate the fire situation with on-site personnel, contractors, and emergency personnel;
- Advise and keep the Proponent or their nominated person in charge informed of the nature, extent, and status of the emergency;
- Facilitate evacuation of personnel to the assigned Muster/Emergency Assembly Point or to the nearest evacuation centre (if safe to do so);
- Account for personnel at the Quarry;
- Move all personnel within the Muster/Emergency Assembly Point; and
- Any other lawful duties as directed by the Proponent or their nominated person in charge.

### *Quarry Personnel and/or Contractors*

Staff will be trained as part of the induction process on fire preparedness. All staff undertake fire extinguisher training. Scheduled maintenance will include review of on-board fire suppression components to ensure that they are well maintained.

Responsibilities are as follows: -

- An Emergency is to be notified via the UHF radio as: EMERGENCY – EMERGENCY – EMERGENCY stating type of emergency and location;
- Immediately advise the Site Supervisor or their nominated person in charge who will take control of the situation;
- Obey all lawful instructions provided by the Quarry Supervisor or their nominated person in charge;
- If safe to do so, put the fire out using appropriate firefighting equipment;
- If safe, move all vehicles and other items as appropriate to a safe area inside the Quarry; and

- In the event of an emergency, site personnel must make their way to the nearest Muster/Emergency Assembly Point.

#### *Fire preparedness*

The preparation of equipment, designation of fire weather monitoring conditions and evacuation processes will be document and include the following aspects of fire management for the Quarry –

- Fire weather monitoring procedures and equipment;
- Fire management checklist to be completed on medium to high-risk weather event days;
- Location and descriptions of firefighting equipment and static water supply;
- Location of emergency muster points, evacuation routes, and the designated evacuation centre; and
- Quarry management practices on Total Fire Ban days declared by the Tasmanian Fire Service.

#### *Signage*

The following signage/notices must be erected at the quarry by the Quarry Manager –

- Map showing the evacuation route from the Quarry to the designated Evacuation Centre;
- Map showing the muster / emergency Assembly Point;
- Map showing the location of the static water supply tanks; and
- Smoking designated locations and associated cigarette butt station.

#### *C-12-5 ASSESSMENT OF NET IMPACTS*

The development and implementation of a *Fire Hazard Management and Response Plan*, and associated mitigation measures should keep the Quarry compliant with fire management requirements.

#### *C-12-6 OFFSETTING UNAVOIDABLE ADVERSE IMPACTS*

No offsets are proposed as no adverse impacts are anticipated from fire risk.

### **C-13 DECOMMISSIONING AND REHABILITATION**

It is the aim of the Proponent to minimise the area of land 'open' at the Quarry at any point in time. When closed, the Quarry will be rehabilitated to native vegetation on a series of stable self-draining benches.

#### *C-13-1 PROGRESSIVE REHABILITATION*

'Progressive rehabilitation' will be applied at the Quarry once sufficient areas have been extracted and some of these are no longer needed or used for Quarry operations. The area's most likely to be rehabilitated early in the life of the Quarry are terminal benches. As an example, DRAWING NUMBER: 1011/103 (**Attachment 2**)

provides an illustration of proposed rehabilitation (about 0.5 hectares) at Stage 4 of the 5-year mining plan – this rehabilitation will likely be of two terminal benches.

Stabilisation of disturbed areas of the landform will be conducted prior to rehabilitation and revegetation to ensure landform stability to minimise sediment movement from source. Temporary vegetative cover of grass species (e.g., *Poa* species) may be established on areas (e.g., soil stockpiles) to prevent weed infestation and erosion by wind or water.

The Maximum Disturbed Area is to be 8 hectares.

The aims of rehabilitation work would be to:

- achieve long term stabilisation of worked out areas to minimise the risk of ongoing erosion by wind and water;
- revegetate worked out areas with native species that will eventually grow to form native vegetation communities (e.g., forest/woodland and scrub); and
- ensure that worked out areas are safe for a future land use.

#### Vegetation Management – clearing and stockpiling

The extent and form of the vegetation to be progressively harvested and cleared is comparable to a very small-scale land clearing activity. The small-scale clearing associated with progressive rock extraction is not likely to generate a high number of logs. Some vegetative material will need to be cleared and removed from the Quarry or burnt on site following the fire permit period conditions that prevail at the time.

No more than 10 cubic metres of vegetative debris generated by clearing works will be stored in any one stockpile, with stockpiles separated by at least 20 m of open bare ground ready for burning when conditions are suitable. The stockpiled material will be stored only within the Disturbed Area.

#### Rehabilitation – reuse of cleared vegetation

Once progressive rehabilitation has commenced, the vegetation cleared from areas being opened for rock extraction may be reused on areas scheduled for rehabilitation. This reduces the need to remove vegetation from the site or to burn the vegetation on the site; however, there may still be times when excess vegetation has been generated for the rehabilitation works underway so some vegetation may need to be burnt or removed from the site. If this were to be the case then, no more than 10 cubic metres of vegetative debris generated by clearing works will be stored in any one stockpile, with stockpiles separated by at least 20 m of open bare ground ready for burning when conditions are suitable. The stockpiled material will be stored only within the allowed Disturbed Area.

The rehabilitation of areas that are no longer being extracted or used for another purpose (such as a stockpile holding area, vegetation stockpile etc.) will be based on the following principles:

1. Surface levelled, and if available, overburden, topsoil, and/or sediment collected from sediment basins and applied to prepared surfaces.
2. Application of native tree/shrub/grass seed or the application of slash (generated by clearing works in the site) that contains fruits with seed (e.g., *Eucalyptus*, *Banksia*, *Bursaria*). Tubestock is unlikely to be needed given the plant species to be used for revegetation readily recruit from seed, and 'natural seeding' by surrounding vegetation is likely to be high.

3. Monitoring of the following factors –
  - d. weed infestation,
  - e. germination success and growth in seed distributed species, and
  - f. landform stability.
4. Remedial works which may include but not necessarily be limited to –
  - a. weed control works,
  - b. additional native species seed spreading,
  - c. landform stabilisation works, and
  - d. erosion control measures and/or repair works.

#### *C-13-2 PERMANENT CLOSURE PLANNING*

In the event of permanent closure of the Quarry prior to complete extraction of the resource a Decommissioning and Rehabilitation Plan (DRP) will be developed and submitted to the EPA for approval.

The DRP would include discussion and describe procedures to: -

- Facilitate the orderly and safe removal of machinery, infrastructure, and other equipment;
- Establish sufficient and appropriate tree/shrub/grass/herb ('native vegetation') cover to minimise the risk of ongoing dust generation and soil erosion; and
- Establish a monitoring regime to assess the success or otherwise of the rehabilitation to sign-off parameters.

#### *C-13-3 FINAL LANDFORM*

Specific attention will be given to the final landform in the DRP. Slopes will be contoured where practicable, while the landform generally will be a benched system.

The DRP prescribed approach to rehabilitation works will include for example:

- Rehabilitation works will be undertaken by the Proponent and overseen by the Quarry Manager;
- The aim of the rehabilitation is to return the worked areas to a stable landform that supports native vegetation of a species composition relatively comparable to that of pre-extraction works;
- Buildings, hardstands and other structures will be removed and the pads decommissioned (generally by ripping with an excavator or bulldozer) or rock/aggregate material recovered for use elsewhere;
- The extraction areas will be stabilised following extraction to remove any unstable materials, and to ensure the perimeter cut-off drains are operational and follow the localised contour;
- Fertiliser application is not likely to be necessary, and advice will need to be sought from a suitably qualified person *prior* to its application; and

- The Quarry Manager may need to engage specialist sub-consultants to undertake weed identification and, if weeds are established after rehabilitation, weed control will be completed by the Proponent.

## **PART D – MANAGEMENT MEASURES SUMMARY**

---

Best practice management is important to the project proponent to minimise the risk of environmental nuisance/harm from the activity.

In the preceding Sections of this EIS, the potential environmental effects which may arise from the Activity have been detailed and, where appropriate, actions documented to prevent and or minimise potential adverse impacts.

The management measures made by the Proponent are summarised in **Table 16**.

**Table 16. Environmental Management Measures for Porters Bridge Road Quarry**

EIS Section	No	Measure	Timeframe
C-1 Air Emissions - Dust	1	<p>Measures to <b>suppress dust</b> include the following extractive industry standard environmental practices:</p> <ul style="list-style-type: none"> <li>• Minimising the geographic extent of areas of exposed soil (maximum disturbed area of 8 hectares).</li> <li>• Retention of vegetation along the access road corridor and around the Quarry working area.</li> <li>• Utilisation of slash/mulch obtained from cleared areas to stabilise the soil surface and to limit wind action on dust generation at the soil surface.</li> <li>• Dampen material prior to crushing and/or to utilise the installed sprayers on the output chute to minimise dust emissions from an otherwise dry product .</li> <li>• Crushers to have sprayers installed and the use of a dedicated water tanker.</li> <li>• Road dampening by a water cart including the below, or their equivalent –               <ul style="list-style-type: none"> <li>○ Level 2 watering (&gt;2 l/m<sup>2</sup>/hr) of the processing and stockpile area.</li> <li>○ Level 1 watering (&lt;2 l/m<sup>2</sup>/hr) of unsealed haul roads when dust is visible.</li> </ul> </li> <li>• Progressive rehabilitation, minimising the geographic extent of areas of exposed soil.</li> <li>• Tarpaulins and load dampening for cartage of material.</li> </ul>	Ongoing
	2	<p>Measures to <b>avoid as far as possible dust generation</b> include the following extractive industry standard environmental practices:</p> <ul style="list-style-type: none"> <li>• Reviewing meteorological conditions regularly to guide quarry operations. Overburden haulage and placement will be guided by ambient weather conditions.</li> <li>• Reviewing meteorological conditions prior to blasting and amendment of plans if excessive dust generation is anticipated.</li> <li>• Topsoil stripping when it is moist (but not wet or saturated) either naturally or through the application of water.</li> <li>• Restrictions on speed of vehicles on site (20km/hr limit).</li> <li>• Education of staff to dust mitigation measures through the induction process.</li> </ul>	Ongoing

<p><b>C-2 Surface Water</b></p>	<p><b>3</b></p>	<p>Measures to <b>avoid and mitigate sediment erosion risk to surface water</b> include the following extractive industry standard environmental practices:</p> <ul style="list-style-type: none"> <li>• Minimising the geographic extent of exposed soil (disturbed area to be a maximum of 8 hectares).</li> <li>• Establishment of additional sediment basins, diversion drains, and other drainage systems at the Development. Sediment basins designed to have outlet structure inclusive of rock to disperse overland flow (see <b>Attachments 2 and 9</b>).</li> <li>• Utilisation of slash obtained from cleared areas or other product (jute mesh) to stabilise the soil surface, and to limit the spread of sediment.</li> <li>• More frequent cleaning and visual monitoring of the sediment settling zone, enlargement of sediment basin.</li> <li>• Utilisation of slash obtained from cleared areas to stabilise the soil surface, and to limit the spread of sediment.</li> <li>• Readily available spill kits on site (workshop, office, in vehicles at working face and at ESA). Train personnel to use spill kits and establish emergency procedures in the event of a spill.</li> <li>• Store products in suitably sized bunded containers.</li> <li>• Refuel only in bunded and/or hardstand area or using a temporary bunding system and spill kit present.</li> <li>• Daily pre-start checks on machinery to minimise the risk of spills; ensure machinery and equipment is functional, hoses are correctly fitted and secure, and caps on fluid tanks are tightened.</li> </ul>	<p>Ongoing</p>
<p><b>C-3 Noise Emissions</b></p>	<p><b>4</b></p>	<p>Mitigation measures for <b>noise emissions associated with quarry operations</b> such as crushing/screening, material carting, and drill/blast are as follow:</p> <ul style="list-style-type: none"> <li>• Blasting is only to occur Monday to Friday 1000 to 1600 hrs.</li> <li>• Blast planning will consider the nearest Noise Sensitive Premises to ensure that PPV and ABO limits are not exceeded.</li> <li>• Reversing beepers for all machinery and equipment, where fitted, will be those of a broad spectrum rather than of a penetrative decibel profile.</li> </ul>	<p>Ongoing</p>
	<p><b>5</b></p>	<p>Mitigation measures for <b>noise emissions associated with loading and cartage of material</b> are as follow: -</p> <ul style="list-style-type: none"> <li>• Trucks using the Access Road near the Rural Living zone (100 m either side of the nearest point of the road to the zone) would travel at no more than 10 km/hr and avoid using engine brakes unless required for safety or an emergency.</li> </ul>	<p>Ongoing</p>

		<ul style="list-style-type: none"> <li>Trucks using the Access Road within 100 m of its junction with Porters Bridge Road should avoid using engine brakes unless they are required for safety or an emergency.</li> </ul>	
	6	Implement the Noise Management Plan for out-of-hours operations.	Post-NMP approval by the EPA
C-4 Natural Values	7	<p><b>Vegetation Management</b></p> <ul style="list-style-type: none"> <li>A suitably qualified person will mark the boundary of the <i>Eucalyptus ovata</i> forest and woodland (DOV) with the Maximum Quarry Extent in the field to define the activity boundary prior to any operations near that area. Exclusion fencing and signage ('Exclusion Zone – Do Not Enter') or an earthen bund to physically exclude machinery and vehicles will be installed by the operator, staff advised of the area through the site induction process to prevent as far as possible any accidental incursion of machinery and vehicles, and areas shown on the site map.</li> <li>Where vegetation comprises <i>Eucalyptus viminalis</i> wet forest or <i>Eucalyptus ovata</i> forest and woodland, disturbance of vegetation on the sides of the access road associated with the use of the Quarry must be restricted to that extent necessary for road maintenance or to ensure the safety of road users.</li> <li>The Proponent will include as part of its induction and operational management system a process for staff, management and contractors working at the Quarry to mark clearing and working areas to identify permitted operational areas and exclusion zones.</li> </ul>	Ongoing
	8	<p><b>Threatened Flora Species</b></p> <ul style="list-style-type: none"> <li>A Permit to Take is to be sought from the Department of Natural Resources and Environment Tasmania to 'take' up to 27 curved riceflower (<i>Pimelea curviflora</i>) plants.</li> <li>An additional survey should be conducted of the area within 1 km of the Site and in the Site itself to further record plants of the species prior to an application for the taking of the curved riceflower plants is made to NRE. A curved riceflower survey of areas to be cleared of native vegetation for expansion of the quarry could be done with the pre-clearance surveys conducted for dens and masked owl potential nest trees.</li> </ul>	When required to take
	9	<b>Terrestrial Mammals</b>	Ongoing

		<p>The following management approach is to be applied for dens and potential dens –</p> <ul style="list-style-type: none"> <li>• Areas to be cleared of vegetation for Quarry activities is to be surveyed by a suitably qualified person to identify if dens or woodpiles supporting dens are present. The pre-clearance surveys must be completed by a suitably qualified person(s) and any dens or suspected dens removed via a procedure approved by the EPA; and</li> <li>• If dens or potential dens are observed or suspected during operations a 50 m no machinery buffer will be applied to the den or suspected den and expert advice sought.</li> <li>• The following management approach will be applied for internal road use and maintenance –             <ul style="list-style-type: none"> <li>○ Undertake education and awareness training for drivers accessing the Quarry;</li> <li>○ Limit internal road speed to 20 km/hr from dusk to dawn;</li> <li>○ Liaise with drivers to identify high-risk road sections (i.e., areas where animals or often seen by drivers) and install advisory signage; and</li> <li>○ Where practicable, and noting relevant controls and identified high-risk areas, clear vegetation on roadsides (at least 3m from road edge) in high-risk areas to enhance view field for drivers.</li> </ul> </li> </ul>	
	<p><b>10</b></p>	<p><b>Masked Owl</b></p> <p>A suitably trained and qualified person will conduct a pre-clearance survey of any area to be cleared of trees and vegetation.</p> <p>Hollow(s) in a tree that could possibly be used by masked owl to nest, or roost will be inspected using the following hierarchy of assessment methods –</p> <ol style="list-style-type: none"> <li>1. Initial Inspection: Inspect trees for any signs of nesting or roosting, such as regurgitated pellets, whitewash or feathers at the base of the tree within the tree’s dripline. The absence of these signs does not rule out the presence of a nest, but their presence can strongly indicate nesting activity. Ground-based and aerial (drone) inspection methods may be used to determine whether a tree contains hollows with an entrance hole <math>\geq 15</math> cm, though these methods are not suitable for conducting hollow inspections.</li> <li>2. Observation of hollows: Observe hollows from sunset to several hours after to detect owls exiting from hollows. A camera should record the hollow during the observations to minimise observer error, ideally using night vision or heat detection capabilities.</li> <li>3. Hollow Inspection: Use an action camera on a pole to inspect inside the hollow to attempt determining if the hollow has been used as either a nest or roosting hollow.</li> </ol>	<p>Ongoing</p>

		<p>4. Invasive Methods: If the above, less-invasive methods are inconclusive, trees should be tapped firmly using a hammer or heavy stick etc to see if an owl is flushed from the hollow.</p> <p>Where clearing operations occur near to (within 50m) or involve the removal of trees with hollows that are of a size and form that could be used as a nest site by masked owl, smaller nearby or adjacent trees will be felled first to allow noise disturbance to flush out any masked owls from trees; if a bird is flushed from a tree hollow then that tree is to be considered a nest or roost site pending further investigations and advice from the EPA.</p> <p>If at any point a tree is thought to contain a nest (through flushing birds or physical evidence), works will cease works within 150 m will cease, and the EPA contacted for further advice. Furthermore, if a masked owl is observed exiting a tree hollow, work within 150 m will cease, and the EPA contacted for further advice.</p>	
	11	<p><b>Weed Management</b></p> <p>A Weed and Pathogen Management Plan (WPMP) approved by the EPA already exists for the Permit. The EPA approved WPMP has been adopted as the ‘weed management plan’ for the Development and accordingly it is submitted with the EIS (<b>Attachment 7</b>).</p>	Ongoing
C-5 Waste	12	<p><b>General Refuse</b></p> <p>Waste generated by workers from general refuse (e.g., lunch wrappers) will be collected in waste bins provided on-site – at the amenities/crib room. The bins will be emptied at least once per fortnight and the material disposed of at a permitted refuse disposal site. Waste bins that receive food scraps will be fitted with preventative access measures to discourage native animals and feral cats attending the Quarry.</p>	Ongoing
	13	<p><b>On-site Machinery and Equipment Servicing Waste</b></p> <p>Waste will be generated at the Quarry (primarily by activities at the workshop) from the repair of equipment breakdowns, general replacement of filters (air and oil) and conveyor belts (screen) or emergency repairs/maintenance.</p> <p>Waste bins will be located at the Quarry and labelled with the types of waste each bin is to receive. Waste will be sorted based on the classification of the type of waste, with Controlled Waste (see Table 15) separated from all other waste streams and disposed of at least monthly at a Meander Valley Council operated facility (e.g., Westbury Waste Depot (179 Cluan Road, Westbury) or Deloraine Waste Depot (54 Tip Road, Deloraine)).</p>	
	14	<p><b>Off-site Machinery and Equipment Servicing Waste</b></p>	

		<p>Waste generated by maintenance works, repairs and/or schedule servicing of equipment and machinery external to the Quarry location will be managed by the service provider at the location where they have been engaged by the Proponent to complete the required works. This in most cases will be a machinery workshop, truck/equipment repair facility or tyre facility.</p>	
	<p><b>15</b></p>	<p><b>Liquid waste (septic)</b></p> <p>The installation of a waste storage system (of 4,000l) is proposed using the modular system provided by Ausco Modular (<b>Attachment 5</b>) which is located under the toilet/shower bundle to be installed. The alarm system, combined with regular checking of waste capacity, will provide the basis for the emptying of the system using an authorised waste disposal service (waste would be disposed of at a TasWater accredited wastewater management system).</p>	<p>As required</p>

<b>C-6 Dangerous and environmentally hazardous goods</b>	<b>16</b>	<p><b>Hydrocarbon storage and use</b></p> <p>All fuels, lubricants and/or hazardous materials are stored in accordance with the relevant requirements of AS 1940:2004 The Storage and Handling of Flammable and Combustible Liquids.</p> <p>An industry standard self-bunded diesel fuel storage tank (20,000L – maximum storage capacity) is proposed to be installed at the Quarry. When the fuel store is installed, a geofabric layers will be imbedded into the gravel layer to capture any hydrocarbon spillage that may soak through.</p> <p>Refuelling activities will only occur when machinery/equipment is within a bunded/hardstand area at the Quarry; bunding may be a temporary structure where the machine/equipment being refuelled is not being refuel at the fuel store (e.g., it is being refuelled by a mobile diesel pod in a light vehicle).</p> <p>Hazardous materials storage areas will be managed in accordance with EPA Tasmania’s Bunding and Spill Management Guidelines December 2015 and the following principles –</p> <ul style="list-style-type: none"> <li>• Design and install bunding and surface sealing of fuel storage areas.</li> <li>• Provide high-performance grease traps and oil traps near workshops and places where vehicles and machinery are parked.</li> <li>• Locate storage areas away from waterways and areas prone to flooding.</li> <li>• Install bund walls or diversion drains to divert surface water away from areas dedicated for the storage of hazardous materials. Line bunded storage areas with impervious material.</li> <li>• The volume of bunded areas(excluding standard self-bunded tanks) must be at least 125 per cent of the maximum volume of the fuel and lubricant capable of being stored. Bund heights will be at least 150 millimetres. Bunded areas will be drained to a sump if the volume of the hydrocarbons exceeds 1,200 litres.</li> </ul>	Ongoing
	<b>17</b>	<p>All fuels, lubricants and/or hazardous materials are stored in accordance with the relevant requirements of AS 1940:2004 <i>The Storage and Handling of Flammable and Combustible Liquids</i>. Refuelling activities will only occur when machinery is within a bunded/hardstand area or with temporary bunding and a spill kit available.</p>	Ongoing

	<b>18</b>	<p><b>Spill and leak prevention and response</b></p> <p>Spill prevention and clean-up equipment is to be readily available and accessible in the vicinity of all plant and machinery, including mobile and fixed fuel storages. As spill kits are used, they are to be replenished. The locations of spill kits in the Quarry are highlighted in the staff/contractor induction process.</p> <p>Spill prevention and clean-up procedures will be in accordance with the following principles –</p> <ul style="list-style-type: none"> <li>• Minimise the volume of hazardous substances kept onsite.</li> <li>• Develop contingency plans to address spills and leaks.</li> <li>• Install trays, thick plastic mats or similar beneath stationary machinery to protect the soil from oil or fuel spills and leaks.</li> <li>• Install spill trays immediately if there is any potential for, or evidence of, leakage.</li> <li>• Ensure that appropriate clean-up equipment is readily accessible.</li> <li>• Maintain a supply of oil-absorbent material.</li> <li>• Contain and treat spills and leaks.</li> <li>• Notify relevant authorities of significant spills or leaks.</li> <li>• Ensure that drainage from areas where spills may occur like a refuelling area is diverted through a sump or interceptor trap to remove hydrocarbon contamination.</li> </ul>	Ongoing
	<b>19</b>	<p><b>Other chemicals</b></p> <p>Chemicals for weed spraying be used and stored in the Quarry. They will be handled, used, and disposed of in accordance with the manufacturer’s directions and relevant regulations. The potential for herbicides to enter waterways is minimal because of the rigid framework around their use near waterways, the very limited volumes being applied, infrequency of application and the occurrence of spraying when rainfall is not forecast. A spill kit will be stored with chemicals in case it is needed to respond to a spill.</p>	Ongoing
	<b>20</b>	<p><b>Oil/Fuel Boom</b></p> <p>A fuel/oil boom will be stored at the Quarry in case an oil or fuel spill occurs in or near a waterway or waterbody (including sediment basins). They are designed to contain and absorb hydrocarbon spill on water surfaces. A fuel/oil boom is made from super absorbent polypropylene micro fibres for maximum oil and fuel absorbency. This material also repels water, so it continues to float even when saturated with oil.</p>	

<p><b>C-7 Groundwater</b></p>	<p>21</p>	<p>Intersected groundwater would likely be captured and stored for use in the Quarry. For example, water may be directed to in-pit ponds or to the existing farm dam for subsequent use in the wetting of roads, use in crushing/screening equipment, rehabilitation works and other Quarry related uses.</p>	<p>If intersected, or occurs in moderate quantities through seepage to the quarry floor</p>
<p><b>C-8 Infrastructure and off-site ancillary facilities</b></p>	<p>22</p>	<p><b>Noise Emissions</b> Equipment will be well maintained and late model machines with proprietary exhaust silencers fitted to ensure noise emissions are as low as possible. These matters are further discussed in Section C-3 NOISE.</p> <p><b>Dust Emissions</b> Loads in trucks will be covered with a tarpaulin or dampened to reduce the risk of fugitive dust emissions during transport. Unsealed roads internal to the Pit will be dampened during campaigns. These matters are further discussed in Section C-1 AIR EMISSIONS – DUST.</p> <p><b>Biodiversity</b> On public roads all wildlife speed reduction warning signs will be obeyed, and education and awareness training will be provided to drivers. These matters are further discussed in Section C-4 NATURAL VALUES.</p>	<p>Ongoing</p>
<p><b>C-10 Greenhouse Gas and OZDs</b></p>	<p>23</p>	<p><b>Energy efficiency</b> Machinery owned and operated by the Proponent will be modern and well maintained, which will ensure that emissions of greenhouse gases per operating hour of machinery/equipment use will be minimised. The Proponent will consider greenhouse gas emissions when procuring new equipment and machinery, as well as engaging other entities for access to a truck fleet, to preferentially adopt low energy (and low emission) options where cost effective to do so relative to the environmental risk reduction those options provide.</p>	<p>Ongoing</p>
<p>24</p>	<p><b>Emissions efficiency</b> Substitution of onsite fossil fuel electricity generators with renewable energy is an important mitigation strategy however this goal is currently not a realistic one for extractive industry related machinery and equipment. The use of fuel-efficient trucks, loaders and light vehicles with regular maintenance schedules will work towards the goal of lower emissions per operating hour.</p>		

		<p><b>Material efficiency</b></p> <p>The Quarry will generate various grades of material including crusher dust which is a potential low-demand product that can be used to blend with other aggregates. The use of low demand products through blending and integration into product ranges is important to maximise the effectiveness of the energy used to extract and process materials.</p>	
C12-Fire Risk	25	<p>The Quarry Manager or their nominated person in charge is to ensure that the induction process for staff/contractors at the Quarry, and daily pre-start checks are to include the identification of the evacuation route from the Quarry and the Muster/Emergency Assembly Point.</p> <p>In the event of a fire emergency the Quarry Supervisor or their nominated person in charge will assume initial control of the incident until emergency services arrive on site. Any response to fire is TIME CRITICAL and where there is an approaching fire threat the plan should be to leave early to the nearest Evacuation Centre, or any alternative deemed a safe location.</p>	In the event of a fire
	26	<p>The general steps to manage and respond to a fire that originates in the Quarry are described below: -</p> <ul style="list-style-type: none"> <li>• Assess the risk to site personnel;</li> <li>• Where safe, attempt to extinguish the fire with appropriate extinguisher;</li> <li>• Call 000;</li> <li>• Call site management and enact an <u>Emergency Response Plan</u>; and</li> <li>• Evacuate equipment if safe to do so.</li> </ul>	
C-13 Decommissioning and rehabilitation	27	The Maximum Disturbed Area is to be 8 hectares.	Ongoing
	28	<p>In the event of <b>permanent closure</b> of the Quarry prior to complete extraction of the resource a Decommissioning and Rehabilitation Plan (DRP) will be developed and submitted to the EPA for approval.</p> <p>The DRP would include discussion and describe procedures to: -</p> <ul style="list-style-type: none"> <li>• Facilitate the orderly and safe removal of machinery, infrastructure, and other equipment;</li> <li>• Establish sufficient and appropriate tree/shrub/grass/herb ('native vegetation') cover to minimise the risk of ongoing dust generation and soil erosion; and</li> <li>• Establish a monitoring regime to assess the success or otherwise of the rehabilitation to sign-off parameters.</li> </ul>	In the event of permanent closure

## PART E – CONCLUSION

---

The Quarry currently operates under a Permit granted by the MBV; Permit No. PA\21\0267 which contains Permit Part B, Permit Conditions - Environmental (PCE) No. 10885. A pre-coat machine is already approved for use in the Quarry by an existing permit issued by the MVC (PA\25\0032) (**Attachment 8**).

The Development proposed by the development application lodged with the Planning Authority seeks approval to –

- (1) intensify the production of aggregates and rock extraction from the Quarry to 200,000 cubic metres per annum – the equivalent of approximately 320,000 tonnes – and to extract all the rock material within the Maximum Quarry Extent; and
- (2) Install the following buildings and ancillary infrastructure at the Expanded Stockpile Area to support the Quarry including an Office, toilets (staff amenities), workshop, self-bunded diesel fuel tank (20,000 litres maximum capacity), weighbridge, and diesel-powered generator.

The Development includes but is not limited to vegetation removal and soil stripping, drilling/blasting, rushing and screening, and the stockpiling and transportation of material. Expansion of the stockpile area (the ‘Expanded Stockpile Area’) is proposed to receive and store material post-production in the Quarry.

The Quarry provides a large resource of dolerite bedrock that can be readily accessed from a state highway (Bass Highway) to provide a centralised location for the delivery of material to customers including Local Councils, State Government agencies, private enterprises, and private landowners.

The Quarry complements the other quarry assets owned and operated by the Proponent, and with increased demand for the product approval is sought to increase production levels to meet demand.

This EIS follows the generic EIS Guidelines and the EIS Project Specific Guidelines issued by the EPA. There are environmental impacts that are likely or potential from the activity, including noise, vibration, dust, and sediment discharge in uncontrolled stormwater discharge. Management measures have been proposed and will be implemented to mitigate the effects of the identified environmental impacts.

It is concluded that:

1. the RMPS and EMPCS objectives have been duly and properly pursued while sourcing and compiling information on the proposal,
2. the EIS for the Activity has been prepared in accordance with the Environmental Impact Assessment Principles, and
3. the proposed activity is capable of being managed in an environmentally acceptable manner such that it is unlikely that the objectives of the *Environmental Management and Pollution Control Act 1994* (the RMPS and EMPCS objectives) would be compromised.

## **PART F - REFERENCES**

---

Forest Practices Authority (2023, version 2.0). Threatened fauna species habitat descriptions. Forest Practices Authority, Hobart, Tasmania.

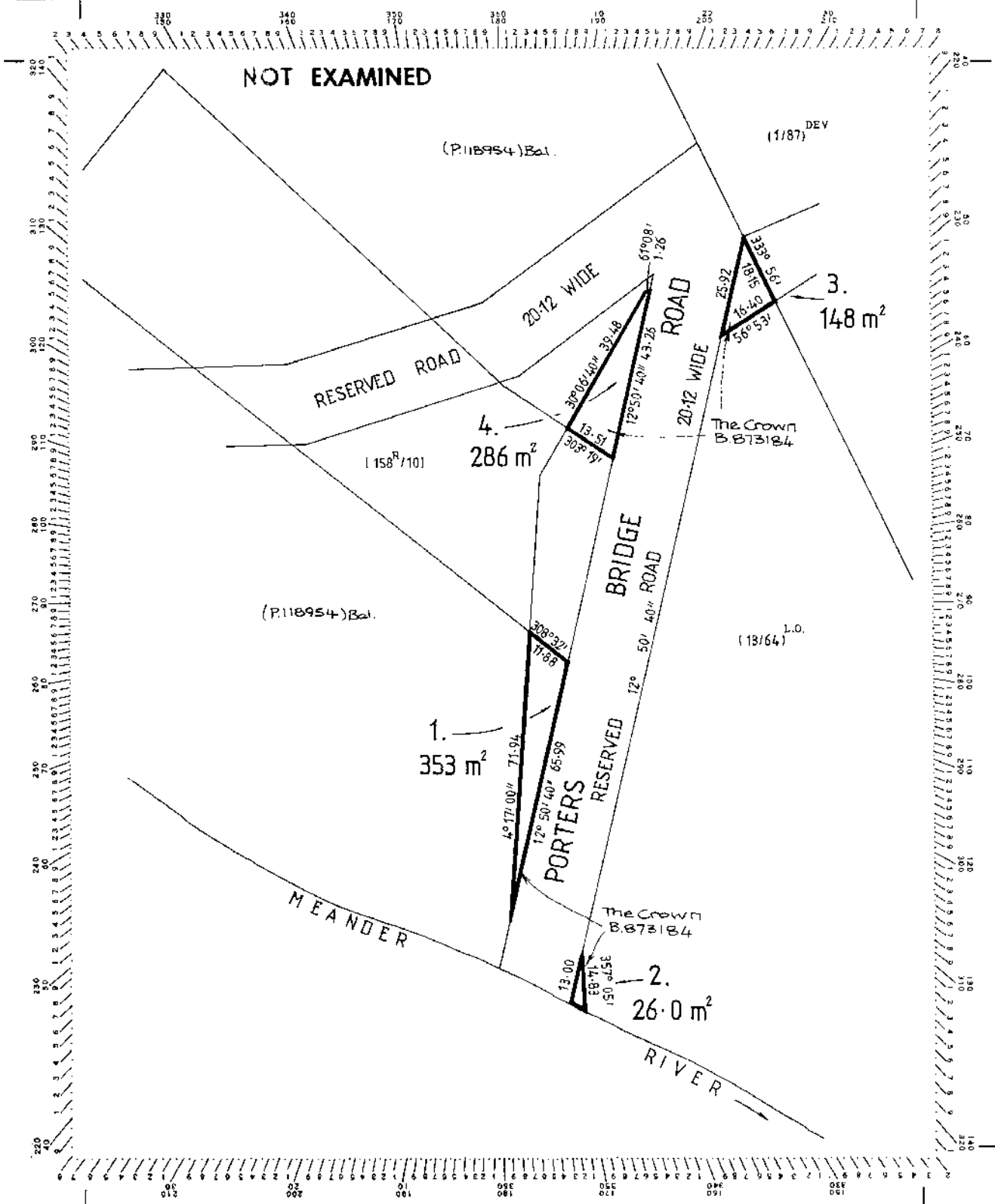
VDC (2025). Porters Bridge Road Quarry Natural Values Assessment. Van Diemen Consulting Pty Ltd, 20 October 2024.

**PART G – ATTACHMENTS**

---

**ATTACHMENT 1. CERTIFICATE OF TITLES**

Owner: Eileen Elizabeth Porter & Ian Carl Porter.	<b>PLAN OF SURVEY</b> by Surveyor R. E. Leamon of of land situated in the DEPARTMENT OF MAIN ROADS 10 MURRAY ST, HOBART <b>LAND DISTRICT OF DEVON</b> <b>PARISH OF WYCOMBE</b>	Registered Number: <b>D39477</b>
Title Reference: C.T. 4042-7	SCALE 1:1000 MEASUREMENTS IN METRES	Approved Effective from: 24 JUL 1995 Recorder of Titles
Grantee: Part of Lot 3651, 50a. 2r. Op. Gtd to John Porter.		



SEARCH OF TORRENS TITLE

VOLUME 39477	FOLIO 1
EDITION 2	DATE OF ISSUE 25-May-1999

SEARCH DATE : 22-Jun-2024

SEARCH TIME : 06.35 PM

DESCRIPTION OF LAND

Parish of WYCOMBE, Land District of DEVON  
 Lot 1 on Diagram 39477  
 Derivation : Part of Lot 3651, Granted to J. Porter  
 Prior CT 250307/1

SCHEDULE 1

B873184 APPLICATION: THE CROWN Registered 04-Aug-1995 at noon

SCHEDULE 2

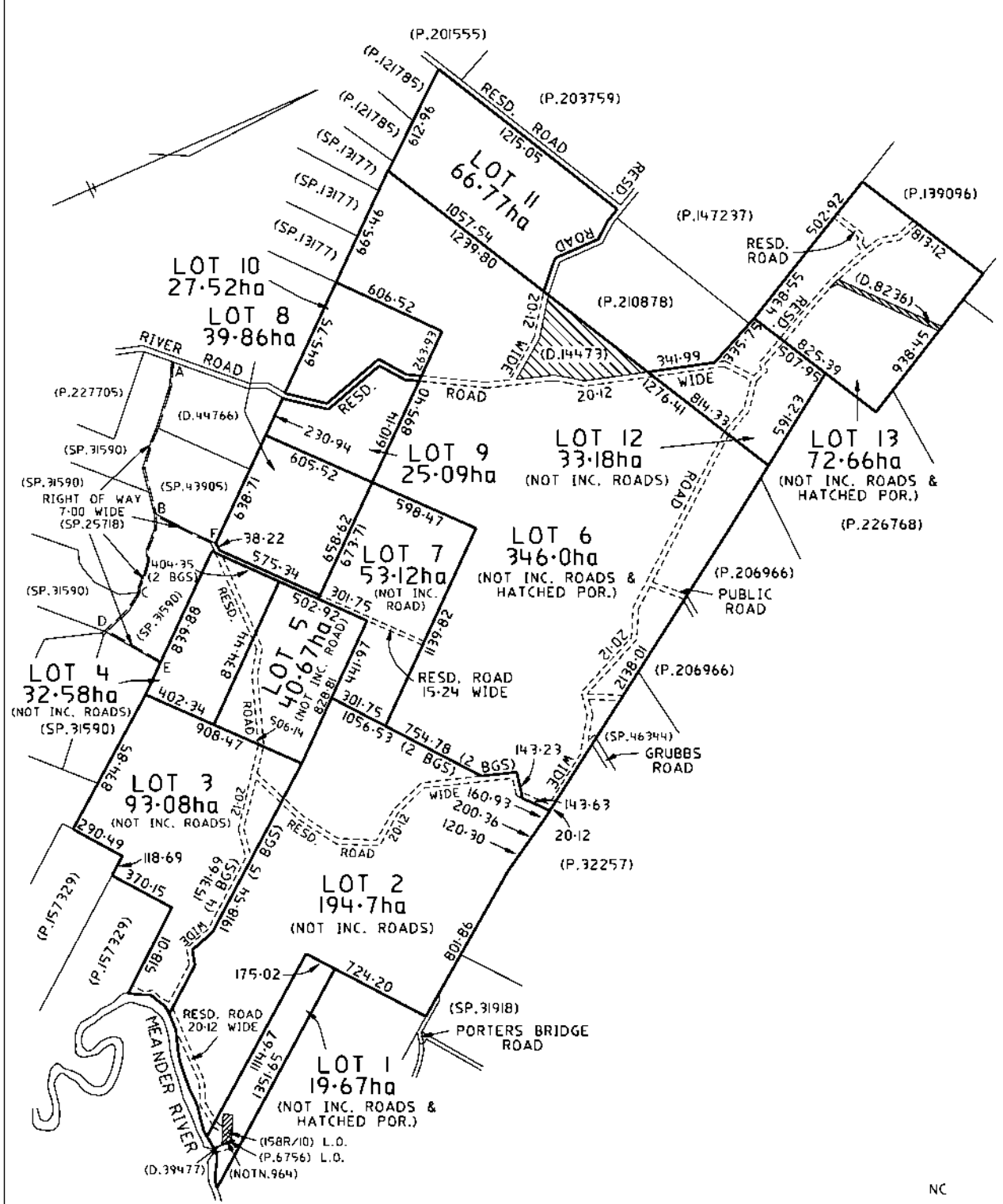
Reservations and conditions in the Crown Grant if any

.

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

OWNER	PLAN OF TITLE		Registered Number
FOLIO REFERENCE CT.118954-1	LOCATION		P.157328
GRANTEE	DEVON - WYCOMBE		APPROVED 22 JUNE 2009
	FIRST SURVEY PLAN No.	32/36,10/82,13/65,13/70, 13/57,13/63,13/60,13/69, 13/71,13/77,13/74,13/62, 13/65 L.O.	<i>Alice Kawa</i> Recorder of Titles
	COMPILED BY LDRB		
	SCALE 1: 20000	LENGTHS IN METRES	
MAPSHEET MUNICIPAL CODE No. 121 (4641) (4640)	LAST UPI No FHD48	LAST PLAN No. P.118954	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN



NC

SEARCH OF TORRENS TITLE

VOLUME 157328	FOLIO 2
EDITION 3	DATE OF ISSUE 30-Jan-2015

SEARCH DATE : 22-Jun-2024

SEARCH TIME : 06.28 PM

DESCRIPTION OF LAND

Parish of WYCOMBE Land District of DEVON  
 Lot 2 on Plan 157328  
 Derivation : Whole of Lot 3652 Gtd. to J. Porter  
 Prior CT 118954/1

SCHEDULE 1

C888932 ASSENT to IAN CARL PORTER Registered 19-Feb-2010 at 12.01 PM

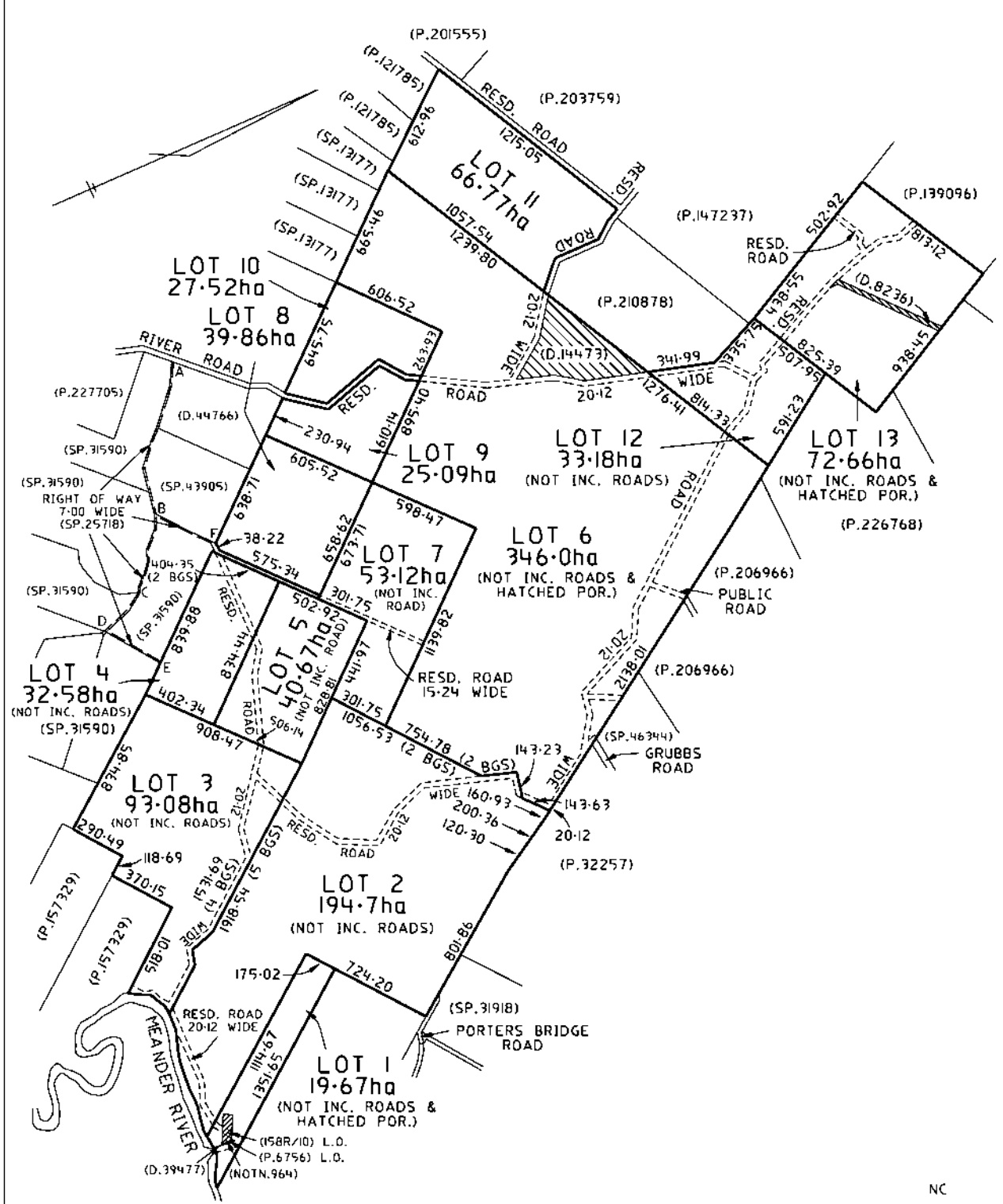
SCHEDULE 2

Reservations and conditions in the Crown Grant if any  
 SP25718 BENEFITING EASEMENT: a right of carraigeway over the Right of Way 7.00 wide on Plan 157328  
 C797552 PRIVATE TIMBER RESERVE pursuant to Section 15(1) of the Forest Practices Act 1985 against part of the land as described therein Registered 02-Nov-2007 at noon  
 M471462 INSTRUMENT Creating Restrictive Covenants benefiting The Crown Registered 30-Jan-2015 at noon

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

OWNER		PLAN OF TITLE		Registered Number	
FOLIO REFERENCE CT.118954-1		LOCATION		P.157328	
GRANTEE		DEVON - WYCOMBE		APPROVED 22 JUNE 2009	
		FIRST SURVEY PLAN No. 32/36,10/82,13/65,13/70, 13/57,13/63,13/60,13/69, 13/71,13/77,13/74,13/62, 13/65 L.O.		<i>Alice Kawa</i> Recorder of Titles	
		SCALE 1: 20000 LENGTHS IN METRES			
MAPSHEET MUNICIPAL CODE No. 121 (4641) (4640)	LAST UPI No FHD48	LAST PLAN No. P.118954	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN		



NC

SEARCH OF TORRENS TITLE

VOLUME 157328	FOLIO 3
EDITION 3	DATE OF ISSUE 06-Jul-2023

SEARCH DATE : 22-Jun-2024

SEARCH TIME : 06.33 PM

DESCRIPTION OF LAND

Parish of WYCOMBE Land District of DEVON  
 Lot 3 on Plan 157328  
 Derivation : Whole of Lot 3653 Gtd. to J. Porter  
 Prior CT 118954/1

SCHEDULE 1

N139169 TRANSFER to ARNOLD PROPERTY INVESTMENTS PTY LTD  
 Registered 06-Jul-2023 at noon

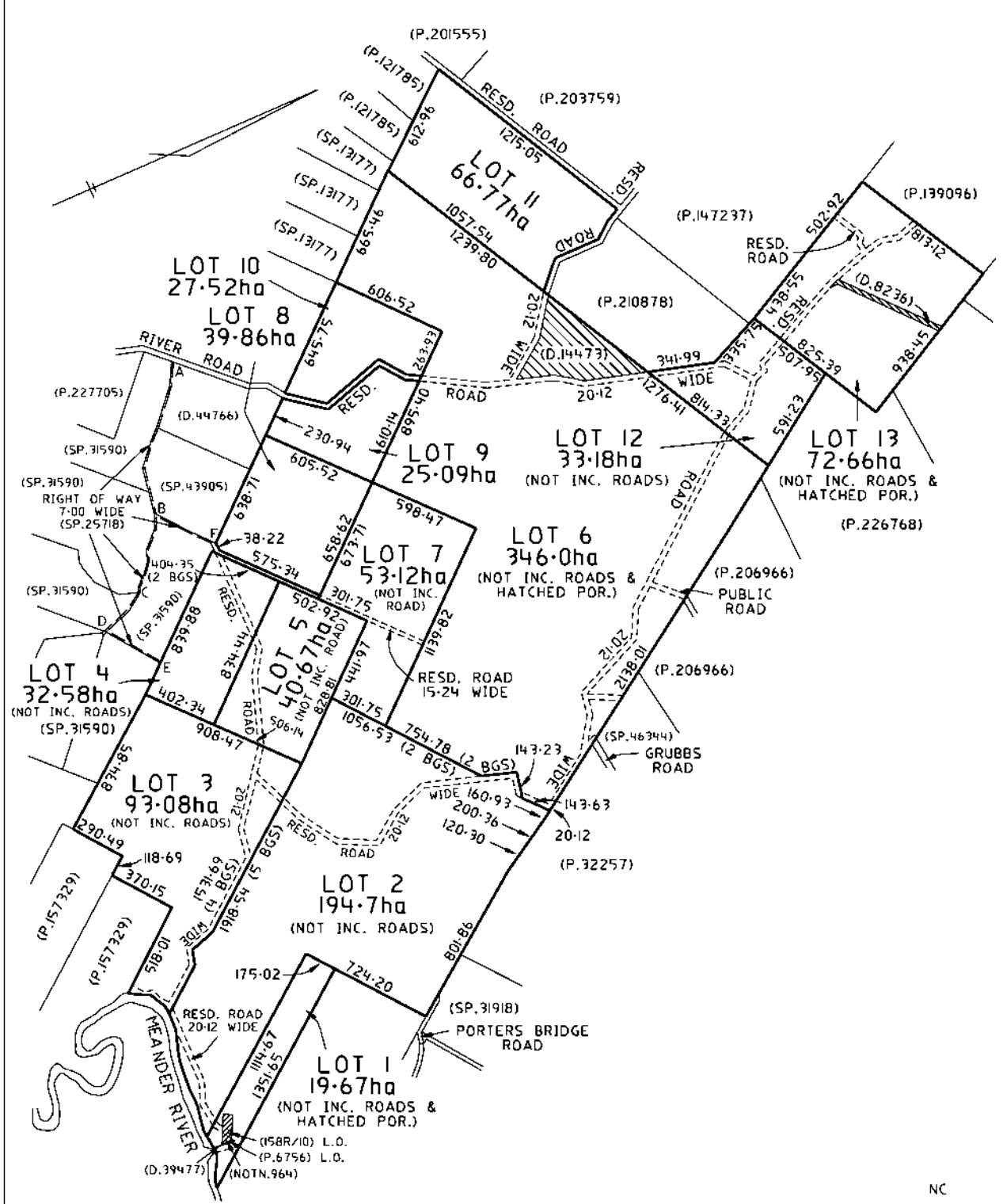
SCHEDULE 2

Reservations and conditions in the Crown Grant if any  
 SP25718 BENEFITING EASEMENT: a right of carraigeway over the  
 Right of Way 7.00 wide on Plan 157328  
 C797552 PRIVATE TIMBER RESERVE pursuant to Section 15(1) of  
 the Forest Practices Act 1985 Registered  
 02-Nov-2007 at noon  
 E351862 MORTGAGE to Australia and New Zealand Banking Group  
 Limited Registered 06-Jul-2023 at 12.01 PM

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

OWNER	PLAN OF TITLE		Registered Number
FOLIO REFERENCE CT.118954-1	LOCATION		P.157328
GRANTEE	DEVON - WYCOMBE		APPROVED 22 JUNE 2009
	FIRST SURVEY PLAN No.	32/36,10/82,13/65,13/70, 13/57,13/63,13/60,13/69, 13/71,13/77,13/74,13/62, 13/65 L.O.	<i>Alice Kawa</i> Recorder of Titles
	COMPILED BY LDRB		
	SCALE 1: 20000	LENGTHS IN METRES	
MAPSHEET MUNICIPAL CODE No. 121 (4641) (4640)	LAST UPI No FHD48	LAST PLAN No. P.118954	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN



NC

SEARCH OF TORRENS TITLE

VOLUME 157328	FOLIO 4
EDITION 2	DATE OF ISSUE 19-Feb-2010

SEARCH DATE : 22-Jun-2024

SEARCH TIME : 06.31 PM

DESCRIPTION OF LAND

Parish of WYCOMBE Land District of DEVON  
 Lot 4 on Plan 157328  
 Derivation : Whole of Lot 3654 Gtd. to J. Porter  
 Prior CT 118954/1

SCHEDULE 1

C888932 ASSENT to IAN CARL PORTER Registered 19-Feb-2010 at  
 12.01 PM

SCHEDULE 2

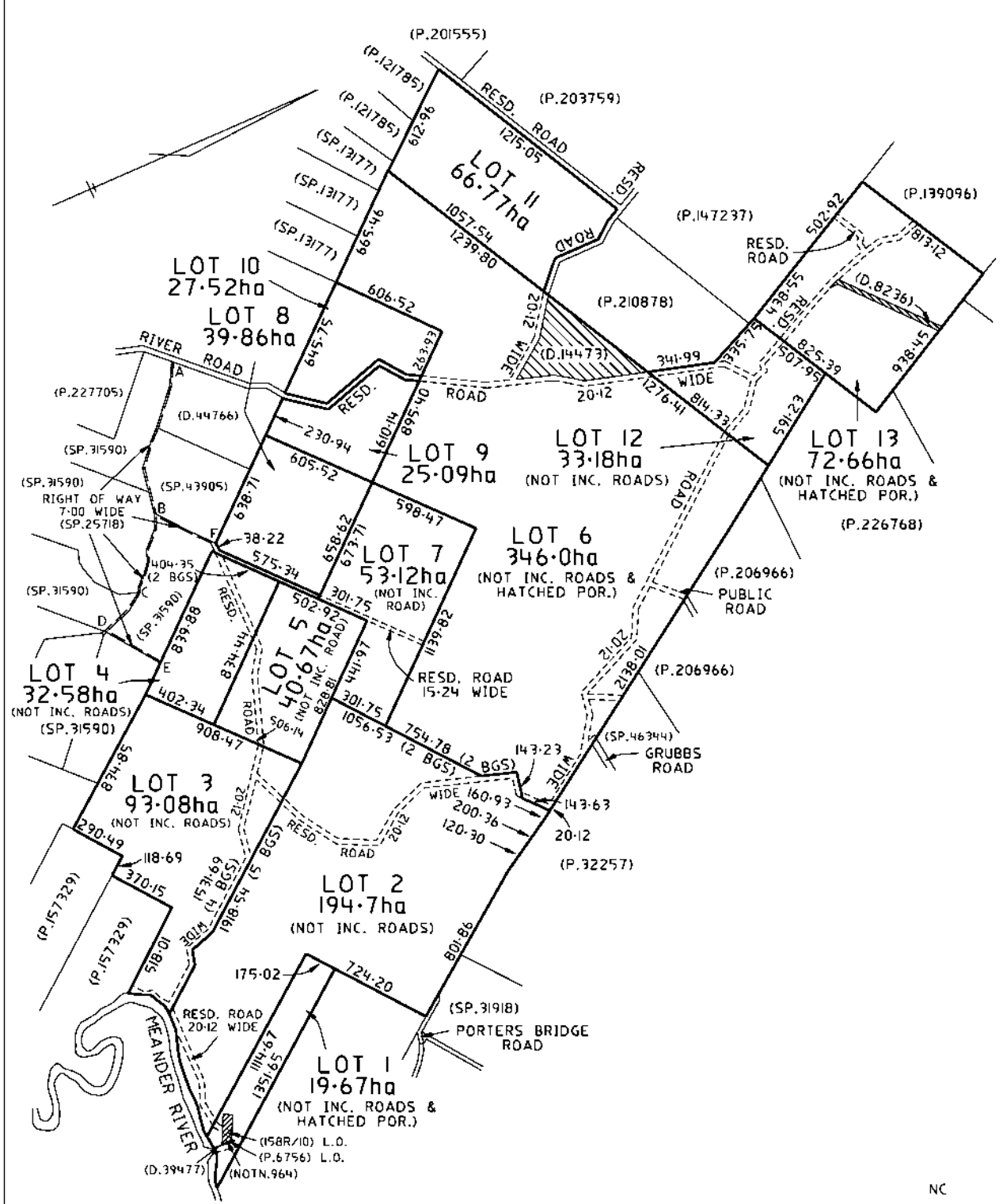
Reservations and conditions in the Crown Grant if any  
 SP25718 BENEFITING EASEMENT: a right of carraigeway over the  
 Right of Way 7.00 wide on Plan 157328  
 C797552 PRIVATE TIMBER RESERVE pursuant to Section 15(1) of  
 the Forest Practices Act 1985 Registered  
 02-Nov-2007 at noon

UNREGISTERED DEALINGS AND NOTATIONS

N193536 PRIORITY NOTICE reserving priority for 90 days  
 TRANSFER IAN CARL PORTER to ARNOLD PROPERTY  
 INVESTMENTS PTY LTD ATF THE ARNOLD PROPERTY TRUST  
 MORTGAGE ARNOLD PROPERTY INVESTMENTS PTY LTD ATF THE  
 ARNOLD PROPERTY TRUST to AUSTRALIA AND NEW ZEALAND  
 BANKING GROUP LIMITED Lodged by RAE & PARTNERS(L) on  
 10-Apr-2024 BP: N193536  
 E383685 MORTGAGE to Australia and New Zealand Banking Group  
 Limited Lodged by DYE & DURHAM (ANZ) on 29-May-2024  
 BP: N193535  
 N193535 TRANSFER to ARNOLD PROPERTY INVESTMENTS PTY LTD  
 Lodged by DYE & DURHAM (ANZ) on 29-May-2024 BP:  
 N193535

OWNER	<b>PLAN OF TITLE</b>	Registered Number
FOLIO REFERENCE CT.118954-1		<b>P.157328</b>
GRANTEE		APPROVED 22 JUNE 2009 <i>Alice Kawa</i> Recorder of Titles
LOCATION DEVON - WYCOMBE FIRST SURVEY PLAN No. 32/36,10/82,13/65,13/70, 13/57,13/63,13/60,13/69, 13/71,13/77,13/74,13/62, 13/65 L.O. COMPILED BY LDRB SCALE 1: 20000 LENGTHS IN METRES		

MAPSHEET MUNICIPAL CODE No. 121 (4641) (4640)	LAST UPI No FHD48	LAST PLAN No. P.118954	ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN
---	-------------------	------------------------	---



NC

SEARCH OF TORRENS TITLE

VOLUME 157328	FOLIO 5
EDITION 2	DATE OF ISSUE 19-Feb-2010

SEARCH DATE : 22-Jun-2024

SEARCH TIME : 06.30 PM

DESCRIPTION OF LAND

Parish of WYCOMBE Land District of DEVON  
 Lot 5 on Plan 157328  
 Derivation : Whole of Lot 6394 Gtd. to J. Porter  
 Prior CT 118954/1

SCHEDULE 1

C888932 ASSENT to IAN CARL PORTER Registered 19-Feb-2010 at  
 12.01 PM

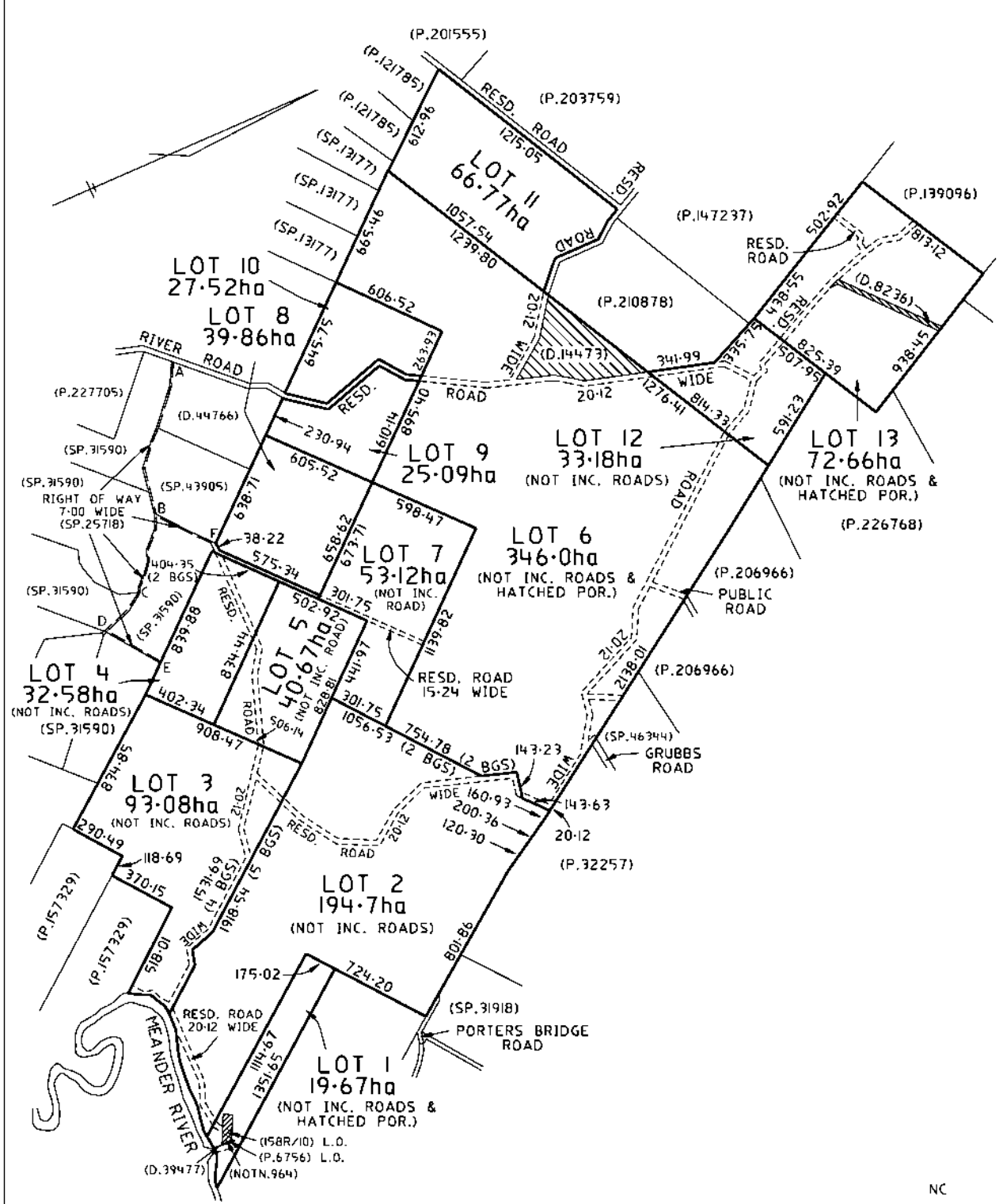
SCHEDULE 2

Reservations and conditions in the Crown Grant if any  
 SP25718 BENEFITING EASEMENT: a right of carraigeway over the  
 Right of Way 7.00 wide on Plan 157328  
 C797552 PRIVATE TIMBER RESERVE pursuant to Section 15(1) of  
 the Forest Practices Act 1985 Registered  
 02-Nov-2007 at noon

UNREGISTERED DEALINGS AND NOTATIONS

N193536 PRIORITY NOTICE reserving priority for 90 days  
 TRANSFER IAN CARL PORTER to ARNOLD PROPERTY  
 INVESTMENTS PTY LTD ATF THE ARNOLD PROPERTY TRUST  
 MORTGAGE ARNOLD PROPERTY INVESTMENTS PTY LTD ATF THE  
 ARNOLD PROPERTY TRUST to AUSTRALIA AND NEW ZEALAND  
 BANKING GROUP LIMITED Lodged by RAE & PARTNERS(L) on  
 10-Apr-2024 BP: N193536  
 E383685 MORTGAGE to Australia and New Zealand Banking Group  
 Limited Lodged by DYE & DURHAM (ANZ) on 29-May-2024  
 BP: N193535  
 N193535 TRANSFER to ARNOLD PROPERTY INVESTMENTS PTY LTD  
 Lodged by DYE & DURHAM (ANZ) on 29-May-2024 BP:  
 N193535

OWNER		PLAN OF TITLE		Registered Number	
FOLIO REFERENCE CT.118954-1		LOCATION		P.157328	
GRANTEE		DEVON - WYCOMBE		APPROVED 22 JUNE 2009	
MAPSHEET MUNICIPAL CODE No. 121 (4641) (4640)		LAST UPI No FHD48		FIRST SURVEY PLAN No. 32/36,10/82,13/65,13/70, 13/57,13/63,13/60,13/69, 13/71,13/77,13/74,13/62, 13/65 L.O. COMPILER BY LDRB SCALE 1: 20000 LENGTHS IN METRES <i>Alice Kawa</i> Recorder of Titles	
LAST PLAN No. P.118954		ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN			



NC

SEARCH OF TORRENS TITLE

VOLUME 157328	FOLIO 1
EDITION 4	DATE OF ISSUE 24-Nov-2021

SEARCH DATE : 27-Jun-2024

SEARCH TIME : 06.34 PM

DESCRIPTION OF LAND

Parish of WYCOMBE Land District of DEVON  
 Lot 1 on Plan 157328  
 Derivation : Part of Lot 3651 Gtd. to J. Porter  
 Prior CT 118954/1

SCHEDULE 1

C888932 ASSENT to IAN CARL PORTER Registered 19-Feb-2010 at  
 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any  
 SP25718 BENEFITING EASEMENT: a right of carraigeway over the  
 Right of Way 7.00 wide on Plan 157328  
 C797552 PRIVATE TIMBER RESERVE pursuant to Section 15(1) of  
 the Forest Practices Act 1985 against part of the  
 land as described therein Registered 02-Nov-2007 at  
 noon  
 E282615 MORTGAGE to Commonwealth Bank of Australia  
 Registered 24-Nov-2021 at 12.01 PM

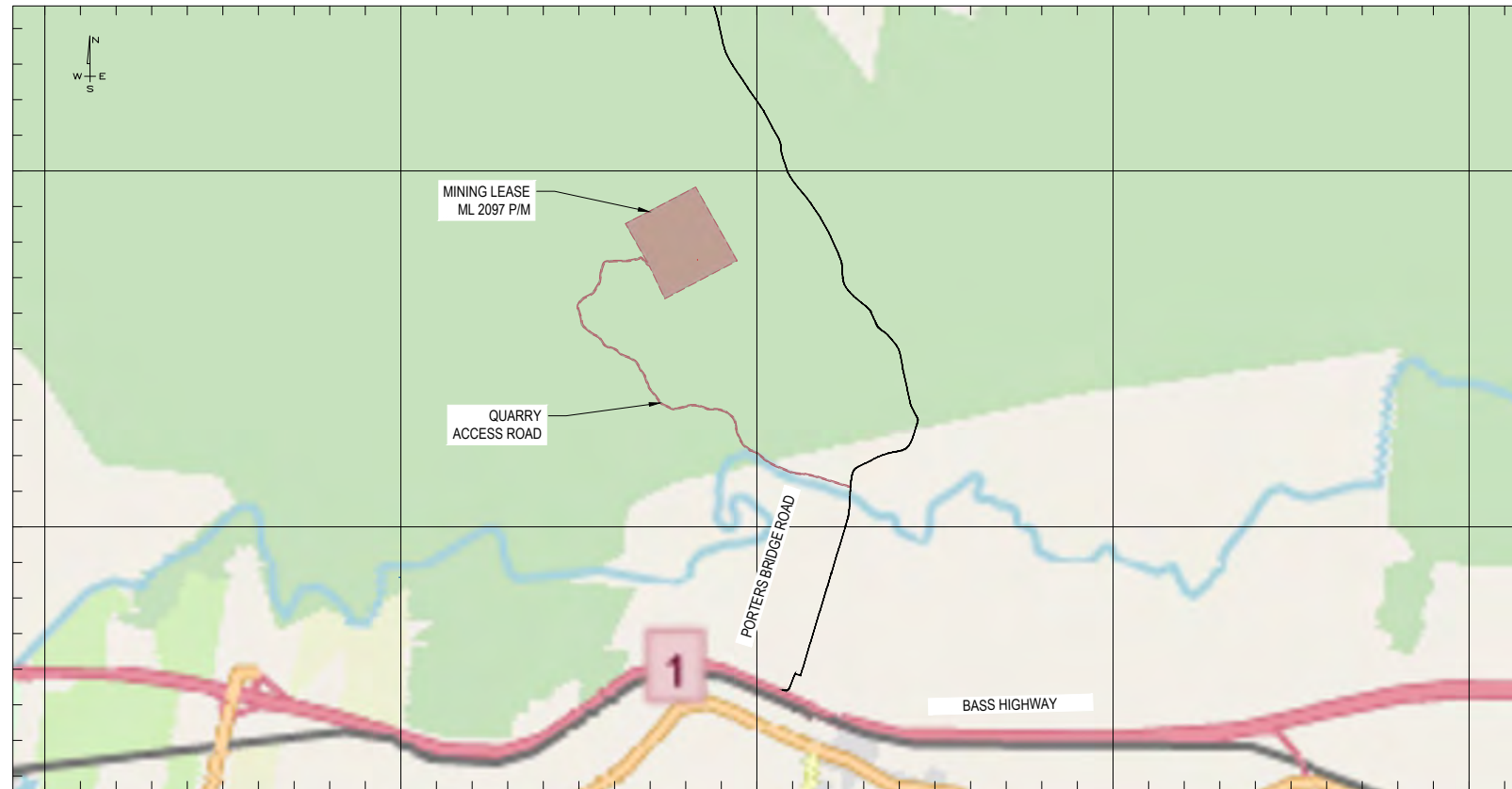
UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

**ATTACHMENT 2. 5 YEAR MINING PLAN – TECHNICAL DRAWINGS**

# MINING PLAN

PORTERS BRIDGE ROAD QUARRY, EXTON  
WALTERS CONTRACTING PTY LTD



LOCALITY MAP  
SCALE 1:50,000

## NOTES - MINING PLAN

- THIS MINING PLAN IS PREPARED FOR THE NEXT 5 YEARS OF MINE LIFE.
- 5 YEAR EXTRACTION PLAN TO BE STAGED AS PER THE DRAWING NO. 1011/103 WHICH SPECIFIES THE CONCEPTUAL PIT LAYOUTS, STAGING AREAS AND OPERATIONAL SEQUENCE.
- MINING LEASE: ML 2097 P/M
- MINERAL CATEGORY: CATEGORY 3 (CONSTRUCTION MINERALS)
- MINING LEASE AREA: 36.41 ha

## NOTES - GENERAL

- MATERIAL QUANTITIES AND VOLUMES INDICATED IN THE DRAWINGS ARE APPROXIMATE ESTIMATES. VARIATION IN TOPSOIL AND OVERBURDEN DEPTHS DUE TO SITE-SPECIFIC CONDITIONS MAY RESULT IN DEVIATIONS FROM THE STATED VOLUMES SO THE TIMEFRAMES.
- ALL MINING ACTIVITIES MUST BE CONDUCTED IN STRICT ACCORDANCE WITH APPLICABLE REGULATORY REQUIREMENTS AND ONLY AFTER OBTAINING THE NECESSARY PERMITS FROM RELEVANT GOVERNMENT AUTHORITIES.
- ALL QUARRYING ACTIVITIES MUST COMPLY WITH THE QUARRY CODE OF PRACTICE TASMANIA, MAY 2017 (QCP) AND ENVIRONMENTAL MANAGEMENT PLANS (WHERE APPLICABLE), ENSURING MINIMAL IMPACT ON SURROUNDING ECOSYSTEMS, WATERCOURSES, AND PROTECTED AREAS.
- PROGRESSIVE REHABILITATION OF THE SITE IS TO BE UNDERTAKEN, ENSURING THE SITE IS RESTORED TO ITS DESIGNATED POST-MINING LAND USE AND ALSO TO MINIMISE THE AREA OF ACTIVE DISTURBANCE AND TO SUPPORT LONG-TERM SITE STABILISATION.
- REHABILITATED AREAS IDENTIFIED IN THESE PLANS ARE CONCEPTUAL AND INDICATIVE ONLY. FINAL REHABILITATION STAGING AND LOCATIONS WILL BE DETERMINED BY THE QUARRY OPERATOR BASED ON PREVAILING SITE CONDITIONS AND SHORT-TERM OPERATIONAL PLANNING.
- THE TOTAL AREA OF DISTURBED LAND WITHOUT REHABILITATION AT ANY GIVEN TIME WILL BE MANAGED IN ACCORDANCE WITH THE MAXIMUM LIMITS PRESCRIBED BY THE RELEVANT STATUTORY AUTHORITIES.
- ALL PERSONNEL ON-SITE MUST ADHERE TO SITE-SPECIFIC HEALTH AND SAFETY PROTOCOLS, WITH ADEQUATE TRAINING PROVIDED FOR THE SAFE OPERATION OF EQUIPMENT AND COMPLIANCE WITH WORKPLACE HEALTH AND SAFETY REGULATIONS.

## NOTES - EARTH BUNDS

- PERIMETER EARTH BUNDS SHALL SERVE MULTIPLE FUNCTIONS, INCLUDING OPERATIONAL SAFETY, STORMWATER INTERCEPTION, AND FLOW DIVERSION. WHERE SAFETY IS THE PRIMARY OBJECTIVE, THE MINIMUM HEIGHT OF THE BUND SHALL BE EQUIVALENT TO AT LEAST HALF THE WIDTH OF THE LARGEST QUARRY VEHICLE OPERATING ON SITE.
- PRIOR TO EXPOSING NEW AREAS FOR EXTRACTION, TOPSOIL AND OVERBURDEN SHALL BE STRIPPED AND PLACED ALONG THE PERIMETER TO FORM BUNDS. WHERE PRACTICAL, TOPSOIL WINDROWS SHOULD NOT EXCEED 1.0 m IN HEIGHT TO PRESERVE SOIL STRUCTURE AND VIABILITY. TOPSOIL AND OVERBURDEN MUST BE STOCKPILED SEPARATELY TO FACILITATE EFFECTIVE REUSE AND REHABILITATION.
- ALL VEGETATION CLEARING AND TOPSOIL STRIPPING ACTIVITIES MUST BE UNDERTAKEN IN ACCORDANCE WITH THE GUIDANCE PROVIDED IN SECTION 7.7 OF THE QUARRY CODE OF PRACTICE TASMANIA.

## NOTES - STORMWATER AND SEDIMENT CONTROL

- PROPOSED DRAINAGE CHANNELS ARE DESIGNED TO CONVEY RUNOFF GENERATED DURING A 1-IN-20-YEAR AVERAGE RECURRENCE INTERVAL (ARI) RAINFALL EVENT, EXCLUDING A 100 mm FREEBOARD ALLOWANCE FOR ADDITIONAL CAPACITY AND SAFETY.
- SEDIMENT BASINS ARE DESIGNED TO CAPTURE AND CONTAIN RUNOFF FROM AT LEAST THE 80<sup>th</sup> PERCENTILE, 5-DAY RAINFALL EVENT, IN ACCORDANCE WITH BEST PRACTICE EROSION AND SEDIMENT CONTROL GUIDELINES BY IECA (INTERNATIONAL EROSION AND SEDIMENT CONTROL ASSOCIATION). WHERE FEASIBLE, COLLECTED STORMWATER SHOULD BE REUSED ONSITE FOR QUARRY OPERATIONS SUCH AS DUST SUPPRESSION, DRILLING, AND CRUSHING. ONLY TREATED EXCESS WATER SHALL BE DISCHARGED TO THE RECEIVING ENVIRONMENT.
- IN-PIT STORMWATER COLLECTION PONDS SHALL BE CONSTRUCTED AS REQUIRED, WITH THE PRIMARY PURPOSE OF FACILITATING STORMWATER REUSE FOR OPERATIONAL ACTIVITIES WITHIN THE QUARRY. THESE PONDS WILL ALSO FUNCTION AS SEDIMENT TRAPS, CAPTURING SUSPENDED SOLIDS AND MINIMISING SEDIMENT TRANSPORT WITHIN THE PIT AREA.

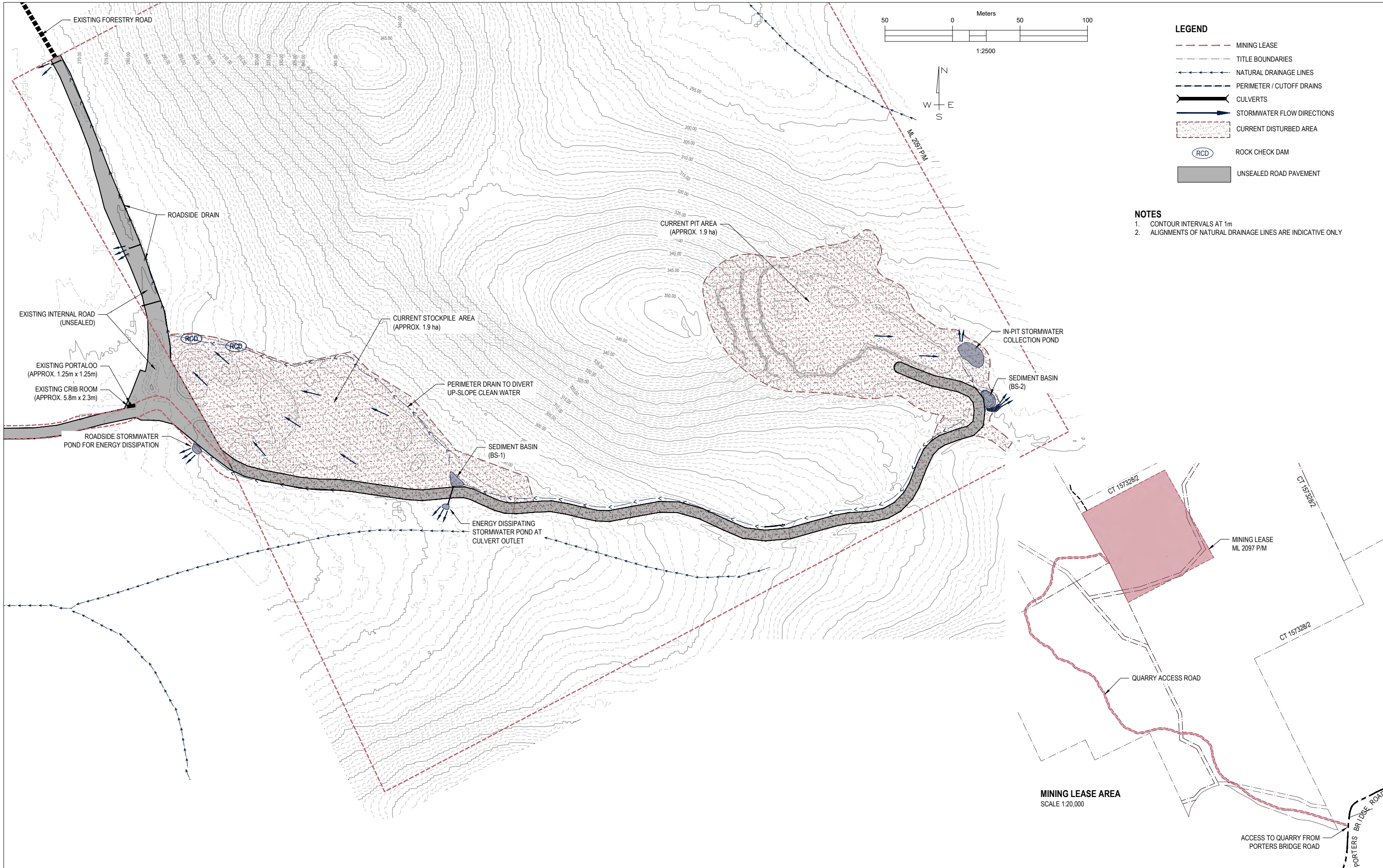
DRAWING NO	REV	DESCRIPTION
1011/100	D	COVER PAGE
1011/101	C	EXISTING SITE LAYOUT
1011/102	C	PROPOSED STOCKPILE AREA
1011/103	B	EXTRACTION PLAN
1011/104	B	AMENITIES LAYOUT PLAN
1011/105	B	AMENITIES (FRONT ELEVATION)
1011/200	A	EXISTING QUARRY PIT
1011/201	A	QUARRY PIT AT STAGE 1 COMPLETION
1011/202	A	QUARRY PIT AT STAGE 2 COMPLETION
1011/203	A	QUARRY PIT AT STAGE 3 COMPLETION
1011/204	A	QUARRY PIT AT STAGE 4 COMPLETION
1011/300	A	SURFACE HYDROLOGY OF THE AREA
1011/301	B	STORMWATER MANAGEMENT AT STOCKPILE AREA

REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED	DO NOT SCALE FROM THE DRAWING.
D	MINOR AMENDMENT	10/09/2025	S.I.	C.M.	CLIENT: WALTERS CONTRACTING PTY LTD
C	SITE LAYOUTS UPDATED	10/08/2025	S.I.	C.M.	ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 7304
B	MINOR AMENDMENT	18/05/2025	S.I.	C.M.	HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD
A	INITIAL PLAN	18/05/2025	S.I.	C.M.	ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED
REVISION HISTORY					PROJECT NUMBER: 1011

**COVER PAGE**

DRAWING NUMBER: 1011/100





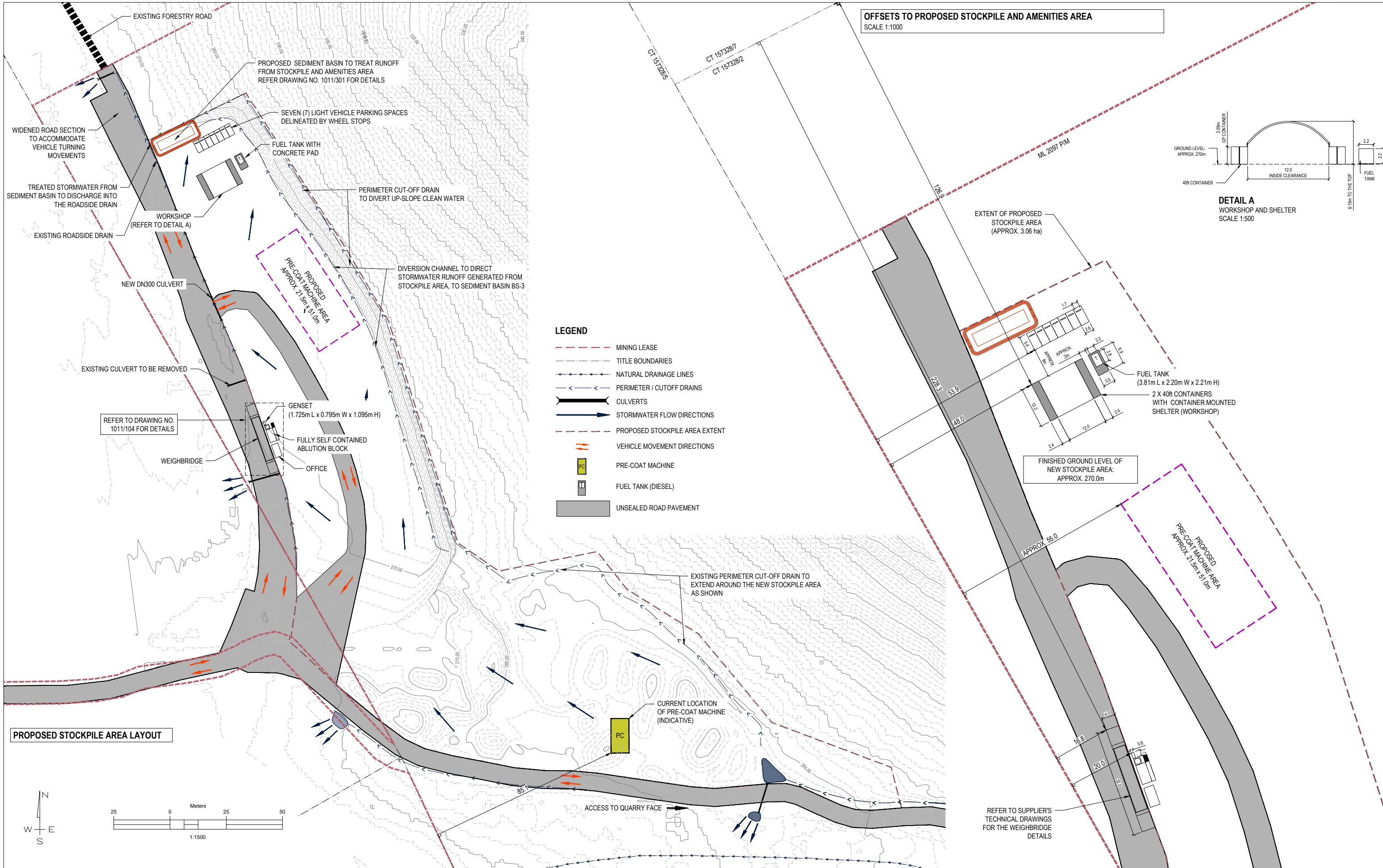
REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED	DO NOT SCALE FROM THE DRAWING.
C	EXISTING AMENITIES UPDATED	10/09/2025	S.I.	C.M.	CLIENT: WALTERS CONTRACTING PTY LTD
B	LEGEND UPDATED	06/08/2025	S.I.	C.M.	ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 7304
A	INITIAL PLAN	18/05/2025	S.I.	C.M.	HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD
					ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED
					DO NOT SCALE FROM THE DRAWING.
REVISION HISTORY					PROJECT NUMBER: 1011

**SITE LAYOUT  
(EXISTING)**

DRAWING NUMBER: 1011/101

**A3**





REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED	DO NOT SCALE FROM THE DRAWING.
C	DIMENSIONS UPDATED	10/09/2025	S.I.	C.M.	CLIENT: WALTERS CONTRACTING PTY LTD
B	MINOR AMENDMENTS	06/08/2025	S.I.	C.M.	ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 7304
A	INITIAL PLAN	29/05/2025	S.I.	C.M.	HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD
REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED	ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED
REVISION HISTORY					
PROJECT NUMBER: 1011					

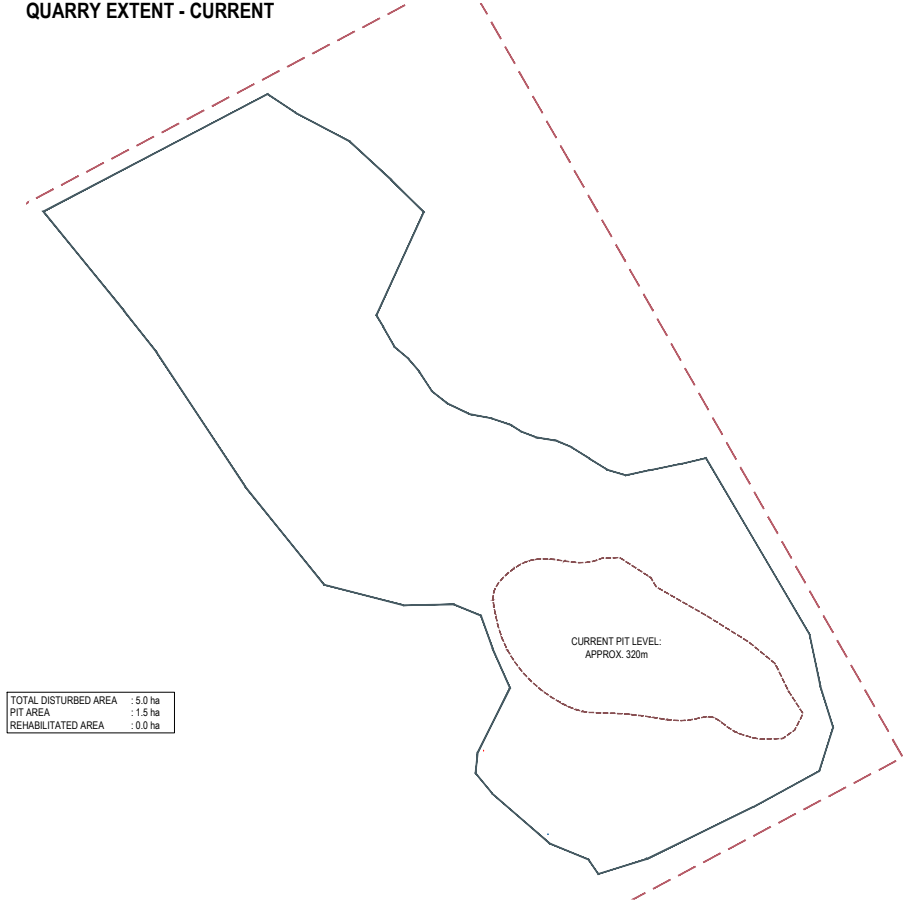
**PROPOSED STOCKPILE AREA**

DRAWING NUMBER: 1011/102

A3



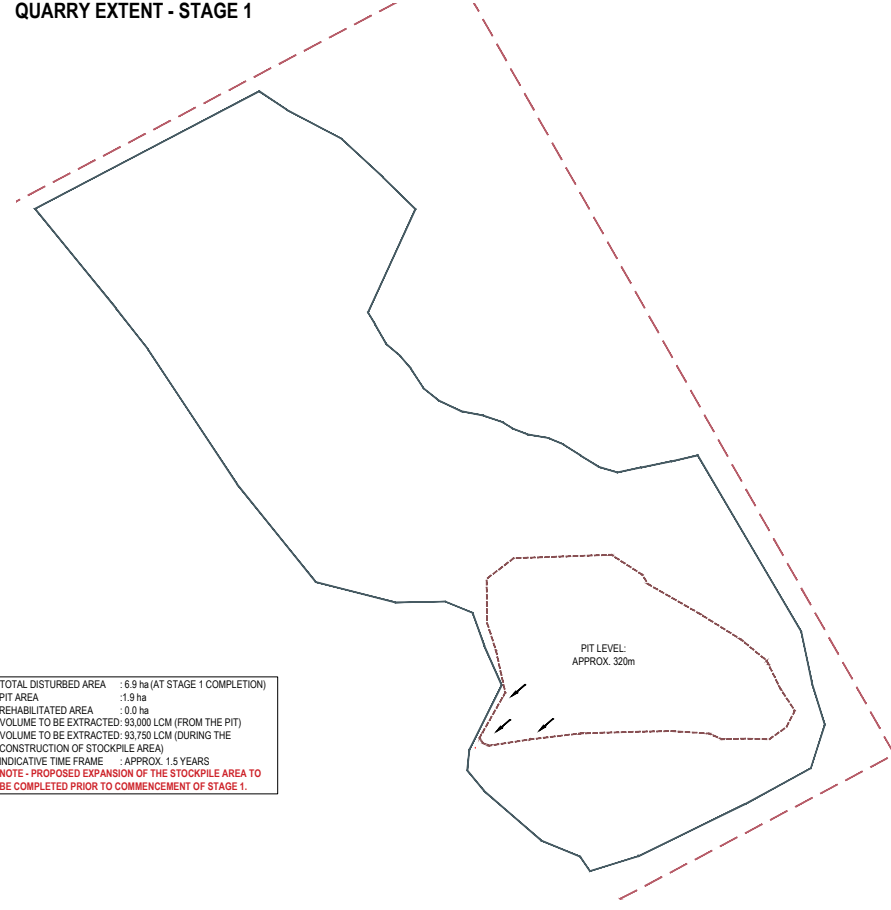
**QUARRY EXTENT - CURRENT**



TOTAL DISTURBED AREA : 5.0 ha  
 PIT AREA : 1.5 ha  
 REHABILITATED AREA : 0.0 ha

CURRENT PIT LEVEL:  
 APPROX. 320m

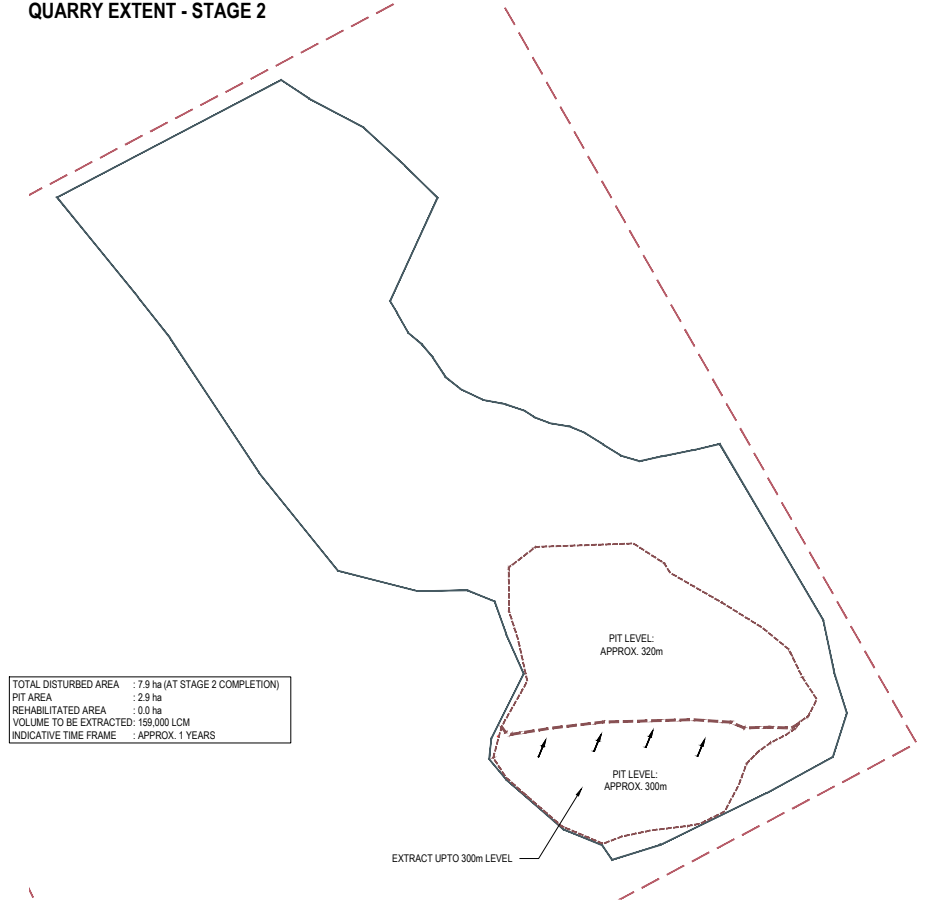
**QUARRY EXTENT - STAGE 1**



TOTAL DISTURBED AREA : 6.9 ha (AT STAGE 1 COMPLETION)  
 PIT AREA : 1.9 ha  
 REHABILITATED AREA : 0.0 ha  
 VOLUME TO BE EXTRACTED: 93,000 LCM (FROM THE PIT)  
 VOLUME TO BE EXTRACTED: 93,750 LCM (DURING THE CONSTRUCTION OF STOCKPILE AREA)  
 INDICATIVE TIME FRAME : APPROX. 1.5 YEARS  
**NOTE - PROPOSED EXPANSION OF THE STOCKPILE AREA TO BE COMPLETED PRIOR TO COMMENCEMENT OF STAGE 1.**

PIT LEVEL:  
 APPROX. 320m

**QUARRY EXTENT - STAGE 2**



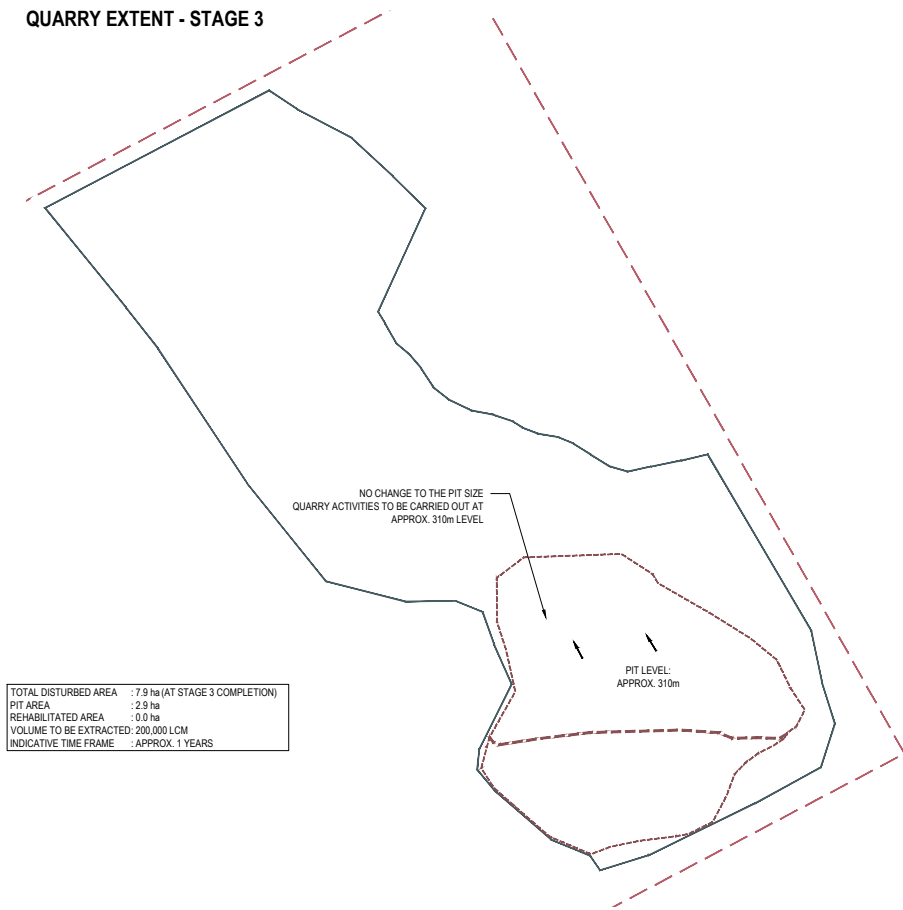
TOTAL DISTURBED AREA : 7.9 ha (AT STAGE 2 COMPLETION)  
 PIT AREA : 2.9 ha  
 REHABILITATED AREA : 0.0 ha  
 VOLUME TO BE EXTRACTED: 199,000 LCM  
 INDICATIVE TIME FRAME : APPROX. 1 YEARS

PIT LEVEL:  
 APPROX. 320m

PIT LEVEL:  
 APPROX. 300m

EXTRACT UPTO 300m LEVEL

**QUARRY EXTENT - STAGE 3**

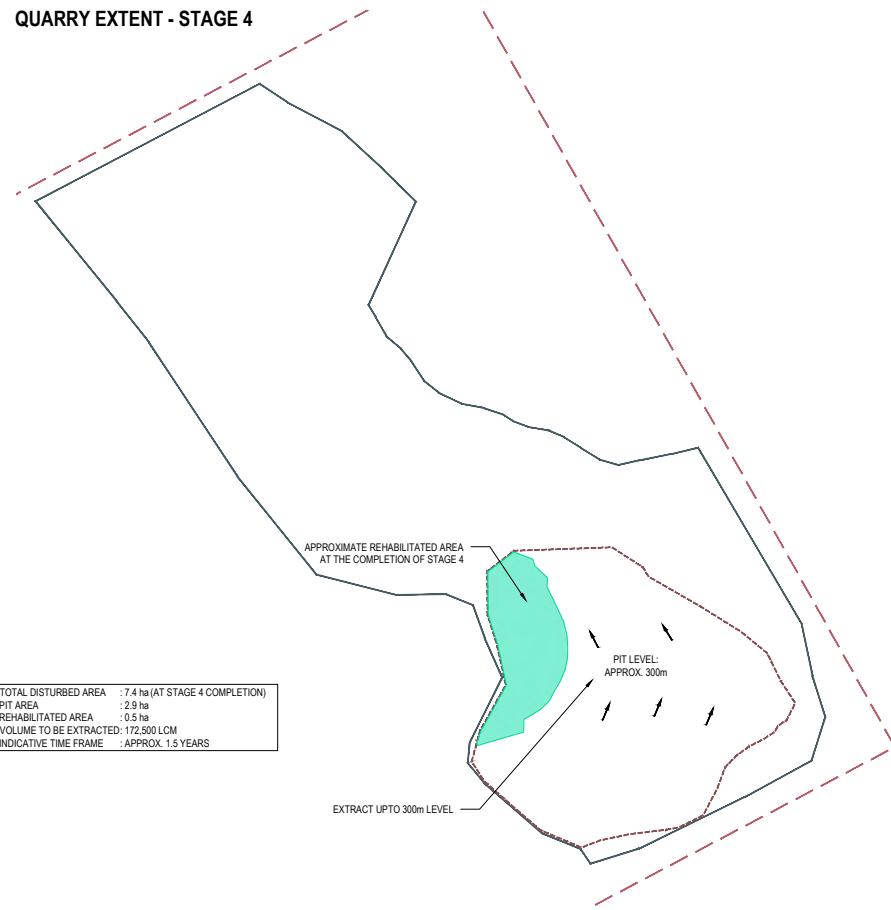


TOTAL DISTURBED AREA : 7.9 ha (AT STAGE 3 COMPLETION)  
 PIT AREA : 2.9 ha  
 REHABILITATED AREA : 0.0 ha  
 VOLUME TO BE EXTRACTED: 200,000 LCM  
 INDICATIVE TIME FRAME : APPROX. 1 YEARS

NO CHANGE TO THE PIT SIZE  
 QUARRY ACTIVITIES TO BE CARRIED OUT AT  
 APPROX. 310m LEVEL

PIT LEVEL:  
 APPROX. 310m

**QUARRY EXTENT - STAGE 4**



TOTAL DISTURBED AREA : 7.4 ha (AT STAGE 4 COMPLETION)  
 PIT AREA : 2.9 ha  
 REHABILITATED AREA : 0.3 ha  
 VOLUME TO BE EXTRACTED: 172,500 LCM  
 INDICATIVE TIME FRAME : APPROX. 1.5 YEARS

APPROXIMATE REHABILITATED AREA  
 AT THE COMPLETION OF STAGE 4

PIT LEVEL:  
 APPROX. 300m

EXTRACT UPTO 300m LEVEL

**LEGEND**

- - - - - MINING LEASE
- MAXIMUM EXTRACTION EXTENT
- PIT EXTENT
- PIT PROGRESS DIRECTION
- PROGRESSIVE REHABILITATED AREA

**NOTES**

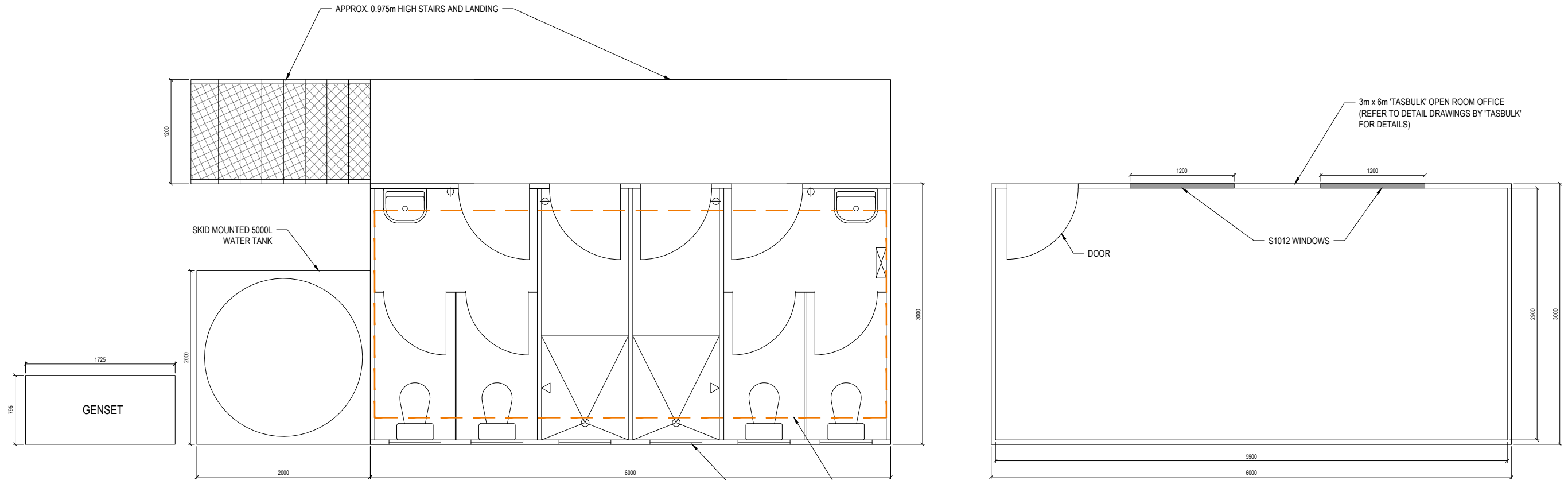
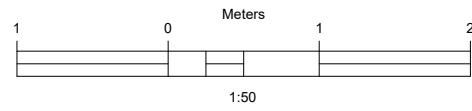
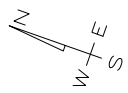
- THE TIMELINE PRESENTED IN THIS PLAN IS INDICATIVE ONLY. ACTUAL QUARRYING PROGRESSION MAY VARY DEPENDING ON MARKET DEMAND, OPERATIONAL CONSTRAINTS, WEATHER CONDITIONS, AND OTHER SITE-SPECIFIC FACTORS.
- THE VOLUMES OF MATERIAL EXTRACTED AND THE EXTENT OF DISTURBED AREAS ILLUSTRATED IN THE PLAN ARE APPROXIMATE. VARIATIONS MAY OCCUR DUE TO FLUCTUATIONS IN IN-SITU MATERIAL DENSITY AND THE VARIABLE DEPTH OF TOPSOIL ACROSS THE SITE.
- REHABILITATED AREAS IDENTIFIED IN THE PLAN ARE CONCEPTUAL AND INDICATIVE ONLY. FINAL REHABILITATION STAGING AND LOCATIONS WILL BE DETERMINED BY THE QUARRY OPERATOR BASED ON PREVAILING SITE CONDITIONS AND SHORT-TERM OPERATIONAL PLANNING.
- THE TOTAL AREA OF DISTURBED LAND WITHOUT REHABILITATION AT ANY GIVEN TIME WILL BE MANAGED IN ACCORDANCE WITH THE MAXIMUM LIMITS PRESCRIBED BY THE RELEVANT STATUTORY AUTHORITIES.
- PROGRESSIVE REHABILITATION IS TO BE UNDERTAKEN WHERE PRACTICAL, TO MINIMISE THE AREA OF ACTIVE DISTURBANCE AND TO SUPPORT LONG-TERM SITE STABILISATION.

					CLIENT: WALTERS CONTRACTING PTY LTD
					ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 7304
B	MINOR UPDATES	29/05/2025	S.I.	C.M.	HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD
A	INITIAL PLAN	29/05/2025	S.I.	C.M.	ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED
REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED	DO NOT SCALE FROM THE DRAWING.
REVISION HISTORY					PROJECT NUMBER: 1011

**EXTRACTION PLAN  
 (5 YEARS)**

DRAWING NUMBER: 1011/103





WEIGHBRIDGE

6000L 'FORMIT' WASTETANK WITH FRAME  
(REFER TO DESIGN DRAWINGS BY 'FORMIT SERVICES PTY LTD'  
FOR DETAILS)

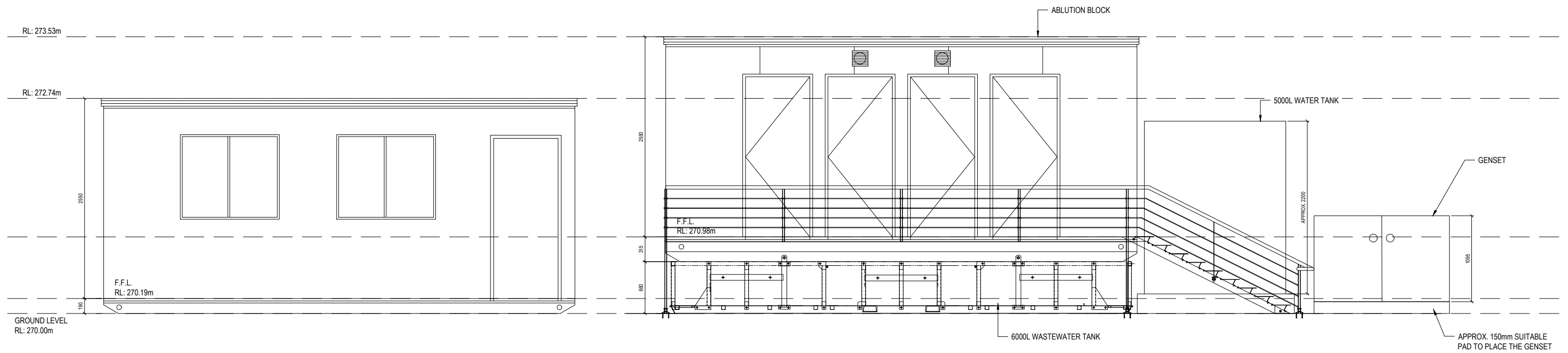
3m x 6m 'TASBULK' ABLUTION BLOCK  
(REFER TO DESIGN DRAWINGS BY 'TASBULK'  
FOR DETAILS)

					CLIENT: WALTERS CONTRACTING PTY LTD
					ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 7304
B	GENSET DIMENSIONS UPDATED	10/09/2025	S.I.	C.M.	HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD
A	INITIAL PLAN	06/08/2025	S.I.	C.M.	ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED
REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED	DO NOT SCALE FROM THE DRAWING.
REVISION HISTORY					PROJECT NUMBER: 1011

## AMENITIES LAYOUT PLAN

DRAWING NUMBER: 1011/104





SCALE 1:50

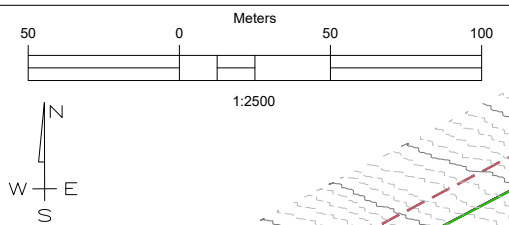
					CLIENT: WALTERS CONTRACTING PTY LTD
					ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 7304
B	GENSET DIMENSIONS UPDATED	10/09/2025	S.I.	C.M.	HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD
A	INITIAL PLAN	06/08/2025	S.I.	C.M.	ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED
REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED	DO NOT SCALE FROM THE DRAWING.
REVISION HISTORY					PROJECT NUMBER: 1011

**AMENITIES  
(FRONT ELEVATION)**

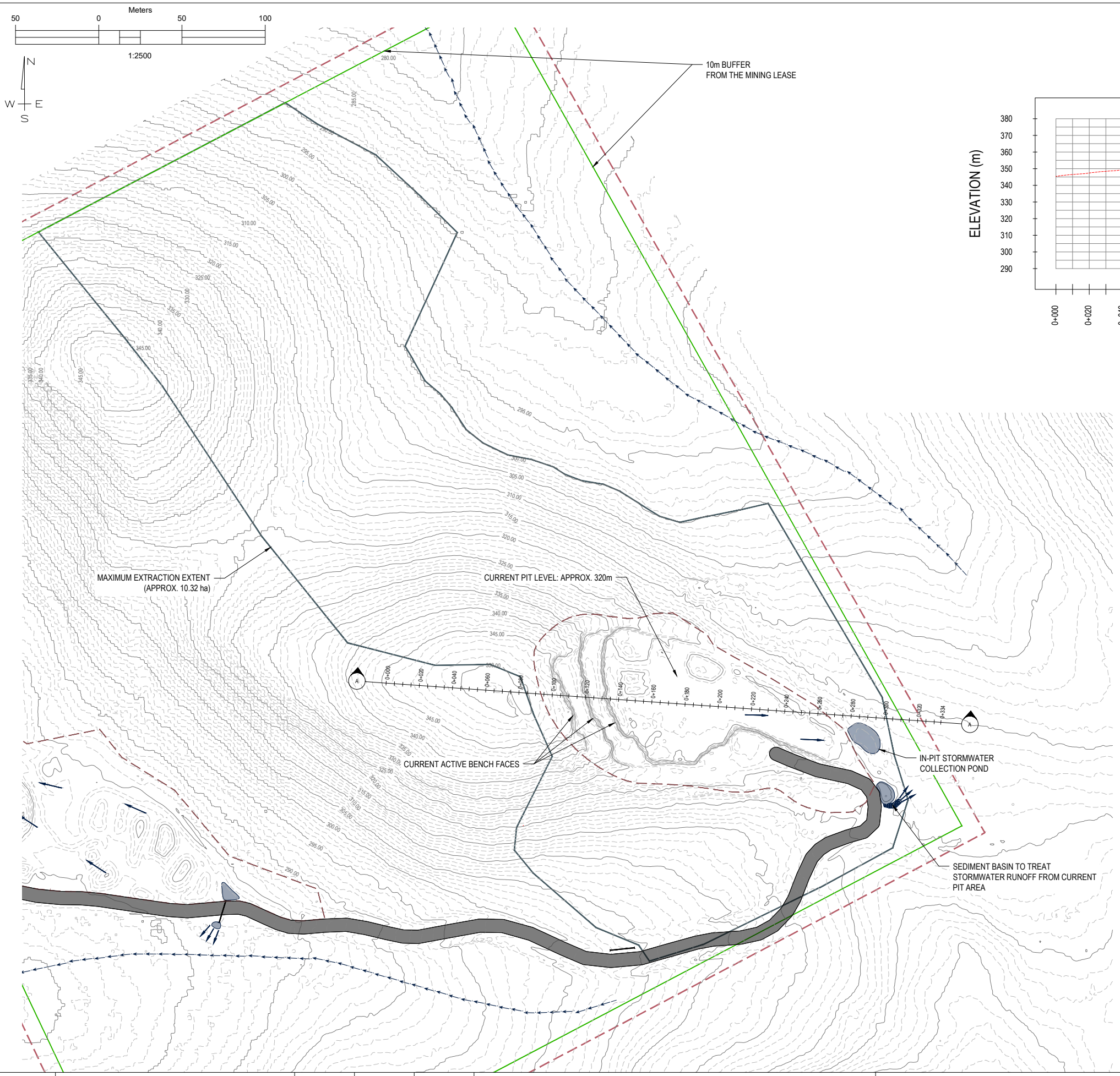
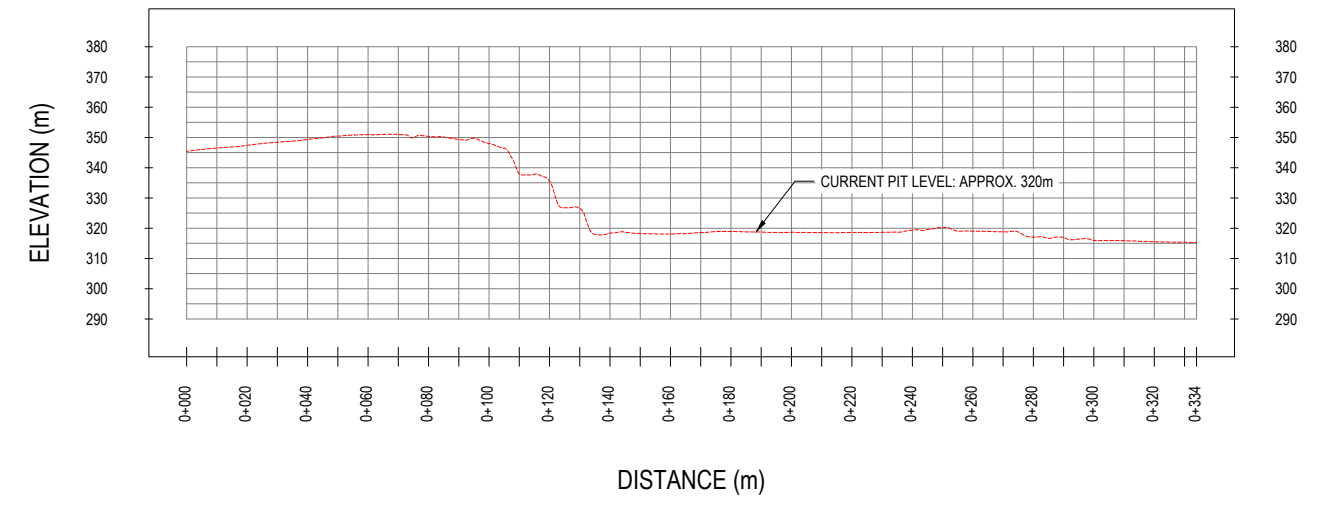
DRAWING NUMBER: 1011/105



A3



### SECTIONAL VIEW (A-A)

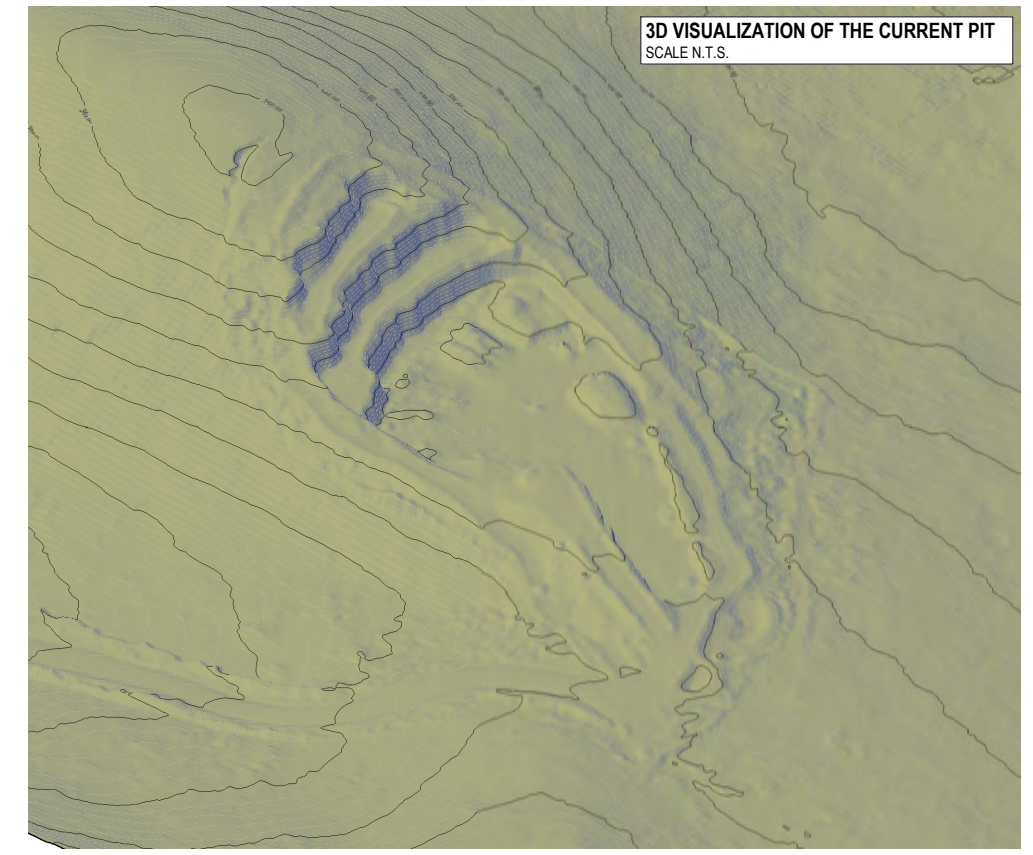


#### LEGEND

- MINING LEASE
- 10m BUFFER FROM THE MINING LEASE
- NATURAL DRAINAGE LINES
- MAXIMUM EXTRACTION EXTENT
- CURRENT PIT EXTENT
- CULVERTS
- STORMWATER FLOW DIRECTIONS

#### NOTES

- NO WORKS ARE PERMITTED WITHIN THE 10 m BUFFER ZONE FROM THE MINING LEASE BOUNDARY.
- ALL EXTRACTION WORK SHALL BE LIMITED TO THE MAXIMUM EXTRACTION AREA SHOWN.
- CONTOUR INTERVALS ARE PRESENTED AT 1m VERTICAL SPACING.

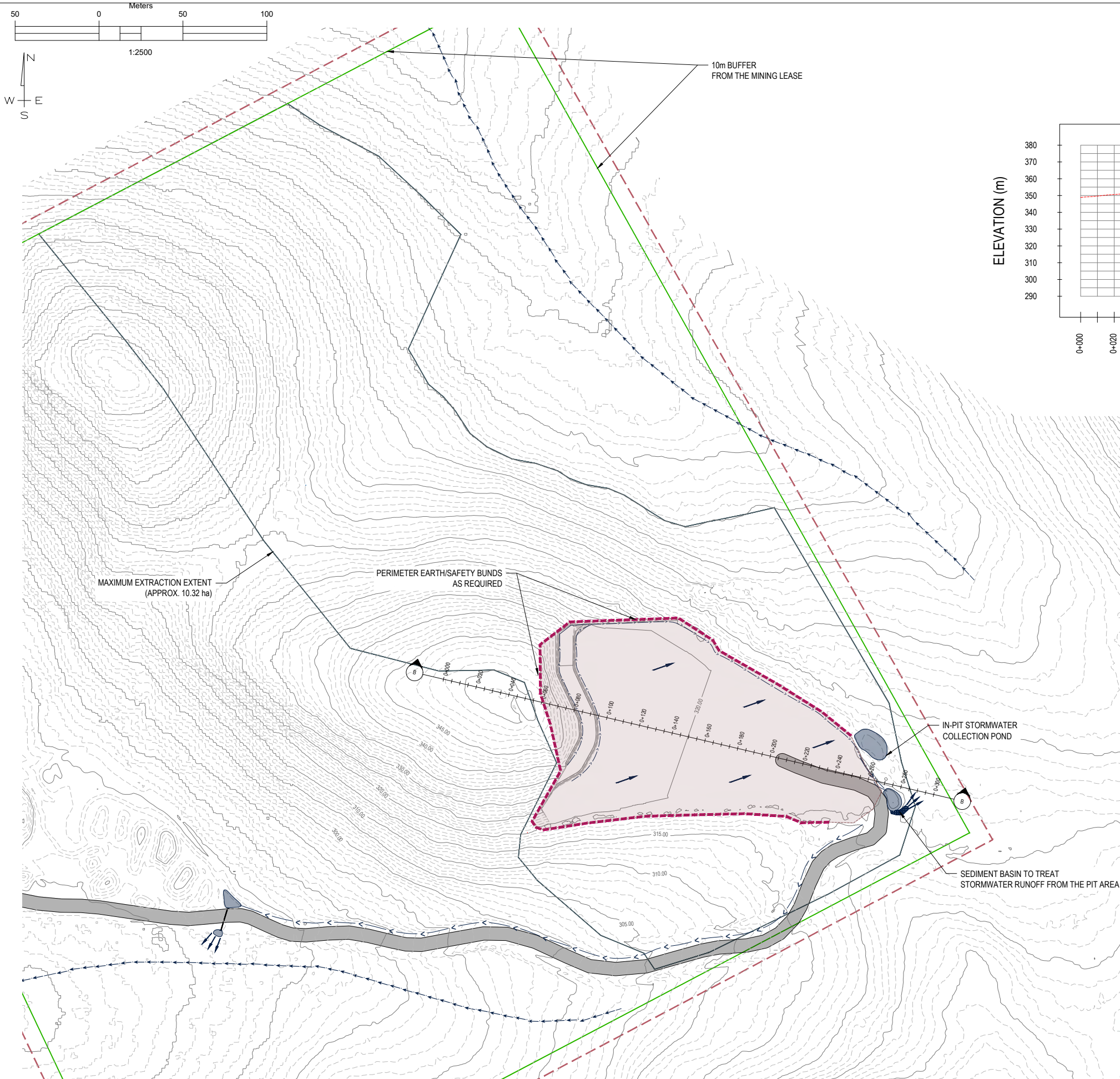
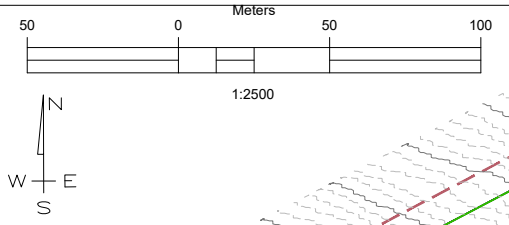


CLIENT: WALTERS CONTRACTING PTY LTD				
ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 7304				
HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD				
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED				
DO NOT SCALE FROM THE DRAWING.				
PROJECT NUMBER: 1011				
REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED
A	INITIAL PLAN	29/05/2025	S.I.	C.M.

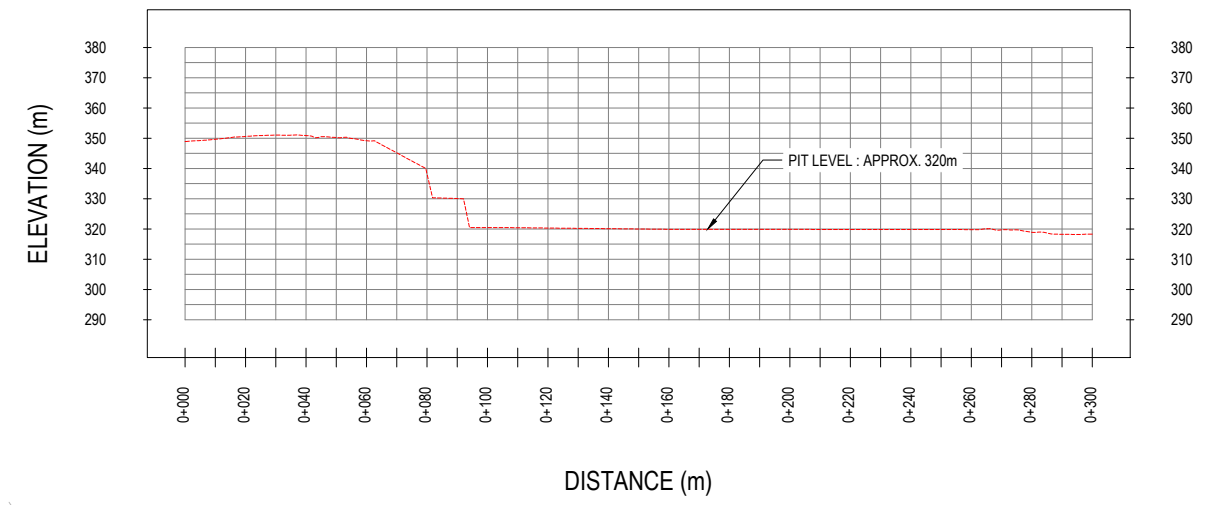
**EXISTING QUARRY PIT**

DRAWING NUMBER: 1011/200





### SECTIONAL VIEW (B-B)

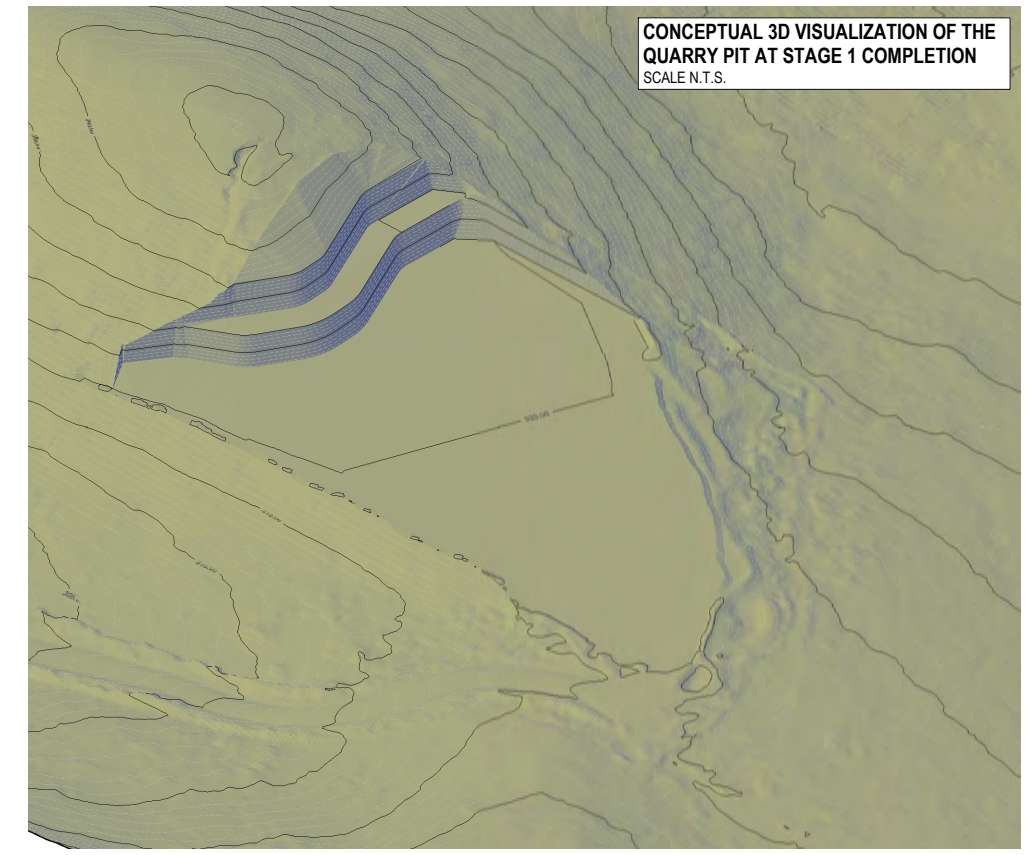


#### LEGEND

- - - MINING LEASE
- - - 10m BUFFER FROM THE MINING LEASE
- - - NATURAL DRAINAGE LINES
- MAXIMUM EXTRACTION EXTENT
- < < DRAINS
- - - PIT EXTENT
- - - EARTH BUNDS
- = CULVERTS
- STORMWATER FLOW DIRECTIONS

#### NOTES

- NO WORKS ARE PERMITTED WITHIN THE 10m BUFFER ZONE FROM THE MINING LEASE BOUNDARY.
- ALL EXTRACTION WORK SHALL BE LIMITED TO THE MAXIMUM EXTRACTION AREA SHOWN.
- PERIMETER BUNDS SHALL BE CONSTRUCTED AS REQUIRED TO SUIT SITE-SPECIFIC CONDITIONS, ENSURING BOTH OPERATIONAL SAFETY AND THE DIVERSION OF CLEAN SURFACE WATER AWAY FROM THE PIT.
- BUNDS SURROUNDING THE PIT AREA MUST BE A MINIMUM HEIGHT EQUIVALENT TO HALF THE DIAMETER OF THE LARGEST WHEEL USED BY QUARRY VEHICLES.
- CONTOUR INTERVALS ARE PRESENTED AT 1m VERTICAL SPACING.



CONCEPTUAL 3D VISUALIZATION OF THE QUARRY PIT AT STAGE 1 COMPLETION  
SCALE N.T.S.

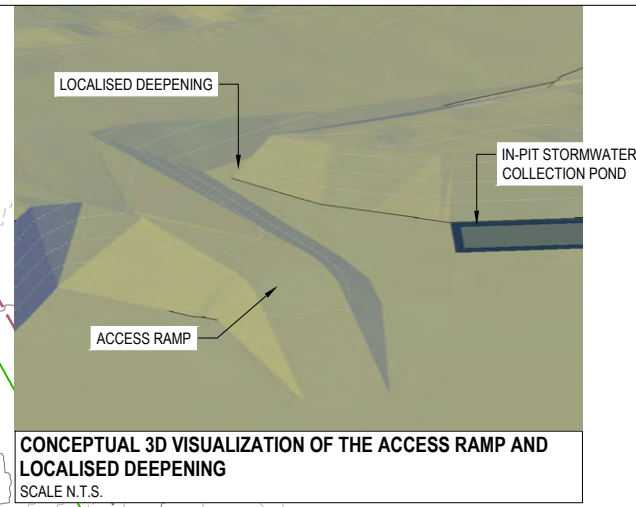
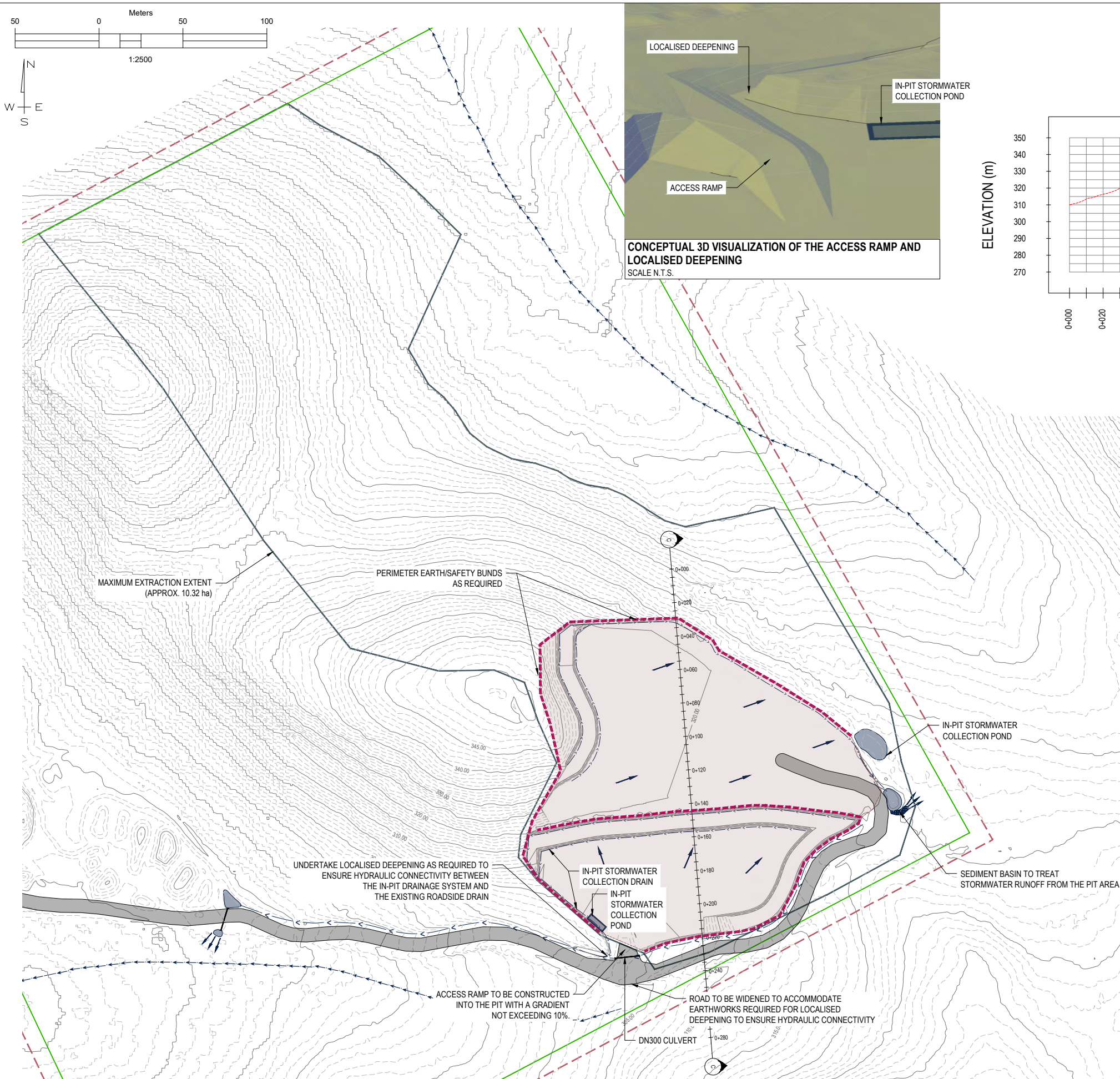
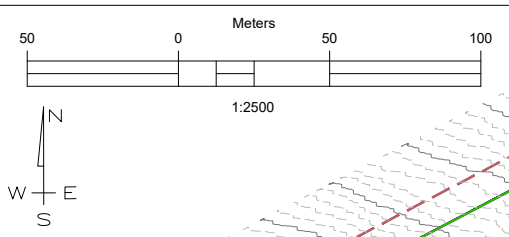
REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED
A	INITIAL PLAN	29/05/2025	S.I.	C.M.

CLIENT: WALTERS CONTRACTING PTY LTD  
 ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 7304  
 HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD  
 ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED  
 DO NOT SCALE FROM THE DRAWING.  
 PROJECT NUMBER: 1011

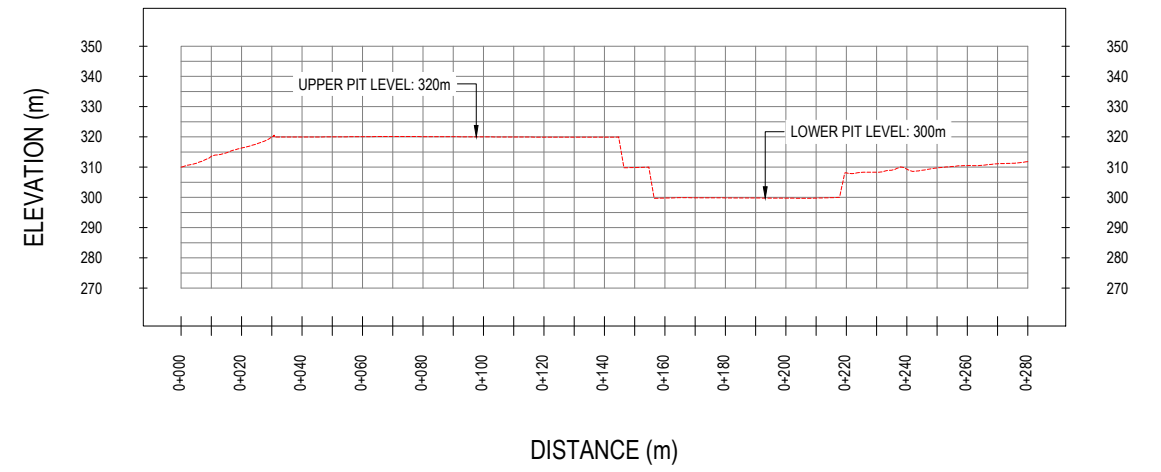
**QUARRY PIT AT STAGE 1 COMPLETION**

DRAWING NUMBER: 1011/201





### SECTIONAL VIEW (C-C)

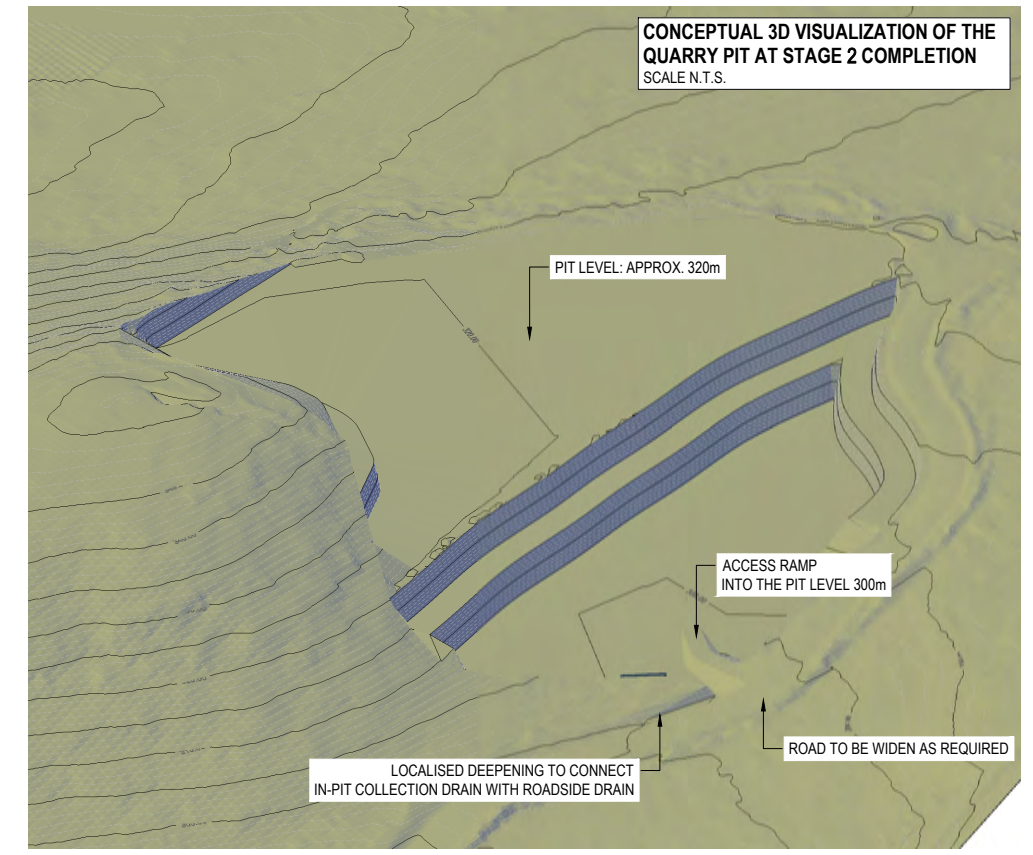


### LEGEND

- MINING LEASE
- 10m BUFFER FROM THE MINING LEASE
- NATURAL DRAINAGE LINES
- MAXIMUM EXTRACTION EXTENT
- DRAINS
- PIT EXTENT
- EARTH BUNDS
- CULVERTS
- STORMWATER FLOW DIRECTIONS

### NOTES

- NO WORKS ARE PERMITTED WITHIN THE 10m BUFFER ZONE FROM THE MINING LEASE BOUNDARY.
- ALL EXTRACTION WORK SHALL BE LIMITED TO THE MAXIMUM EXTRACTION AREA SHOWN.
- PERIMETER BUNDS SHALL BE CONSTRUCTED AS REQUIRED TO SUIT SITE-SPECIFIC CONDITIONS, ENSURING BOTH OPERATIONAL SAFETY AND THE DIVERSION OF CLEAN SURFACE WATER AWAY FROM THE PIT.
- BUNDS SURROUNDING THE PIT AREA MUST BE A MINIMUM HEIGHT EQUIVALENT TO HALF THE DIAMETER OF THE LARGEST WHEEL USED BY QUARRY VEHICLES.
- CONTOUR INTERVALS ARE PRESENTED AT 1m VERTICAL SPACING.



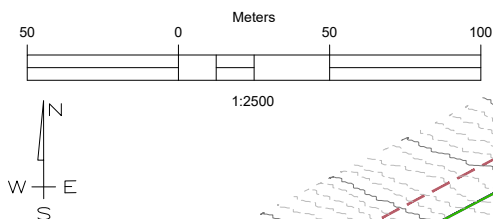
REVISION HISTORY	DESCRIPTION	DATE	DRAFTED	REVIEWED
A	INITIAL PLAN	29/05/2025	S.I.	C.M.

CLIENT: WALTERS CONTRACTING PTY LTD  
 ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 7304  
 HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD  
 ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED  
 DO NOT SCALE FROM THE DRAWING.  
 PROJECT NUMBER: 1011

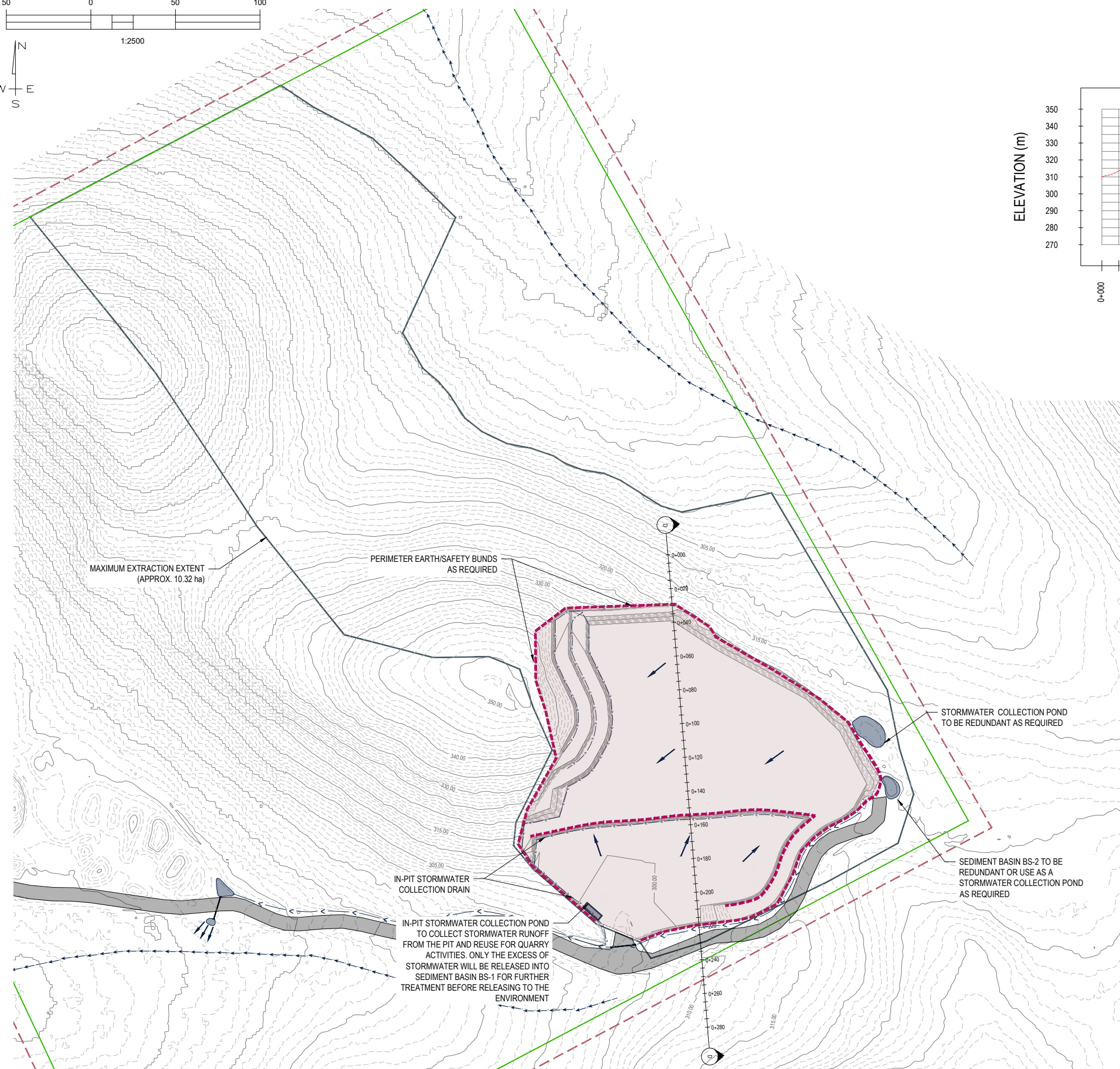
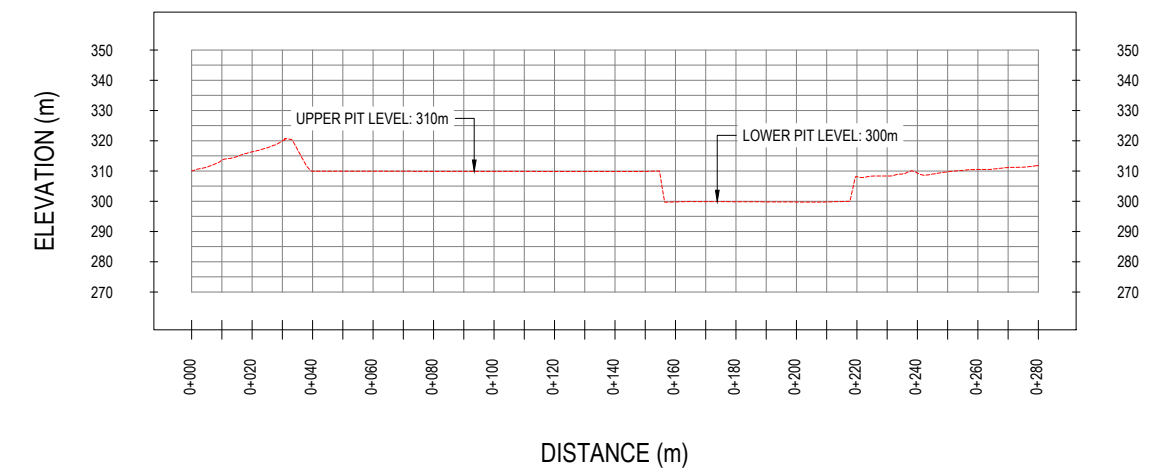
## QUARRY PIT AT STAGE 2 COMPLETION

DRAWING NUMBER: 1011/202





### SECTIONAL VIEW (D-D)

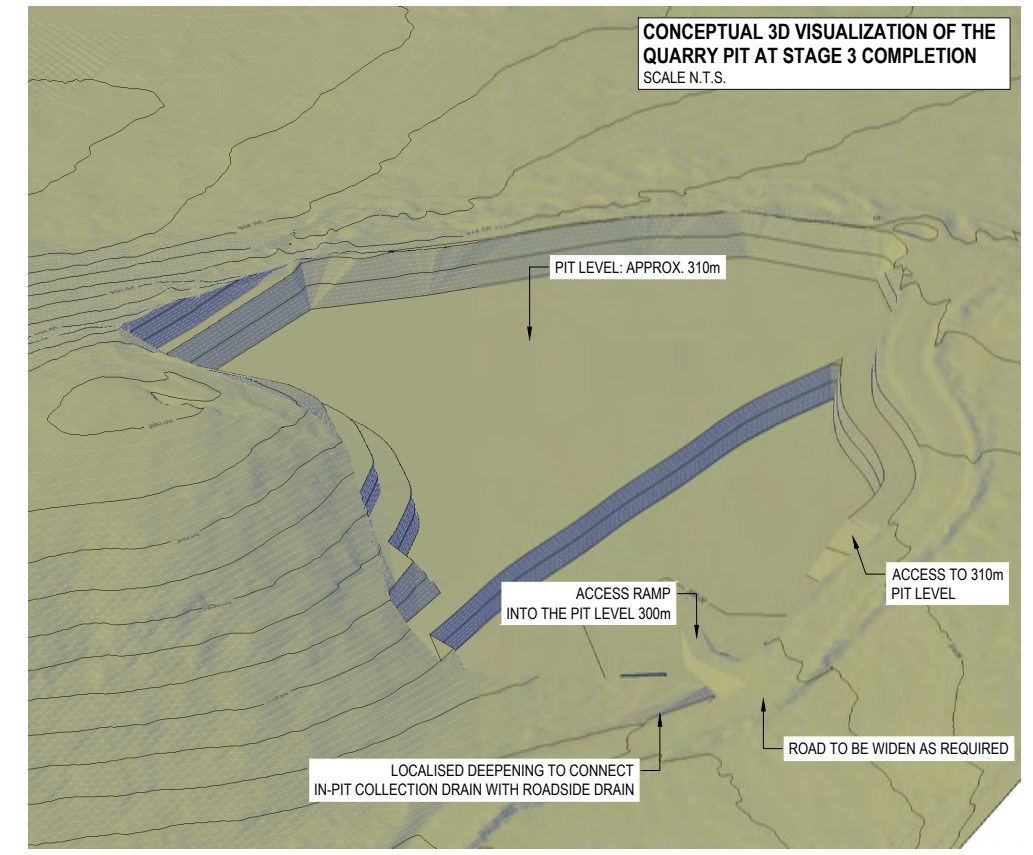


#### LEGEND

- MINING LEASE
- 10m BUFFER FROM THE MINING LEASE
- NATURAL DRAINAGE LINES
- MAXIMUM EXTRACTION EXTENT
- DRAINS
- PIT EXTENT
- EARTH BUNDS
- CULVERTS
- STORMWATER FLOW DIRECTIONS

#### NOTES

- NO WORKS ARE PERMITTED WITHIN THE 10m BUFFER ZONE FROM THE MINING LEASE BOUNDARY.
- ALL EXTRACTION WORK SHALL BE LIMITED TO THE MAXIMUM EXTRACTION AREA SHOWN.
- PERIMETER BUNDS SHALL BE CONSTRUCTED AS REQUIRED TO SUIT SITE-SPECIFIC CONDITIONS, ENSURING BOTH OPERATIONAL SAFETY AND THE DIVERSION OF CLEAN SURFACE WATER AWAY FROM THE PIT.
- BUNDS SURROUNDING THE PIT AREA MUST BE A MINIMUM HEIGHT EQUIVALENT TO HALF THE DIAMETER OF THE LARGEST WHEEL USED BY QUARRY VEHICLES.
- CONTOUR INTERVALS ARE PRESENTED AT 1m VERTICAL SPACING.



CLIENT: WALTERS CONTRACTING PTY LTD				
ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 7304				
HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD				
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED				
DO NOT SCALE FROM THE DRAWING.				
PROJECT NUMBER: 1011				

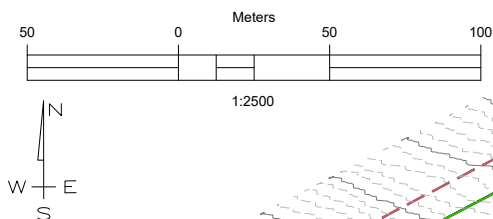
## QUARRY PIT AT STAGE 3 COMPLETION

DRAWING NUMBER: 1011/203

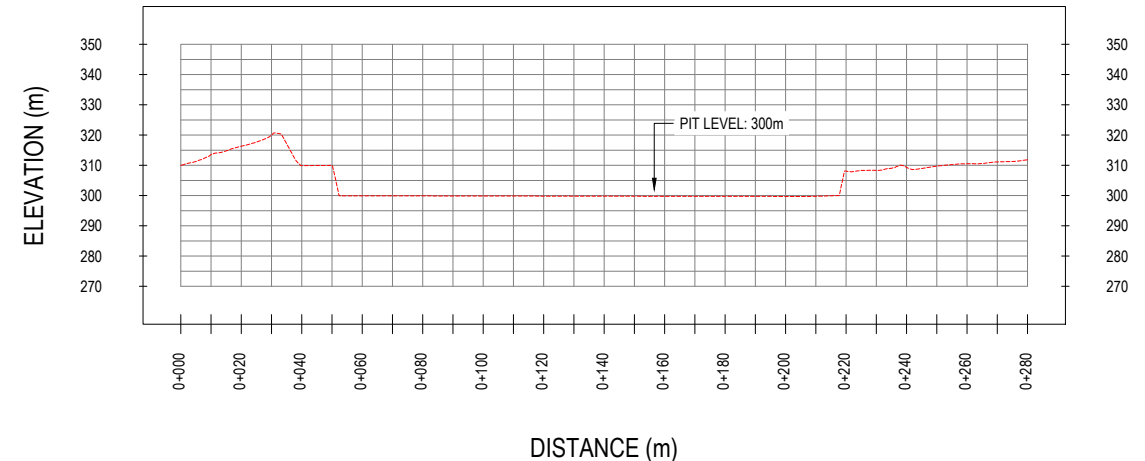


REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED
A	INITIAL PLAN	29/05/2025	S.I.	C.M.

REVISION HISTORY



### SECTIONAL VIEW (E-E)

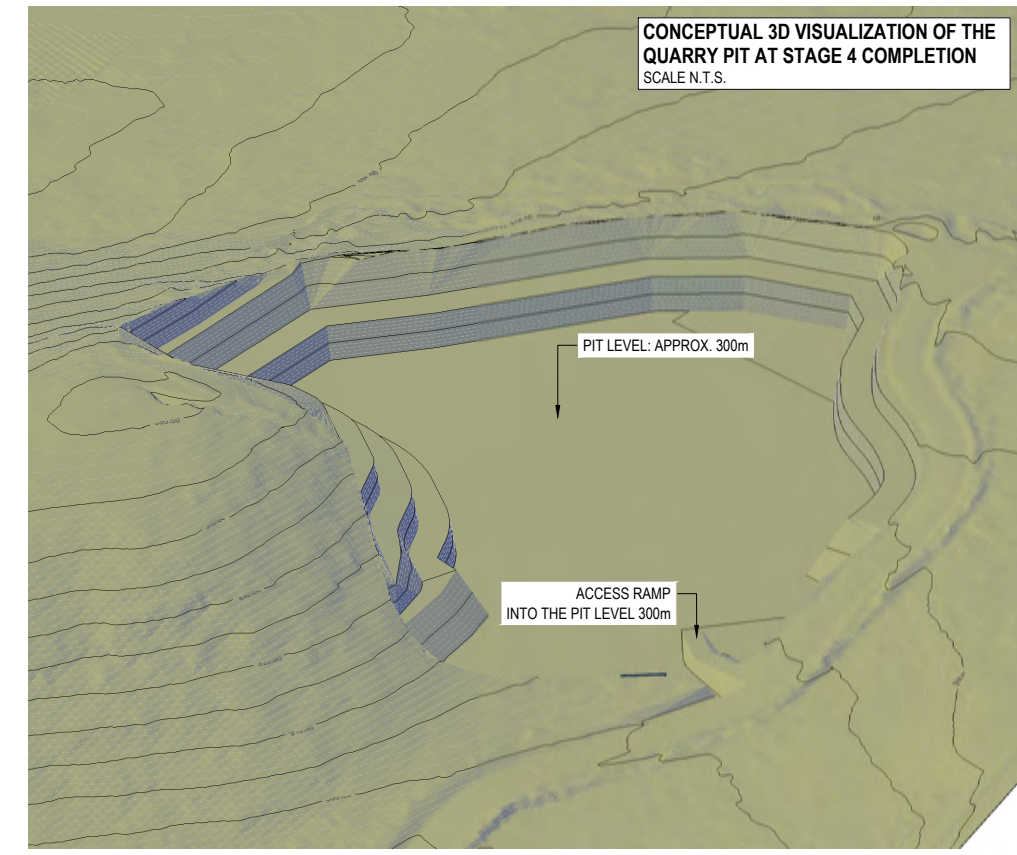
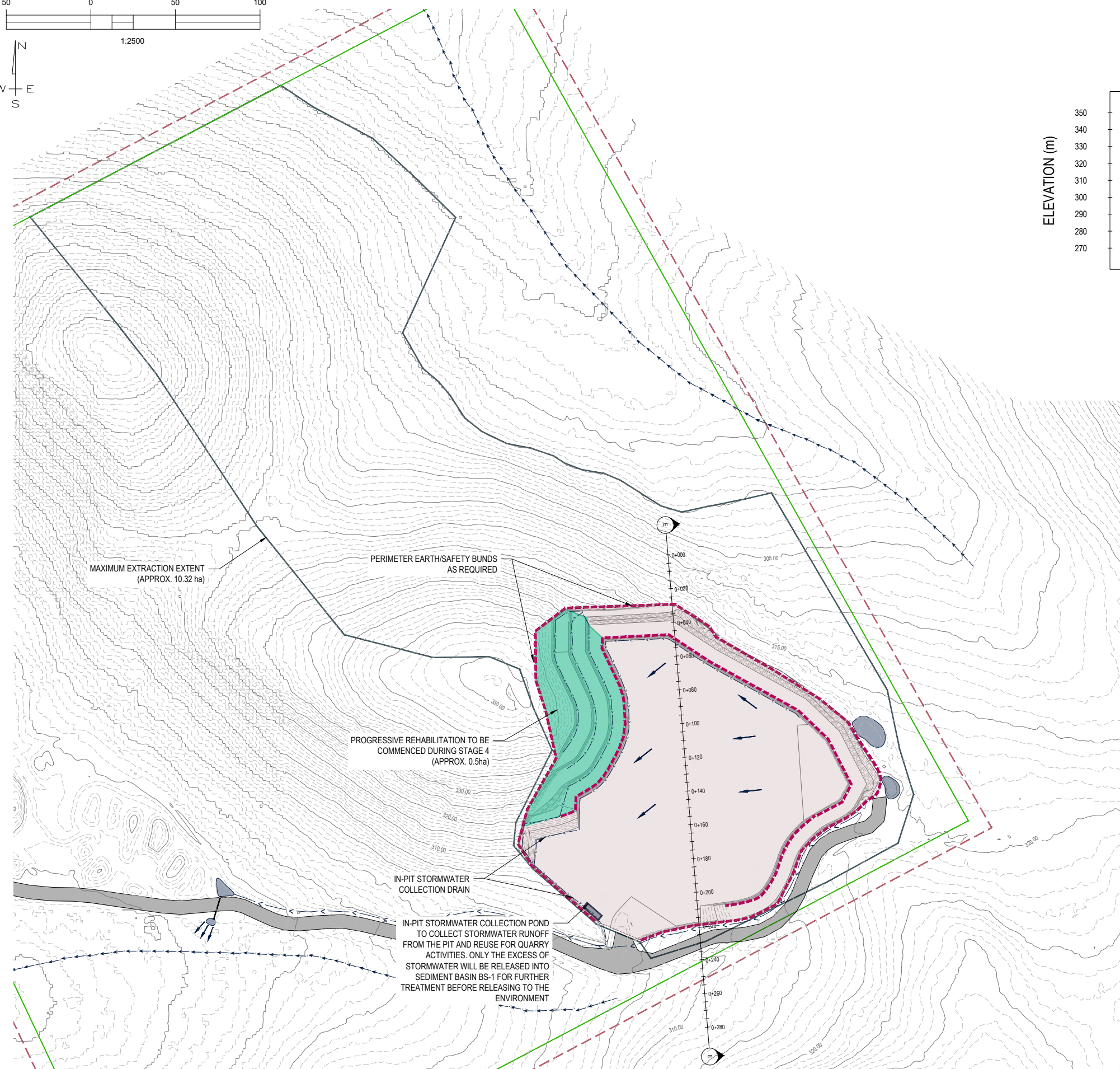


#### LEGEND

- MINING LEASE
- 10m BUFFER FROM THE MINING LEASE
- NATURAL DRAINAGE LINES
- MAXIMUM EXTRACTION EXTENT
- DRAINS
- PIT EXTENT
- EARTH BUNDS
- CULVERTS
- STORMWATER FLOW DIRECTIONS
- REHABILITATED AREA (INDICATIVE)

#### NOTES

- NO WORKS ARE PERMITTED WITHIN THE 10m BUFFER ZONE FROM THE MINING LEASE BOUNDARY.
- ALL EXTRACTION WORK SHALL BE LIMITED TO THE MAXIMUM EXTRACTION AREA SHOWN.
- PERIMETER BUNDS SHALL BE CONSTRUCTED AS REQUIRED TO SUIT SITE-SPECIFIC CONDITIONS, ENSURING BOTH OPERATIONAL SAFETY AND THE DIVERSION OF CLEAN SURFACE WATER AWAY FROM THE PIT.
- BUNDS SURROUNDING THE PIT AREA MUST BE A MINIMUM HEIGHT EQUIVALENT TO HALF THE DIAMETER OF THE LARGEST WHEEL USED BY QUARRY VEHICLES.
- CONTOUR INTERVALS ARE PRESENTED AT 1m VERTICAL SPACING.

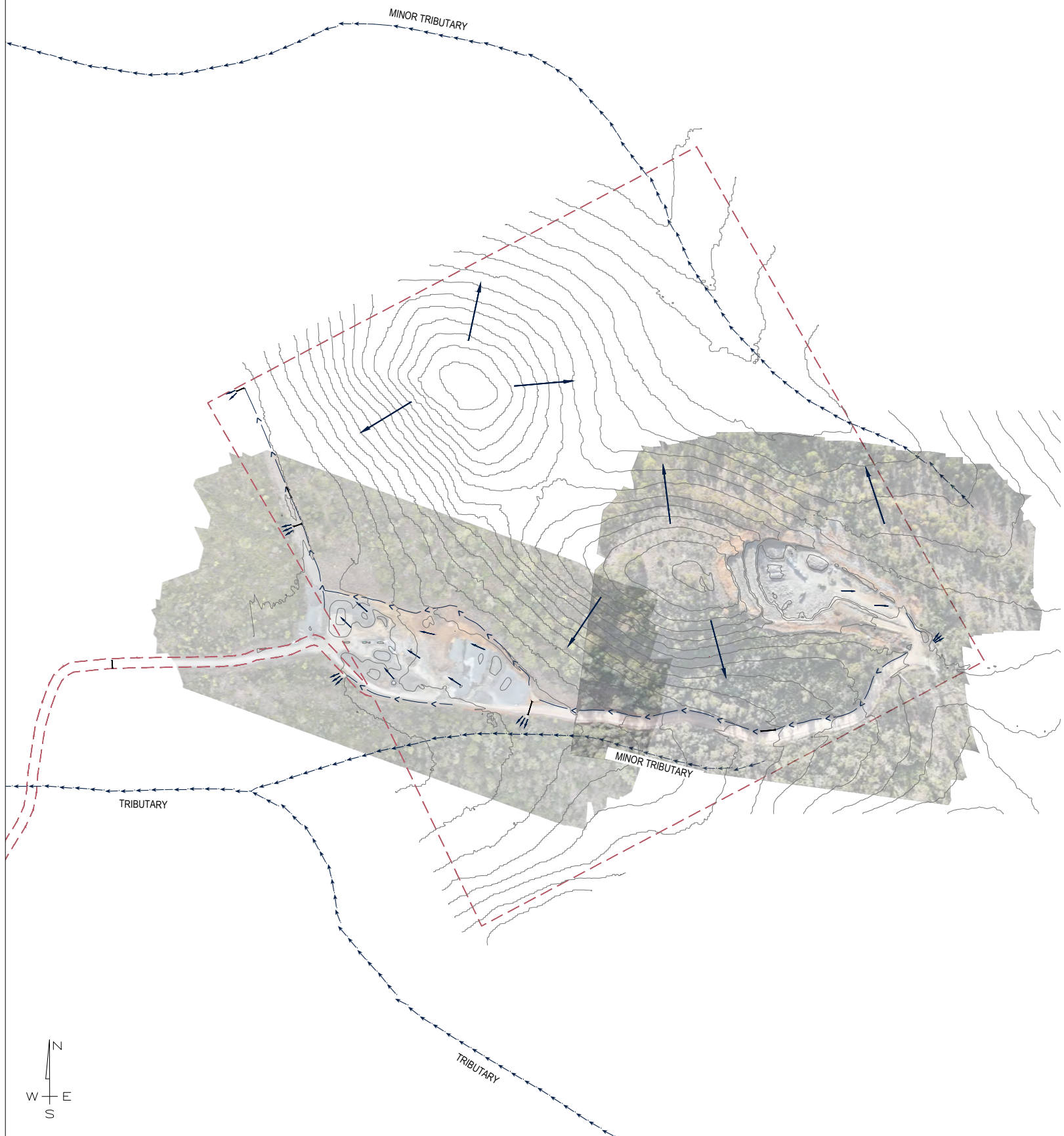


CLIENT: WALTERS CONTRACTING PTY LTD				
ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 7304				
HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD				
ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED				
A	INITIAL PLAN	29/05/2025	S.I.	C.M.
REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED
DO NOT SCALE FROM THE DRAWING.				
PROJECT NUMBER: 1011				

**QUARRY PIT AT STAGE 4 COMPLETION**

DRAWING NUMBER: 1011/204



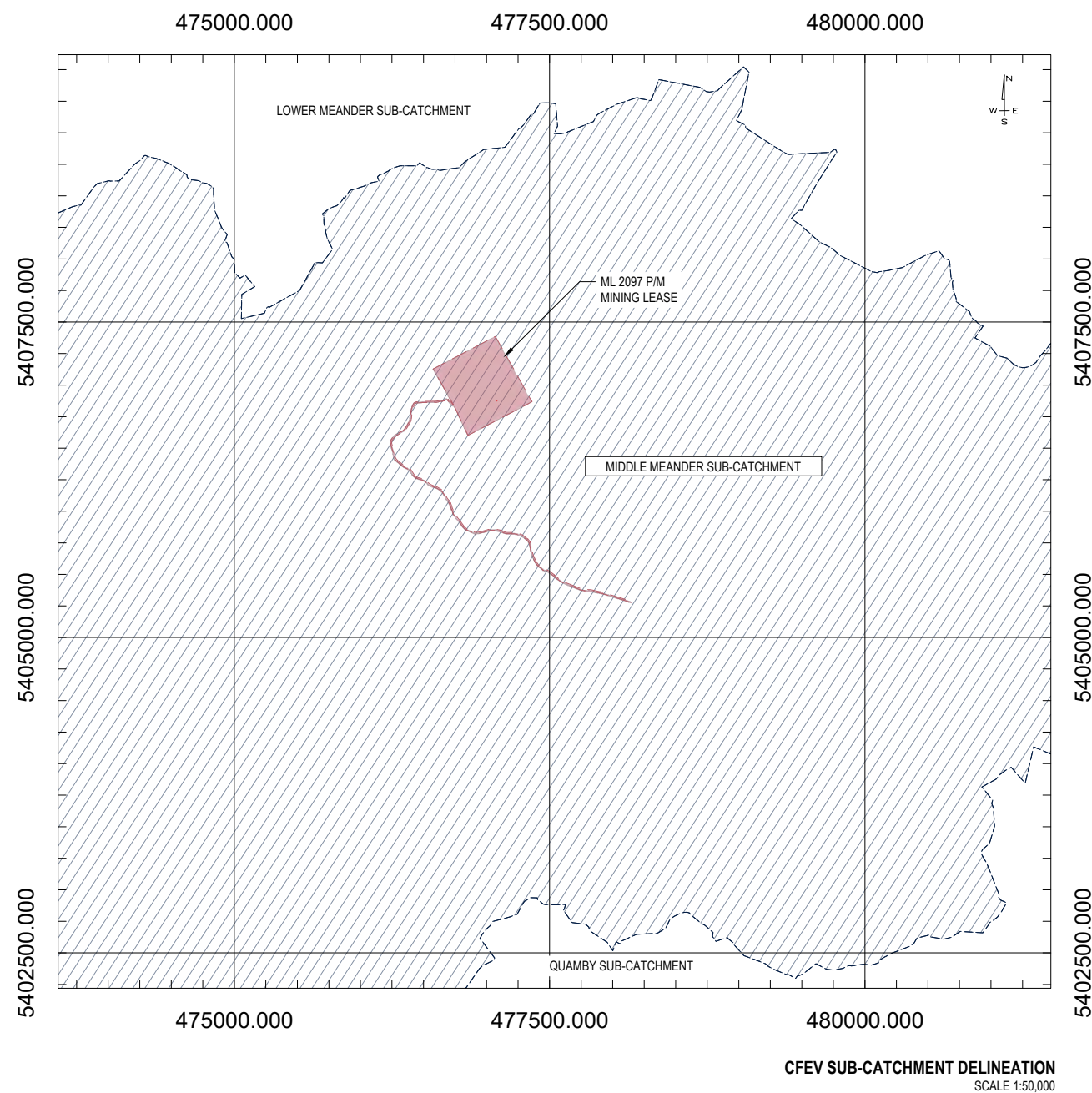


**LEGEND**

- MINING LEASE
- NATURAL DRAINAGE LINES
- PERIMETER / CUT-OFF DRAINS
- CULVERT
- STORMWATER FLOW DIRECTIONS
- MIDDLE MEANDER SUB-CATCHMENT AREA

**NOTE**

THE MINING LEASE ML 2097 P/M IS LOCATED WITHIN THE MEANDER CATCHMENT (MIDDLE MEANDER SUB-CATCHMENT), AS IDENTIFIED IN THE CONSERVATION OF FRESHWATER ECOSYSTEM VALUES (CFEV) DATA BASE.



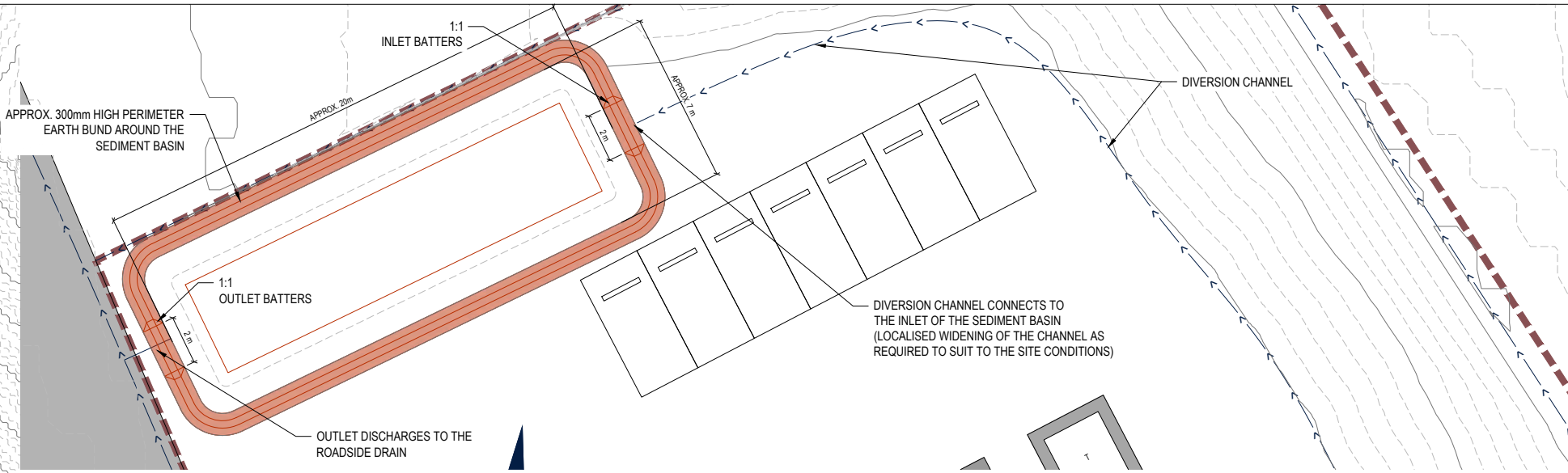
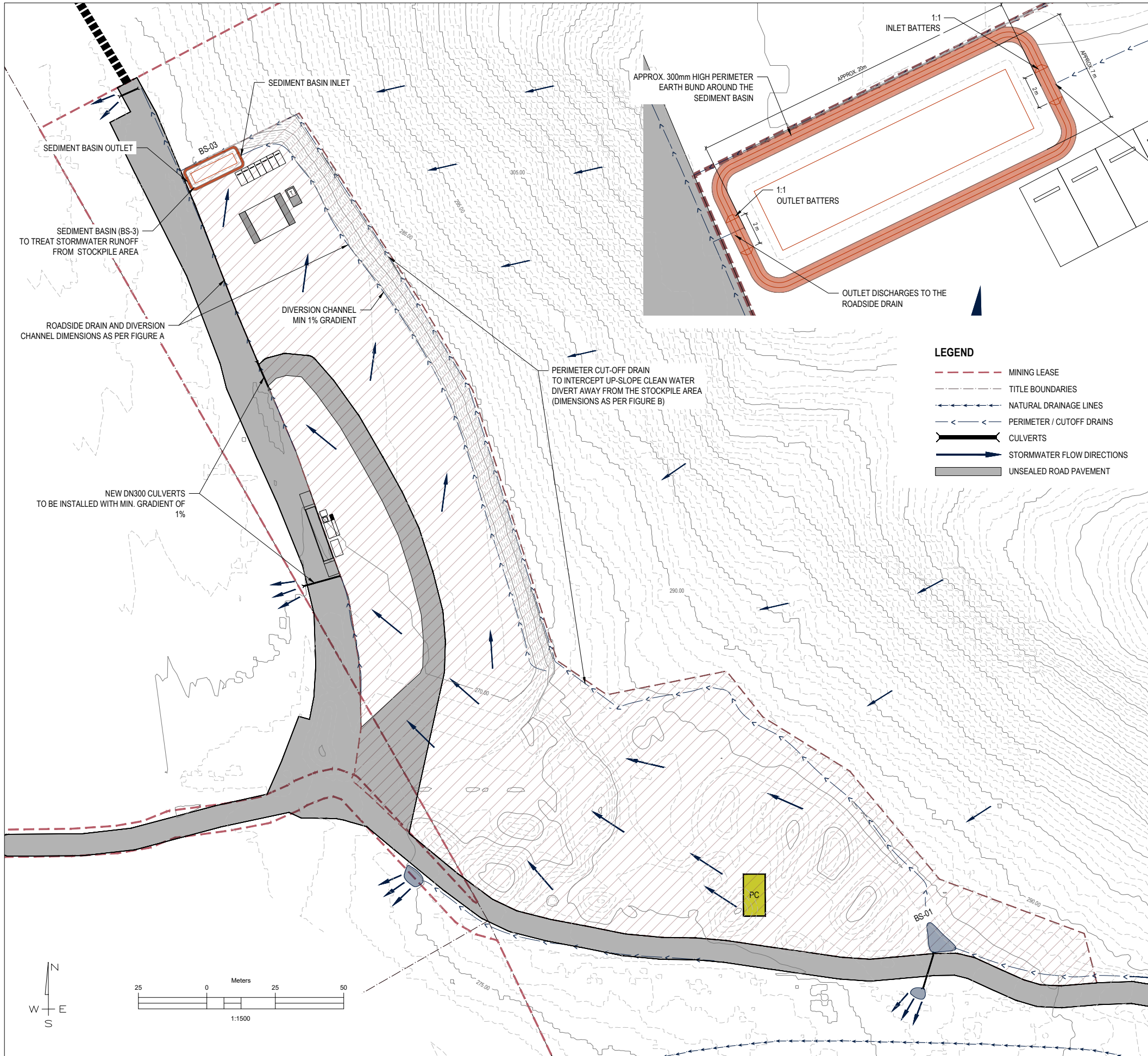
**CFEV SUB-CATCHMENT DELINEATION**  
SCALE 1:50,000

					CLIENT: WALTERS CONTRACTING PTY LTD
					ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 7304
					HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD
A	INITIAL PLAN	18/05/2025	S.I.	C.M.	ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED
REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED	DO NOT SCALE FROM THE DRAWING.
REVISION HISTORY					PROJECT NUMBER: 1011

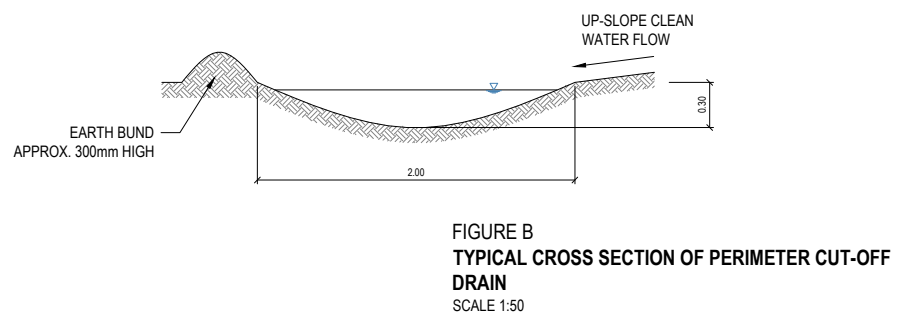
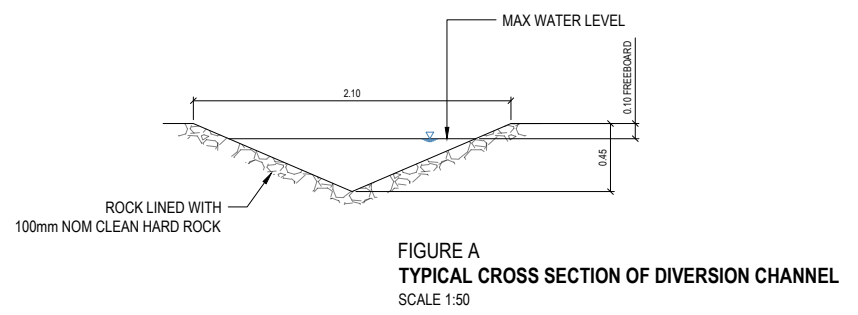
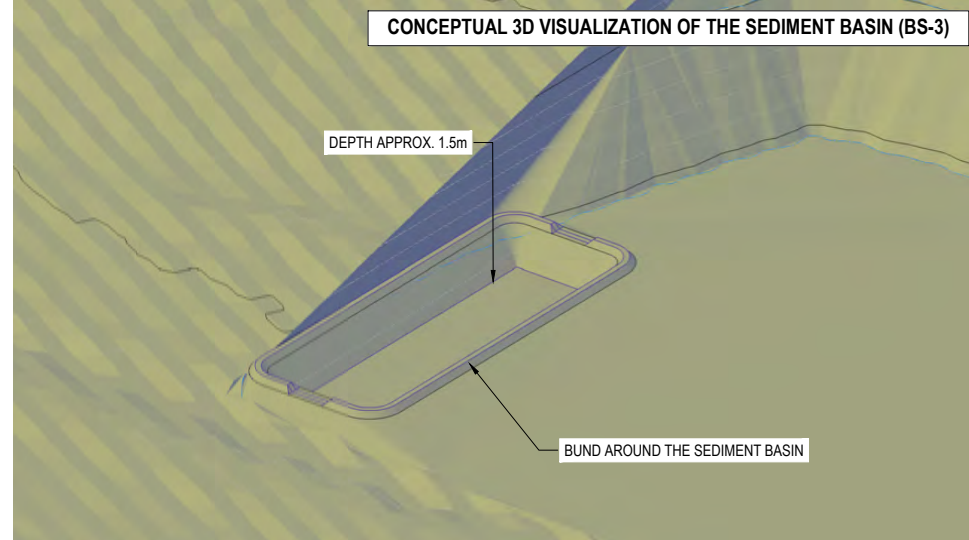
**SURFACE HYDROLOGY OF THE AREA**

DRAWING NUMBER: 1011/300





- LEGEND**
- MINING LEASE
  - TITLE BOUNDARIES
  - NATURAL DRAINAGE LINES
  - PERIMETER / CUTOFF DRAINS
  - CULVERTS
  - STORMWATER FLOW DIRECTIONS
  - UNSEALED ROAD PAVEMENT



REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED	DO NOT SCALE FROM THE DRAWING.
B	MINOR UPDATES	06/08/2025	S.I.	C.M.	HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD
A	INITIAL PLAN	29/05/2025	S.I.	C.M.	ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED

REVISION HISTORY

CLIENT: WALTERS CONTRACTING PTY LTD  
 ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 7304  
 PROJECT NUMBER: 1011

**STORMWATER MANAGEMENT AT STOCKPILE AREA**

DRAWING NUMBER: 1011/301



**ATTACHMENT 3. PORTERS BRIDGE ROAD QUARRY NATURAL VALUES ASSESSMENT V3 AUGUST 2025**

# **PORTERS BRIDGE ROAD QUARRY, EXTON**

## **NATURAL VALUES ASSESSMENT**

**WALTERS CONTRACTING PTY LTD**



Van Diemen Consulting Pty Ltd

PO Box 1  
New Town, Tasmania

T: 0438 588 695 E: [rwbarnes73@gmail.com](mailto:rwbarnes73@gmail.com)

This document has been prepared in accordance with the scope of services agreed upon between Van Diemen Consulting (VDC) and the Client.

To the best of VDC's knowledge, the report presented herein represents the Client's intentions at the time of completing the document. However, the passage of time, manifestation of latent conditions or impacts of future events may result in changes to matters that are otherwise described in this document. In preparing this document VDC has relied upon data, surveys, analysis, designs, plans and other information provided by the client, and other individuals and organisations referenced herein. Except as otherwise stated in this document, VDC has not verified the accuracy or completeness of such data, surveys, analysis, designs, plans and other information.

No responsibility is accepted for use of any part of this document in any other context or for any other purpose by third parties.

This document does not purport to provide legal advice. Readers should engage professional legal advisers for this purpose.

#### Document Status

Revision	Author	Review	Date
1	R Barnes C McCoull	R Barnes and C McCoull, VDC	8-5-2025
1	R Barnes C McCoull	J Walters, Walters Contracting Pty Ltd	17-5-2025
2	R Barnes C McCoull	R Barnes and C McCoull, VDC	12-8-2025
2	R Barnes C McCoull	J Walters, Walters Contracting Pty Ltd	14-8-2025
3	R Barnes C McCoull	R Barnes and C McCoull, VDC	20-8-2025
3	R Barnes C McCoull	J Walters, Walters Contracting Pty Ltd	21-8-2025

**Table of Contents**

**EXECUTIVE SUMMARY .....7**

**PART A – BACKGROUND.....12**

    A.1 DEVELOPMENT BACKGROUND INFORMATION .....12

    A.2 ASSESSMENT AND REPORT SCOPE.....13

    A.3 LOCATION AND USE OF THE SITE.....14

        A.3.1 Location and access .....14

        A.3.2 Land uses .....14

        A.3.3 Landform and geology.....14

**PART B – SURVEY METHODS .....21**

    B.1 QUALIFICATIONS OF PERSONNEL.....21

    B.2 VEGETATION CLASSIFICATION AND MAPPING .....21

        B.2.1 Classification .....21

        B.2.2 Mapping.....21

        B.2.3 Forest Structure Assessment.....22

    B.3 GENERAL FLORA AND FAUNA SPECIES SURVEY .....22

    B.4 TARGETED FLORA AND FAUNA SPECIES SURVEYS.....22

        B.4.1 Eagle species .....22

        B.4.2 Conservation Listed (threatened) Mammal Species .....23

        B.4.3 Masked owl.....23

    B.5 FAUNA HABITAT ASSESSMENT CRITERIA AND SIGNIFICANT HABITAT .....24

    B.6 EXISTING AND ONGOING IMPACTS TO NATIVE VEGETATION COMMUNITIES.....24

        B.6.1 Tracks and roads .....24

        B.6.2 Silvicultural activity .....25

        B.6.3 Existing Quarry.....25

        B.6.4 Dieback/rural tree decline .....25

    B.7 LIMITATIONS.....25

        B.7.1 Flora .....25

        B.7.2 Fauna .....25

        B.7.3 Micro Flora and Fauna .....26

**PART C – SURVEY RESULTS .....27**

    C.1 VEGETATION COMMUNITY IDENTIFICATION, DESCRIPTIONS AND CONSERVATION STATUS .....27

        C.1.1 State Threatened Vegetation Communities .....27

        C.1.2 EPBC Act Threatened Ecological Communities.....27

        C.1.3 Vegetation Descriptions .....30

    C.2 THREATENED FLORA SPECIES .....32

C.2.1 State Listed Flora Species .....	32
C.2.2 EPBC Act Listed Flora Species .....	34
C.3 WEEDS .....	39
C.3.1 Declared Weeds.....	39
C.3.2 Pasture and environmental weeds.....	40
C.4 PATHOGENS.....	41
C.4.1 Phytophthora cinnamomi, PC.....	41
C.4.2 Myrtle Wilt.....	42
C.4.3 Myrtle Rust .....	42
C.4.4 Chytrid fungus and other freshwater pathogens .....	42
C.5 THREATENED FAUNA SPECIES.....	45
C.5.1 Relevant species .....	45
C.4.2 Threatened Fauna Habitat Assessments .....	47
<b>PART D – OTHER NATURAL VALUES.....</b>	<b>70</b>
D.1 GEOCONSERVATION SITES AND GEOMORPHOLOGICAL PROCESSES .....	70
D.2 PROTECTED ENVIRONMENTAL VALUES (PEVs) – MEANDER RIVER CATCHMENT .....	70
D.3 WILDERNESS QUALITY.....	75
D.4 CONSERVATION OF FRESHWATER ECOSYSTEM VALUES (CFEV) .....	75
D.5 FIRE HISTORY.....	77
<b>PART E – DISCUSSION AND RECOMMENDATIONS .....</b>	<b>78</b>
E.1 OVERVIEW .....	78
E.2 RECOMMENDATIONS .....	78
E.2.1 Vegetation Communities .....	78
E.2.2 Curved riceflower.....	79
E.2.3 Terrestrial Mammals.....	79
E.2.4 Masked Owl .....	80
E.2.5 Weed and Pathogen Management.....	80
<b>PART F – REFERENCES .....</b>	<b>82</b>
<b>PART G – ATTACHMENTS .....</b>	<b>83</b>
ATTACHMENT 1: NATURAL VALUES ATLAS (NVA) REPORT .....	84
ATTACHMENT 2: BIODIVERSITY VALUES DATABASE (BVD) REPORT .....	85
ATTACHMENT 3: PROTECTED MATTERS SEARCH TOOL (PMST) REPORT – EPBC ACT.....	86
ATTACHMENT 4: THREATENED FLORA SPECIES NOTESHEETS .....	87
ATTACHMENT 5: FLORA SPECIES (OBSERVED) LIST FOR THE SITE .....	88
ATTACHMENT 6: DA22308 (PERMIT TO TAKE – <i>PIMELEA CURVIFLORA</i> ) GRANTED ON 14 APRIL 2022...89	

**TABLES**

Table 1. Vegetation (TASVEG 4.0 codes) categories recorded in the Site..... 30

Table 2. State listed threatened flora species with NVA recorded locations within 5 km of the Site ..... 32

Table 3. Approximate number of individuals to be taken by the Development..... 34

Table 4. EPBC Act listed threatened flora species based on the PMST Report\* ..... 35

Table 5. Declared Weeds observed in the Site..... 39

Table 6. Pasture and environmental weeds observed in the Site ..... 40

Table 7. Threatened fauna species range boundary intersection with the Site ..... 45

**FIGURES**

**Figure 1** Location of Porters Bridge Road Quarry

**Figure 2** Location of Porters Bridge Road Quarry and Land Titles

**Figure 3** Topography (AHD) of Porters Bridge Road Quarry Development Area

**Figure 4** Geological bedrock (MRT – scale 1:25,000) in and around the Mining Lease

**Figure 5** Existing regional drainage lines and catchments

**Figure 6** Site Layout

**Figure 7A** Vegetation communities (TASVEG 4.0) in the Porters Bridge Road Quarry

**Figure 7B** Vegetation communities (TASVEG 4.0) along the Porters Bridge Road Quarry access

**Figure 8** Known (NVA) and observed threatened flora species at the Porters Bridge Road Quarry

**Figure 9A** Weeds (observed declared) in and around the Porters Bridge Road Quarry

**Figure 9B** Weeds (observed) in and around the Porters Bridge Road Quarry

**Figure 10** NVA records of threatened fauna around the Porters Bridge Road Quarry

**Figure 11** Nearest known (NVA) raptor nests to the Porters Bridge Road Quarry

**Figure 12** Canopy height model (m) (NRE accessed data)

**Figure 13** Other Natural Values – CFEV surrounding the Porters Bridge Road Quarry

## EXECUTIVE SUMMARY

Walters Contracting Pty Ltd has applied to intensify production and conduct further development at the existing Porters Bridge Road Quarry near Exton.

Walters Contracting Pty Ltd engaged VDC to conduct ecological assessments of the Site to document and report on the Natural Values present at the Site. Specifically, the matters listed in Section 5.2 **Biodiversity and Natural Values** of the Project Specific Guidelines<sup>1</sup> issued by the EPA are addressed.

The information provided in the Report is intended to form part of the EIS.

Vegetation Communities				
<b>Native Vegetation Communities</b>	There are 4 native forest communities present within the Site, and only 2 of these occur within the area of rock extraction and associated clearing (e.g., for the additional stockpile area).			
	DESCRIPTION	TASVEG CODE	Extent in the Site (ha)	Area to be cleared (ha)
	<b>Forest and other categories in and adjacent to the Maximum Quarry Extent (Figure 7A)</b>			
	<i>Eucalyptus amygdalina</i> forest and woodland on dolerite	DAD	25.03	9.26
	<i>Eucalyptus ovata</i> forest and woodland # *	DOV	3.10	0.0 <sup>2</sup>
	Extra Urban Miscellaneous (access roads, stockpile area, pit)	FUM	NA	NA
	<b>Forest types bordering access road (Figure 7B)</b>			
	<i>Eucalyptus viminalis</i> wet forest # *	WVI	NA	0
	<i>Eucalyptus ovata</i> forest and woodland	DOV	NA	0
	<i>Eucalyptus viminalis</i> grassy forest and woodland	DVG	NA	0
	<i>Eucalyptus amygdalina</i> forest and woodland on dolerite	DAD	NA	0
	<b>Threatened Native Vegetation Communities (NC Act)</b>	Two native vegetation communities listed on Schedule 3A (Threatened native vegetation communities) of the <i>Nature Conservation Act 2002</i> occur in the Land or adjacent to the access road – <ul style="list-style-type: none"> <li>• <i>Eucalyptus viminalis</i> wet forest (TASVEG – WVI), and</li> <li>• <i>Eucalyptus ovata</i> forest and woodland (TASVEG code – DOV).</li> </ul>		

<sup>1</sup> EIS Guidelines for Walters Contracting Pty Ltd, Porters Bridge Road Quarry Intensification, 190 Porters Bridge Road, Reedy Marsh, September 2024.

<sup>2</sup> Areas of this forest type occur adjacent to the Maximum Extraction Area.

<p><b>Threatened Ecological Communities (EPBC Act)</b></p>	<p>Two ecological communities listed under section 181 of the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> occur in or adjacent to the Site –</p> <ul style="list-style-type: none"> <li>• Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (<i>Eucalyptus ovata</i> / <i>E. brookeriana</i>) – the equivalent of <i>Eucalyptus ovata</i> forest and woodland (TASVEG code – DOV); and</li> <li>• Tasmanian white gum (<i>Eucalyptus viminalis</i>) wet forest – the equivalent of <i>Eucalyptus viminalis</i> wet forest (TASVEG code – WVI).</li> </ul>
<p><b>Threatened Flora Species</b></p>	
<p><b>Flora Species</b></p>	<p>Curved riceflower (<i>Pimelea curviflora</i> subsp. <i>gracilis</i>) is present (listed as ‘rare’); it is obvious when in flower (bright yellow tubular flowers), as it was during the surveys in 2020 and 2024, despite its small and cryptic stature amongst grass tussocks, bracken-fern and on rocky scree slopes. Upwards of 27 plants will be taken by the activity over the life of the Development based on current plant numbers within the Maximum Quarry Extent.</p> <p>An additional survey should be conducted of the area within 1 km of the Site and in the Site itself to further record plants of the species prior to an application for the taking of the curved riceflower plants is made to NRE. A curved riceflower survey of areas to be cleared of native vegetation for expansion of the quarry could be done with the pre-clearance surveys conducted for dens and masked owl potential nest trees.</p>
<p><b>Declared Weeds</b></p>	
<p>The following Declared Weeds under the <i>Biosecurity Act 2019</i> were observed in the Site –</p> <ul style="list-style-type: none"> <li>• Blackberry, <i>Rubus fruticosus</i> agg. - Zone B – sporadic, mainly on Meander River section of roadline</li> <li>• Californian thistle, <i>Cirsium arvense</i> - Zone B – sporadic, but very low abundance on access road and pit</li> <li>• Gorse, <i>Ulex europaeus</i> - Zone B – sporadic, but very low abundance near access, access road and pit</li> <li>• Horehound, <i>Marrubium vulgare</i> - Zone A – localised, one area on access road</li> <li>• Ragwort, <i>Senecio jacobea</i> - Zone B – single location at access from Porters Bridge Road</li> <li>• Scotch broom, <i>Cytisus scoparius</i> - Zone B – single location at access from Porters Bridge Road</li> <li>• slender thistle, <i>Carduus pycnocephalus</i> - Zone B – sporadic, mainly on Meander River section of roadline</li> <li>• Spanish heath, <i>Erica lusitanica</i> - Zone B – single location on access road.</li> </ul>	
<p><b>Threatened Fauna Species that require management actions</b></p>	
<p><b>Tasmanian devil, quolls and eastern barred bandicoot</b></p>	<p>The following management approach should be applied for <b>dens and potential dens</b> –</p> <ul style="list-style-type: none"> <li>• Areas to be cleared of vegetation for Quarry activities should first be surveyed by a suitably qualified person to identify if dens or woodpiles supporting dens are present. The pre-clearance surveys must be completed by a suitably qualified person(s) and any dens or suspected dens removed via a procedure approved by the EPA; and</li> <li>• If dens or potential dens are observed or suspected during operations a 50 m no machinery buffer will be applied to the den or suspected den and expert advice sought.</li> </ul>

	<p>The following management approach will be applied for <b>internal road use and maintenance</b> –</p> <ul style="list-style-type: none"> <li>• Undertake education and awareness training for drivers accessing the Quarry;</li> <li>• Limit internal road speed to 20 km/hr from dusk to dawn;</li> <li>• Liaise with drivers to identify high-risk road sections (i.e., areas where animals or often seen by drivers) and install advisory signage; and</li> <li>• Where practicable, and noting relevant controls and identified high-risk areas, clear vegetation on roadsides (at least 3m from road edge) in high-risk areas to enhance view field for drivers.</li> </ul>
<p><b>Masked Owl</b></p>	<p>While no impact to the species is anticipated, measures should be applied in case a nest tree is observed/found given the longevity of the Quarry. These are –</p> <ul style="list-style-type: none"> <li>• Potential roost trees be checked for any signs of occupation (presence of owls, regurgitated pellets or feathers) and tapped firmly (hammer or heavy stick) to see if a bird is flushed, prior to removal.</li> <li>• During construction works and/or vegetation clearing, if potential nesting habitat is identified, it is recommended that a 150m buffer be maintained around a potential nest/roost tree or further investigations are undertaken to confirm if the tree is a nest tree.</li> </ul>

DEFINITIONS	
<b>Approval</b>	Permit No. PA\21\0267, containing Permit Part B, Permit Conditions – Environmental (PCE) No. 10885.
<b>Development</b>	<p>The Development is to -</p> <p>(1) intensify the production of aggregates and rock extraction from the Quarry to 200,000 cubic metres per annum – the equivalent of approximately 320,000 tonnes – and to extract all the rock material within the Maximum Quarry Extent, and to continue to use the pre-coat machine in a comparable way as approved by PA\25\0032 in an area of the Expanded Stockpile Area; and.</p> <p>(2) Install the following buildings and ancillary infrastructure to support the Quarry and include –</p> <ul style="list-style-type: none"> <li>• Office, toilet (staff amenities), workshop, self-bunded diesel fuel tank (20,000 litres maximum capacity), weighbridge, and diesel-powered generator.</li> <li>• Expansion of the stockpile area (Expanded Stockpile Area) to receive and store material post-production in the Pit, including additional car parking spaces and drainage systems including settling ponds. The Expanded Stockpile Area will also be used to operate a pre-coat machine.</li> </ul>
<b>Expanded Stockpile Area</b>	The area identified as the <i>Expanded Stockpile Area</i> in <b>Figure 6</b> .
<b>Maximum Quarry Extent</b>	The area identified as the <i>Maximum Quarry Extent</i> in <b>Figure 6</b> .
<b>PEV Assessment</b>	ENVIRONMENTAL MANAGEMENT GOALS for TASMANIAN SURFACE WATERS – MEANDER RIVER CATCHMENT May 2004
<b>(the) Planning Authority</b>	Meander Valley Council
<b>Quarry</b>	Porters Bridge Road Quarry (ML 2097P/M, granted and in force)
<b>Report</b>	This report ' <i>Porters Bridge Road Quarry, Natural Values Assessment</i> '.
<b>(the) Scheme</b>	Tasmanian Planning Scheme – Meander Valley
<b>Site</b>	The land identified as Mining Lease 2097P/M.
<b>Threatened fauna</b>	Species of fauna listed on the –

	<ul style="list-style-type: none"> <li>• Tasmanian <i>Threatened Species Protection Act 1995</i>, or the</li> <li>• Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>.</li> </ul>
<b>Threatened flora</b>	<p>Species of flora listed on the –</p> <ul style="list-style-type: none"> <li>• Tasmanian <i>Threatened Species Protection Act 1995</i>, or the</li> <li>• Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>.</li> </ul>
<b>Threatened ecological communities</b>	<p>Ecological communities listed under s 181 of the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>.</p>
<b>Threatened native vegetation communities</b>	<p>Native vegetation communities listed under Schedule 3A of the Tasmanian <i>Nature Conservation Act 2002</i>.</p>

<b>ACRONYMS</b>	
<b>BVD</b>	Biodiversity Values Database (maintained by the Forest Practices Authority)
<b>DCCEEW</b>	Department of Climate Change, Energy, the Environment, and Water
<b>DPIPWE (now NRE Tas)</b>	Department of Primary Industries, Parks, Water and Environment
<b>(the) EPBC Act</b>	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
<b>EIS</b>	Environmental Impact Statement
<b>NRE Tas</b>	Department of Natural Resources and Environment Tasmania (was DPIPWE)
<b>NVA</b>	Natural Values Atlas (database maintained by NRE Tas)
<b>MNES</b>	Matter of National Environmental Significance (applied in the context of the EPBC Act)
<b>PEV</b>	Protected Environmental Value(s)
<b>(the) TSP Act</b>	<i>Threatened Species Protection Act 1995</i>

## **PART A – BACKGROUND**

### **A.1 DEVELOPMENT BACKGROUND INFORMATION**

Walters Contracting Pty Ltd owns and operates under an Approval the Porters Bridge Road Quarry at Porters Bridge Road north of the township of Exton.

Walters Contracting Pty Ltd has applied to intensify production and conduct further development at the existing Porters Bridge Road which includes the following –

- (1) **intensify the production of aggregates** and rock extraction from the Quarry to 200,000 cubic metres per annum – the equivalent of approximately 320,000 tonnes – and to extract all the rock material within the Maximum Quarry Extent, and to continue to use the pre-coat machine in a comparable way as approved by PA\25\0032 in an area of the Expanded Stockpile Area; and.
- (2) **Install the following buildings and ancillary infrastructure** to support the Quarry including –
  - Office, toilet (staff amenities), workshop, self-bunded diesel fuel tank (20,000 litres maximum capacity), weighbridge, and diesel-powered generator; and
  - Expansion of the stockpile area (Expanded Stockpile Area) to receive and store material post-production in the Pit, including additional car parking spaces and drainage systems including settling ponds. The Expanded Stockpile Area will also be used to operate a pre-coat machine.

The Site upon which the activity (including carting) is to occur is spatially defined in **Figures 1 and 2**.

The address for the activity is 190 Porters Bridge Rd Exton TAS 7304 and access is from Porters Bridge Road with road connections to the Bass Highway via Meander Valley Road. Mining Lease 2097P/M (granted and in force) and land that includes the access and associated ingress/egress at Porters Bridge Road.

The material to be extracted is Jurassic dolerite which will be crushed/screened into variously sized aggregates. The activity has a lifespan of at least 15 years if full production levels are achieved every year from the commencement of the activity.

Extraction and processing would be undertaken in the following manner:

- Removal/harvesting of vegetation;
- Clearing over burden with an excavator or dozer;
- Drill and blast based on a pattern designed by blast contractor;
- Crush and screen material using crushers and screens (mechanised/vibratory);
- Stockpile material; and
- Loading into trucks with a wheel loader.

A pre-coat machine is approved for use in the Quarry (permit granted by the Planning Authority on 22 October 2024; PA\25\0032).

Operating hours remain unchanged from the Approval; 0600 – 1700 Monday to Saturday, 0700-1600 Sundays and Statewide public holidays.

## A.2 ASSESSMENT AND REPORT SCOPE

Walters Contracting Pty Ltd engaged VDC to conduct ecological (a component of ‘Natural Values’) assessments of the Site to document and report on the Natural Values present at the Site. Specifically, the matters listed in Section 5.2 **Biodiversity and Natural Values** of the Project Specific Guidelines<sup>3</sup> issued by the APE are addressed.

The information provided in the Report is intended to provide the basis for assessment of the EIS.

*Natural Values* refers to ‘biological and geodiversity values of conservation significance, being those species, vegetation communities and other values that have significance and/or statutory protection under the Tasmanian *Threatened Species Protection Act 1995* (TSPA), *Nature Conservation Act 2002* (NCA) and other relevant policies and regulations<sup>4</sup>.’

The following matters are excluded from the direct survey of the Site for ‘ecological’ values –

- **Acid sulphate soils** were not assessed because they are not mapped by NRE Tas to occur in the Site; and
- **Marine** surveys are not relevant to the activity as it is not occurring in the marine environment<sup>5</sup>.

The following tasks were undertaken as part of the Natural Values assessment and Report:

1. A review of biodiversity values recorded previously in the area within and adjacent to a geographically defined Site;
2. The potential for the occurrence of threatened fauna species listed under the TSP Act and EPBC Act in the Site was evaluated using the –
  - (a) *Natural Values Atlas Database (Attachment 1)*;
  - (b) *Biodiversity Values Database (Attachment 2)*; and
  - (c) *Protected Matters Search Too Report (Attachment 3)*;
3. Field surveys were undertaken to investigate and verify the potential biodiversity values identified in the desktop assessment. The field surveys included:
  - (a) The ground-truthing and mapping of vegetation communities in the Site based on TASVEG 4.0 mapping units (and ecological communities listed under the EPBC Act);

---

<sup>3</sup> EIS Guidelines for Walters Contracting Pty Ltd, Porters Bridge Road Quarry Intensification, 190 Porters Bridge Road, Reedy Marsh, September 2024.

<sup>4</sup> Natural and Cultural Heritage Division (2015) Guidelines for Natural Values Surveys - Terrestrial Development Proposals. Department of Primary Industries, Parks, Water and Environment. Version 1.2, May 2021.

<sup>5</sup> Natural and Cultural Heritage Division (2020) Guidelines for Natural Values Surveys - Estuarine and Marine Development Proposals. Department of Primary Industries, Parks, Water and Environment. Version 2.0 – 2 June 2020.

- (b) Surveys of terrestrial and riparian flowering annual and perennial plants and aquatic flora<sup>6</sup>, including potential habitat for conservation significant species;
  - (c) Habitat assessment for threatened raptor and mammal species; and
  - (d) The identification and mapping of declared weeds listed on the *Biosecurity Act 2019* within and near the Site.
4. Provide a summary of the Natural Values that are of relevance and/or significance at the Site as the basis for future planning and development assessment purposes; and
  5. Provide management recommendations to avoid, mitigate and/or offset potential and actual impacts to identified Natural Values.

### **A.3 LOCATION AND USE OF THE SITE**

#### *A.3.1 Location and access*

The address of the Quarry is 190 Porters Bridge Rd Exton TAS 7304, and access is from Porters Bridge Road with road connections to the Bass Highway via Meander Valley Road (**Figures 1 and 2**).

#### *A.3.2 Land uses*

The current land use is forestry (native forest silviculture) and some livestock grazing with an existing Quarry with an existing Approval. Surrounding land use is agriculture (mainly livestock grazing, forestry), conservation (private reserves), rural residential and other extractive industries.

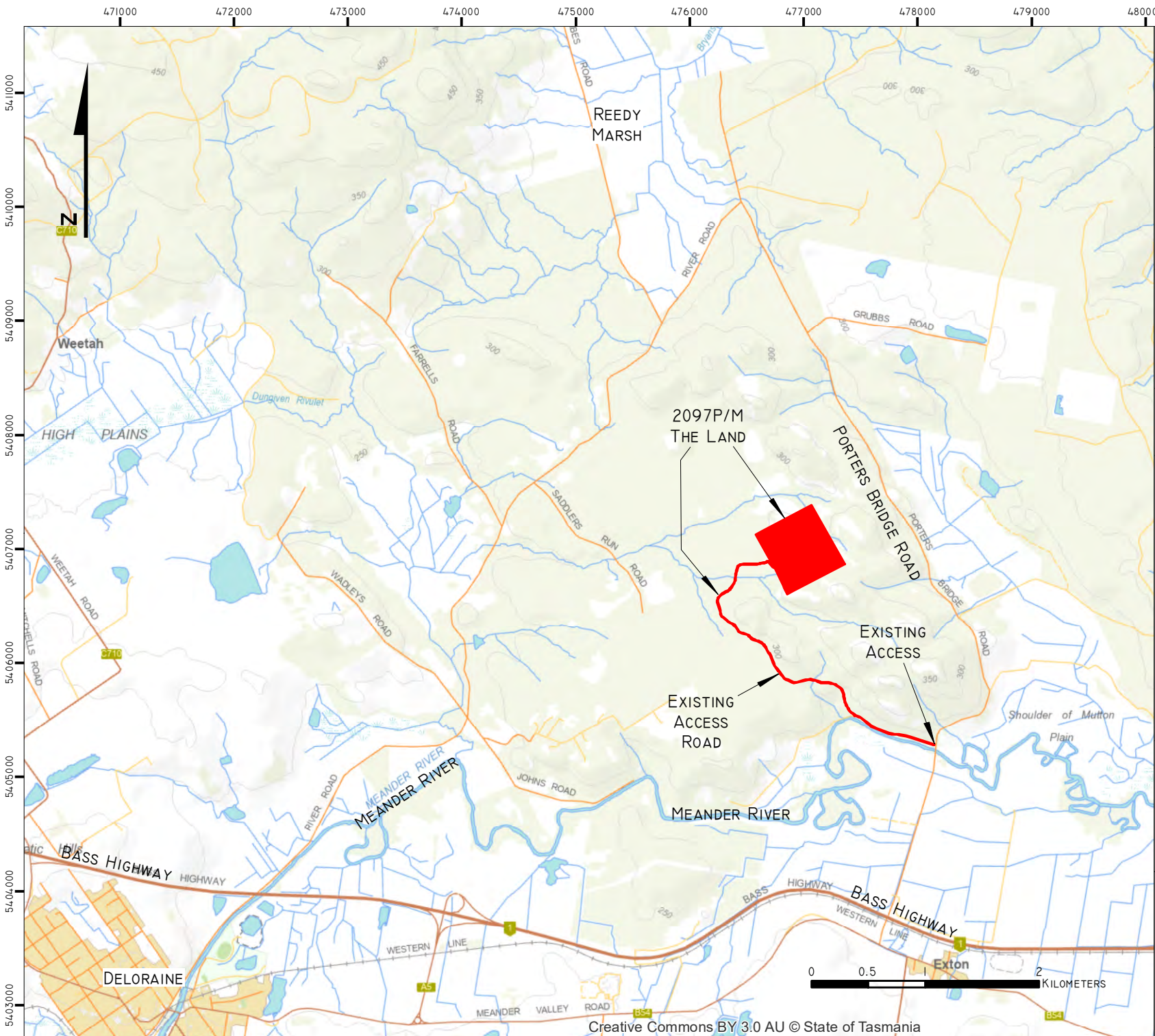
#### *A.3.3 Landform and geology*

The main portion of the Site where extraction activities are to occur is formed by two dolerite hills with a small saddle between them (**Figure 3**). The hills are generally aligned north-west to south-east and have steep south-west facing slopes. Drainage lines (headwaters of tributaries which flow to Dungiven Rivulet) occur south and north-east of the Maximum Quarry Extent.

The basement geology is Jurassic dolerite (**Figure 4**) which outcrops as the hills in the Porters Bridge Road region. The flats associated with the Meander River valley system are Quaternary alluvium deposits.

---

<sup>6</sup> Excluding micro-flora such as algae, lichen, fungi.



# PORTERS BRIDGE ROAD QUARRY

## NATURAL VALUES ASSESSMENT

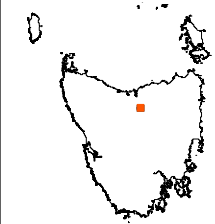
FIGURE I: LOCATION OF PORTERS BRIDGE ROAD QUARRY

TASMAP:  
DELORAINÉ  
4640

LGA:  
MEANDER VALLEY

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE BY TASMAP. © STATE OF TASMANIA

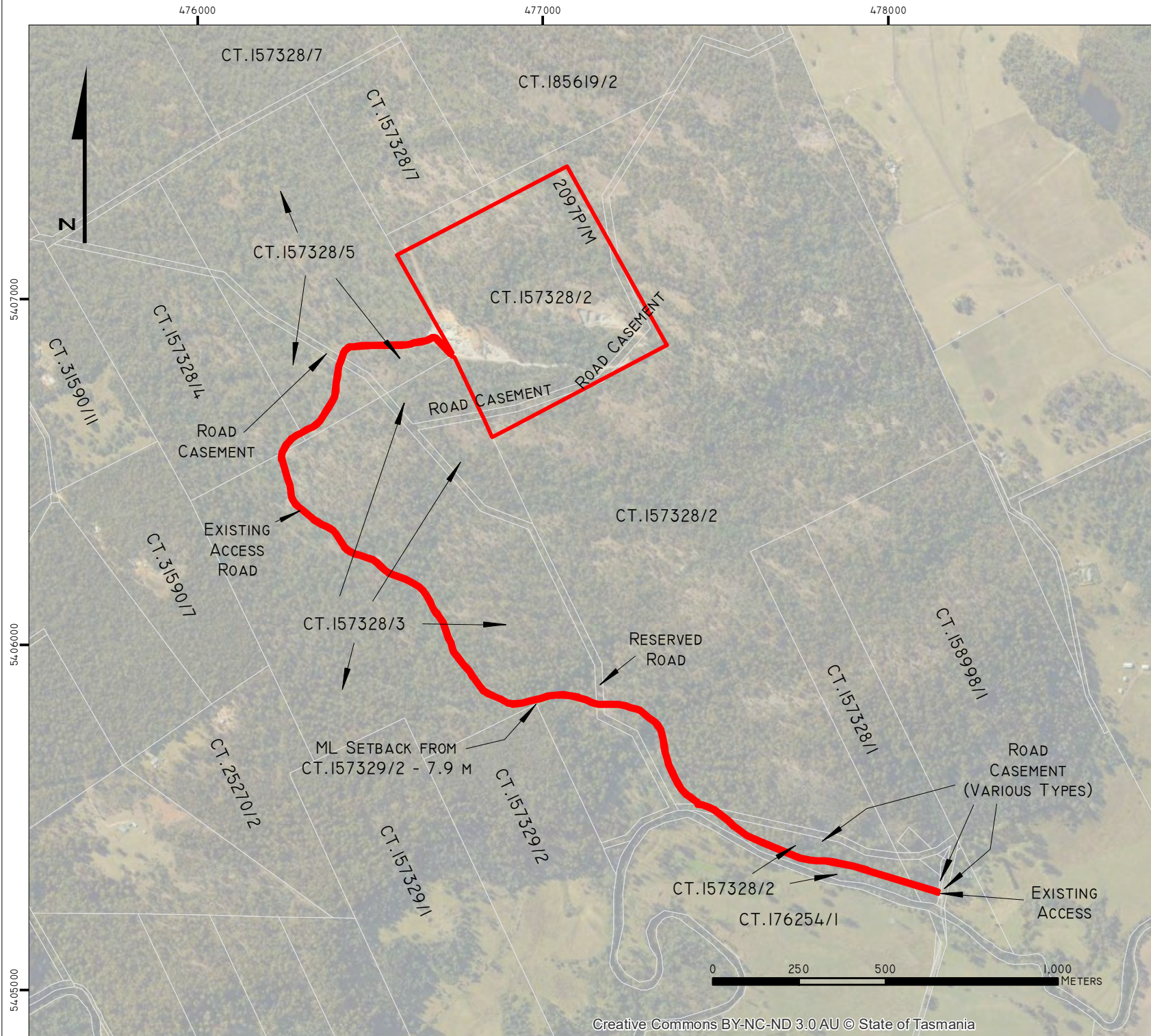
an Diemen CONSULTING  
PO Box 1 New Town TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 3 APR 2025



# PORTERS BRIDGE ROAD QUARRY

## NATURAL VALUES ASSESSMENT

FIGURE 2: LOCATION OF PORTERS BRIDGE ROAD QUARRY AND LAND TITLES

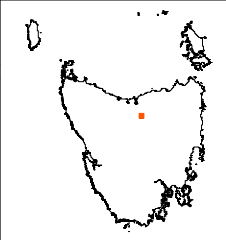
TASMAP:  
DELORAINÉ  
4640

LGA:  
MEANDER VALLEY

NOTE:  
ACCESS AND INTERNAL ROAD EXISTING. NO CLEARING OF VEGETATION REQUIRED.

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE BY TASMAP. © STATE OF TASMANIA

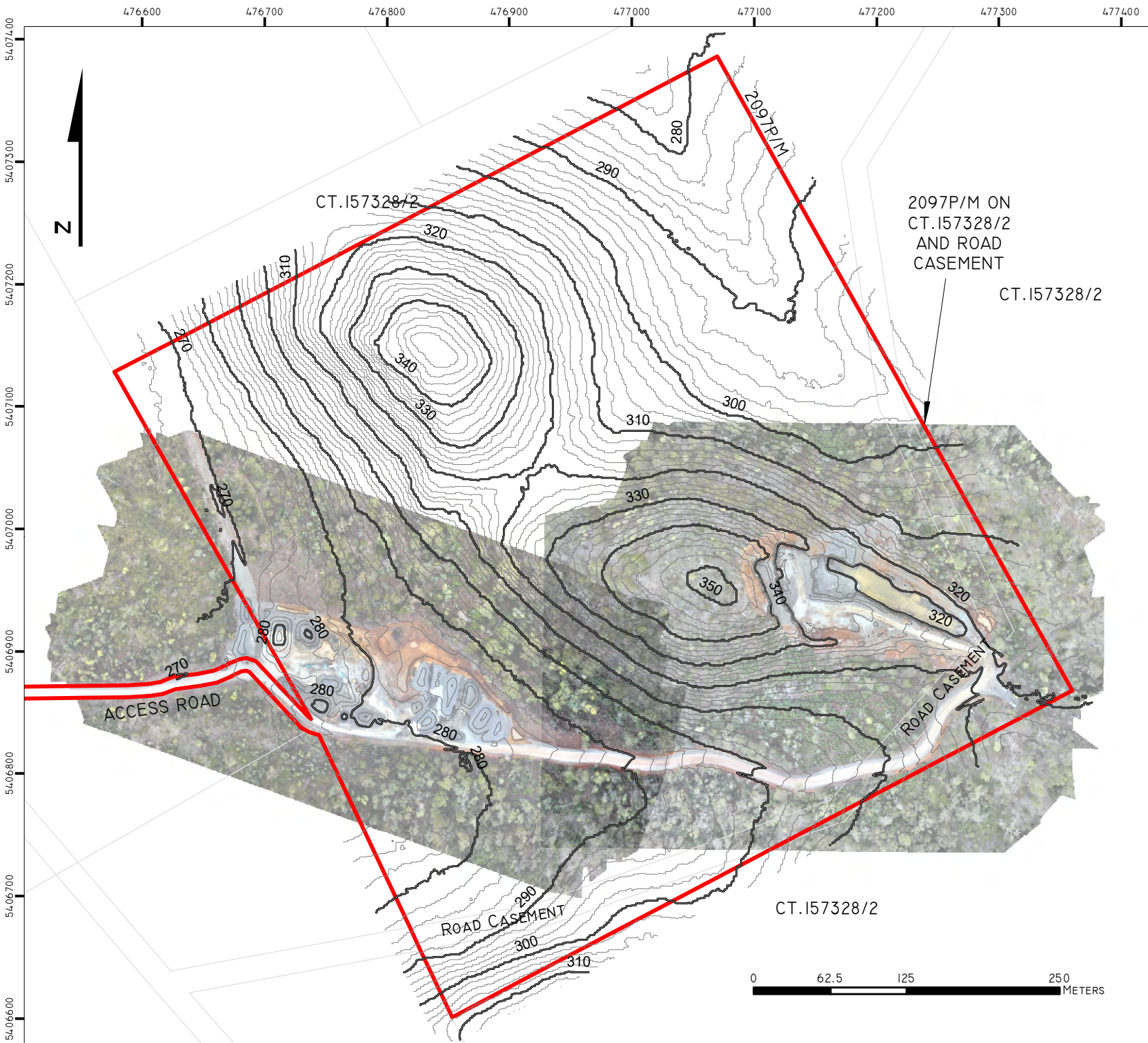
**an Diemen CONSULTING**  
PO Box 1 New Town TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS CONTRACTING PTY LTD

DATE: 3 APR 2025



PORTERS BRIDGE  
ROAD QUARRY

NATURAL VALUES  
ASSESSMENT

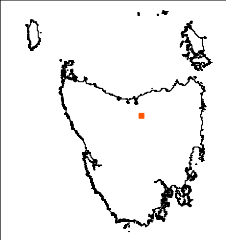
FIGURE 3: TOPOGRAPHY (AHD)  
AT THE PORTERS BRIDGE ROAD  
QUARRY DEVELOPMENT AREA

TASMAP:  
DELORAINE  
4640

LGA:  
MEANDER  
VALLEY

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © VAN DIEMEN CONSULTING

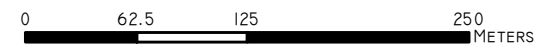
an Diemen CONSULTING  
PO Box 1 NEW TOWN TAS 7008

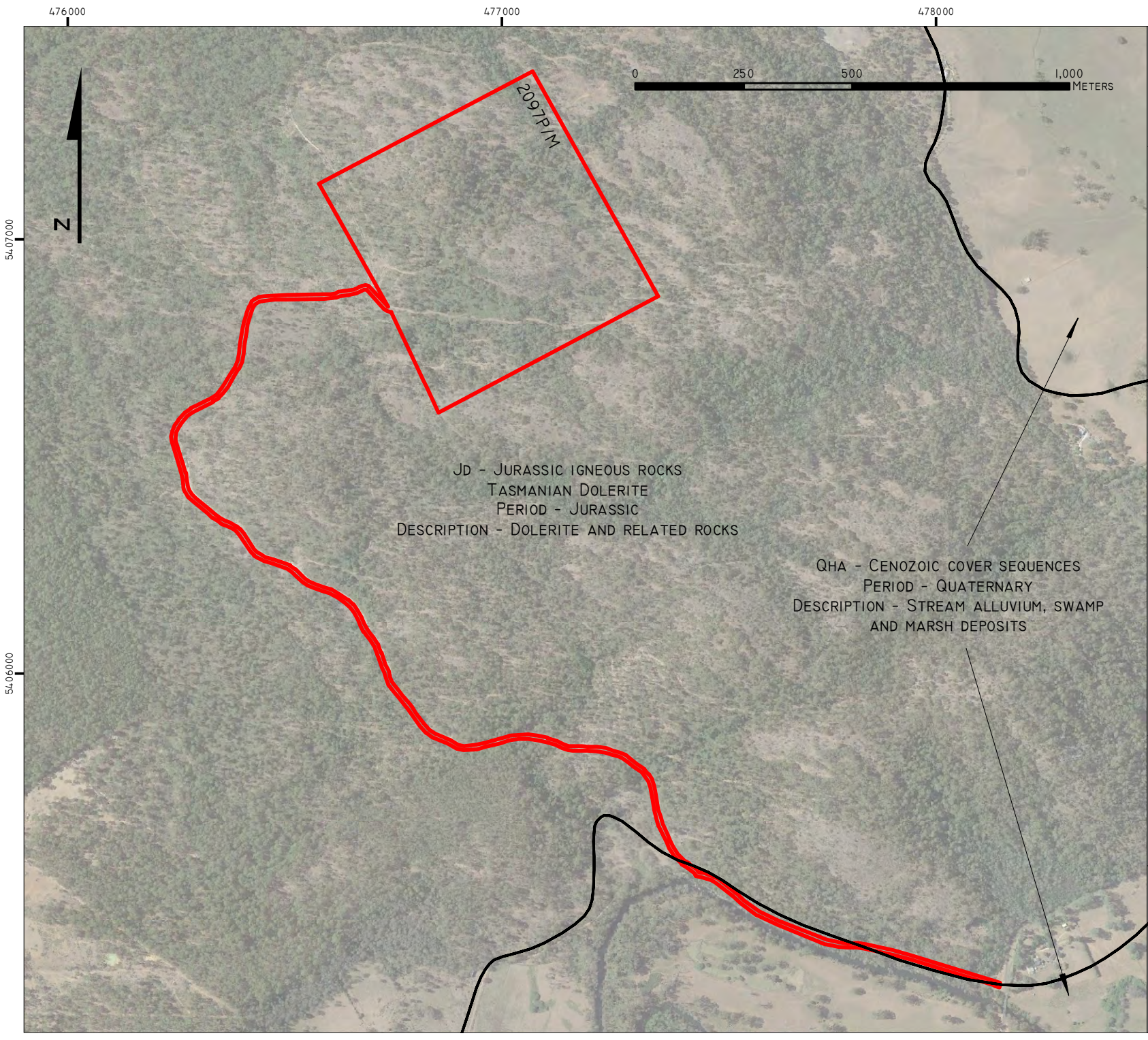


DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 3 APR 2025





PORTERS BRIDGE  
ROAD QUARRY

NATURAL VALUES  
ASSESSMENT

FIGURE 4: GEOLOGICAL BEDROCK  
(MRT – SCALE 1:25,000) IN  
AND AROUND THE MINING LEASE

TASMAP:  
DELORAINÉ  
4640

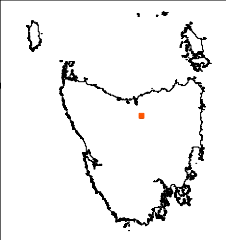
LGA:  
MEANDER  
VALLEY

JD - JURASSIC IGNEOUS ROCKS  
TASMANIAN DOLERITE  
PERIOD - JURASSIC  
DESCRIPTION - DOLERITE AND RELATED ROCKS

QHA - CENOZOIC COVER SEQUENCES  
PERIOD - QUATERNARY  
DESCRIPTION - STREAM ALLUVIUM, SWAMP  
AND MARSH DEPOSITS

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH

an Diemen CONSULTING  
PO Box 1 New Town TAS 7008



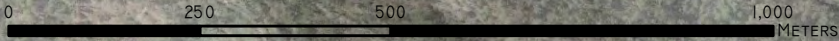
DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 3 APR 2025

476000

477000



# PORTERS BRIDGE ROAD QUARRY

## NATURAL VALUES ASSESSMENT

FIGURE 5: EXISTING REGIONAL DRAINAGE LINES AND CATCHMENTS

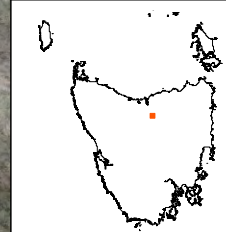
TASMAP:  
DELORAINÉ  
4640

LGA:  
MEANDER  
VALLEY

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH



**van Diemen CONSULTING**  
PO Box 1 New Town TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 3 APR 2025

2097P/M IS  
WITHIN THE  
MEANDER RIVER  
SUB-CATCHMENT

N

5407000

0009075

UN-NAMED  
TRIBUTARY

TO THE  
MEANDER  
RIVER

UN-NAMED  
MINOR TRIBUTARY

UN-NAMED  
TRIBUTARY

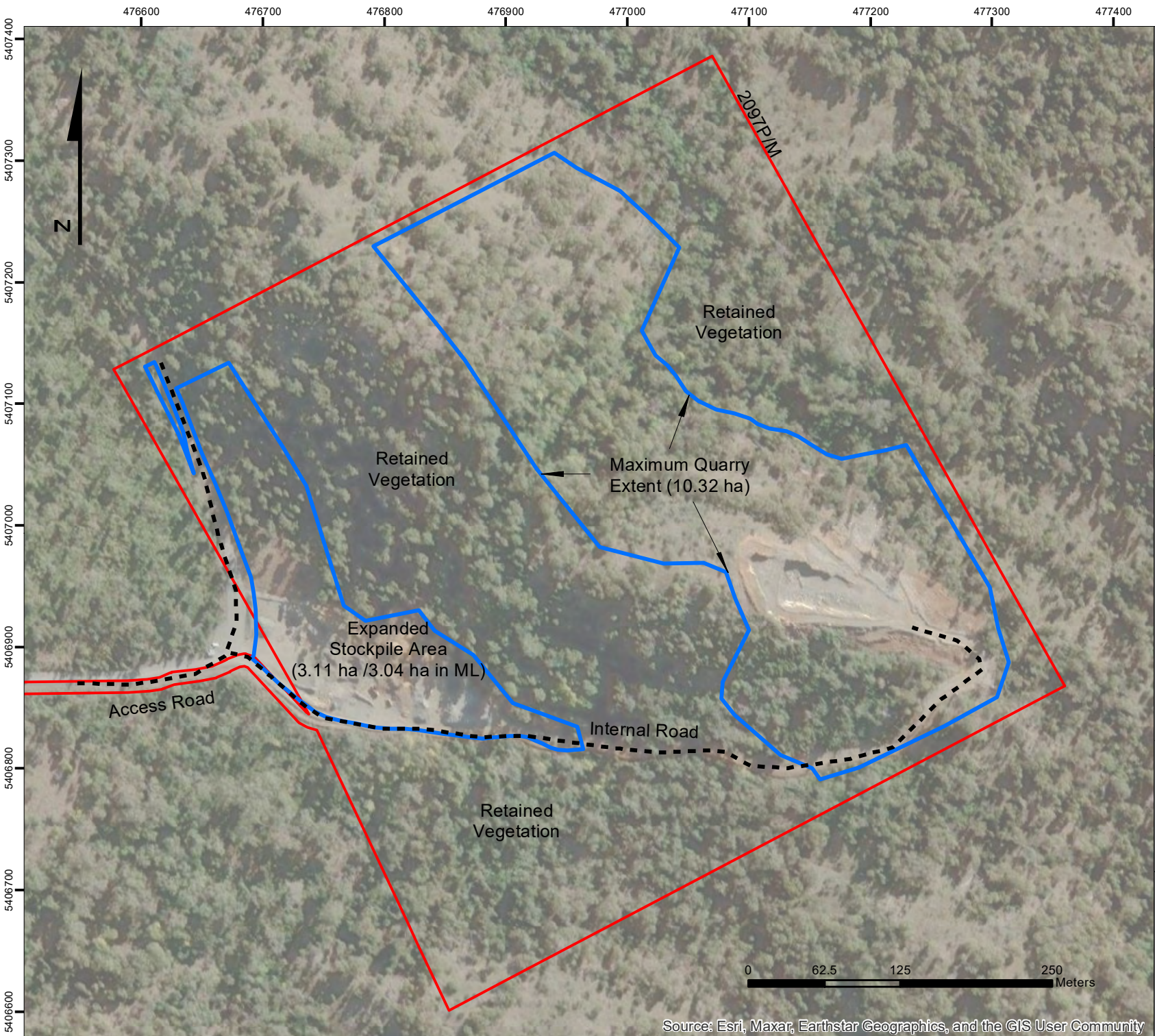
2097P/M

UN-NAMED  
MINOR TRIBUTARY

UN-NAMED  
MINOR TRIBUTARY

CREV RIVER  
SECTION CATCHMENT  
BOUNDARY

UN-NAMED  
TRIBUTARY



PORTERS BRIDGE  
ROAD QUARRY

NATURAL VALUES  
ASSESSMENT

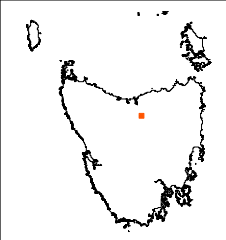
Figure 6: Site  
Layout

TASMAP:  
DELORAINÉ  
4640

LGA:  
MEANDER  
VALLEY

Base data by TASMAP. © State of Tasmania  
Base image © ESRI

van Diemen CONSULTING  
PO Box 1 NEW TOWN TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 3 APR 2025

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

## **PART B – SURVEY METHODS**

This section provides details of the survey techniques applied for the studies conducted in the Site, and the planning and assessment tools/documents used to identify the Natural Values, if any, of conservation significance in the Site.

### **B.1 QUALIFICATIONS OF PERSONNEL**

The Natural and Cultural Heritage Division (2015<sup>7</sup>) note that -

‘The proponent or their representative must ensure that the personnel undertaking surveys and preparing reports have appropriate skills, qualifications and experience in identification and documentation of all natural values of interest, including a knowledge of Tasmanian species, their habitat and other ecological requirements, and vegetation communities.’

In this case, the surveyors of the natural values each hold a PhD in a relevant field of science – zoology and botany – and over 60 years of combined field expertise in natural values assessment, identification, mapping, reporting and ecological impact assessment/mitigation.

### **B.2 VEGETATION CLASSIFICATION AND MAPPING**

#### *B.2.1 Classification*

Vegetation communities were identified and attributed to Tasmanian Vegetation Mapping Units (Kitchener and Harris 2013, 2<sup>nd</sup> Edition and with revisions in April 2019). All vegetation types in the Site were assessed and the variation (if any) within each explored. Flora species present within representative plots were recorded and additional species were added to the list as they were encountered in a meandering survey.

Flora species were recorded as they were encountered in a meandering assessment. Scientific names for flora species follow de Salas and Baker (2024).

#### *B.2.2 Mapping*

An iPhone was also used to navigate and assist with the interpretation of vegetation types using Google Earth overlain with shapefiles of the Site and threatened species locations (NVA data). Aerial photography both in the field and in the office was used to further interpret vegetation boundaries. Drone imagery was also obtained of some parts of the Site to facilitate high-resolution mapping of vegetation boundaries.

---

<sup>7</sup> Natural and Cultural Heritage Division (2015). Guidelines for Natural Values Surveys - Terrestrial Development Proposals. Department of Primary Industries, Parks, Water and Environment. Version 1.1 – 13th August 2019 (minor updates to links in document).

### B.2.3 Forest Structure Assessment

A Light Detection and Ranging (LIDAR) generated canopy height model was accessed from TheLIST to aid the identification of eagle nest search areas and the location of structural elements within the canopy of forest types for relevant threatened fauna species (e.g., masked owl). The canopy height model is in **Figure 12**.

## B.3 GENERAL FLORA AND FAUNA SPECIES SURVEY

Queries of the Natural Values Atlas (NVA, **Attachment 1**), Biodiversity Values Database (BVD; **Attachment 2**), and Protected Matters Search Tool (EPBC database maintained by DCCEEW) report (PMST Report, **Attachment 3**) were used to generate reports to identify previous recorded locations of species (flora and fauna) and range boundaries for significant or threatened fauna species.

The conservation status of flora and fauna species follow the:

- Tasmanian *Threatened Species Protection Act 1995*;
- *Nature Conservation Act 2002*; and the
- Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

The survey directly assessed the range of habitat types present in the Site, especially rocky outcrops as these may support rare or interesting flora species and/or vegetation communities.

Surveys that have provided information included in this Report were conducted in 2021 (several days, including an eagle nest search), 2022 (September (1 day), 2024 (October (3 days), November (2 days)), and in 2025 (January (2 days), April (2 days including an eagle nest search)), and July (1 day).

## B.4 TARGETED FLORA AND FAUNA SPECIES SURVEYS

Flora species of particular focus were those listed in the Natural Values Atlas report as having known records, or potential habitat, within and near the Site. Potential habitat for threatened fauna was assessed by reference to the vegetation communities present and the associated characteristics of the habitat values each provided to fauna species - assessments were made by comparing the characteristics of known fauna habitat with the habitat present in the Site.

### B.4.1 Eagle species

The Site is within the potential range (foraging and breeding) of the Tasmanian wedge-tailed eagle (*Aquila audax fleayi*) and white-bellied sea eagle (*Haliaeetus leucogaster*).

Three nests attributed to the Tasmanian wedge-tailed eagle have been recorded near the Site – RND125, RND193, RND3462; **Figure 11**. RND193 and RND3462 are located within 1,000m of the access road however the access road is not within line-of-sight (**Figures 10 and 11**); the nests are located on the eastern to south-eastern side of a hillock where the viewfield is blocked by the landform to the west that provides wind protection to the nests. RND125 is located more than 1km from any part of the Site (**Figure 11**).

A nest search was conducted of the Site and suitable habitat within 1km line-of-sight of the Site – April and August 2021 and no new nests were found. Another search of the same areas was conducted in April 2025, and no new nests were found. All recorded nests shown in **Figure 11** were visited during the April 2025 nest

search and it was found that RND 125 is absent – it has a 1km accuracy and is unlikely to have existed, or it is unlikely it was at the location identified by the NVA held coordinates.

#### *B.4.2 Conservation Listed (threatened) Mammal Species*

Four conservation significant ground-dwelling mammals were of relevance to the ecological assessment:

- spotted-tailed quoll (*Dasyurus maculatus maculatus*),
- eastern quoll (*Dasyurus viverrinus*),
- eastern barred bandicoot (*Perameles gunnii gunnii*), and
- Tasmanian devil (*Sarcophilus harrisii*).

All four mammals are habitat ‘generalists’ in that they will use and occupy native and non-native vegetation cover, as well as human-made structures including houses, sheds, huts, and culverts under roadways. Quolls and devils will also den in woodpiles created by land clearing practices and/or timber harvesting operations. Trapping was not conducted as it would have required the approval of the Tasmanian Animal Ethics Committee and was not considered warranted.

A ‘habitat suitability’ assessment rather than trapping is justified in this case as there is enough anecdotal evidence and existing State Government data (e.g., Natural Values Atlas records of all four species occur within 5 kms of the Site) that all four species are present in suitable habitat in the Tamar region. A search for dens/nests in the Site was done on-foot.

#### *B.4.3 Masked owl*

The Habitat Context Assessment Tool<sup>8</sup> (Forest Practices Authority) was accessed from the FPA webpage to identify the areas which may support trees that could be of sufficient age and growth status (and possible senescence of trees that could have formed ‘chimneys’ as they decay) to contain a hollow for breeding by masked owls. These areas were the focus of the surveys on foot, with additional areas checked in the Site to validate the Habitat Context Assessment Tool. A Light Detection and Ranging (LIDAR) generated canopy height model was also accessed from TheLIST to further aid the identification of tall trees that may support structural elements (hollows) suitable for use by masked owl. The canopy height model is in **Figure 12**.

---

<sup>8</sup> This tool assesses the availability of a particular habitat, such as tree hollows, within the landscape surrounding a proposed harvest unit. When you insert central coordinates, it calculates the predicted availability of a particular habitat.

## B.5 FAUNA HABITAT ASSESSMENT CRITERIA AND SIGNIFICANT HABITAT

Fauna species with potential or known habitat in the Site were considered in the context of habitat ranges/descriptions provided below (FPA 2023B) –

Habitat Descriptor	Definition
<b>Core Range</b>	Encompasses the area, within the known range, known to support the highest densities of the species and/or thought to be of highest importance for the maintenance of breeding populations of the species.
<b>Potential Range</b>	Encompasses the area, within the known range, known to support the highest densities of the species and/or thought to be of highest importance for the maintenance of breeding populations of the species.
<b>Known Range</b>	Is the area within which the species is most likely to occur, being the area of land within a minimum convex polygon of all known localities of the species. This term is synonymous with 'extent of occurrence' as referred to in the <i>Guidelines for Eligibility for Listing under the Threatened Species Protection Act 1995</i> (DPIW 2009).
<b>Potential habitat</b>	Is all habitat types within the potential range of a species that are likely to support that species in the short and/or long term. It may not include habitats known to be occupied intermittently (e.g. occasional foraging habitat only). Potential habitat is determined from published and unpublished scientific literature and/or expert opinion, and is agreed by the Threatened Species Section (DPIPWE) in consultation with species' specialists.
<b>Significant habitat</b>	<p>Is habitat within the known or core range of a species that –</p> <ol style="list-style-type: none"> <li>1) is known to be of high priority for the maintenance of breeding populations throughout the species' range and/or</li> <li>2) conversion of which to non-native vegetation is considered to result in a long-term negative impact on breeding populations of the species.</li> </ol> <p>It may include areas that do not currently support breeding populations of the species but that need to be maintained to ensure the long-term future of the species. Significant habitat is determined from published and unpublished scientific literature and/or expert opinion, and is agreed by the Threatened Species Section (DPIPWE) in consultation with species' specialists.</p>

## B.6 EXISTING AND ONGOING IMPACTS TO NATIVE VEGETATION COMMUNITIES

The native forest vegetation present on the Site is not old growth, wilderness or in an undisturbed state. Comments are provided below on the existing and ongoing impacts to native vegetation condition.

### B.6.1 Tracks and roads

Numerous tracks (including the access road used by the Quarry) exist in the Site, with most being used for silvicultural practices, and general access across the Site.

### *B.6.2 Silvicultural activity*

The land within the Site is a Private Timber Reserve and accordingly it has a long history of being harvested for timber, with many areas being dominated by regrowth to mature trees. Many landings occur across the Land Titles on which the Mining Lease is registered, with some directly connecting to the Quarry access road. The native forest in the Site could be harvested again under a forest practices plan certified under the *Forest Practices Act 1985*.

### *B.6.3 Existing Quarry*

The existing Quarry has approval to clear the vegetation within the Maximum Quarry Extent (**Figures 6 and 7A**); the new application doesn't change the Maximum Quarry Extent, but it does propose to increase the size of the stockpile area which will result in some additional vegetation clearing. Hence, most of the native vegetation to be cleared is already approved to be cleared by the Approval.

### *B.6.4 Dieback/rural tree decline*

Within *E. viminalis* dominated areas, there are several *E. viminalis* trees (about 10 to 15% but as high as 30% in some patches) that have died or are dying possibly due to ginger tree syndrome, or simply prolonged periods of drought.

## **B.7 LIMITATIONS**

### *B.7.1 Flora*

Due to varying flowering times and seasonality of occurrence not all flora species that occur in the Site may have been recorded during the on-ground surveys.

Surveys were done in –

- 2020 (September (2 days), October (2 days), November (2 days)); and
- 2021 (January (1 day) April and August (2 days – eagle nest search)).

Follow up surveys were done in –

- 2024 (October (2 days), December (1 day)); and
- 2025 (April (1 day) – eagle nest search).

The intensity and frequency of surveys over a long flowering period, which included spring and summer, makes it very unlikely that any species of conservation significance were overlooked. There are very few winter flowering annuals and other species that are of any conservation significance in the Exton and Deloraine area, so it is unlikely that any were overlooked because they are unlikely to be present. Overall, it is very unlikely that any species of conservation significance were unidentified (if present) in the original surveys and follow-up surveys.

### *B.7.2 Fauna*

The fauna assessment (except for direct searches of nests and dens etc as outlined in section *B.4 Targeted Flora and Fauna Species Surveys*) was limited to a habitat assessment for fauna species, including the ground truthing of potential habitats for significant fauna species that were identified in database searches.

### *B.7.3 Micro Flora and Fauna*

The flora and fauna surveys excluded micro-flora and micro-invertebrates such as algae, zooplankton, and cave-dwelling fauna (no caves are present in, or are associated with the geological formations/bedrock of the Site).

## PART C – SURVEY RESULTS

This section provides details of the survey techniques applied for the studies conducted in the Site, and the planning and assessment tools/documents used to identify the natural values, if any, of conservation significance in the Site.

### C.1 VEGETATION COMMUNITY IDENTIFICATION, DESCRIPTIONS AND CONSERVATION STATUS

A list of vegetation communities located in the Site is provided in **Table 1** and spatially presented in **Figures 7A and 7B**.

#### C.1.1 State Threatened Vegetation Communities

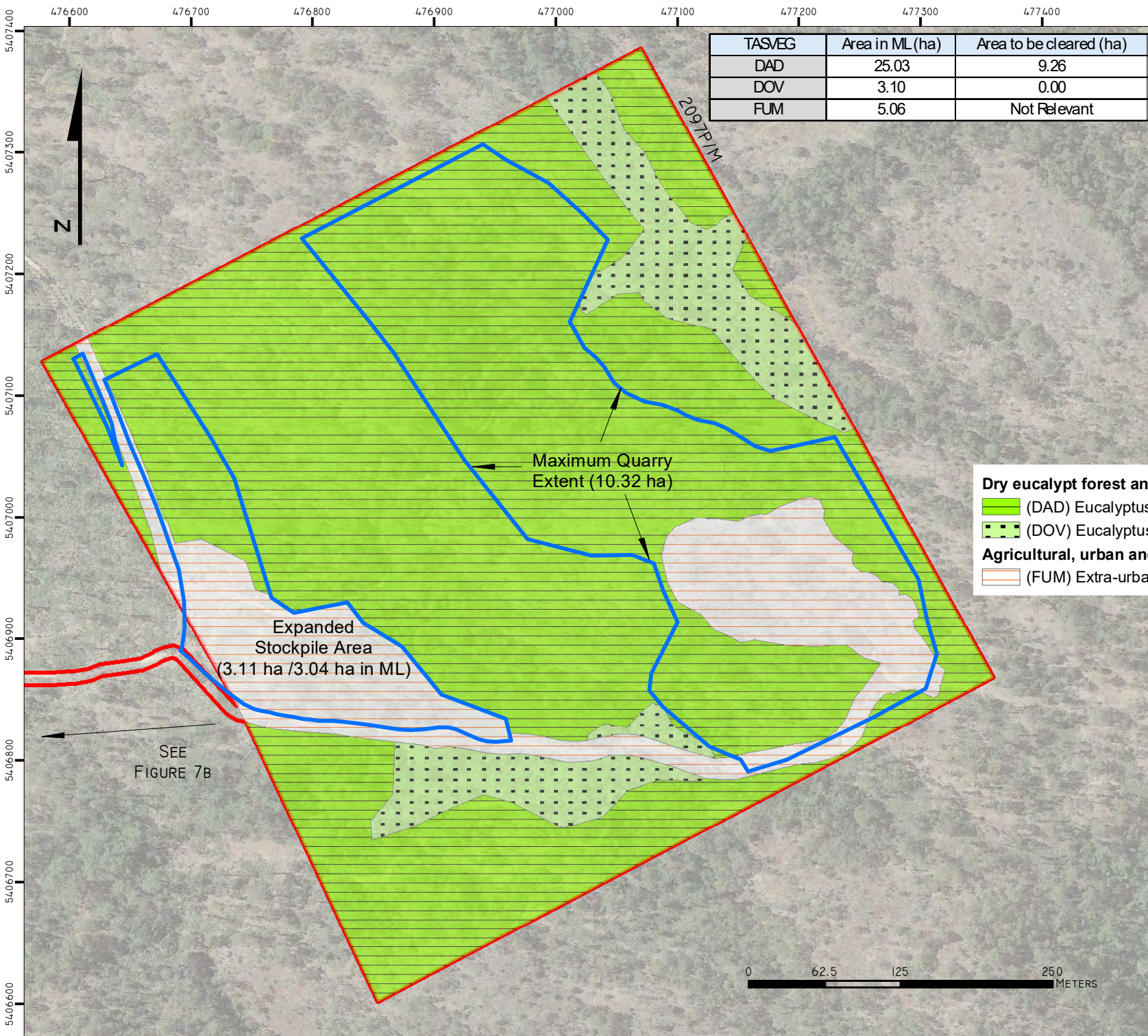
Two native vegetation communities listed on Schedule 3A (Threatened native vegetation communities) of the *Nature Conservation Act 2002* occur in the Land or adjacent to the access road –

- *Eucalyptus viminalis* wet forest (TASVEG code – WVI), and
- *Eucalyptus ovata* forest and woodland (TASVEG code – DOV).

#### C.1.2 EPBC Act Threatened Ecological Communities

Two ecological communities listed under section 181 of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* occur in or adjacent to the Site –

- **Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (*Eucalyptus ovata* / *E. brookeriana*)** – the equivalent of *Eucalyptus ovata* forest and woodland (TASVEG code – DOV); and
- **Tasmanian white gum (*Eucalyptus viminalis*) wet forest** – the equivalent of *Eucalyptus viminalis* wet forest (TASVEG code – WVI).



TASVEG	Area in ML (ha)	Area to be cleared (ha)
DAD	25.03	9.26
DOV	3.10	0.00
FUM	5.06	Not Relevant

# PORTERS BRIDGE ROAD QUARRY

## NATURAL VALUES ASSESSMENT

FIGURE 7A: VEGETATION COMMUNITIES (TASVEG 4.0) IN THE PORTERS BRIDGE ROAD QUARRY

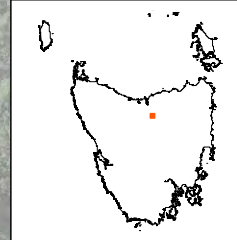
TASMAP: DELORAINÉ 4640	LGA: MEANDER VALLEY
------------------------------	------------------------

- Dry eucalypt forest and woodland**
- (DAD) Eucalyptus amygdalina forest and woodland on dolerite
  - (DOV) Eucalyptus ovata forest and woodland
- Agricultural, urban and exotic vegetation**
- (FUM) Extra-urban miscellaneous

NOTE  
DOV - E. OVATA FOREST AND WOODLAND (E/CR)  
DAD - E. AMYGDALINA FOREST (-/-)

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH

**an Diemen CONSULTING**  
PO Box 1 NEW TOWN TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 3 APR 2025

476000

477000

478000

5407000

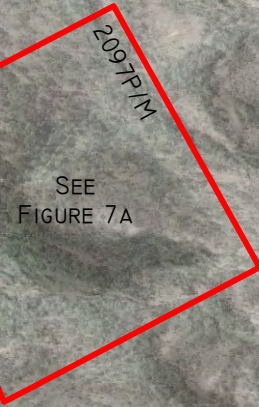
5406000

5405000



(DOV) EUCALYPTUS OVATA FOREST AND WOODLAND

EXISTING ROAD END



SEE FIGURE 7A

EXISTING ACCESS ROAD

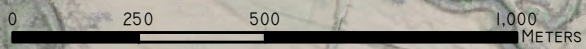
REMAINDER OF ACCESS ROAD IS (DAD) EUCALYPTUS AMYGDALINA FOREST AND WOODLAND ON DOLERITE

(WVI) EUCALYPTUS VIMINALIS WET FOREST

(DVG) EUCALYPTUS VIMINALIS GRASSY FOREST AND WOODLAND

(WVI) EUCALYPTUS VIMINALIS WET FOREST

EXISTING ROAD START



# PORTERS BRIDGE ROAD QUARRY


## NATURAL VALUES ASSESSMENT

### FIGURE 7B: VEGETATION COMMUNITIES (TASVEG 4.0) ALONG THE PORTERS BRIDGE ROAD QUARRY ACCESS

TASMAP:  
DELORAINE  
4640

LGA:  
MEANDER VALLEY

NOTE  
WVI - E. VIMINALIS WET FOREST (E/-)  
DOV - E. OVATA FOREST AND WOODLAND (E/CR)  
DAD - E. AMYGDALINA FOREST (-/-)  
DVG - E. VIMINALIS GRASSY FOREST (-/-)

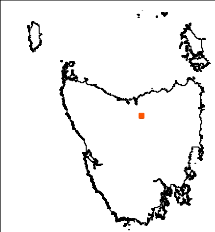
 SECTION OF EXISTING ROAD GOING THROUGH THREATENED NATIVE FOREST

NOTE:  
VEGETATION ALONG ROAD WILL NOT BE REMOVED

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH



**an Diemen CONSULTING**  
PO Box 1 New Town TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS CONTRACTING PTY LTD

DATE: 3 APR 2025

**Table 1. Vegetation (TASVEG 4.0 codes) categories recorded in the Site**

DESCRIPTION	TASVEG CODE	Extent in the Site (hectares)	Area to be cleared (hectares)
<b>Forest and other categories in and adjacent to the Maximum Quarry Extent (Figure 7A)</b>			
<i>Eucalyptus amygdalina</i> forest and woodland on dolerite	DAD	25.03	9.26
<i>Eucalyptus ovata</i> forest and woodland # *	DOV	3.10	0.0 <sup>9</sup>
Extra Urban Miscellaneous (access roads, existing stockpile area and pit)	FUM	NA	NA
<b>Forest types bordering the access road (Figure 7B)</b>			
<i>Eucalyptus viminalis</i> wet forest # *	WVI	NA	0
<i>Eucalyptus ovata</i> forest and woodland	DOV	NA	0
<i>Eucalyptus viminalis</i> grassy forest and woodland	DVG	NA	0
<i>Eucalyptus amygdalina</i> forest and woodland on dolerite	DAD	NA	0

# Threatened native vegetation communities are those listed in Schedule 3A of the *Nature Conservation Act 2002*

\* Ecological community equivalent listed under section 181 of the *Environment Protection and Biodiversity Conservation Act 1999*.

### C.1.3 Vegetation Descriptions

Descriptions of each vegetation community in or adjacent to the Maximum Quarry Extent (**Figure 7A**) and some representative images for forest communities are provided below.

#### ***Eucalyptus ovata* forest and woodland**

Forest dominated by *Eucalyptus ovata* (*E. amygdalina* co-dominant or sub-dominant) over a wet forest shrub and tea-tree species midstorey layer is present on two drainage lines/poorly drained areas in the northern part of the Land (**Figure 7A**). Canopy height varies from 12 to 25 m and foliage cover of the canopy trees varies from 10 to 50% dependent upon the density of *E. ovata* (and *E. amygdalina*) trees. Timber harvesting (native

<sup>9</sup> Areas of this forest type occur adjacent to the Maximum Extraction Area.

forest silviculture) has occurred adjacent to some of this forest community, and some areas of this forest community have been selectively harvested.

The midstorey layer is generally formed predominantly by *Pomaderris apetala*, *Bedfordia salicina*, *Acacia dealbata* and *A. melanoxylon* with sub-dominant *Olearia argophylla*, *Nematolepis squamea*, *Olearia lirata* and *Exocarpos cupressiformis*.

Ferns (mainly *B. wattsii*, and *Polystichum proliferum*), lilies (*Dianella tasmanica*, *Drymophila cyanocarpa*) and small shrubs (*Coprosma quadrifida*, *Pimelea drupaceae*, *Bursaria spinosa*, *Senecio linearifolius*, *Pultenaea juniperina*) are sporadic in the understorey layer – leaf litter is abundant.



### ***Eucalyptus amygdalina* forest and woodland on dolerite**

This forest type is dominated by uneven-aged *Eucalyptus amygdalina* (*E. viminalis* and *E. obliqua* are subdominant) in an open forest structure with trees rarely exceeding 25 m. The understorey is variable, ranging from grassy to shrubby with *Bursaria spinosa*, *Acacia dealbata* and *Banksia marginata* typical of the midstorey layer. The ground layer is dominated by tussock grasses (*Poa*), low shrubs, sagg (*Lomandra longifolia*) and in damp areas, bracken-fern (*Pteridium esculentum*), and damp forest fern species (e.g., *Polystichum proliferum*).



**C.2 THREATENED FLORA SPECIES**

*C.2.1 State Listed Flora Species*

There are two threatened flora species recorded in or near (within 5,000m) the Site based on data contained within the Natural Values Atlas (**Attachment 1**) and Biodiversity Values Database (**Attachment 2**); see **Figure 8**. **Table 2** provides a list of the State listed threatened flora species recorded nearby or on Site.

Only one flora species protected by a statutory mechanism were observed during the surveys of the Site; curved riceflower (*Pimelea curviflora* subsp. *gracilis*).

**Table 2. State listed threatened flora species with NVA recorded locations within 5 km of the Site**

Species name	Common name	TSPA / EPBC	Observed on the Site during surveys conducted for this Report
<i>Glycine microphylla</i>	slender fanwort	v / -	No
<i>Pimelea curviflora</i> subsp. <i>gracilis</i>	curved riceflower	r / -	Yes

\* Derived from records in the Natural Values Atlas (**Attachment 1**).

Key: r = rare, v = vulnerable

Curved riceflower is obvious when in flower (bright yellow tubular flowers), as it was during the surveys in 2020 and 2024, despite its small and cryptic stature amongst grass tussocks, bracken-fern and on rocky scree slopes.



**Table 3** lists the total number of plants of curved riceflower to be taken by the proposed Development, which are spatially shown in **Figure 8**.

476000

477000

478000

5407000

5406000

5405000



PIMELEA CURVIFLORA VAR. GRACILIS (R/-)  
(OBSERVED / NVA)

EXPANDED  
STOCKPILE AREA  
(3.11 HA / 3.04 HA IN ML)

MAXIMUM QUARRY  
EXTENT (10.32 HA)

2097P/M

PIMELEA CURVIFLORA VAR. GRACILIS (R/-) (NVA RECORDS)

# PORTERS BRIDGE ROAD QUARRY

## NATURAL VALUES ASSESSMENT

FIGURE 8: KNOWN (NVA)  
AND OBSERVED THREATENED FLORA  
AT THE PORTERS BRIDGE  
ROAD QUARRY

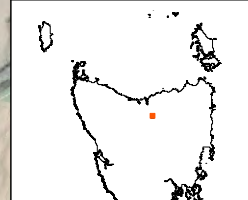
TASMAP:  
DELORAINE  
4640

LGA:  
MEANDER  
VALLEY

NOTE:  
27 PIMELEA CURVIFLORA VAR. GRACILIS  
TO BE TAKEN DURING CLEARING FOR  
QUARRY AND STOCKPILE EXPANSION

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH

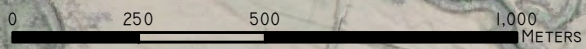
PO Box 1 New Town TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 3 APR 2025



The NRE Tas issued notesheet for this species is provided in **Attachment 4**.

**Table 3. Approximate number of individuals to be taken by the Development**

Species	Number of plants proposed to be taken by the Development
<i>Pimelea curviflora</i> subsp. <i>gracilis</i> ; curved riceflower – rare	27

VDC recorded 61 plants in the Mining Lease (the Site) during surveys in 2022 (the survey was required by an EPA imposed condition in the existing permit) with 13 plants having been removed to facilitate quarry initiation and expansion via a permit issued by NRE (DA22308 granted on 14 April 2022, **Attachment 6**).

A further 27 plants are proposed to be taken over the life of the Development, which will leave at least 21 plants unaffected by the activity within the Mining Lease. The loss of 27 plants is scheduled to occur as a long-term requirement to facilitate the extraction of the identified resource. Of the population within the Mining Lease, there are no patches occupied by the species to be completely removed by the Development.

There are additional known occurrences of curved riceflower outside of the Mining Lease (the Site) as is evident from the mapped NVA data displayed in **Figure 8**; the higher density of observations in the Site is reflective of the survey effort applied to that area (required by an EPA imposed condition in the existing permit).

An additional survey should be conducted of the area within 1 km of the Site and in the Site itself to further record plants of the species prior to an application for the taking of the curved riceflower plants is made to NRE. A curved riceflower survey of areas to be cleared of native vegetation for expansion of the quarry could be done with the pre-clearance surveys conducted for dens and masked owl potential nest trees.

#### C.2.2 EPBC Act Listed Flora Species

No species listed on the *Environment Protection and Biodiversity Conservation Act 1999* were observed during the Site surveys, and none listed on the EPBC Act are likely to occur in the Site.

**Table 4** provides a summary of the flora species with potential, likely and/or known habitat in the region based on the PMST report in **Attachment 3**.

None of the species listed in **Table 4** were observed on the Site, and for most there is no suitable habitat present in the Site.

**Table 4. EPBC Act listed threatened flora species based on the PMST Report\***

Species name	Common name	EPBC	Habitat Description (FPA 2023A)	Present in Site? Notes about occurrence in the Site
<i>Acacia axillaris</i>	Midlands Wattle	VU	Mainly confined to riparian habitats such as dense riparian scrub and associated floodplains but also extends to paddocks and open grassy forests in frost hollows and areas of poor drainage, but also occasionally occurs on rocky slopes (there is a somewhat anomalous population on the midslopes of Mt Barrow in the north-east). All populations are strongly associated with dolerite. Records outside the core of the range (e.g. Prosser River, Broad River, River Clyde) need to be treated carefully as they may represent the more recently described <i>Acacia derwentiana</i> .	<p><b>No.</b></p> <p>The species has not been recorded within 5kms of the Site based on NVA held records. There are no major river systems or creeklines present.</p> <p>The species is very distinctive and perennial and is therefore unlikely to have been overlooked in the many surveys conducted of the Site.</p>
<i>Barbarea australis</i>	Native wintercress	EN	A riparian species found near river margins, creek beds and along flood channels. It tends to favour the slower reaches and has not been found on steeper sections of rivers. Juveniles predominantly occur on flood deposits of silt, and gravel deposited as point bars and at the margins of base flows, or more occasionally or between large cobbles on sites frequently disturbed by fluvial processes; however, few plants in these open habitats make it to maturity. Flowering plants tend to occur in protected niches, which can include relatively coarse surrounding vegetation like bracken. Some of the sites are a considerable distance from the river, in flood channels scoured by previous flood action, exposing river pebbles. Most populations are in the Central Highlands,	<p><b>No.</b></p> <p>The species has not been recorded within 5kms of the Site based on NVA held records. There are no major river systems or creeklines present in the Site (the Meander River is adjacent) which is the typical habitat for the species.</p> <p>The species is very distinctive and perennial and is therefore unlikely to have been overlooked in the many surveys conducted of the Site; a survey along the access road adjacent to the Meander River was conducted (January 2025) in the species' peak flowering period, which is November to February.</p>

			but other populations occur in the northeast and upland areas in the central north.	
<b><i>Colobanthus curtisiae</i></b>	Curtis' colobanth	VU	Occurs in lowland grasslands and grassy woodlands but is also prevalent on rocky outcrops and margins of forest on dolerite on the Central Highlands (including disturbed sites such as log landings and snig tracks).	<p><b>No.</b></p> <p>The species has not been recorded within 5kms of the Site based on NVA held records. The species is predominantly on the Central Highlands, Midlands and elevated areas around the north-east.</p> <p>The species is very distinctive and perennial and is therefore unlikely to have been overlooked in the surveys conducted of the Site; a survey was conducted (January 2025) in the species' peak flowering period, which is November to February.</p>
<b><i>Glycine latrobeana</i></b>	Clover Glycine	VU	<p>Occurs in a range of habitats, geologies and vegetation types. Soils are usually fertile but can be sandy when adjacent to or overlaying fertile soils. The species mainly occurs on flats and undulating terrain over a wide geographical range, including near-coastal environments, the Midlands, and the Central Plateau.</p> <p>It mainly occurs in grassy/heathy forests and woodlands and native grasslands.</p>	<p><b>No.</b></p> <p>Suitable habitat is present (semi-native grasslands grassy woodlands), but it is in poor condition due to current and historic land uses – fertiliser application, and sheep/cattle grazing. The species is very unlikely to be present given the land use. It was not found despite searches of suitable habitat during the flowering period (November).</p>
<b><i>Lepidium hyssopifolium</i></b>	Basalt pepper-cress	EN	The native habitat of <i>Lepidium hyssopifolium</i> is the growth suppression zone beneath large trees in grassy woodlands and grasslands (e.g. over-mature black wattles and isolated eucalypts in rough pasture). It is now found primarily under large exotic trees on roadsides and home yards on farms. It occurs in the eastern part of Tasmania between sea-level to 500 metres above sea level in dry, warm and fertile areas on flat ground on weakly acid to alkaline soils derived from	<p><b>No.</b></p> <p>Suitable habitat is present (grassy woodlands) but the habitat lacks 'growth suppression zones' caused by a dominance of over-mature black wattles and isolated eucalypts in rough pasture (these are both absent).</p> <p>The species is very unlikely to be present. It was not found despite searches of suitable habitat during the flowering/fruitletting period.</p>

			a range of rock types. It can also occur on frequently slashed grassy/weedy roadside verges where shade trees are absent.	
<b><i>Leucochrysum albicans</i> subsp. <i>tricolor</i></b>	Hoary Sunray	EN	Occurs in the west and on the Central Plateau and the Midlands, mostly on basalt soils in open grassland. This species would have originally occupied <i>Eucalyptus pauciflora</i> woodland and tussock grassland, though most of this habitat is now converted to improved pasture or cropland.	<b>No.</b> The species is known from the Midlands on basalt, but there are no nearby recorded locations. There are no NVA records of this species within 5km of the Site.  Suitable habitat is absent.
<b><i>Prasophyllum stellatum</i> (now <i>Paraprasophyllum stellatum</i>)</b>	Ben Lomond leek-orchid	CR	Is known from two disjunct locations in Tasmania, at Storys Creek and Cluan Tiers, with sites ranging from 555-960 m above sea level. The species occurs in forest dominated by <i>Eucalyptus delegatensis</i> (with <i>Eucalyptus dalrympleana</i> as a minor canopy component), with a shrubby to grassy understorey.  All sites occur on dolerite, with a relatively high surface rock cover and deep clay-loam soils at most sites.	<b>No.</b> The Site is well below the elevation of the known populations, and in a different forest type.  Suitable habitat is absent.
<b><i>Pterostylis ziegeleri</i></b>	Grassland greenhood	VU	Occurs in the State's south, east and north, with an outlying occurrence in the north-west. In coastal areas, the species occurs on the slopes of low stabilised sand dunes and in grassy dune swales, while in the Midlands it grows in native grassland or grassy woodland on well-drained clay loams derived from basalt.	<b>No.</b> There is no habitat in the Site that is comparable to the known occurrences of this habitat specific species. There are no NVA records of this species within 5km of the Site.  The species is likely to be absent and has not been detected despite a survey in its peak flowering period (January).
<b><i>Senecio psilocarpus</i></b>	Swamp Fireweed	VU	Known from six widely scattered sites in the northern half of the State, including King and Flinders islands.	<b>No.</b> There is no habitat in the Site that is comparable to any known occurrences of this very habitat specific species.

			<p>It occurs in swampy habitats including broad valley floors associated with rivers, edges of farm dams amongst low-lying grazing/cropping ground, herb-rich native grassland in a broad swale between stable sand dunes, adjacent to wetlands in native grassland, herbaceous marshland and low-lying lagoon systems.</p>	<p>There are no NVA records of this species within 5km of the Site.</p> <p>The species is likely to be absent and has not been detected despite a survey in its flowering period (January).</p>
<p><i>Xerochrysum palustre</i></p>	<p>Swamp everlasting</p>	<p>VU</p>	<p>This species has a scattered distribution with populations in the north-east, east coast, Central Highlands and Midlands, all below about 700 m elevation.</p> <p>It occurs in wetlands, grassy to sedgy wet heathlands and extends to associated heathy Eucalyptus ovata woodlands. Sites are usually inundated for part of the year.</p>	<p><b>No.</b></p> <p>There is no habitat in the Site that is comparable to any of the known occurrences of this very habitat specific species. There are no NVA recorded observations of this species within 5km of the Site.</p> <p>The species is likely to be absent and has not been detected despite a survey in its flowering period (January).</p>

\* Derived from records in the EPBC Protected Matters Search Tool Report (**Attachment 3**).

Key: CR = critically endangered, EN = endangered, VU = vulnerable

### C.3 WEEDS

#### C.3.1 Declared Weeds

Several species listed as a Declared Weed on the Tasmanian *Biosecurity Act 2019 (Biosecurity Regulations 2022)* were recorded in the Site. The declared weeds listed in **Table 5** were observed in the Site (see also **Figure 9A**).

**Table 5. Declared Weeds observed in the Site**

Common name	Species name	Meander Valley Municipality Status	Comments
<b>blackberry</b>	<i>Rubus fruticosus</i> agg.	Zone B	Common along the riparian zone of the Meander River and at the Porters Bridge Road access.
<b>Californian thistle</b>	<i>Cirsium arvense</i>	Zone B	Widespread and dense patches in canopy gaps (caused by dead white gums/fallen trees from flood damage) in the riparian zone of the Meander River. Localised patches along disused roadside/logging landing in main area of the Land.
<b>Gorse</b>	<i>Ulex europaeus</i>	Zone B <sup>10</sup>	Occasional patches in the roadside margin in the riparian zone of the Meander River. Localised plants along disused roadside/logging landings in main area of the Land.
<b>Horehound</b>	<i>Marrubium vulgare</i>	Zone A <sup>11</sup>	Single localised infestation at a roadside location where dirt/bricks have been dumped.
<b>Ragwort</b>	<i>Senecio jacobea</i>	Zone B	Occasional on disturbed ground/bare soil near access from Porters Bridge Road and along Porters Bridge Road.
<b>Scotch broom</b>	<i>Cytisus scoparius</i>	Zone B	Occasional on disturbed ground/bare soil near access from Porters Bridge Road and along Porters Bridge Road.

<sup>10</sup> Containment within municipal boundaries, protection of specified areas within municipal boundaries, prevention of spread to Zone A municipalities. This applies to all Zone B municipalities.

<sup>11</sup> Implement integrated control program for eradication and prevent future occurrences. This applies to all Zone A municipalities.

<b>slender thistle</b>	<i>Carduus pycnocephalus</i>	Zone B	Occasional patches in canopy gaps (caused by dead white gums/fallen trees from flood damage) and roadside margin in the riparian zone of the Meander River.  Localised plants along disused roadside/logging landing in main area of the Land.
<b>Spanish heath</b>	<i>Erica lusitanica</i>	Zone B	Single, localised but dense infestation at a roadside location and adjacent previous logging landings.

### C.3.2 Pasture and environmental weeds

Pasture and environmental weeds were observed sporadically in the Site, most commonly in association with old vehicle tracks and roads, and include -

- spear thistle (*Cirsium vulgare*);
- hawthorn (*Crataegus monogyna*); and
- pasture grasses and herbs (e.g., *Holcus lanatus*, *Prunella vulgaris*, *Hypochaeris radicata*).

The weeds listed in **Table 6** were observed in the Site (see also **Figure 9B**).

**Table 6. Pasture and environmental weeds observed in the Site**

<b>Common name</b>	<b>Species name</b>	<b>Comments about occurrence and within Site distribution</b>
<b>Blue periwinkle</b>	<i>Vinca major</i>	Occasional in canopy gaps (caused by dead white gums/fallen trees from flood damage) in the riparian zone of the Meander River.
<b>Euphorbia</b>	<i>Euphorbia lathyris</i>	Occasional on disturbed ground/bare soil near access from Porters Bridge Road.
<b>Franchet's cotoneaster</b>	<i>Cotoneaster franchetii</i>	Common along the riparian zone of the Meander River mainly near the Porters Bridge Road access.
<b>Great mullein</b>	<i>Verbascum thapsus</i>	Occasional in canopy gaps (caused by dead white gums/fallen trees from flood damage) in the riparian zone of the Meander River.
<b>Spear thistle</b>	<i>Cirsium vulgare</i>	Occasional along existing road alignment, previous logging landings, disused tracks, and near Porters Bridge Road access.
<b>Sycamore</b>	<i>Acer pseudoplatanus</i>	Common along the riparian zone of the Meander River.
<b>Wild teasel</b>	<i>Dipsacus fullonum</i>	Occasional on disturbed ground/bare soil near the access from Porters Bridge Road and along the riparian zone of the Meander River.

<b>Hemlock</b>	<i>Conium maculatum</i>	Occasional on disturbed ground/bare soil near the access from Porters Bridge Road.
----------------	-------------------------	--

## C.4 PATHOGENS

### C.4.1 *Phytophthora cinnamomi*, PC

Root-rot fungus (*Phytophthora cinnamomi*, PC) is a soil borne pathogen that causes death in a wide range of native plant species often leading to floristic and structural changes in susceptible plant communities.

PC evolved in tropical areas, and it requires warm moist soils for at least some time of the year to produce sporangia and release zoospores (Rudman 2005). Only those areas of the State that are below an altitude of about 700m above sea level have soils sufficiently warm for this to occur (Podger *et al* 1990). Vegetation types below 700m elevation may not be wholly or partly susceptible if closed canopies keep soil temperatures cool during the summer months, such as tall wet eucalypt forests over rainforest species, or rainforest communities.

PC can be spread through the movement of infected soil or plant material by people or animals and can even be transported by water percolating through soil or via surface water, such as in creeks and other drainage lines. Transport of PC to new areas is usually through soil/dirt adhering to vehicles and machinery. Transport into non-roaded areas of high human usage is mainly via bushwalking items such as tents or footwear but can also occur by bird activity.

The fungus is not always evident in the landscape as it attacks root systems of susceptible species, usually causing death in new growth or the yellowing of leaves followed by loss of vigour and, in most cases, death. The fungus can inhabit the root systems of resistant species without any visible signs of infection within the host plant.

The Site is not within a PC Management Area<sup>12</sup>.

Samples to detect PC were not collected. Instead, areas within and around the Site were inspected in detail for signs of infection by PC which included areas of water accumulation such as spoon drains, culverts, and other drainage features associated with the tracks and road lines.

No plant 'symptom' evidence of the pathogen was observed, probably because there are few susceptible species present (none exhibited PC symptoms), and that dry forest and woodland (with occasional wet forest patches) occurs across the Site.

---

<sup>12</sup> See Schahinger, R., Rudman T., and Wardlaw, T. J. (2003). Conservation of Tasmanian Plant Species & Communities threatened by *Phytophthora cinnamomi*. Strategic Regional Plan for Tasmania. Technical Report 03/03, Nature Conservation Branch, Department of Primary Industries, Water and Environment, Hobart

#### C.4.2 Myrtle Wilt

Myrtle wilt, caused by a wind-borne fungus (*Chalara australis*), occurs naturally in rainforest where myrtle beech (*Nothofagus cunninghamii*) is present. The fungus enters wounds in the tree, usually caused by damage from wood-boring insects, wind damage and forest clearing. The incidence of myrtle wilt often increases forest clearing events such as windthrow and wildfire.

*Nothofagus cunninghamii* is not present within or adjacent to the Site; no special management is considered warranted.

#### C.4.3 Myrtle Rust

Myrtle rust is a disease limited to plants in the Myrtaceae family. This plant disease is a member of the guava rust complex caused by *Austropuccinia psidii*, a known significant pathogen of Myrtaceae plants outside Australia. Infestations are currently limited to NSW, Victoria, Queensland, and Tasmania (DPIPWE 2015).

No evidence of myrtle rust was observed.

#### C.4.4 Chytrid fungus and other freshwater pathogens

The freshwater pests and pathogens *Batrachochytrium dendrobatidis* (chytrid frog disease), *Mucor amphibiorum* (platypus mucor disease) and the freshwater algal pest *Didymosphenia geminata* (didymo) (Allan and Gartenstein 2010) pose a threat to native freshwater species and habitat and can be spread via contaminated water, mud, gravel, soil and plant material or infected animals are moved between sites. Contaminated materials and animals are commonly transported on boots, equipment, vehicles tyres and during road construction and maintenance activities.

Chytrid fungus causes the disease known as chytridiomycosis or chytrid infection. The fungus infects the skin of frogs destroying its structure and function and can ultimately cause death. Sporadic deaths occur in some frog populations, and 100 per cent mortality occurs in other populations. The disease is difficult to positively confirm within the landscape as mouth-swab samples need to be collected from tadpoles at a site to enable testing to be conducted (PCR testing).

The disease has been positively confirmed within the Meander River catchment (Obendorf 2005).

Didymo was not observed in waterways (i.e., the access road adjacent Meander River).

476000

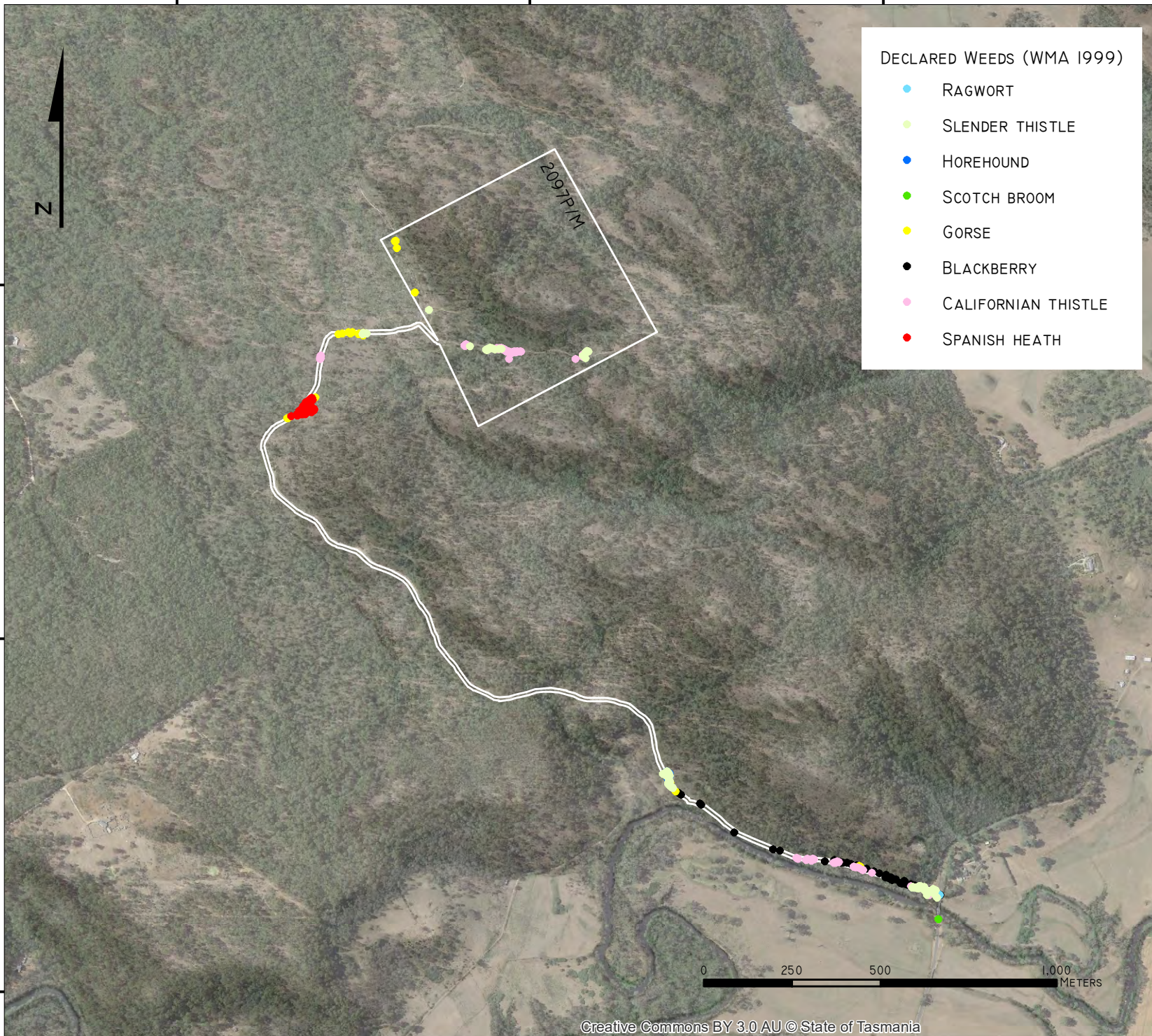
477000

478000

5407000

5406000

5405000



- DECLARED WEEDS (WMA 1999)
- RAGWORT
  - SLENDER THISTLE
  - HOREHOUND
  - SCOTCH BROOM
  - GORSE
  - BLACKBERRY
  - CALIFORNIAN THISTLE
  - SPANISH HEATH

# PORTERS BRIDGE ROAD QUARRY

## NATURAL VALUES ASSESSMENT

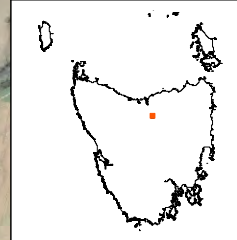
FIGURE 9A: WEEDS (OBSERVED) IN AND AROUND THE PORTERS BRIDGE ROAD QUARRY

TASMAP:  
DELORAINÉ  
4640

LGA:  
MEANDER  
VALLEY

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH

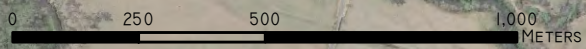
**an Diemen CONSULTING**  
PO Box 1 New Town TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 3 APR 2025



476000

477000

478000

5407000

5406000

5405000



ENVIRONMENTAL WEEDS

- FRANCHET'S COTONEASTER
- EUPHORBIA
- GREAT MULLEIN
- HEMLOCK
- WILD TEASEL
- BLUE PERIWINKLE
- SYCAMORE

# PORTERS BRIDGE ROAD QUARRY

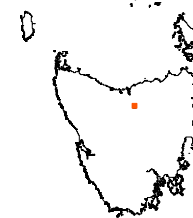
## NATURAL VALUES ASSESSMENT

FIGURE 9B: WEEDS (OBSERVED) IN AND AROUND THE PORTERS BRIDGE ROAD QUARRY

TASMAP:  
DELORAINÉ  
4640

LGA:  
MEANDER  
VALLEY

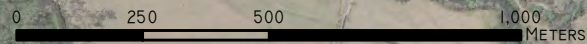
BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 3 APR 2025



## C.5 THREATENED FAUNA SPECIES

### C.5.1 Relevant species

There are several previous recorded sightings of conservation significant fauna species near the Site based on data held within the NVA – **Figure 10**.

**Table 7** provides a list of NVA identified fauna species that were considered in the assessment of habitat in the Site with the type of range class (potential or core range; see FPA 2023B).

**Table 7. Threatened fauna species range boundary intersection with the Site**

Group	Species Name	Common name	TSPA/EPBC	Range Class
Insects	<i>Catadromus lacordairei</i>	green-lined ground beetle	r/-	Potential
Mammals	<i>Sarcophilus harrisi</i>	Tasmanian devil	e/EN	Potential
	<i>Dasyurus maculatus</i> subsp. <i>maculatus</i>	spotted-tailed quoll	r/VU	
	<i>Dasyurus viverrinus</i>	eastern quoll	-/EN	Core and Potential
	<i>Perameles gunnii gunnii</i>	eastern barred bandicoot	-/VU	Core and Potential
Fish	<i>Galaxias fontanus</i>	Swan galaxias	e/EN	Potential
	<i>Prototroctes maraena</i>	Australian grayling	v/VU	Potential
Lizards and Frogs	<i>Pseudemoia rawlinsoni</i>	glossy grass skink	r/-	Potential
	<i>Pseudemoia pagenstecheri</i>	tussock skink	r/-	Potential
	<i>Litoria raniformis</i>	green and golden frog	v/VU	Potential
Birds	<i>Accipiter novaehollandiae</i>	grey goshawk	e/-	Potential
	<i>Lathamus discolor</i>	swift parrot	e/EN	N and W Potential
	<i>Aquila audax</i> subsp. <i>fleayi</i>	wedge-tailed eagle	e/EN	Potential
	<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle	v/-	Potential
	<i>Neophema chrysostoma</i>	blue wing parrot	-/VU	Potential
	<i>Tyto novaehollandiae</i> subsp. <i>castanops</i>	masked owl	e/VU	Core and Potential

476000

477000

478000

5407000

5406000

5405000



SARCOPHILUS HARRISII (E/EN)  
(TASMANIAN DEVIL)

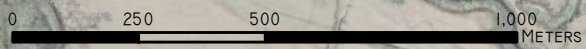
DASYURUS MACULATUS SUBSP. MACULATUS (R/VU)  
(SPOTTED-TAILED QUOLL)

2097P1M

SARCOPHILUS HARRISII (E/EN)  
(TASMANIAN DEVIL)

AQUILA AUDAX SUBSP. FLEAYI (E/EN)  
(TASMANIA WEDGE-TAILED EAGLE)  
NESTS AND BIRD OBSERVATIONS

DASYURUS MACULATUS SUBSP. MACULATUS (R/VU)  
(SPOTTED-TAILED QUOLL)



# PORTERS BRIDGE ROAD QUARRY

## NATURAL VALUES ASSESSMENT

FIGURE 10: NVA RECORDS  
(THREATENED FAUNA) AROUND  
THE PORTERS BRIDGE  
ROAD QUARRY

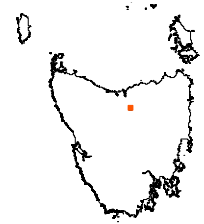
TASMAP:  
DELORAINE  
4640

LGA:  
MEANDER  
VALLEY

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH



**an Diemen CONSULTING**  
PO Box 1 New Town TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 3 APR 2025

C.4.2 Threatened Fauna Habitat Assessments

Eastern barred bandicoot (*Perameles gunnii gunnii*)

The eastern barred bandicoot is a subspecies of *P. gunnii gunnii* which is found only in Tasmania. It originally occurred in native grasslands and grassy woodlands in Tasmania’s Midlands. However, it is now rare in the Midlands where most of its habitat has been cleared. Since European settlement, the eastern barred bandicoot has spread into (originally heavily forested) agricultural areas in the state’s south-east, north-east and north-west. In these areas, it occurs in mosaic habitats of pasture and remnant native forest, often with a significant amount of cover provided by weeds such as gorse and blackberry.

The Conservation Advice<sup>13</sup> for the species does not identify ‘habitat critical to the survival of the species’ and there is no Recovery Plan for this species.

Habitat descriptors for the species (FPA 2023B) are -

<b>Potential habitat</b>	Open vegetation types including woodlands and open forests with a grassy understorey, native and exotic grasslands, particularly in landscapes with a mosaic of agricultural land and remnant bushland.
<b>Significant Habitat</b>	Dense tussock grass-sagg sedge swards, piles of coarse woody debris and denser patches of low shrubs (especially those that are densely branched close to the ground providing shelter) within the core range of the species.

*Survey Results*

No nests attributable to the eastern barred bandicoot were observed in the Site during the surveys. There are very few local roadkill records and observations of the species in the NVA (**Attachment 1**). No bandicoots (eastern barred or the more common and not threatened southern brown) were observed during the surveys or were incidentally flushed from undergrowth (e.g., sagg and bracken-fern dominated areas) during the surveys.

*Assessment of habitat and likely presence in the Site*

It is likely that the species is present, even sporadically, in the Site, and region more broadly, given the presence of potential and significant habitat in the Site; localised patches of dense sagg - sedges in dry eucalypt forest and woodland. The surrounding landscape also supports potential and significant habitat (within core

---

<sup>13</sup> Department of the Environment, Water, Heritage and the Arts (2008zr). Approved Conservation Advice for *Perameles gunnii gunnii* (Eastern Barred Bandicoot (Tasmania)). Canberra: Department of the Environment, Water, Heritage and the Arts. Available from: <http://www.environment.gov.au/biodiversity/threatened/species/pubs/66651-conservation-advice.pdf>. In effect under the EPBC Act from 26-Mar-2008.

range) in the form of a mosaic of agricultural land and remnant bushland (south and east of the Site), with larger tracts of native forest, to the west and north of the Site.

The Site is within the core range of the species, and a component of significant habitat is present (dense tussock grass - sagg - sedge sward and there are some piles of coarse woody debris). The loss of this habitat compared to the very large extent of comparable habitat that is not being disturbed is unlikely to cause a significant impact to the species.

Tasmanian devil (*Sarcophilus harrisii*)

Tasmanian Devils are the largest carnivorous marsupials in the world today and are only found naturally on mainland Tasmania. It lives in a wide range of habitats across Tasmania, especially in landscapes with a mosaic of pasture and woodland. The population has declined by more than 80% since the mid-1990s, when the infectious cancer Devil Facial Tumour Disease (DFTD) was first detected. DFTD has now spread across much of Tasmania.

The Conservation Advice<sup>14</sup> for the species does not identify ‘habitat critical to the survival of the species’ and there is no Recovery Plan for the species.

Habitat descriptors for the species (FPA 2023B) are -

<b>Potential habitat</b>	All terrestrial native habitats, forestry plantations and pasture. Devils require shelter (e.g. dense vegetation, hollow logs, burrows or caves) and hunting habitat (open understorey mixed with patches of dense vegetation) within their home range (4-27 km <sup>2</sup> ).
<b>Significant Habitat</b>	A patch of potential denning habitat where three or more entrances (large enough for a devil to pass through) may be found within 100 m of one another, and where no other potential denning habitat with three or more entrances may be found within a 1 km radius, being the approximate area of the smallest recorded devil home range (Pemberton 1990).

*Survey Results*

No dens attributable to the Tasmanian devil were recorded in the Site during surveys. No devils were detected (none were observed) in the Site when conducting the surveys. Scats were observed, of various ages of decomposition, on the access road, and snig tracks/landings associated with forestry activities. The species is present in the Site, which is to be expected given the previous records of it in the Exton area (NVA records),

---

<sup>14</sup> Department of the Environment, Water, Heritage and the Arts (2009). Approved Conservation Advice for *Sarcophilus harrisii* (Tasmanian Devil). Canberra: Department of the Environment, Water, Heritage and the Arts. Available from: <http://www.environment.gov.au/biodiversity/threatened/species/pubs/299-conservation-advice.pdf>. In effect under the EPBC Act from 29-May-2009.

the indirect evidence of its occurrence in the Site observed during surveys, and the occurrence of suitable forest and woodland habitat in the Site and surrounds.

The geological formations across most of the Site, being a dolerite bedrock with some skeletal soils (and some areas of colluvium), are not easily dug either by wombats (wombat burrows can be used by devils to den) or devils themselves. Gullies and downhill slopes where deeper soils have formed are more conducive to the construction of burrows by wombats however the colluvium formed is rocky, gravelly, and generally shallow and/or unstable to create a functional burrow.

There are localised denning opportunities within fallen timber (mainly trees that have fallen) in the Site but the fallen timber tends to be wattles (decompose readily, offer insufficient dimensions to the trunk to use as a 'den', etc.), is of small overall size as 'woodpiles', and if it is an older tree or stag that has fallen it was found that the tree carcass has collapsed such that a cavity is not created nor maintained for denning activities to occur. Landings associated with forestry activities have a larger volume of timber and coarse woody debris associated with them, but no landings are being impacted by the Quarry.

#### *Assessment of habitat and likely presence in the Site*

The Site is within the potential (but **not** core) range of the species (NVA **Attachment 1**). Significant habitat is absent (i.e. A patch of potential denning habitat where three or more entrances (large enough for a devil to pass through) may be found within 100 m of one another...) but potential habitat is present. The Tasmanian devil would occur in the Site to forage and move.

Potential denning habitat (i.e., areas of burrowable, well-drained soil, log piles or sheltered overhangs) is present but very localised in its occurrence in the Site. No dens were observed during surveys, and none are likely to be present in the Site given the paucity of denning opportunities (e.g., skeletal soils, few suitable rock overhangs). Given the transient nature of devils, there is a possibility that a den has gone undetected and/or new dens may be formed in the future.

#### *Assessment of roadkill risk*

The **total** (on an annual basis) number of trucks and other vehicles generated by the use will exceed that approved under the Approval, however the number of trucks and other vehicles per day will largely remain unchanged because the Quarry is naturally limited in the number it can receive, load and have exit the Site per day. Put simply, there will be more days of carting rather than more trucks and other vehicles per day.

Under the *Survey Guidelines and Management Advice for Development Proposals that may Impact on the Tasmanian Devil (Sarcophilus harrisi)*: A Supplement to the Guidelines for Natural Values Surveys – Terrestrial Development Proposals<sup>15</sup>, the following is recommended in relation to assessing the potential risk of roadkill from a project –

---

<sup>15</sup> Environment Strategic Business Unit (2023) Survey Guidelines and Management Advice for Development Proposals that may impact the Tasmanian Devil (*Sarcophilus harrisi*). Department of Natural Resources and Environment, Tasmania. Version 2.1 – 6 November 2024 (minor updates).

### ‘3.4 Traffic impact assessment

Comparison of current and projected night time traffic rates (i.e. between one hour before sunset to one hour after sunrise) including volume of traffic, types of traffic (light versus heavy vehicles) and/or increased speed on road.

### 3.5 Roadkill Assessment

Roadkill records are available on the NVA and theLIST, however, it is important to be aware that these sources do not provide a complete picture of roadkill records across Tasmania (due to underreporting). A roadkill assessment is recommended to be conducted where desktop assessment of the local devil population and the projected roadkill risk (i.e., >10% increase in night time traffic) indicate potential for a substantial impact on the local population. Ideally, the survey should be conducted regularly over a long period of time, preferably covering all seasons (noting that December to April is when peak roadkill of weaned devils may occur). Notwithstanding the previous point, at a minimum, survey of road killed devils should cover one of the following set periods of time - either 3 months for weaned devils between January and April or 6 months over the remainder of the year. This should involve regular (i.e., daily or weekly) observations and recording of numbers of roadkilled devils along the targeted road/s throughout the survey period. Additional considerations:

- If assessing the impact of traffic associated with a proposed development on the devil, it is necessary to understand the current roadkill rate, potential construction phase roadkill rate, and potential post-development roadkill rate.
- It can be difficult to attribute the relative contribution of a proposed development to roadkill rates on public roads. Where this is an issue, it should be resolved by extending the impact assessment area to the point on a road at which it no longer represents a potential increase in the risk of roadkill of greater than 10 % using a parameter relevant to the proposed development or activity (e.g., to a point where the proposed land use activity is no longer responsible for a greater than 10 % increase in the volume or speed of night time traffic).’

The existing traffic levels in the Approval for the operating hours of 0600 to 1900 hrs Monday to Friday and 0800 to 1600hrs Saturday on each of those days is unlikely to substantially change, it is the number of days per year of carting that will increase. When approved by the EPA, and noting the possible impact to devils, the Approval required at Condition FF1 a **Wildlife monitoring and Wildlife Monitoring Report** which states ‘Impacts of traffic associated with quarry operations on Tasmanian Devil (*Sarcophilus harrisi*), Spotted-tail Quoll (*Dasyurus maculatus*) and Eastern Quoll (*Dasyurus viverrinus*) must be monitored at least weekly on the access road associated with The Land.’

Monitoring in accordance with Condition FF1 demonstrated that no wildlife has been impacted by the traffic on the access road, within the quarry, or associated with the use of Porters Bridge Road from the access to the Exton township despite operating in the approved operating hours. Devils and quolls have been observed on the access road from time to time by truck and light vehicle drivers, but none have been impacted by the traffic using it. Accordingly, the risk to all wildlife remains as it is now (at a negligible level), especially given that no additional trucks can access the quarry during the period of 1 hr before dusk, and 1 hour after dawn; that is, there is physically no ability to get more trucks into the quarry, have them loaded, and then depart beyond what current levels are within each hour of that 1 hr before dusk, and 1 hour after dawn period.

### *Recommendations and mitigation measures*

The following management approach should be applied for **dens and potential dens** –

- Areas to be cleared of vegetation for Quarry activities should first be surveyed by a suitably qualified person to identify if dens or woodpiles supporting dens are present. The pre-clearance surveys must be completed by a suitably qualified person(s) and any dens or suspected dens removed via a procedure approved by the EPA; and
- If dens or potential dens are observed or suspected during operations a 50 m no machinery buffer will be applied to the den or suspected den and expert advice sought.

The following management approach will be applied for **internal road use and maintenance** –

- Undertake education and awareness training for drivers accessing the Quarry;
- Limit internal road speed to 20 km/hr from dusk to dawn;
- Liaise with drivers to identify high-risk road sections (i.e., areas where animals or often seen by drivers) and install advisory signage; and
- Where practicable, and noting relevant controls and identified high-risk areas, clear vegetation on roadsides (at least 3m from road edge) in high-risk areas to enhance view field for drivers.

Spotted-tailed quoll (*Dasyurus maculatus maculatus*)

The spotted-tailed quoll is a carnivorous marsupial which occurs in Tasmania and eastern Australia from Queensland to Victoria. On mainland Australia, the species population has declined dramatically and now Tasmania is its stronghold. It is primarily a forest-dwelling species being most abundant in higher rainfall areas containing rainforest, wet forest, and blackwood swamp forest. Important habitat components appear to be structurally complex forest, old growth forest with tree hollows and coastal scrub (such areas provide opportunities for arboreal hunting and avoidance of Tasmanian devils which compete for prey).

The Recovery Plan<sup>16</sup> for the species does identify ‘habitat critical to the survival of the species’ as:

‘Habitat that is critical to the survival of the Spotted-tailed Quoll includes large patches of forest with adequate denning resources and relatively high densities of medium-sized mammalian prey (Belcher 2000; Belcher & Darrant 2006b; Glen & Dickman 2006a, b). However, the threshold densities of these critical components required to support quoll populations are unknown. Consequently it is currently not possible to define (or map) habitat critical to the survival of the Spotted-tailed Quoll.’

Habitat descriptors for the species (FPA 2023B) are –

<b>Potential habitat</b>	Coastal scrub, riparian areas, rainforest, wet forest, damp forest, dry forest and blackwood swamp forest (mature and regrowth), particularly where structurally complex areas are present, and includes remnant patches in cleared agricultural land or plantation areas.
--------------------------	--

---

<sup>16</sup> Department of Environment, Land, Water and Planning. 2016. National Recovery Plan for the Spotted-tailed Quoll *Dasyurus maculatus*. Australian Government, Canberra.

<b>Significant Habitat</b>	All potential denning habitat within the core range of the species.
<b>Potential denning habitat</b>	Includes 1) any forest remnant (>0.5ha) in a cleared or plantation landscape that is structurally complex (high canopy, with dense understorey and ground vegetation cover), free from the risk of inundation, or 2) a rock outcrop, rock crevice, rock pile, burrow with a small entrance, hollow logs, large piles of coarse woody debris and caves. FPA’s Fauna Technical Note 10 can be used as a guide in the identification of potential denning habitat.

*Survey Results*

No den or dens attributable to the spotted-tailed quoll were recorded in the Site during the surveys. No quolls were detected, nor were any confirmed quoll scats observed in the Site when conducting surveys.

The geological formations across most of the Site, being a dolerite bedrock with some skeletal soils (and some areas of colluvium), are not easily dug either by wombats (wombat burrows can be used by devils to den) or devils themselves. Gullies and downhill slopes where deeper soils have formed are more conducive to the construction of burrows by wombats however the colluvium formed is rocky, gravelly, and generally shallow and/or unstable to create a functional burrow.

There are localised denning opportunities within fallen timber (mainly trees that have fallen) in the Site but the fallen timber tends to be wattles (decompose readily, offer insufficient dimensions to the trunk to use as a ‘den’, etc.), is of small overall size as ‘woodpiles’, and if it is an older tree or stag that has fallen it was found that the tree carcass has collapsed such that a cavity is not created nor maintained for denning activities to occur. Landings associated with forestry activities have a larger volume of timber and coarse woody debris associated with them, but no landings are being impacted by the Quarry.

*Assessment of habitat and likely presence on the Site*

The Site is within the potential (but **not** core) range of the species (see NVA Report, **Attachment 1**). Significant habitat is absent because the Site is outside the core range, but potential habitat is present. The spotted tailed quoll may sporadically occur on the Site to forage and move.

Potential denning habitat (i.e., areas of burrowable, well-drained soil, log piles or sheltered overhangs) is present but very localised in its occurrence in the Site. No dens were observed during the surveys. Given the transient nature of the spotted-tailed quoll, there is a possibility that a den has gone undetected and/or new dens may be formed in the future.

*Assessment of roadkill risk*

This aspect of impact risk is discussed for the Tasmanian devil, with the assessment method and outcomes the same for the spotted-tailed quoll as they are described for the devil.

*Recommendations and mitigation measures*

The management approaches outlined for Tasmanian devil apply for this species.

Eastern quoll (*Dasyurus viverrinus*)

The eastern quoll was once widespread across south-eastern Australia. It disappeared from the mainland in the 1960s. Today, it is only found in the wild in Tasmania but does exist in a mainland haven in Victoria (DoE 2020). It is mostly solitary and is active at night: hunting for prey such as insects, small mammals, birds, and reptiles. Eastern quolls have a thick coat, which can be either fawn or black, with white spots. Both fawn and black young can be born in the same litter. Fawn quolls are much more common.

The Conservation Advice<sup>17</sup> for the species does not identify ‘habitat critical to the survival of the species’ and there is no Recovery Plan for this species.

Habitat descriptors for the species (FPA 2023B) are -

<b>Potential habitat</b>	Includes rainforest, heathland, alpine areas, and scrub. However, it seems to prefer dry forest and native grassland mosaics which are bounded by agricultural land.
<b>Significant Habitat</b>	N/A
<b>Potential denning habitat</b>	N/A

*Survey Results*

The presence of eastern quoll in the Site was not confirmed; no scats definitively attributable to this species were observed, and no eastern quolls were directly observed during the surveys. No den or dens attributable to the eastern quoll were recorded in the Site during the surveys.

The geological formations across most of the Site, being a dolerite bedrock with some skeletal soils (and some areas of colluvium), are not easily dug either by wombats (wombat burrows can be used by quolls to den) or quoll themselves. Gullies and downhill slopes where soils have formed are more conducive to the construction of burrows by wombats however the colluvium formed is rocky, gravelly, and generally shallow and/or unstable to create a functional burrow. There are localised denning opportunities within fallen timber (mainly trees that have fallen) in the Site but fallen timber tends to be wattles (decompose readily, offers insufficient dimensions to the trunk to use as a ‘den’), are of small overall size as ‘woodpiles’, and if it is an older tree or stag that has fallen it was found that these tree carcasses collapse such that a cavity is not created nor maintained for denning activities to occur.

---

<sup>17</sup> Threatened Species Scientific Committee (2015). Conservation Advice *Dasyurus viverrinus* eastern quoll. Canberra: Department of the Environment. Available from: <http://www.environment.gov.au/biodiversity/threatened/species/pubs/333-conservation-advice-2015123.pdf>. In effect under the EPBC Act from 03-Dec-2015.

### *Assessment of habitat and likely presence on the Site*

The Site is within the core range of the species (see NVA Report, **Attachment 1**). Potential habitat is present, and the eastern quoll may sporadically occur on the Site to forage and move.

Potential denning habitat (i.e., areas of burrowable, well-drained soil, log piles or sheltered overhangs) is present but very localised in its occurrence in the Site. No dens were observed during the surveys. Given the transient nature of the eastern quoll, there is a possibility that a den has gone undetected and/or new dens may be formed in the future.

### *Assessment of roadkill risk*

This aspect of impact risk is discussed for the Tasmanian devil, with the assessment method and outcomes the same for the eastern quoll as they are described for the devil.

### *Recommendations and mitigation measures*

The management approaches outlined for Tasmanian devil apply for this species.

### Masked owl (*Tyto novaehollandiae castanops*)

The Tasmanian Masked Owl is endemic to Tasmania, including several near-shore islands, although it is absent from King Island and the Furneaux Group (DPIPWE 2009).

Masked owl is a nocturnal vertebrate predator that is most active at night and roosts during the day. It feeds predominately on introduced rodents and rabbits on agricultural land, and arboreal marsupials, terrestrial mammals, and native birds in less disturbed habitats. The Tasmanian Masked Owl hunts at night for small mammals and birds in a range of habitats which contain some mature forest, usually below 600 m altitude - these include native forests and woodlands as well as agricultural areas with a mosaic of native vegetation and pasture.

Densities of the subspecies vary across Tasmania. The highest densities are in the east and north (Bell *et al.* 1997; Bell and Mooney, 1997), and the lowest densities occur at elevations greater than 600 m and in the western half of the State (Bell *et al.* 1997). Nesting occurs in large tree hollows of living or dead trees, but sometimes in vertical spouts or limbs (Bell *et al.* 1997; Higgins 1999). Birds pair for life, occupying a permanent territory and relying on hollows in old-growth trees for nesting and roosting.

Habitat for the Tasmanian Masked Owl includes the following elements: foraging habitat - a diverse range of forest, woodland and non-forest vegetation including agricultural and forest mosaics; nesting habitat - eucalypt forests and woodlands containing old growth trees with suitable hollows for nesting/roosting but will also nest in isolated old growth trees with suitable hollows.

The Conservation Advice<sup>18</sup> for the species does not identify ‘habitat critical to the survival of the species’ and there is no Recovery Plan for this species.

Habitat descriptors for the species (FPA 2023B) are -

<b>Potential habitat</b>	Potential habitat for the masked owl is all areas with trees with large hollows (≥15 cm entrance diameter). Remnants and paddock trees (in any dry or wet forest type) in agricultural areas may also constitute potential habitat. See <i>FPA Fauna Technical Note 17</i> for guidance on assessing masked owl habitat using ‘on-ground’ and remote methods.
<b>Significant Habitat</b>	Significant habitat for the masked owl is any area of native dry forest, within the core range, with trees with large hollows (≥15 cm entrance diameter). Remnants and paddock trees (in any dry or wet forest type) in agricultural areas may also constitute significant habitat.

### Survey Results

The Site is within the core range of the species, and potential and significant habitat is present (i.e. areas with trees with large hollows (≥15 cm entrance diameter)).

No trees were observed in the Site that support a nest. There are some dead trees in the Site which support hollows, or possible hollows, of >15cm diameter but none were found to be associated with a chamber or larger hollow formation that could accommodate a masked owl for breeding purposes; none of these trees are in the area proposed to be cleared for the Quarry.

Trees outside the Site, such as further to the north, and along the Meander River to the west, support larger (mainly paddock) trees which could support a nest. Roosting habitat (mainly native cherry – *Exocarpos cupressiformis*) is present along the drainage lines in the south and north-west of the Site where rock is to be extracted. Native cherry that occurs on the south-west facing slope of the main section of the Site could also be used as a roost site, but these are in an area not designated for extraction activities.

### Assessment of habitat and likely presence on the Site

The forest mosaic in the Site, and landscape around the Site generally, represents potential habitat in the core range of the species. The entire Site represents foraging habitat for the species, and there are localised pockets of native cherry in the forests and woodlands which represent potential roosting habitat. The species may use the site to forage and roost, but is unlikely to use it for nesting given the paucity of nest possible trees in the Site, and immediate vicinity of the Site, and the greater occurrence of larger trees with better developed hollows in the broader landscape.

---

<sup>18</sup> Department of the Environment, Water, Heritage and the Arts (2010). Approved Conservation Advice for *Tyto novaehollandiae castanops* (Tasmanian Masked Owl). Canberra, ACT: Department of the Environment, Water, Heritage and the Arts. Available from: <http://www.environment.gov.au/biodiversity/threatened/species/pubs/67051-conservation-advice.pdf>. In effect under the EPBC Act from 19-Aug-2010.

### *Recommendations and mitigation measures*

While no impact to the species is anticipated, the following management measures will be applied in case a nest tree is observed/found given the longevity of the Quarry –

- **Potential roost trees** be checked for any signs of occupation (presence of owls, regurgitated pellets or feathers) to see if a bird is flushed, prior to removal. Roosting habitat and methods to identify it are provided in *Fauna Technical Note No. 17: Identifying masked owl habitat*; and
- During construction works and/or vegetation clearing, if **potential nesting habitat** is identified, it is recommended that a 150m buffer be maintained around a potential nest/roost tree or further investigations are undertaken by a suitably qualified expert to confirm if the tree is a nest tree.

### Blue winged parrot (*Neophema chrysostoma*)

A slender parrot with an olive-green head and upper body. Its name comes from the large, dark blue patch on the wings. The main populations of Blue-winged Parrots are in Tasmania and Victoria, particularly in southern Victoria and the midlands and eastern areas of Tasmania. Sparser populations are found in western New South Wales and eastern South Australia, extending to south-west Queensland and occasionally into the Northern Territory. Inhabits a range of habitats from coastal, sub-coastal and inland areas, right through to semi-arid zones. Throughout their range, they favour grasslands and grassy woodlands. They are often found near wetlands both near the coast and in semi-arid zones and can also be seen in altered environments such as airfields, golf courses and paddocks.

Blue-winged parrots breed in Tasmania, coastal south-eastern South Australia, and southern Victoria. During the breeding season (spring and summer), birds occupy eucalypt forests and woodlands (Higgins 1999). They form monogamous pairs and make their nests in a tree hollow or stump, preferably one with a vertical opening. Breeding season is from October to February.

Before migrating from Tasmania in autumn, many birds congregate on saltmarshes and agricultural land before departing north (Higgin 1999). While on the mainland, mobile flocks feed in saltmarsh and rough pasture in coastal Victoria. Birds are known to move more than 100 km inland during winter to feed in semi-arid chenopod shrubland and sparse grassland (Holdsworth *et al.* 2021).

A Recovery Plan is required but has not been completed or approved for implementation.

The Conservation Advice<sup>19</sup> for *Neophema chrysostoma* (blue-winged parrot) issued by DCCEEW states the following of this species:

‘Habitat critical to the survival of the blue-winged parrot include areas that include (sic):

---

<sup>19</sup> Department of Climate Change, Energy, the Environment and Water (2023). Conservation Advice for *Neophema chrysostoma* (blue-winged parrot). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: <http://www.environment.gov.au/biodiversity/threatened/species/pubs/726-conservation-advice-31032023.pdf>. In effect under the EPBC Act from 31-Mar-2023.

- Foraging and staging habitats found from coastal, sub-coastal and inland areas, right through to semi-arid zones including: grasslands, grassy woodlands and semi-arid chenopod shrubland with native and introduced grasses, herbs and shrubs.
- Wetlands both near the coast and in semi-arid zones used for foraging and staging.
- Eucalypt forests and woodlands within the breeding range in Tasmania, coastal southeastern South Australia and southern Victoria.
- Live and dead trees and stumps with suitable hollows within the breeding range.'

Holdsworth *et al.* (2021) describes the Tasmanian breeding range as north-western, central [central north] and eastern parts of Tasmania. Nests have been recorded (based on NVA held data) in the central north and south-east of the State. The Forest Practices Authority considers the breeding range to be the known locations/nests for breeding – being the area within 5kms of a known breeding colony.

Habitat descriptors for the species (FPA 2023B) are -

<b>Potential habitat</b>	includes native Eucalypt forest, native Eucalypt woodlands, grasslands and wetlands.
--------------------------	--

#### *Survey Results*

No blue-winged parrots were observed in the Site during surveys, and consequently no nests were observed. There are sporadic trees with some nest potential locations within their trunk or on secondary branches across the Site, with most of these being *Eucalyptus obliqua*.

#### *Assessment of habitat and likely presence in the Site*

There is foraging habitat in the Site, being forest and woodland dominated by eucalypts. The species may utilise the habitat present in the Site but there are no observations of the species, and no recorded nesting locations. The species may utilise the Site to forage but is unlikely to breed in the Site due to the poor quality of nesting habitat present; vertical hollows are absent, and most 'hollows' are where dead trees have lost limbs but there has not been any subsequent hollow development.

#### Swift parrot (*Lathamus discolor*)

The swift parrot is a small, largely nectar-feeding fast flying parrot which spends its winter in south-eastern mainland Australian before migrating to Tasmania in late winter/early spring to breed. During the breeding season, nectar from Tasmanian blue gum (*Eucalyptus globulus*) and black gum (*Eucalyptus ovata*) flowers is the primary food source for the species. These eucalypts are patchily distributed, and their flowering patterns are erratic and unpredictable, often leading to only a small proportion of swift parrot habitat being available for breeding in any one year. *Eucalyptus ovata* flowers before the main food tree *Eucalyptus globulus* and consequently *E. ovata* is considered an important earlier feeding resource for breeding swift parrots.

Swift Parrots nest in tree hollows in mature eucalypts within foraging range of a flower source. Birds can nest at low densities or sometimes in groups of >50 nests in <100 ha depending on the availability of flowers and tree hollows.

The National Recovery Plan<sup>20</sup> for the swift parrot (*Lathamus discolor*) states the following in relation to ‘habitat critical to the survival of the species’ for the habitat in Tasmania:

‘Breeding and foraging habitat in Tasmania

- In different years the majority of the breeding population may be concentrated within a subset of the potential breeding range, according to spatially and temporally variable flowering patterns of preferred foraging species.
- Therefore, within areas where breeding is most likely to occur based on known breeding records, scientific literature and expert opinion, habitat critical to survival of Swift Parrots comprises both potential foraging habitat – which is native forest and woodland containing either Blue Gum (*E. globulus*) and/or Black Gum (*E. ovata*) as a dominant, subdominant or low density species, and potential nesting habitat – which is forests or woodlands containing hollow-bearing eucalypt trees within foraging range (~10 km) of potential foraging habitat that is old enough to flower.’

Of particular importance for conservation management for swift parrot are priority habitats which are used:

- for nesting,
- by large proportions of the Swift Parrot population,
- repeatedly between seasons (site fidelity), or
- or prolonged periods of time (site persistence).

The Survey Area is not within the identified ‘potential breeding range of swift parrot in Tasmania’ (Figure 2 of the National Recovery Plan).

The Range and Habitat descriptors for the species (FPA 2022) are -

<b>Potential habitat</b>	<p>Potential breeding habitat for the swift parrot comprises potential foraging habitat and potential nesting habitat and is based on definitions of foraging and nesting trees (see Table 1 in Technical Note 3).</p> <p>Potential foraging habitat comprises <i>E. globulus</i> or <i>E. ovata</i> trees that are old enough to flower (for management purposes, this applies to native forest only). In the Eastern Tiers, potential foraging habitat also includes <i>E. brookeriana</i> where it has the potential to contribute a substantial foraging resource. The occurrence of foraging-habitat can be remotely assessed, although only to a limited extent, by using mapping layers such as GlobMap (DPIPWE 2010). Due to the scale and inadequacies in current foraging-habitat mapping, potential foraging-habitat density within operational areas should be identified by ground-based surveys as per Table 2 in the swift parrot habitat assessment Technical Note).</p> <p>For management purposes potential nesting habitat is considered to comprise eucalypt forests that contain hollow-bearing trees. The FPA mature habitat availability map (see FPA’s Fauna Technical Note 2) predicts the availability of hollow-bearing trees using the relevant definitions of habitat provided in</p>
--------------------------	--

<sup>20</sup> DCCEEW 2024, National Recovery Plan for the Swift Parrot (*Lathamus discolor*), Department of Climate Change, Energy, the Environment and Water, Canberra. CC BY 4.0.

	<p>Table 3 of the swift parrot habitat assessment Technical Note. The mature habitat availability map is designed to be used to make landscape-scale assessments and may not be reliable for stand-level assessments required during the development of a forest practices plan.</p> <p>At the stand-level the availability and distribution of hollow-bearing trees across a coupe or operation area is best determined from a ground-based assessment (see Table 3 in the Fauna Technical Note 3 Swift parrot breeding habitat).</p>
<p><b>Significant Habitat</b></p>	<p>Significant habitat is all potential breeding habitat within the SE potential breeding range and the NW breeding areas.</p>

*Survey Results*

There are no swift parrot observations in the NVA for the Reedy Marsh, Exton, and Westbury areas. The Reedy Marsh area, of which the Site is a broader part, is well-studied for its bird diversity.

No swift parrots (nor nests) were observed in the Site during surveys (some were conducted in the swift parrot breeding season including 2021, 2022 (September), 2024 (October, November), and in 2025 (January)).

The nearest NVA swift parrot observations are from Parkham, Elizabeth Town and Deloraine, with a known breeding colony utilising forest on the north-eastern slopes of the Gog Range. The Site is about 18 kms from the Gog Range breeding area, which is more than the 10km ‘foraging range’ of the species noted in the Recovery Plan.

There are sporadic trees with some nest potential locations within their trunk or on secondary branches across the Site, with most of these being *Eucalyptus obliqua*. No swift parrots were observed during surveys of the Site. The Site does support *Eucalyptus ovata* forest and woodland (see **Figure 7A**), and there are large stands of this forest type in the broader Reedy Marsh area (e.g. around Larcombes Road, and to the west of the Mining Lease towards Saddlers Run Road). There is no naturally occurring or planted *E. globulus* in this area.

*Assessment of habitat and likely presence in the Site*

The Site is outside any known swift parrot breeding areas, but it is within the N and W potential breeding area, with the Gog Range breeding area located about 18 kms to the west.

The species may forage in areas of *E. ovata* forest and woodland in the Site and/or surrounding the Site during migration to and from breeding areas. No swift parrots were observed during surveys of the Site, and there are no observations recorded in the Site or broader Reedy Marsh region. It is possible that swift parrots over-fly or use the area to move through the landscape on their migration to and from breeding areas (whether they are the east coast, south-east or north-west known breeding areas such as the Gog Range to the west). It is also possible (but unlikely) that there are undetected swift parrot nest locations within the Reedy Marsh area. It is very unlikely that there would be any impact to the species despite the removal of a few trees with small hollows within their trunk or on secondary branches.

Wedge-tailed eagle (*Aquila audax fleayi*)

This eagle subspecies is found only in Tasmania and occurs throughout the State including large offshore islands. It hunts over a wide range of habitats, but nests only in old-growth trees in native forests. Bird

densities are highest in areas with mosaics of forest, farmland, grassland, wetlands, and rivers. Eagles feed mainly on rabbits, hares, wallabies, possums, birds such as native hens and ravens and carrion.

Nests are usually in tall eucalypt trees in large tracts (more than 10 ha) of old-growth eucalypt or mixed forest. Nest trees are amongst the largest in a locality. They are in sheltered positions on leeward slopes, between the lower and mid slopes and with the top of the tree usually lower than the ground level of the top of the ridge. Nests are not constructed close to sources of disturbance such as quarries or houses. Nests are traditional, with some having been used for at least 50 years. More than one nest may occur within a territory but only one is used in any one year. Breeding failure often promotes a change of nest in the next year. The breeding season occurs between August and January inclusive with eagles being particularly sensitive to disturbance early in this period.

The Recovery Plan (2006-2010) states for this species:

‘Habitat critical to the survival of the Tasmanian Wedge-tailed Eagle is defined by nesting habitat (see Mooney & Holdsworth 1991, Brown & Mooney 1997), as forests of predominantly old growth trees greater than 10ha in area and occurring on sites sheltered from prevailing strong winds. Trees selected for nesting are greater than 27 m in height, with few exceptions. Most nest sites have an eastern, south-eastern or southern aspect and the height of the nest is usually positioned below that of the ridge to the windward side.’

Habitat descriptors for the species (FPA 2023B) are -

<p><b>Potential habitat</b></p>	<p>Potential habitat for the wedge-tailed eagle comprises potential nesting habitat and potential foraging habitat. Potential foraging habitat is a wide variety of forest (including areas subject to native forest silviculture) and non-forest habitats. Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10 ha) of eucalypt or mixed forest. Nest trees are usually amongst the largest in a locality. They are generally in sheltered positions on leeward slopes, between the lower and mid sections of a slope and with the top of the tree usually lower than the ground level of the top of the ridge, although in some parts of the State topographic shelter is not always a significant factor (e.g. parts of the northwest and Central Highlands). Nests are usually not constructed close to sources of disturbance and nests close to disturbance are less productive. More than one nest may occur within a territory but only one is used for breeding in any one year. Breeding failure often promotes a change of nest in the next year. [see FPA’s Fauna Technical Note 1 and FPA’s Fauna Technical Note 6 for more information].</p>
<p><b>Significant Habitat</b></p>	<p>Is all native forest and native non-forest vegetation within 500m or 1 km line-of-sight of known nest sites (where the nest tree is still present).</p>

*Survey Results*

A nest search was conducted of the Site across two survey periods – April and August 2021 and no nests were found. Another search was conducted in April 2025 and no additional nests were found. Foraging habitat is present.

RND193 and RND3462 are located within 1,000m of the access road however the access road is not within line-of-sight (**Figures 10 and 11**); the nests are located on the eastern to south-eastern side of a hillock where the viewfield is blocked by the landform to the west that provides wind protection to the nests. RND125 is

located more than 1km from any part of the Site and in April 2025 was found to be absent at the NVA recorded coordinates (RND125 has a poor level of accuracy; **Figure 11**); no new or alternate nest was located around the area despite searching.

*Assessment of habitat and likely presence in the Site*

There are several raptor nests in the local region attributed to wedge-tailed eagle – see **Figure 11**.

Significant habitat is present in the Site because native forest and native non-forest vegetation occurs within 500m or 1 km line-of-sight of known nest sites (where the nest tree is still present); this applies to RND193 and RND3462 only. The significant habitat is not being cleared or converted because where it exists the road already exists (it is road use and maintenance not clearance of vegetation for road construction), and there is no intersection with Quarry specific activities like crushing, drilling and blasting, screening, and stockpiling. The Site lacks ‘habitat critical to the survival of the species’ as defined in the Recovery Plan. No impact to the species is anticipated.

White-bellied sea eagle (*Haliaeetus leucogaster*)

The white-bellied sea eagle is widely distributed from India to Australia. Key sites in Tasmania include the Tamar River estuary, Tasman Peninsula, and the Bass Strait Islands. They nest and forage mainly near the coast but will also live near large rivers and lakes inland, often moving on a seasonal basis.

The nest of the white-bellied sea eagle is similar in construction to the wedge-tailed eagle and when resources are limited, competition for nest sites between the two species can occur. As with the wedge-tailed eagle, the white-bellied sea eagle nests are traditional. More than one nest may occur within a territory, but only one is used in any one year. The breeding season occurs between August and January inclusive with eagles being particularly sensitive to disturbance early in this period.

Habitat descriptors for the species (FPA 2023B) are -

<p><b>Potential habitat</b></p>	<p>Comprises potential nesting habitat and potential foraging habitat. Potential foraging habitat is any large waterbody (including sea coasts, estuaries, wide rivers, lakes, impoundments and even large farm dams) supporting prey items (fish). Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10 ha) of eucalypt or mixed forest within 5 km of the coast (nearest coast including shores, bays, inlets and peninsulas), large rivers (Class 1), lakes or complexes of large farm dams. Scattered trees along river banks or pasture land may also be used. The species nests and forages mainly near the coast but will also live near rivers, lakes and farm dams. Nest trees are amongst the largest in a locality. Nests are not usually constructed close to sources of disturbance and nests close to disturbance are less productive. More than one nest may occur within a territory but only one is used for breeding in any one year. Breeding failure often promotes a change of nest in the next year. [see Part I of the BVD, and FPA’s Fauna Technical Note 1 for more information].</p>
<p><b>Significant Habitat</b></p>	<p>Is all native forest and native non-forest vegetation within 500m or 1 km line-of-sight of known nest sites (where the nest tree is still present).</p>

### *Survey Results*

A nest search was conducted of the Site across two survey periods – April and August 2021 and no nests were found. Another search was conducted in April 2025 and no additional nests were found. Foraging habitat is present.

### *Assessment of habitat and likely presence in the Site*

There are very few raptor nests in the Deloraine region attributed to white-bellied sea eagle, none of which occur within 1,000 m line-of-sight or 500 m of the Site. Significant habitat for this species is absent. No impact to the species is anticipated.

476000

477000

478000

5408000

5407000

5406000

5405000



RND 125  
AQUILA AUDAX SUBSP. FLEAYI (E/EN)  
POSITION ACCURACY 1 KM

2097PM



RND 193 & 3462  
AQUILA AUDAX SUBSP. FLEAYI (E/EN)  
POSITION ACCURACY 50 & 10 M

0 250 500 1,000 METERS

# PORTERS BRIDGE ROAD QUARRY

## NATURAL VALUES ASSESSMENT

FIGURE II: NEAREST KNOWN  
(NVA) RAPTOR NESTS TO  
THE PORTERS BRIDGE  
ROAD QUARRY

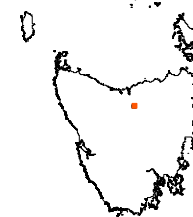
TASMAP:  
DELORAINÉ  
4640

LGA:  
MEANDER  
VALLEY

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH



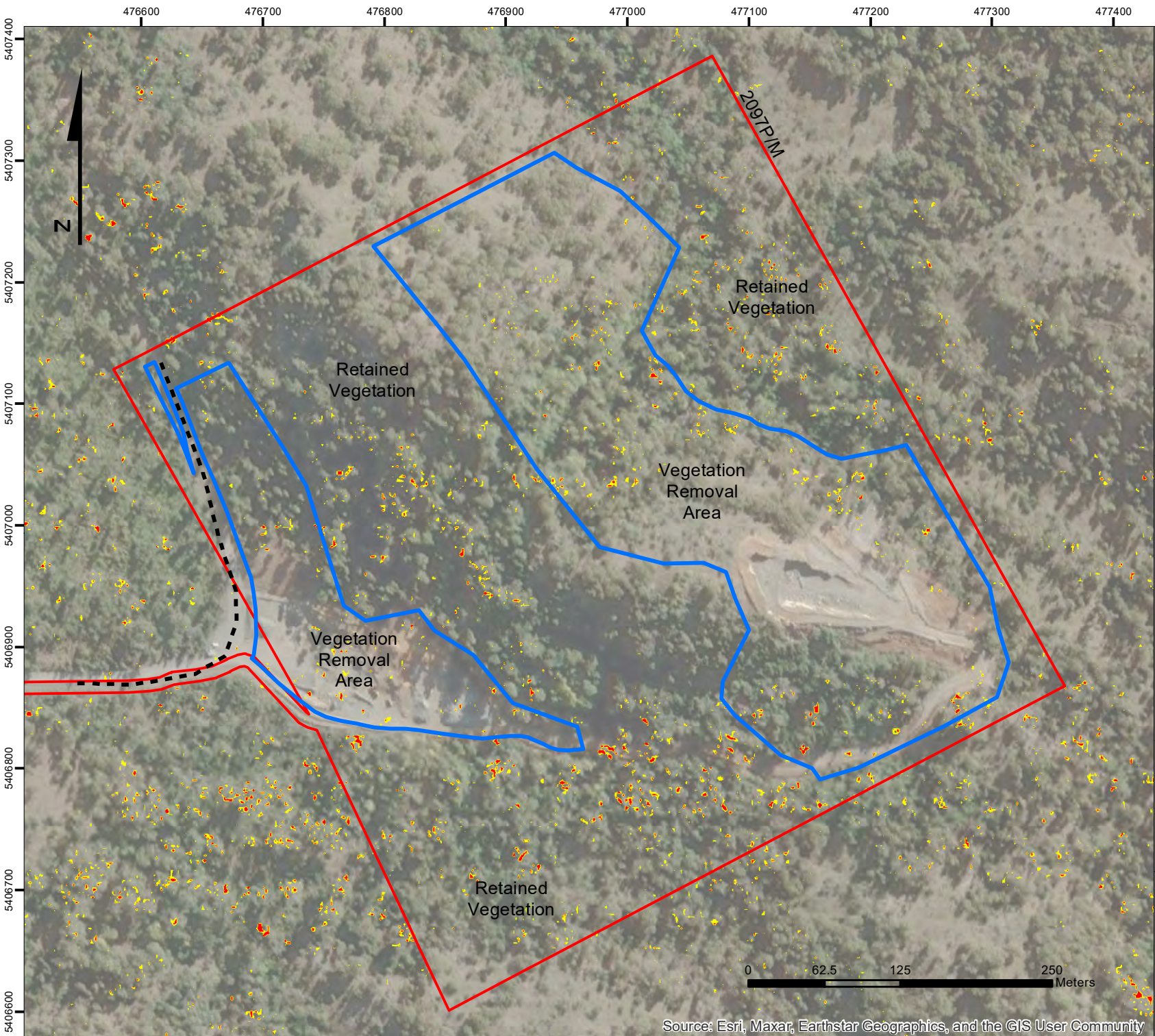
**an Diemen CONSULTING**  
PO Box 1 New Town TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 3 APR 2025



PORTERS BRIDGE  
ROAD QUARRY

NATURAL VALUES  
ASSESSMENT

Figure 12: Canopy  
Height Model (m)  
(NRE)

TASMAP:  
DELORAINÉ  
4640

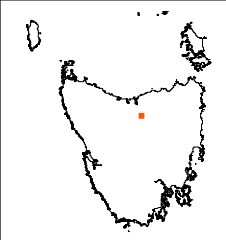
LGA:  
MEANDER  
VALLEY

CANOPY HEIGHT MODEL (NRE)

	<15M
	15 TO 20M
	>20M

Base data by TASMAP. © State of Tasmania  
Base image © ESRI

van Diemen CONSULTING  
PO Box 1 NEW TOWN TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 3 APR 2025

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Grey goshawk (*Accipiter novaehollandiae*)

This raptor species inhabits mature blackwood swamp forest, wet forest, and mixed forest, primarily at lower altitudes (Forest Practices Authority 2008). In general, forest with a closed canopy and low stem density is favoured by the birds for nesting. Consequently, breeding densities are greatest in blackwood swamps and riparian blackwood forest in the north-west. Other areas where breeding occurs are in the north-east, the south-east (including wet parts of Bruny Island), the Mount Field area, the northern side of the Western Tiers, south of Macquarie Harbour and in coastal forest between Macquarie Harbour and the Pieman River.

Habitat descriptors for the species (FPA 2023B) are -

<b>Potential habitat</b>	Native forest with mature elements below 600 m altitude, particularly along watercourses. <i>FPA's Fauna Technical Note 12</i> can be used as a guide in the identification of grey goshawk habitat.
<b>Significant Habitat</b>	May be summarised as areas of wet forest, rainforest and damp forest patches in dry forest, with a relatively closed mature canopy, low stem density, and open understorey in close proximity to foraging habitat and a freshwater body (i.e. stream, river, lake, swamp, etc.). <i>FPA's Fauna Technical Note 12</i> can be used as a guide in the identification of grey goshawk habitat.

*Survey Results*

There is potential nesting and foraging habitat for grey goshawk on the Site; the riparian zone of the Meander River. The Site otherwise has no permanent watercourses that support dense stands of blackwood and tea-tree (or swampy vegetation where these species may be co- or sub-dominant), nor are there any areas of closed canopy in association with ponds, dams, or any other artificial waterbody.

Some localised patches in the south and north-west of the Site where rock is to be extracted support small areas (<0.05 hectares) of dense dogwood (*Pomaderris apetala*), paperbark (*Melaleuca ericifolia*) and blackwood (*Acacia melanoxylon*) midstorey with an open understorey. The patches of dense vegetation are not connected and are surrounded otherwise by very open dry forest vegetation with only a sparse to scattered midstorey layer of trees. A nest search of Suitability 1 and 2 habitat types as defined in Fauna Technical Note No. 12: *Goshawk habitat categories* were conducted (January 2025) – for example, the DOV forest in the north-eastern corner of the Site was searched. No grey goshawk nests or potential nests were observed.

*Assessment of habitat and likely presence in the Site*

The Site is within the potential range for the species, and the species may at some stage be present in or use the Meander River for foraging. The use and maintenance of the existing access road is not likely to affect the habitat for this species in the adjacent Meander River. No impact to the species is anticipated.

Green and gold frog (*Litoria raniformis*)

A large frog (up to 80 mm long) which occurs in Tasmania and south-eastern mainland Australia. Despite the name, its coloration varies considerably, but all adults have a pale green stripe down the middle of the back

and turquoise thighs. In Tasmania, the species occurs in lowland areas in the south-east and north, breeding in permanent freshwater lagoons, generally with emergent vegetation. The mating call is a very distinctive series of grunts and growls. This is the only Tasmanian frog which can be seen ‘basking’ out of water, amongst vegetation or on rocks and logs.

Breeding habitat includes the following elements: still or slow-moving water bodies (lagoons, lakes, farm dams, ponds, irrigation channels, swamps, and slow-moving sections of rivers and streams); the species prefers the shallow part of lagoons (to approx. 1.5m) with a complex vegetation structure, often containing vegetation communities dominated by emergent plants such as water ribbons (*Triglochin*) and spikerush (*Eleocharis*), and submerged plants such as watermilfoil (*Myriophyllum*), marsh-flower (*Ornduffia*), and pondweed (*Potamogeton*); however, other plant communities can also form suitable breeding habitat.

Habitat descriptors for the species (FPA 2023B) are -

<b>Potential habitat</b>	Permanent and temporary waterbodies, usually with vegetation in or around them. Potential habitat includes features such as natural lagoons, permanently or seasonally inundated swamps and wetlands, farm dams, irrigation channels, artificial water-holding sites such as old quarries, slow-flowing stretches of streams and rivers and drainage features.
<b>Significant Habitat</b>	Still or very slow flowing water bodies, with at least some vegetation, and a lack of obvious pollutants (oils, chemicals, etc). See <i>FPA Fauna Technical Note 18</i> for further guidance on assessing <i>Significant habitat</i> for the green and gold frog.

#### Survey Results

There is no suitable habitat in the Site; no dams/artificial water impoundments or wetlands were observed. The access road adjacent to the Meander River is slow flowing for part of the year, but the river section adjacent to the access road lacks suitable macrophyte habitat.

#### Assessment of habitat and likely presence in the Site

The species is known from the Meander River catchment, but no suitable habitat is present in the Site. No impact to the species is anticipated.

#### Glossy grass skink (*Pseudemoia rawlinsoni*)

A ground-dwelling lizard of swampy and wetland sites. It has a widespread but scattered distribution in Tasmania, known from locations on the east coast, north coast, inland near Cradle Mountain and Cape Barren Island. It forages and basks within this habitat e.g. on logs amongst dense grass. It shelters in dense vegetation, such as within the base of grass and rush tussocks, and in rotting logs.

Habitat descriptors for the species (FPA 2023B) are -

<b>Potential habitat</b>	Wetlands and swampy sites (including grassy wetlands, teatree swamps and grassy sedgeland), and margins of such habitats.
--------------------------	---

*Survey Results*

No suitable habitat is present in the Site.

*Assessment of habitat and likely presence on the Site*

The Site is within the potential range for the species, with the nearest records being towards Launceston on the Tamar River. No suitable habitat is present in the Site and accordingly no impact to the species is anticipated.

Tussock skink (*Pseudemoia pagenstecheri*)

In Tasmania, this ground-dwelling lizard, occurs in grassland and grassy woodland habitats at a range of elevations. Records of the species in Tasmania are in small, disconnected patches of habitat in the Midlands, inland near Cradle Mountain and the eastern Bass Strait islands.

Habitat descriptors for the species (FPA 2023B) are -

<b>Potential habitat</b>	Grassland and grassy woodland (including rough pasture with paddock trees), generally with a greater than 20% cover of native grass species, especially where medium to tall tussocks are present.
--------------------------	--

*Survey Results*

No suitable habitat is present in the Site; the forest is generally shrubby to scrubby, and grasslands are absent.

*Assessment of habitat and likely presence on the Site*

The Site is within the potential range for the species, but no suitable habitat is present in the Site. No impact to the species is anticipated.

Green-lined beetle (*Catadromus lacordairei*)

A large and predatory ground-dwelling beetle, shiny black in colour and with a distinctive metallic green line down either side of the body. The species has only been recorded from a small number of sites in Tasmania, mainly in the northern and central Midlands. It also occurs on mainland Australia. The species occurs in open grassy woodland associated with wetlands at low elevations.

The species occurs in open grassy woodland associated with wetlands at low elevations. In this habitat, adults occur beneath stones and woody debris and may also be found sheltering and hunting within the fissures of basaltic clay soils (Spencer and Richards 2010). Of the sites surveyed, beetles were recorded in highest densities in areas associated with naturally occurring wetlands. Most recent sites for the species have been within a hundred metres of permanent water such as a dam or wetland (Spencer & Richards 2010).

It is likely that the Green-lined Ground Beetle was more widespread historically in Tasmania, prior to extensive land clearing and modification of natural wetlands and large river systems in the Tasmanian Midlands. Recent collections of the species from novel sites, but within the broader predicted range of low elevation Midlands,

suggests that minor range extensions and infillings are possible, with targeted surveys (Spencer & Richards 2010).

Habitat descriptors for the species (FPA 2023B) are -

<b>Potential habitat</b>	Open, grassy/sedgy, low altitude grasslands and woodlands associated with temporary and permanent wetlands and low-lying plains, flats and ephemeral drainages adjacent to rivers and streams. Key habitat elements that need to be present include sheltering sites such as patches of stones, coarse woody debris and/or cracking soils.
--------------------------	--

#### *Survey Results*

There are no grasslands, grassy woodlands, wetlands, or other ‘habitats’ present that have or are associated with ‘cracking soils’.

#### *Assessment of habitat and likely presence on the Site*

The Site is within the potential range for the species, with the nearest records being towards Longford on the broader river flats and associated soils of a large river system. The species is likely to be absent from the Site given the lack of habitat. No impact to the species is anticipated.

#### Australian grayling (*Prototroctes maraena*)

A native fish which migrates between fresh and marine waters. The species occurs in coastal rivers and streams in New South Wales, Victoria and Tasmania. In Tasmania, the Australian Grayling has been found in northern, eastern and western rivers, but has so far not been recorded from the south-west. Adults live and breed in freshwater rivers, and the larvae are swept downstream into coastal waters. Juveniles then remain in marine waters for about six months before returning to the freshwater adult habitat.

Habitat descriptors for the species (FPA 2023B) are -

<b>Potential habitat</b>	All streams and rivers in their lower to middle reaches. Areas above permanent barriers (e.g. Prosser River dam, weirs) that prevent fish migration are not considered potential habitat.
--------------------------	---

#### *Survey Results*

The Meander River (potential habitat for the species) is adjacent to the access road that provides ingress and egress to the Quarry. The road exists and is to be maintained, without any further works required to widen it or to install additional drainage or culverts.

#### *Assessment of habitat and likely presence on the Site*

The Site is within the potential range for the species, and the species may at some stage be present in or use the Meander River. The use and maintenance of the existing access road is not likely to affect the habitat for this species in the adjacent Meander River. No impact to the species is anticipated.

Swan galaxias (*Galaxias fontanus*)

A small native freshwater fish (up to 135 mm long). The species is restricted to a few very small populations in headwater streams in eastern Tasmania, which have in the past been protected from invasive introduced fish such as trout and Redfin Perch. These remaining populations include nine natural populations (all occurring in the Swan River and Macquarie River catchments and between upper St Pauls River in the north and Rocka Rivulet in the south) and a small number of translocated populations. Key threats to the species are from introduced fish and from changes to water flow and quality. Streams supporting healthy populations are all protected from trout invasion by some form of barrier (waterfall, marsh, small channel), and the maintenance of these barriers to fish movements (while avoiding alteration to water flow or quality) is vital for the long-term survival of the remaining populations.

Habitat descriptors for the species (FPA 2023B) are -

<b>Potential habitat</b>	Slow to moderately fast flowing streams containing permanent water (even when not flowing), which have good in-stream cover from overhanging banks and/or logs, and shade from overhanging vegetation. A population can only be maintained where barriers have prevented establishment of trout and redfin perch. The nature of these barriers is variable and can include permanent natural structures such as waterfalls and chutes and also low flow-dependent features such as marshes, ephemeral water-losing and remnant channels, and braided channel floodplain features.
--------------------------	---

*Survey Results*

The Meander River (potential habitat for the species) is adjacent to the access road that provides ingress and egress to the Quarry. The road exists and is to be maintained, without any further works required to widen it or to install additional drainage or culverts.

*Assessment of habitat and likely presence on the Site*

No permanent watercourses occur within the Site, with the Meander River being adjacent to an existing road that will be used to access the Quarry. There will be no impact to the Meander River as the existing road will be used and maintained. The Meander River also has few barriers to trout movement and occupation of river habitat in the Deloraine area; the presence of trout will prevent the occurrence of swan galaxias. No impact to the species is anticipated.

## **PART D – OTHER NATURAL VALUES**

This section considers the other natural values or natural processes stipulated in the PSGs including Protected Environmental Values, Wilderness and geoconservation values.

### **D.1 GEOCONSERVATION SITES AND GEOMORPHOLOGICAL PROCESSES**

The Tasmanian Geoconservation Database (TGD) is a source of information about geodiversity features, systems, and processes of conservation significance in the State of Tasmania. The database is a resource for anyone with an interest in conservation and the environment. However, the principal aim is to make information on sites of geoconservation significance available to land managers to assist their management.

More than a thousand sites are currently listed. These range in scale from individual rock outcrops and cuttings that expose important geological sections, to landscape-scale features that illustrate the diversity of Tasmania's geomorphic features and processes. Many of the sites are very robust and unlikely to be affected by human activities; others are highly sensitive to disturbance and require careful management.

The nearest geoconservation site is the Deloraine Eocene fossil site (ID 2509) which is located to the west of the Meander River just to the north of Deloraine (about 5.4 kms to the south-west of the Site). The Site does not overlap with, or occur adjacent to, **any** geoconservation sites listed on the Tasmanian Geoconservation Database. Hence, the Quarry will not have any impact to a listed geoconservation site.

The Quarry will exploit a large area of Jurassic dolerite (**Figure 4**) that would otherwise have a very slow natural rate of erosion and decomposition. Natural sediment loads into the Meander River would not be altered by the Quarry (i.e., untreated [for sediment removal] polluted stormwater will not be directed to Meander River from the Quarry). Sediment generated by the Quarry from open areas of bare ground would be managed near source using sumps and small sediment traps (as they currently are for the Approval), with water treatment occurring through the sediment pond system for the Quarry. The access road has existed for many years (prior to the Quarry), and has drains, culverts, and sumps to catch water prior to its discharge to the Meander River.

### **D.2 PROTECTED ENVIRONMENTAL VALUES (PEVS) – MEANDER RIVER CATCHMENT**

#### Setting and managing PEVs

Under the *State Policy on Water Quality Management 1997* protected environmental values (PEVs) must be set for all Tasmanian surface waters (including estuarine and coastal waters). The PEVs also need to be considered in the context of the Conservation of Freshwater Ecosystem Values (see *D.4 Conservation of Freshwater Ecosystem Values (CFEV)*).

The document entitled 'ENVIRONMENTAL MANAGEMENT GOALS for TASMANIAN SURFACE WATERS – MEANDER RIVER CATCHMENT May 2004' (the 'PEV Assessment') was prepared by the Environment Division in association with the Land and Water Management Branch, of the Department of Primary Industries Water and Environment, the Tasmanian Parks and Wildlife Service and the Meander Valley, West Tamar, Northern Midlands and Central Highlands Councils.

The first step in the implementation of the State Policy on Water Quality Management 1997 is the identification of Protected Environmental Values (PEVs) for the surface waters in the subject region. PEVs are

the current values and uses of a water body for which water quality should be protected. These values and uses should be clearly in evidence at the time of the implementation of the Policy.

The State Policy on Water Quality Management 1997 specifies a range of PEVs which may be applied to a given water body. More than one PEV may be applied to a water body. The PEVs apply to all surface waters within each land tenure category, other than:

- privately owned waters<sup>21</sup> that are not accessible to the public and are not connected to, or flow directly into, waters that are accessible to the public; or
- waters in any tank, pipe, or cistern.

The PEVs are:

- A. Protection of Aquatic Ecosystems
- B. Recreational Water Quality and Aesthetics
- C. Raw Water for Drinking Water Supply
- D. Agricultural Water Use
- E. Industrial Water Supply

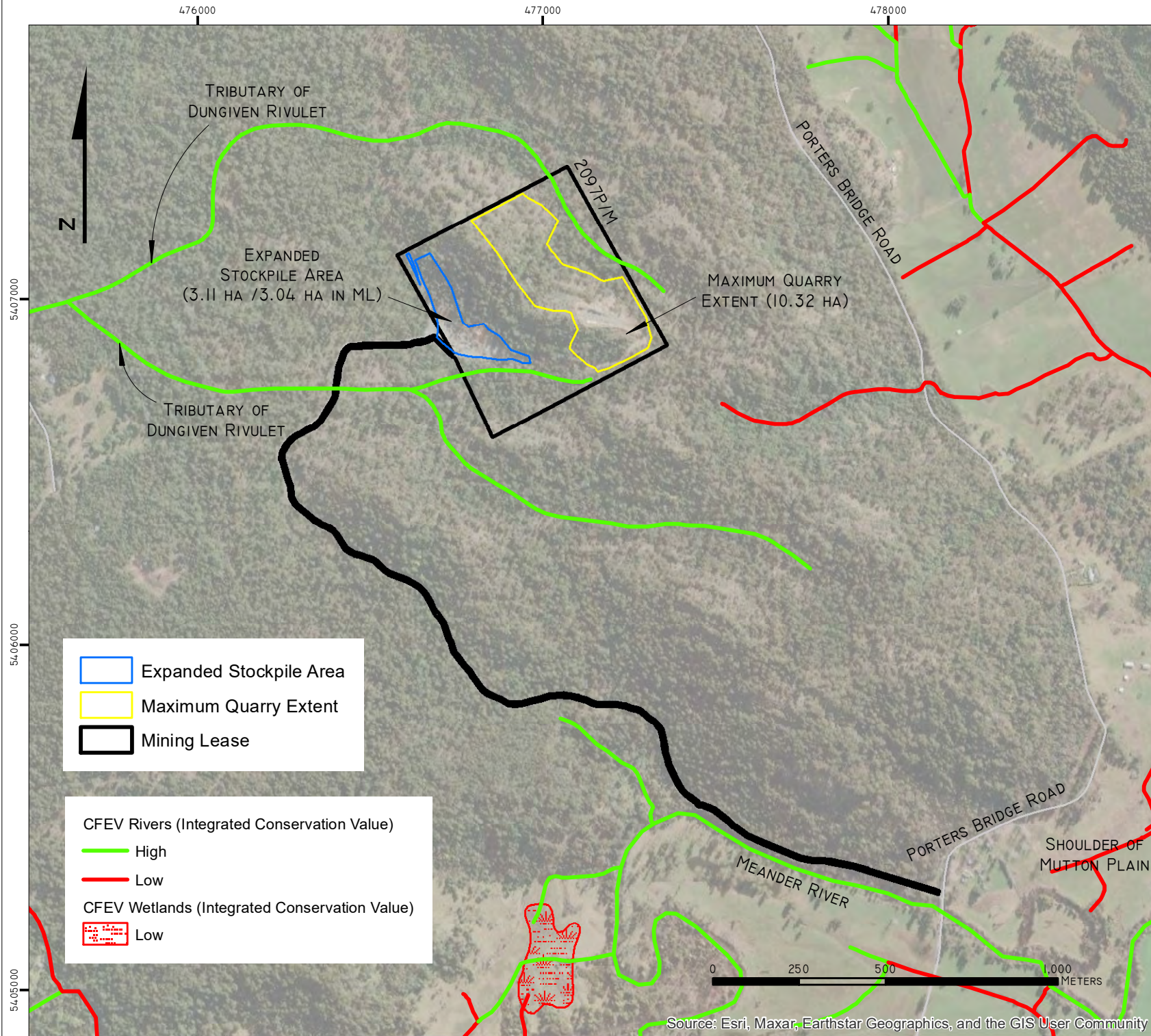
The PEV Assessment was used as a basis for community and stakeholder participation in the process of developing environmental management goals for the Meander River Catchment. After public consultation, and with approval of the above planning authorities, Protected Environmental Values were then finalised. The Protected Environmental Values are to be shown in park management plans, used for Natural Resource Management, and considered in water management planning.

Words and expressions used in the PEV Assessment have, unless the contrary intention appears, the same meaning as defined in the State Policy on Water Quality Management 1997 and the *Environmental Management and Pollution Control Act 1994*. Ecosystem refers to *physical, chemical and biological aspects* of the aquatic environment.

---

<sup>21</sup> “Privately owned waters” means any surface waters confined within the boundary of privately owned land and which do not flow into, or do not communicate with:

(a) the sea or arm or creek of the sea; (b) a source of supply for a water district or irrigation water district; (c) any river, stream, watercourse, lake, pond, or marsh.



476000 477000 478000

5407000

5406000

5405000

# PORTERS BRIDGE ROAD QUARRY

## NATURAL VALUES ASSESSMENT

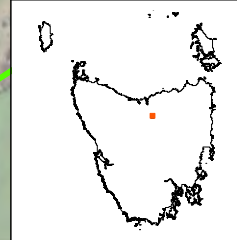
FIGURE 13: OTHER NATURAL VALUES - CFEV SURROUNDING THE PORTERS BRIDGE ROAD QUARRY

TASMAP:  
DELORAINÉ  
4640

LGA:  
MEANDER VALLEY

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © ESRI

an Diemen CONSULTING  
PO Box 1 NEW TOWN TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 3 APR 2025

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

### Meander River

The Meander River catchment covers an area of about 1,600 square kilometres in northern Tasmania. A major sub catchment of the South Esk River Basin, its headwaters rise at about 1,300 metres elevation in the high rainfall areas of the Great Western Tiers before it runs north and east to join the South Esk River below Hadspen. Its waters eventually discharge into the Tamar River at Launceston. Overall, it is estimated there are 1,100 kilometres of streams draining the catchment, with the Meander River, Liffey River, Quamby Brook and Western Creek being the major waterways.

The Great Western Tiers have a considerable impact upon regional climatic conditions. Because of its higher altitude (over 1000 metres), the escarpment is characterised by greater annual rainfall (2200 mm average) and colder conditions with greater frequency of snow and frost. Conditions are less severe to the north and to the east with milder temperatures and lower rainfall (annual average around 700 mm in the east). However, some lower lying catchments such as the Meander and Liffey are prone to flooding due to high rainfall events along the escarpment. Conversely, lack of water can also be a problem in some years. Frosts are also common during the winter months.

The Meander River is the receiving water for three sewage treatment plants at Deloraine (annual discharge 280 ML), Westbury (annual discharge 110 ML) and Carrick (250 ML)<sup>22</sup>.

Most of the catchment lies within the Meander Valley Municipality. Small areas to the north, east and south lie within the West Tamar, Northern Midlands and Central Highlands municipalities respectively. Major forms of land tenure within the catchment are private land (over 70%), state forest (21%) and the Central Plateau Conservation Area (5%). Areas comprising the southern boundaries of the catchment are also registered on the World Heritage List for outstanding natural and cultural values.

### Survey Area

The Site is located northwards of the Meander River where it passes in a westerly direction through lowland terrain between Deloraine and Quamby Bend (**Figure 1**). The nearby Shoulder of Mutton Plains, east of the Site access off Porters Bridge Road, contains numerous old river terraces and beds.

Two eastern tributaries of Dungiven Rivulet have part of their headwaters in the Site and associated area which then flow westwards to report to the primary channel of Dungiven Rivulet (**Figure 13**) and then to the Meander River.

The relevant table is taken from the PEV Assessment for **Surface waters flowing through Private Land** –

---

<sup>22</sup> ENVIRONMENTAL MANAGEMENT GOALS for TASMANIAN SURFACE WATERS – MEANDER RIVER CATCHMENT May 2004.

LAND USE	PROTECTED ENVIRONMENTAL VALUES– MEANDER RIVER CATCHMENT
For all surface waters within private land (including forest on private land)	<p>A: Protection of Aquatic Ecosystems</p> <p>(ii) Protection of modified (not pristine) ecosystems from which edible fish are harvested</p> <p>B: Recreational Water Quality &amp; Aesthetics*</p> <p>(i) Primary contact water quality (Deloraine, Egmont [Birralee Road], and Bracknell)</p> <p>(ii) Secondary contact water quality</p> <p>(iii) Aesthetic water quality</p> <p>C: Raw Water for Drinking Water Supply (Westbury/Hagley, Exton, Bracknell, and Deloraine)</p> <p>(ii) Subject to coarse screening plus disinfection</p> <p>D: Agricultural Water Uses</p> <p>(i) Irrigation</p> <p>(ii) Stock watering</p> <p>E: Industrial Water Supply (Hydro-Electric Power Generation, Pivot)</p> <p>That is, as a minimum, water quality management strategies should provide water of a physical and chemical nature to support a modified, but healthy aquatic ecosystem from which edible fish may be harvested; that is suitable to supply town drinking water (subject to coarse screening plus disinfection) at Westbury/Hagley, Exton, Bracknell and Deloraine; that is acceptable for irrigation and stock watering purposes; and which will allow people to safely engage in primary and secondary contact recreation activities such as swimming (Deloraine, Egmont and Bracknell), paddling or fishing in aesthetically pleasing waters; and is suitable for use by Pivot and (following impoundment) in the Trevallyn Power Scheme.</p>

The development and use of the Quarry will not disturb the Meander River, which is the main surface waterbody flowing near any area proposed to be used (or continued to be used) for the Quarry. The access road is existing and has been for many years prior to the Quarry having received its Approval. The road was established for timber harvesting and has been maintained since for that purpose, and then it was slightly upgraded and improved when the Quarry commenced.

The Dungiven Rivulet tributaries commence within the Site (**Figure 13**) but are not proposed to be rock extracted; they are protected or are to be protected by buffers of native vegetation and drainage measures applied to discharge points to ensure sedimentation risks are mitigated.

The Quarry is unlikely to compromise or prejudice the PEVs in the Meander River and tributaries of Dungiven Rivulet such that there should be negligible to the broader Tamar Estuary.

### **D.3 WILDERNESS QUALITY**

The PSGs require consideration of high-quality wilderness areas identified in the Tasmanian Regional Forest Agreement in or within the vicinity of the site. To assess this matter, the Wilderness layer available through TheLIST was accessed, in conjunction with background reports<sup>23</sup> to provide context of the mapping.

The Wilderness layer is the result of a wilderness mapping project that was undertaken by the Parks and Wildlife Service in the mid 1990's. The scope of the project was the landmass of Tasmania including the Bass Strait islands. The project driver was to complete work to contribute to the 1997 Tasmanian Regional Forest Agreement (RFA). The methodology followed the guidelines of the National Wilderness Inventory (NWI) which was developed by the Australian Heritage Commission in the late 1980s and early 1990s to identify wilderness quality across Australia. A NWI 12 was used for RFA processes as the threshold of high wilderness quality.

The Quarry (and Mining Lease) is not identified as having any Wilderness value (i.e. no NWI), and its operation will therefore not affect any high-quality wilderness.

### **D.4 CONSERVATION OF FRESHWATER ECOSYSTEM VALUES (CFEV)**

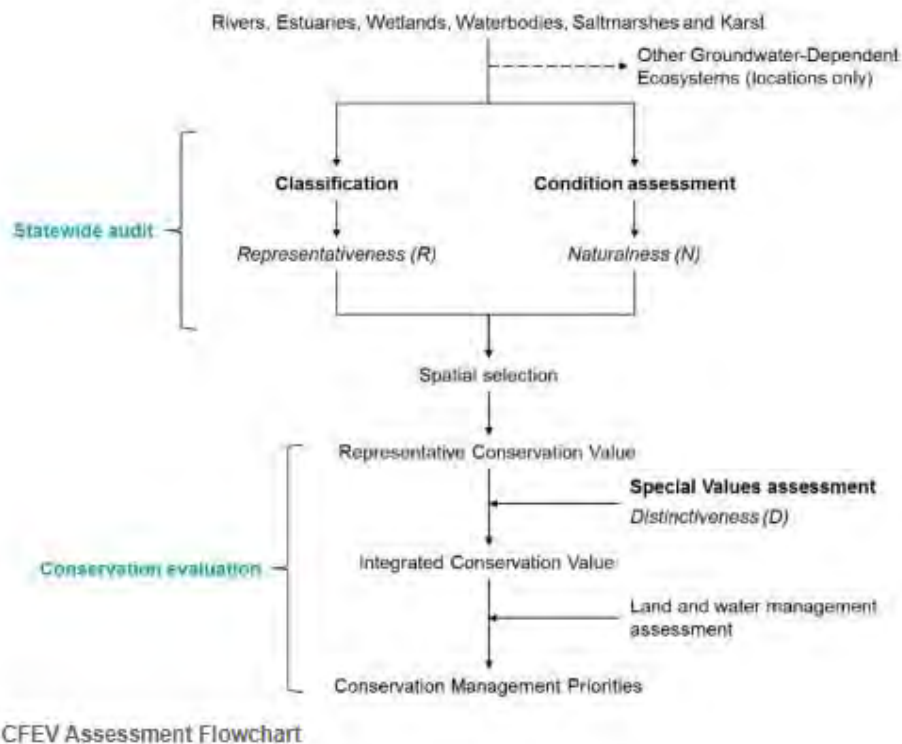
The Conservation of Freshwater Ecosystem Values (CFEV) program aims to ensure that priority freshwater values are appropriately considered in the development, management and conservation of the state's water resources. The program undertook an assessment of the conservation management priorities (CMP) of all freshwater ecosystems throughout the state. It generated the first Comprehensive, Adequate and Representative (CAR) assessment of freshwater ecosystems conducted in Australia.

The CFEV program completed a Statewide audit and conservation evaluation of Tasmania's freshwater-dependent ecosystems, which used existing environmental data to identify where aquatic values exist and their overall priority for conservation management. These two exercises form integral parts of the CFEV assessment framework. The scope of the audit included an assessment of rivers (including riparian vegetation), wetlands, lakes and waterbodies, saltmarshes, estuaries, karst systems and groundwater-dependent ecosystem values. Each ecosystem is considered separately, and no attempt has been made to compare between them (i.e., to compare rivers with wetlands, or estuaries with lakes).

The CFEV assessment framework (see flowchart below; DPIPWE 2014) is driven by three main components (Naturalness (N), Representativeness (R) and Distinctiveness (D)) and consisted of two key steps – the Statewide audit and conservation evaluation. Every river section, wetlands, waterbody, saltmarsh, estuary, and karst system in the state was 'put through' the framework in the following way to be assigned a Representative Conservation Value (RCV), Integrated Conservation Value (ICV) or Conservation Management Priority (CMP) ranking.

---

<sup>23</sup> Tasmanian Public Land Use Commission (1996). Tasmanian -Commonwealth Regional Forest Agreement: supplement to Environment & Heritage report vol V.- background report part C. Tasmanian Public Land Use Commission, Hobart. Lesslie, R and Maslen, M. (1995). National Wilderness Inventory - Handbook of Procedures, Content and Usage, 2nd Edition. Australian Heritage Commission, Canberra.



The Statewide audit consisted of two assessments being conducted simultaneously. A classification was conducted to describe the pre-European physical and biological characteristics of all the ecosystem spatial units. This provided an indication of the feature's Representativeness. The condition (or Naturalness) assessment involved a range of physical and biological variables used to determine the extent to which the ecosystem feature had changed from its pre-European or natural condition.

The results of the classification and condition assessment were combined and input to the conservation evaluation. This process involved ranking each ecosystem spatial unit based on their conservation value. Conservation value was determined by using the results of the statewide audit in a spatial selection process to identify freshwater areas that are highly representative of its kind (as described by up to seven separate classifications), with a preference for the most natural examples. These ecosystem spatial units were given the highest Representative Conservation Value (RCV) ranking.

A second conservation value ranking was assigned to the ecosystem spatial units that took into account the presence of unique and distinct values at or near the sites (an assessment of Distinctiveness). Distinctive features of an ecosystem include a diverse assortment of 'Special Values', such as threatened flora and fauna species, important bird sites, species with important evolutionary life traits. These values were considered alongside the RCV to give an Integrated Conservation Value (ICV) ranking.

The last step of the conservation evaluation results in a Conservation Management Priority being assigned to the ecosystem spatial units. This process re-orders the conservation value rankings by including an assessment of current and future land and water management practices. For example, sites deep within National Parks are less of a priority for urgent conservation management than coastal saltmarshes on private land.

#### Site – Tributaries of Dungiven Rivulet

The Survey Area includes two tributaries (at or near the headwaters) of Dungiven Rivulet which are both identified as ICF - High (**Figure 13**). These are also labelled in **Figure 5**. Vegetative buffers exist with the tributaries and these will be maintained, so it is unlikely that there would be any impact to the watercourses which feed into the larger Dungiven Rivulet before it reports to the Meander River.

#### Site – Other waterways

The Meander River section located near the Site is recorded as ICF - High (**Figure 13**). The access road is existing and will be maintained in accordance with best practice unsealed road management practices. A vegetative buffer exists between the river edge and road surface and associated infrastructure including culverts and drains.

### **D.5 FIRE HISTORY**

The Site has no *recorded* fire history based on the NVA Report and TheLIST.

Fires have clearly occurred at the Site and surrounding area owing to the presence of fire-killed trees and scorch/fire marks on several older eucalypts and burnt wood in some locations. The date of the last fire is unknown.

## PART E – DISCUSSION AND RECOMMENDATIONS

The following provides a summary of the Natural Values in the Site.

### E.1 OVERVIEW

The vegetation present in the Site is typical of the lowland flats and dolerite hills around Deloraine and Exton. Two threatened vegetation communities (both NC Act and EPBC Act listed) were identified and mapped in the Site. A single flora species was identified and mapped within the Site; *Pimelea curviflora* subsp. *gracilis* (curved riceflower).

Declared and environmental weeds typical of the Deloraine region were recorded, with most being associated with weedy vegetation along the Meander River (e.g., gorse, scotch broom, sycamore, wild teasel, blackberry, ragwort) and access road (e.g., Spanish heath, horehound).

Terrestrial mammals such as the Tasmanian devil, eastern quoll, and spotted-tailed quoll are likely or known to use the Site and habitats in the broader landscape. No dens of any of these species were recorded during the surveys of the Site.

Wedge-tailed eagle nests are known to occur near the Meander River to the north of the access from Porters Bridge Road, but the access road is not visible at those nests. A third recorded nest was not relocated during searches and is confirmed as 'absent' from the NVA held coordinates.

No geodiversity, PEV's and wilderness values will be affected or impacted by the Quarry.

There are unlikely to be cumulative negative impacts to natural values given the comprehensive assessment undertaken of the Site (which identified a limited number of natural values of significance exist within the Site), and mitigation measures recommended to manage the natural values including threatened fauna and flora and vegetation.

### E.2 RECOMMENDATIONS

Recommendations based on the best practice management approach of 'avoid, mitigate, and offset' are provided in this section for those Natural Values, or threats to Natural Values, that should be considered in the development and operation of the Quarry.

#### E.2.1 Vegetation Communities

Two native vegetation communities listed on Schedule 3A (Threatened native vegetation communities) of the *Nature Conservation Act 2002* occur in the Site or adjacent to the access road –

- *Eucalyptus viminalis* wet forest (TASVEG – WVI), and
- *Eucalyptus ovata* forest and woodland (TASVEG code – DOV).

Two ecological communities listed under section 181 of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* occur in or adjacent to the Site –

- Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (*Eucalyptus ovata* / *E. brookeriana*) – the equivalent of *Eucalyptus ovata* forest and woodland (TASVEG code – DOV); and

- Tasmanian white gum (*Eucalyptus viminalis*) wet forest – the equivalent of *Eucalyptus viminalis* wet forest (TASVEG code – WVI).

### Recommendations

- A suitably qualified person will mark the boundary of the *Eucalyptus ovata* forest and woodland (DOV) with the Maximum Quarry Extent in the field to define the activity boundary prior to any operations near that area. Exclusion fencing and signage ('Exclusion Zone – Do Not Enter') or an earthen bund to physically exclude machinery and vehicles will be installed by the operator, staff advised of the area through the site induction process to prevent as far as possible any accidental incursion of machinery and vehicles, and areas shown on the site map; and
- Where vegetation comprises *Eucalyptus viminalis* wet forest or *Eucalyptus ovata* forest and woodland, disturbance of vegetation on the sides of the access road associated with the use of the Quarry must be restricted to that extent necessary for road maintenance or to ensure the safety of road users.

### E.2.2 Curved riceflower

One species listed on the *Threatened Species Protection Act 1995* will be disturbed/taken by the Quarry activity – curved riceflower, *Pimelea curviflora* subsp. *gracilis*, listed as Rare. Upwards of 27 plants will be taken by the activity based on the current plant numbers within the Maximum Quarry Extent.

### Recommendation

- A Permit to Take is to be sought from the Department of Natural Resources and Environment Tasmania to 'take' up to 27 curved riceflower (*Pimelea curviflora* subsp. *gracilis*) plants.
- An additional survey should be conducted of the area within 1 km of the Site and in the Site itself to further record plants of the species prior to an application for the taking of the curved riceflower plants is made to NRE. A *Pimelea curviflora* subsp. *gracilis* survey of areas to be cleared of native vegetation for expansion of the quarry could be done with the pre-clearance surveys conducted for dens and masked owl potential nest trees.

### E.2.3 Terrestrial Mammals

Tasmanian devil, eastern quoll, and spotted-tailed quoll are known to occur in the region and may occur sporadically on and near the Site.

### Recommendations

The following management approach should be applied for **dens and potential dens** –

- Areas to be cleared of vegetation for Quarry activities should first be surveyed by a suitably qualified person to identify if dens or woodpiles supporting dens are present. The pre-clearance surveys must be completed by a suitably qualified person(s) and any dens or suspected dens removed via a procedure approved by the EPA; and

- If dens or potential dens are observed or suspected during operations a 50 m no machinery buffer will be applied to the den or suspected den and expert advice sought.

The following management approach will be applied for **internal road use and maintenance** –

- Undertake education and awareness training for drivers accessing the Quarry;
- Limit internal road speed to 20 km/hr from dusk to dawn;
- Liaise with drivers to identify high-risk road sections (i.e., areas where animals are often seen by drivers) and install advisory signage; and
- Where practicable, and noting relevant controls and identified high-risk areas, clear vegetation on roadsides (at least 3m from road edge) in high-risk areas to enhance view field for drivers.

#### *E.2.4 Masked Owl*

While no impact to the species is anticipated, measures should be applied in case a nest tree is observed/found given the longevity of the Quarry. These are –

- Potential roost trees be checked for any signs of occupation (presence of owls, regurgitated pellets or feathers) and tapped firmly (hammer or heavy stick) to see if a bird is flushed, prior to removal.
- During construction works and/or vegetation clearing, if potential nesting habitat is identified, it is recommended that a 150m buffer be maintained around a potential nest/roost tree or further investigations are undertaken to confirm if the tree is a nest tree.

#### *E.2.5 Weed and Pathogen Management*

A Weed and Pathogen Management Plan (WPMP) should be developed and implemented as part of the Quarry. The plan will be guided by the *Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania* (Department of Primary Industries, Parks, Water and Environment, 2015).

The objectives of the Weed and Pathogen Management Plan (WPMP) would be to:

- record and map the occurrence of weeds within the Lease, with a focus on those areas actively being quarried;
- identify and implement management measures within the Lease to –
  - minimise the risk of spreading propagules of weeds within the Lease and to locations outside the Lease;
  - control and/or eradicate weeds where practicable;
  - ensure that rehabilitation works are not compromised by the occurrence or growth of weeds; and to
  - minimise the risk of introducing soil-borne pathogens into the Lease.
- monitor and review the results of on-ground actions as required; and to
- establish a mechanism to review the plan, including its objectives and implementation.

The objectives, responsibilities, and management actions of the WPMP will need to adapt to new information about the site as it becomes available. The WPMP should be reviewed as required with revised versions provided to the EPA for approval prior to its implementation.

Two key aspects of the WPMP are –

1. Weed Spraying Program

A Weed Spraying Program will be included in the WPMP. The program should be reviewed each year and updated as new information about the occurrence of weeds in the Quarry become available.

2. Clean Machinery Policy

Transport trucks and light vehicles pose less risk to the transportation of weed propagules if they remain on the hard surface of the roads and the gravel loading area and that these areas are managed to exclude weeds. The highest risk of transporting propagules into the quarry is from heavy machinery, such as excavators, as these can carry large clods of dirt and mud in which seed propagules can be lodged. Heavy machinery should be brought into the Quarry in a clean condition; free of weed propagules, clods of dirt and vegetative matter. Suitable washdown facilities exist at Deloraine.

#### *E.2.6 Conservation of Freshwater Ecosystem Values*

Watercourses that receive drainage from the Quarry (existing and proposed) are generally dominated by intact native vegetation but in some locations are affected by tracks and roads that cross them, and with some impacts from fire and possibly drought. The immediate receiving watercourse environment from all existing sediment basins is slightly modified, being native forest that has been logged but with streamside reserves established (i.e., 10m wide SSRs required by the Forest Practices Code).

All drainage from the existing extraction and stockpile locations in the Mining Lease eventually reports to Dungiven Rivulet via these two minor un-named tributaries. Water passes through about 5.5 kms of waterway (and broad drainage flats) prior to reporting at the Meander River to the south-west of the Maximum Extraction Area. This drainage arrangement will not change through the Development, as all water will still report to the Meander River (and Dungiven Rivulet) catchment.

Additional sediment basins and drains should be designed and constructed as required to manage stormwater and erosion/sediment control.

## PART F – REFERENCES

- Forest Practices Authority (2023A, version 2.3). 'Habitat descriptions and survey notes for Tasmania's threatened flora species'. Forest Practices Authority, Hobart, Tasmania.
- Forest Practices Authority (2023B, version 2.0). Threatened fauna species habitat descriptions. Forest Practices Authority, Hobart, Tasmania.
- Higgins PJ (ed) (1999). Handbook of Australian, New Zealand and Antarctic Birds. Vol. 4. Parrots to Dollarbird. Oxford University Press, Melbourne.
- Holdsworth M, Newman M, Menkhorst P, Morley C, Cooper R, Green B, Starks J, Baker GB, Garnett ST (2021) Blue-winged Parrot *Neophema chrysostoma*. In The Action Plan for Australian Birds 2020. (Eds ST Garnett and GB Baker). CSIRO Publishing, Melbourne.
- Kitchener, A. and Harris, S. (2013). From Forest to Fjeldmark: Descriptions of Tasmania's Vegetation. Edition 2. Department of Primary Industries, Parks, Water and Environment, Tasmania. 2<sup>nd</sup> Edition and revisions April 2019.
- Spencer, C.P. & Richards, K. (2010). The Green-lined ground beetle, *Catadromus lacordairei*, in Tasmania. *The Tasmanian Naturalist* 132: 15–19.
- Threatened Species Unit (2001). Listing Statement: Green and Golden Frog *Litoria raniformis*. [Online]. Department of Primary Industries, Water and Environment, Tas.

**PART G – ATTACHMENTS**

**ATTACHMENT 1: NATURAL VALUES ATLAS (NVA) REPORT**

# Natural Values Atlas Report

*Authoritative, comprehensive information on Tasmania's natural values.*

## Reference:

Requested For: PBR Quarry

Report Type: Summary Report

Timestamp: 08:33:54 AM Saturday 19 April 2025

Threatened Flora: buffers Min: 500m Max: 5000m

Threatened Fauna: buffers Min: 500m Max: 5000m

Raptors: buffers Min: 500m Max: 5000m

Tasmanian Weed Management Act Weeds: buffers Min: 500m Max: 5000m

Priority Weeds: buffers Min: 500m Max: 5000m

TASVEG: buffer 1000m

Threatened Communities: buffer 1000m

Fire History: buffer 1000m

Tasmanian Reserve Estate: buffer 1000m

Biosecurity Risks: buffer 1000m

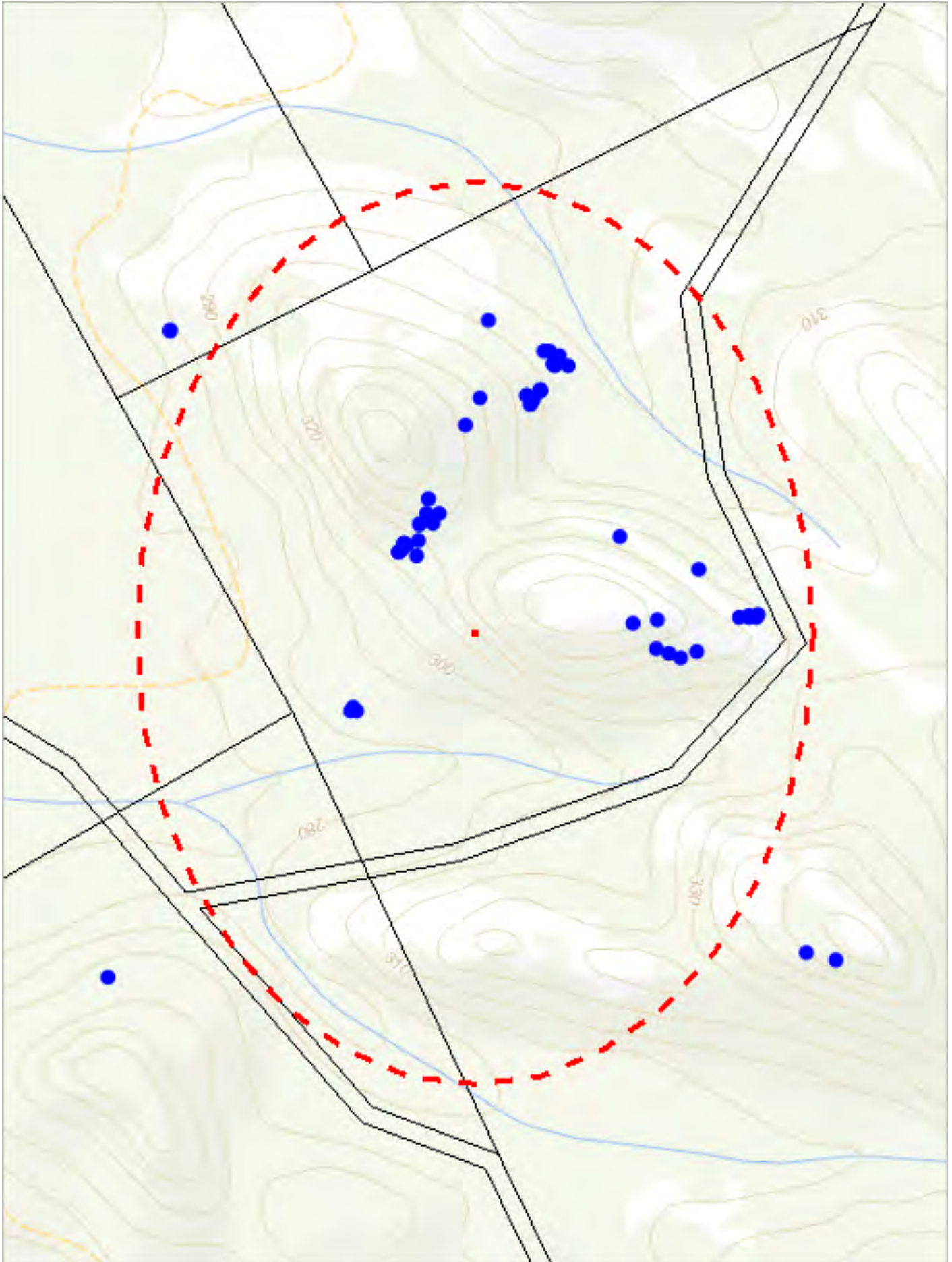


The centroid for this query GDA94: 476944.0, 5406927.0 falls within:

Property: 9570157

# Threatened flora within 500 metres

477472, 5407628



476415, 5406225

Please note that some layers may not display at all requested map scales

# Threatened flora within 500 metres

Legend: Verified and Unverified observations

● Point Verified

● Point Unverified

▬ Line Verified

▬ Line Unverified

▭ Polygon Verified

▭ Polygon Unverified

Legend: Cadastral Parcels



# Threatened flora within 500 metres

## Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
<i>Pimelea curviflora</i> var. <i>gracilis</i>	slender curved riceflower	r		n	51	09-Mar-2022

## Unverified Records

No unverified records were found!

For more information about threatened species, please contact Threatened Species Enquiries.

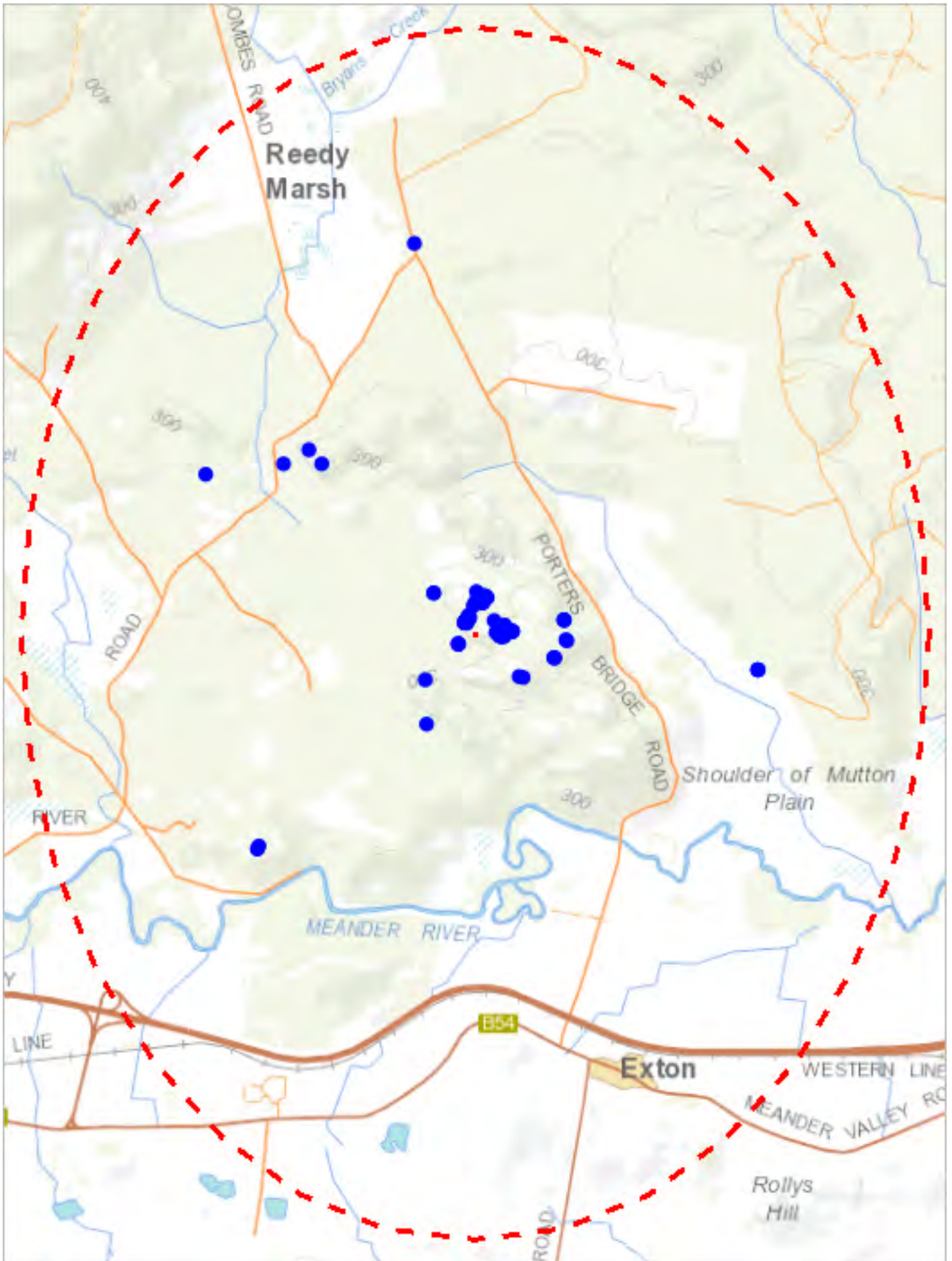
Telephone: 1300 368 550

Email: [ThreatenedSpecies.Enquiries@nre.tas.gov.au](mailto:ThreatenedSpecies.Enquiries@nre.tas.gov.au)

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

# Threatened flora within 5000 metres

480866, 5412136



473016, 5401715

Please note that some layers may not display at all requested map scales

# Threatened flora within 5000 metres

Legend: Verified and Unverified observations

● Point Verified

● Point Unverified

▬ Line Verified

▬ Line Unverified

▭ Polygon Verified

▭ Polygon Unverified

Legend: Cadastral Parcels



# Threatened flora within 5000 metres

## Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
<i>Glycine microphylla</i>	small-leaf glycine	v		n	1	17-Mar-2009
<i>Pimelea curviflora</i>	curved riceflower	p		n	2	17-Mar-2009
<i>Pimelea curviflora</i> var. <i>gracilis</i>	slender curved riceflower	r		n	70	15-Sep-2022

## Unverified Records

No unverified records were found!

For more information about threatened species, please contact Threatened Species Enquiries.

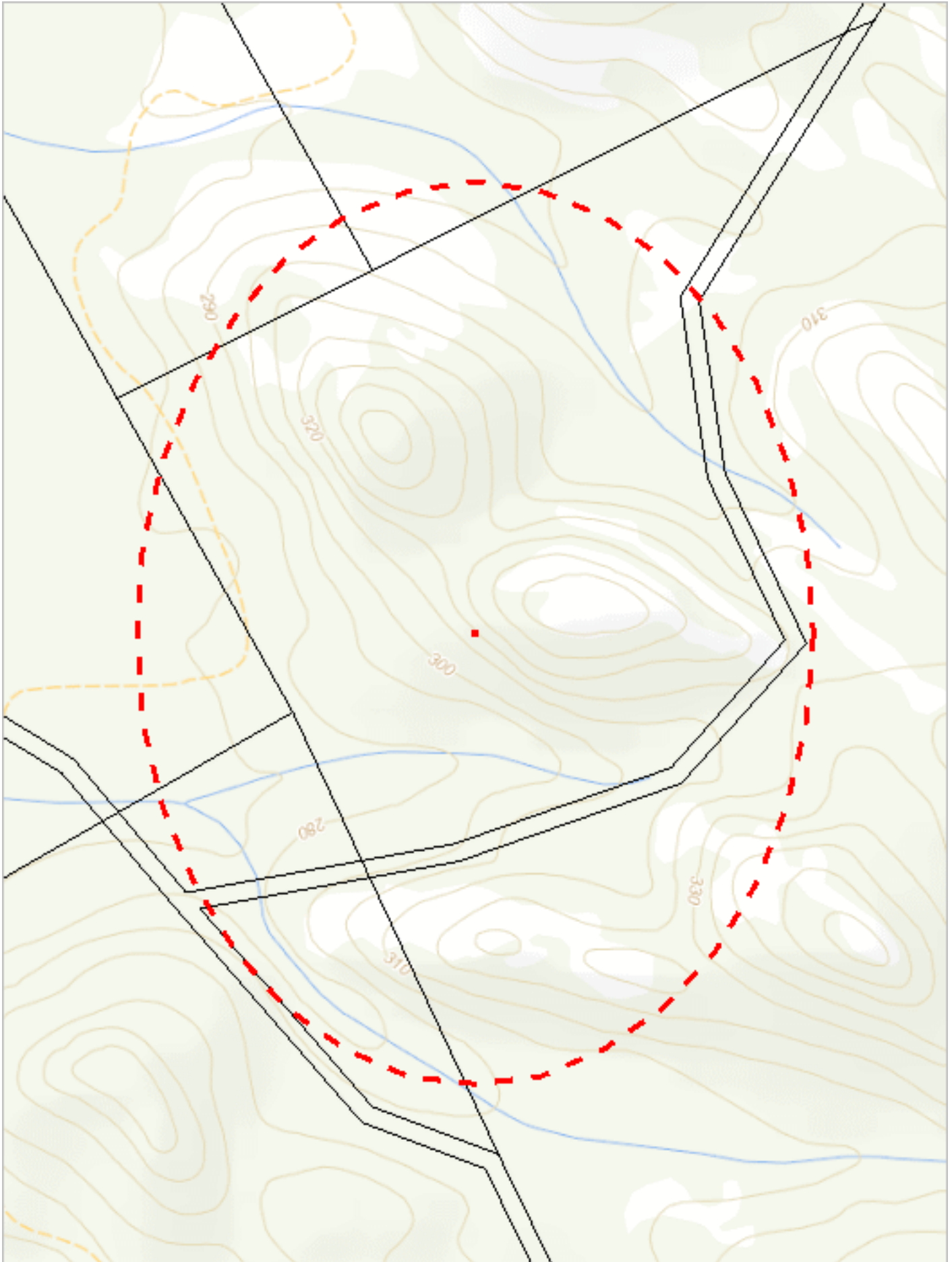
Telephone: 1300 368 550

Email: [ThreatenedSpecies.Enquiries@nre.tas.gov.au](mailto:ThreatenedSpecies.Enquiries@nre.tas.gov.au)

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

# Threatened fauna within 500 metres

477472, 5407628



476415, 5406225

Please note that some layers may not display at all requested map scales

# Threatened fauna within 500 metres

Legend: Verified and Unverified observations

● Point Verified

● Point Unverified

▬ Line Verified

▬ Line Unverified

□ Polygon Verified

□ Polygon Unverified

Legend: Cadastral Parcels



# Threatened fauna within 500 metres

## Threatened fauna within 500 metres (based on Range Boundaries)

Species	Common Name	SS	NS	BO	Potential	Known	Core
<i>Litoria raniformis</i>	green and gold frog	v	VU	n	1	0	0
<i>Lathamus discolor</i>	swift parrot	e	CR	mbe	1	0	0
<i>Pseudemoia pagenstecheri</i>	tussock skink	v		n	1	0	0
<i>Galaxias fontanus</i>	swan galaxias	e	EN	e	1	0	0
<i>Tyto novaehollandiae</i> subsp. <i>castanops</i>	masked owl (Tasmanian)	e	VU	e	1	0	1
<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle	v		n	1	0	0
<i>Dasyurus maculatus</i> subsp. <i>maculatus</i>	spotted-tailed quoll	r	VU	n	1	0	0
<i>Catadromus lacordairei</i>	Green-lined ground beetle	v		n	1	0	0
<i>Accipiter novaehollandiae</i>	grey goshawk	e		n	1	0	0
<i>Sarcophilus harrisi</i>	tasmanian devil	e	EN	e	1	0	0
<i>Perameles gunnii</i>	eastern barred bandicoot		VU	n	1	0	1
<i>Aquila audax</i> subsp. <i>fleayi</i>	tasmanian wedge-tailed eagle	e	EN	e	1	0	0
<i>Dasyurus viverrinus</i>	eastern quoll		EN	n	0	0	1

For more information about threatened species, please contact Threatened Species Enquiries.

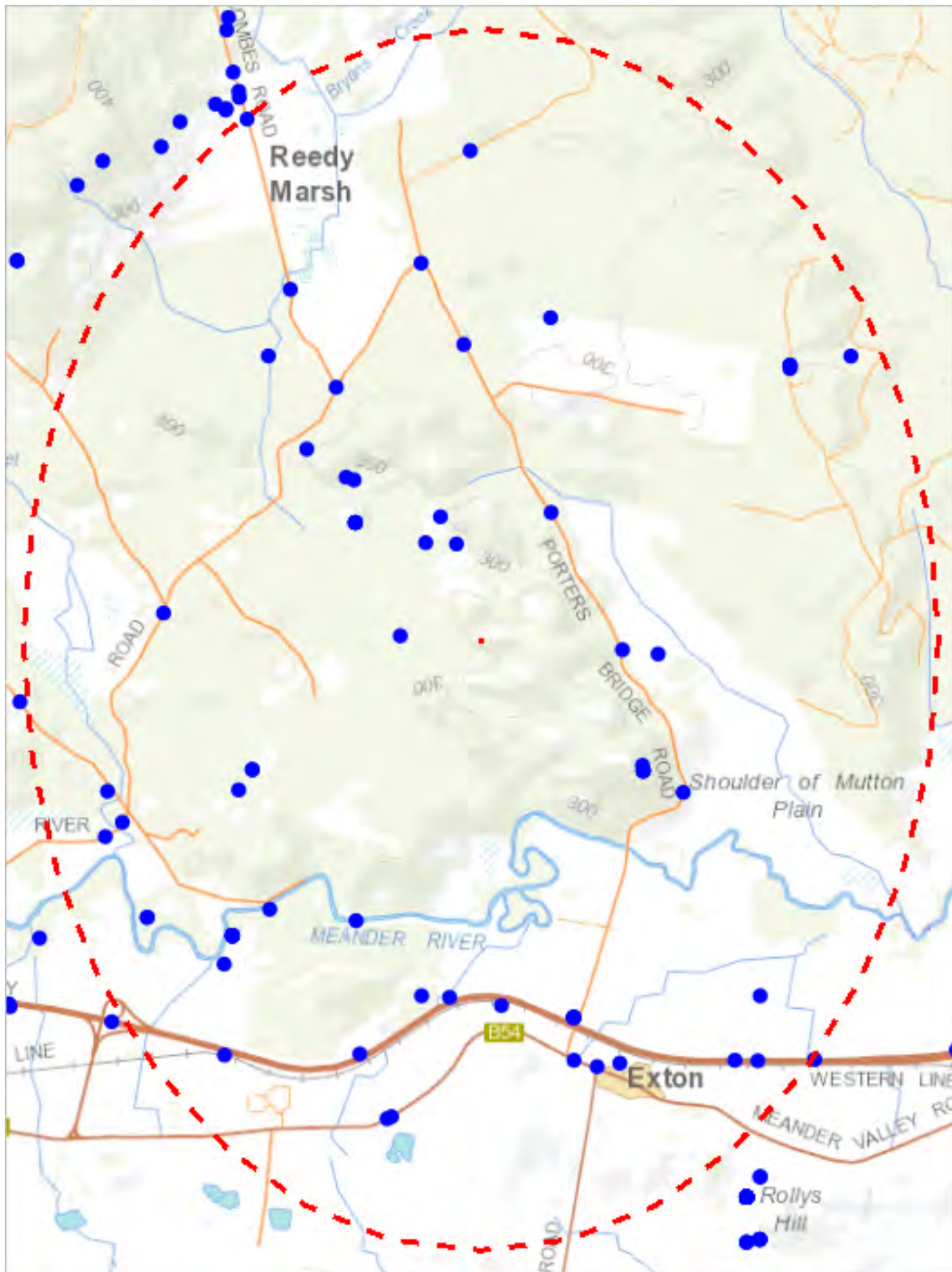
Telephone: 1300 368 550

Email: [ThreatenedSpecies.Enquiries@nre.tas.gov.au](mailto:ThreatenedSpecies.Enquiries@nre.tas.gov.au)

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

# Threatened fauna within 5000 metres

480866, 5412136



473016, 5401715

Please note that some layers may not display at all requested map scales

# Threatened fauna within 5000 metres

Legend: Verified and Unverified observations

● Point Verified

● Point Unverified

▬ Line Verified

▬ Line Unverified

□ Polygon Verified

□ Polygon Unverified

Legend: Cadastral Parcels



# Threatened fauna within 5000 metres

## Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Accipiter novaehollandiae	grey goshawk	e		n	3	11-Sep-2024
Aquila audax	wedge-tailed eagle	pe	PEN	n	4	01-Jan-2024
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	e	18	23-Oct-2024
Dasyurus maculatus	spotted-tailed quoll	r	VU	n	4	03-Sep-2024
Dasyurus maculatus subsp. maculatus	spotted-tailed quoll	r	VU	n	3	14-Jun-2024
Eagle sp.	Eagle	e	EN	n	2	21-Feb-2023
Haliaeetus leucogaster	white-bellied sea-eagle	v		n	12	21-Feb-2023
Litoria raniformis	green and gold frog	v	VU	n	1	04-Jan-2018
Perameles gunnii	eastern barred bandicoot		VU	n	8	22-Dec-2016
Pseudemoia rawlinsoni	glossy grass skink	r		n	3	18-Dec-2024
Sarcophilus harrisi	tasmanian devil	e	EN	e	30	15-Jun-2024
Tyto novaehollandiae	masked owl	pe	PVU	n	2	01-Apr-1983
Tyto novaehollandiae subsp. castanops	masked owl (Tasmanian)	e	VU	e	2	16-Jun-2024

## Unverified Records

No unverified records were found!

## Threatened fauna within 5000 metres (based on Range Boundaries)

Species	Common Name	SS	NS	BO	Potential	Known	Core
Litoria raniformis	green and gold frog	v	VU	n	1	0	1
Lathamus discolor	swift parrot	e	CR	mbe	1	0	0
Prototroctes maraena	australian grayling	v	VU	ae	1	0	0
Pseudemoia pagenstecheri	tussock skink	v		n	1	0	0
Haliaeetus leucogaster	white-bellied sea-eagle	v		n	3	0	0
Galaxias fontanus	swan galaxias	e	EN	e	1	0	0
Tyto novaehollandiae subsp. castanops	masked owl (Tasmanian)	e	VU	e	1	0	1
Dasyurus maculatus subsp. maculatus	spotted-tailed quoll	r	VU	n	1	0	1
Catadromus lacordairei	Green-lined ground beetle	v		n	1	0	0
Accipiter novaehollandiae	grey goshawk	e		n	1	0	0
Sarcophilus harrisi	tasmanian devil	e	EN	e	1	0	0
Perameles gunnii	eastern barred bandicoot		VU	n	1	0	1
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	e	1	0	0
Dasyurus viverrinus	eastern quoll		EN	n	0	0	1

For more information about threatened species, please contact Threatened Species Enquiries.

Telephone: 1300 368 550

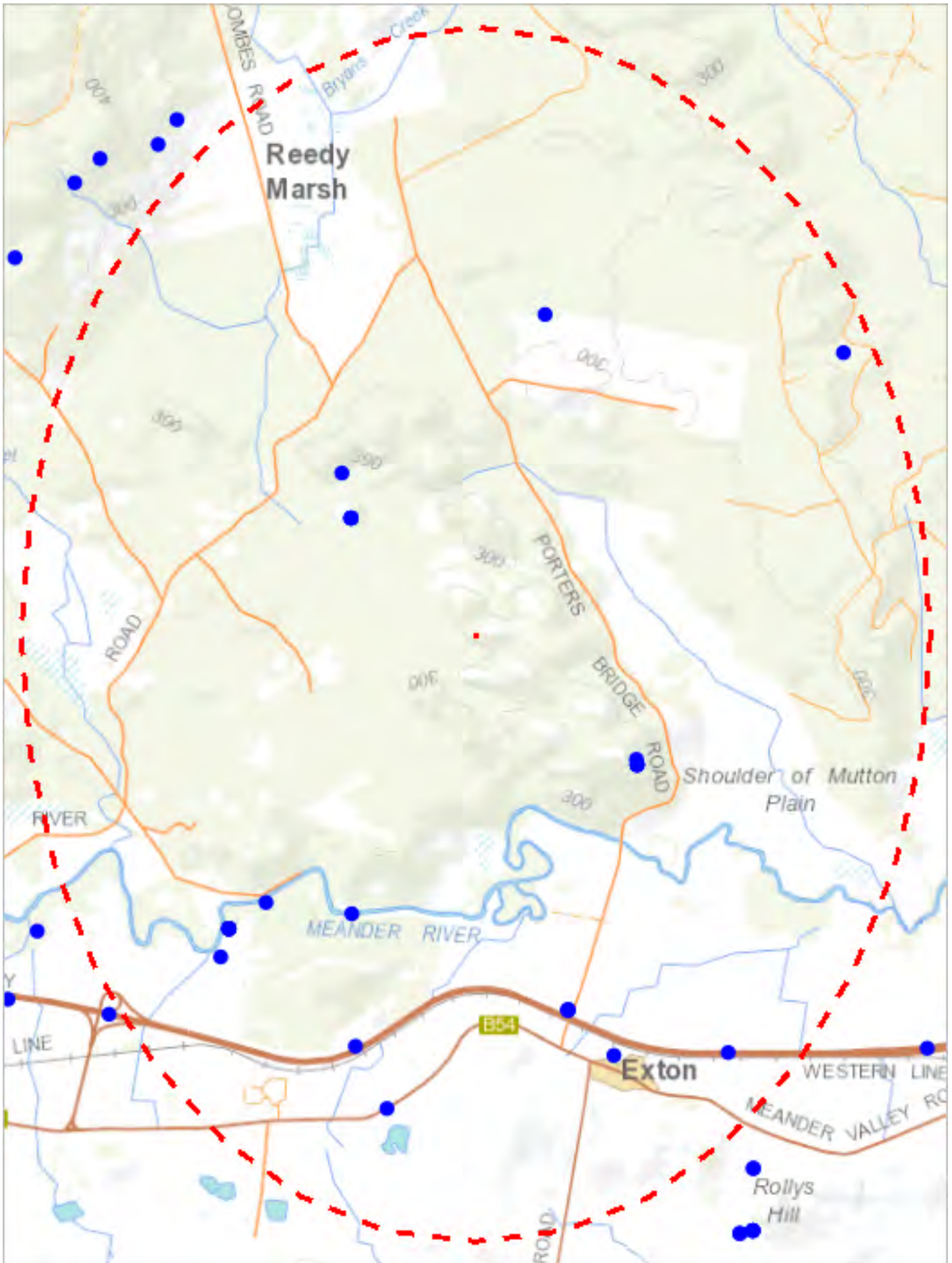
Email: [ThreatenedSpecies.Enquiries@nre.tas.gov.au](mailto:ThreatenedSpecies.Enquiries@nre.tas.gov.au)

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

\*\*\* No Raptor nests or sightings found within 500 metres. \*\*\*

# Raptor nests and sightings within 5000 metres

480866, 5412136



473016, 5401715

Please note that some layers may not display at all requested map scales

# Raptor nests and sightings within 5000 metres

Legend: Verified and Unverified observations

● Point Verified

● Point Unverified

▬ Line Verified

▬ Line Unverified

▭ Polygon Verified

▭ Polygon Unverified

Legend: Cadastral Parcels



# Raptor nests and sightings within 5000 metres

## Verified Records

Nest Id/Location Foreign Id	Species	Common Name	Obs Type	Observation Count	Last Recorded
125	<i>Aquila audax subsp. fleayi</i>	tasmanian wedge-tailed eagle	Nest	4	25-Nov-2023
1516	<i>Aquila audax subsp. fleayi</i>	tasmanian wedge-tailed eagle	Nest	1	01-Jan-2007
193	<i>Aquila audax subsp. fleayi</i>	tasmanian wedge-tailed eagle	Nest	5	22-Sep-2010
2682	<i>Aquila audax subsp. fleayi</i>	tasmanian wedge-tailed eagle	Nest	1	23-Oct-2024
2682	Eagle sp.	Eagle	Nest	1	27-Jun-2019
2682	<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle	Nest	4	21-Feb-2023
3151	Eagle sp.	Eagle	Nest	1	21-Feb-2023
3349	<i>Aquila audax subsp. fleayi</i>	tasmanian wedge-tailed eagle	Nest	1	05-Mar-2024
3462	<i>Aquila audax subsp. fleayi</i>	tasmanian wedge-tailed eagle	Nest	1	16-Jun-2024
	<i>Accipiter novaehollandiae</i>	grey goshawk	Sighting	3	11-Sep-2024
	<i>Aquila audax</i>	wedge-tailed eagle	Carcass	1	12-Feb-2019
	<i>Aquila audax</i>	wedge-tailed eagle	Not Recorded	1	20-Mar-2018
	<i>Aquila audax</i>	wedge-tailed eagle	Sighting	2	01-Jan-2024
	<i>Aquila audax subsp. fleayi</i>	tasmanian wedge-tailed eagle	Sighting	5	16-Jun-2024
	<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle	Not Recorded	4	30-Apr-2017
	<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle	Sighting	4	05-Jun-2022
	<i>Tyto novaehollandiae</i>	masked owl	Sighting	2	01-Apr-1983

## Unverified Records

No unverified records were found!

## Raptor nests and sightings within 5000 metres (based on Range Boundaries)

Species	Common Name	SS	NS	Potential	Known	Core
<i>Aquila audax subsp. fleayi</i>	tasmanian wedge-tailed eagle	e	EN	1	0	0
<i>Accipiter novaehollandiae</i>	grey goshawk	e		1	0	0
<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle	v		3	0	0

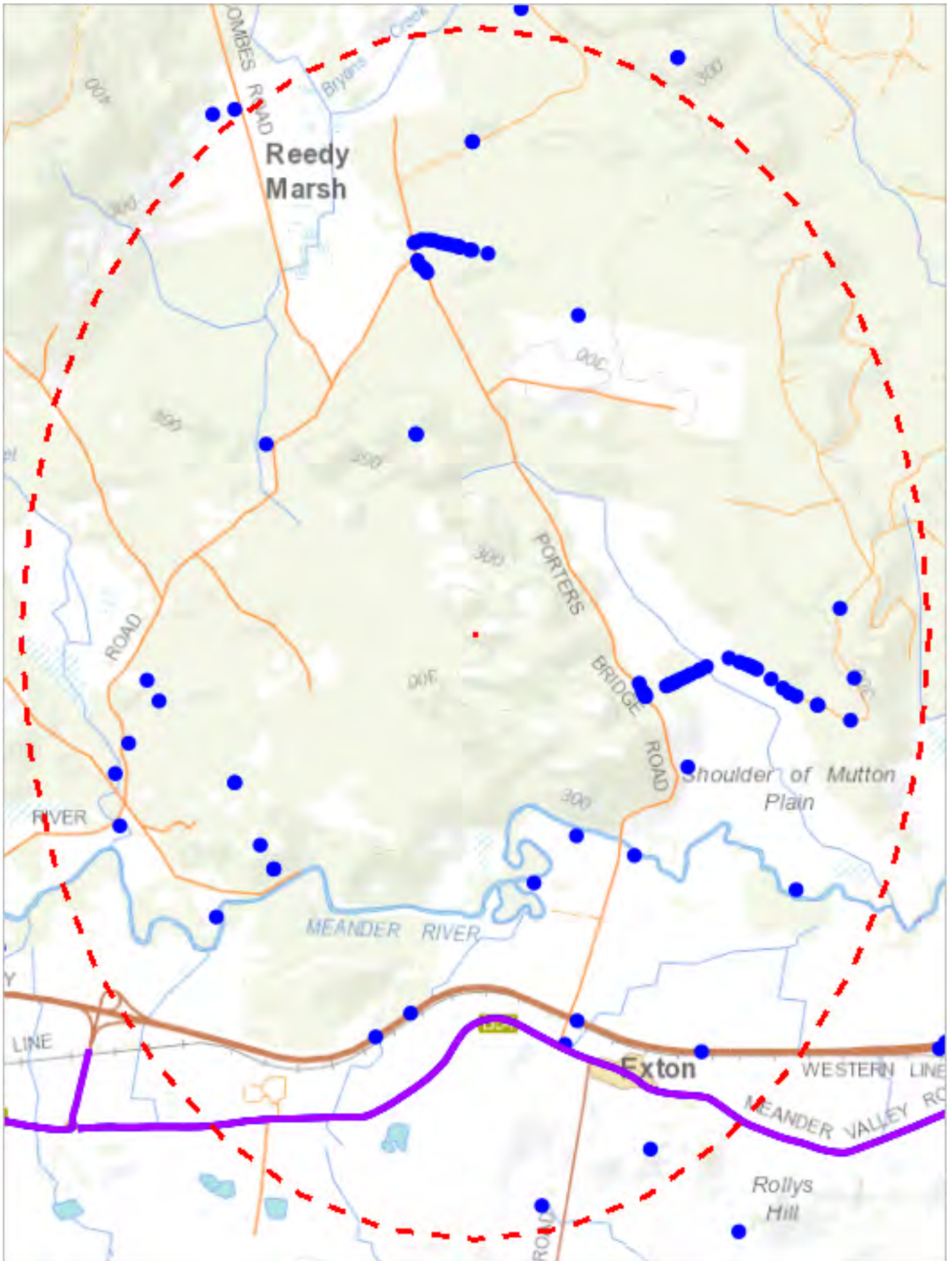
For more information about raptor nests, please contact Threatened Species Enquiries.

Telephone: 1300 368 550

Email: [ThreatenedSpecies.Enquiries@nre.tas.gov.au](mailto:ThreatenedSpecies.Enquiries@nre.tas.gov.au)

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

\*\*\* No Tas Management Act Weeds found within 500 metres \*\*\*



473016, 5401715

Please note that some layers may not display at all requested map scales

# Tas Management Act Weeds within 5000 m

Legend: Verified and Unverified observations

● Point Verified

● Point Unverified

▬ Line Verified

▬ Line Unverified

▭ Polygon Verified

▭ Polygon Unverified

Legend: Cadastral Parcels



# Tas Management Act Weeds within 5000 m

## Verified Records

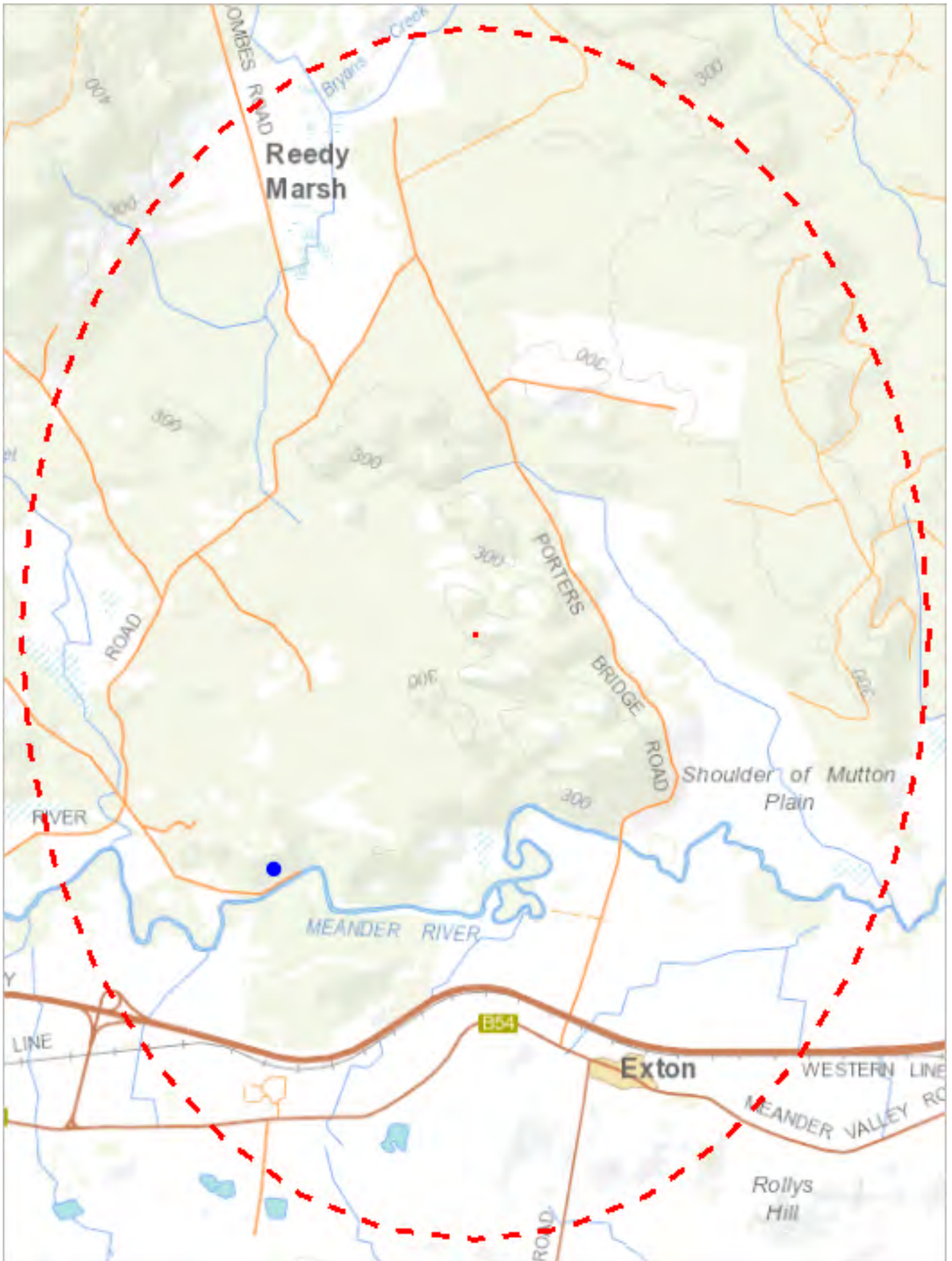
Species	Common Name	Observation Count	Last Recorded
Bassia scoparia	copper saltbush	2	22-Feb-1995
Cytisus scoparius	english broom	4	15-Sep-2022
Erica lusitanica	spanish heath	6	15-Sep-2022
Genista monspessulana	montpellier broom or canary broom	1	21-Oct-2021
Ilex aquifolium	holly	3	10-May-2024
Rubus echinatus	blackberry	1	12-Feb-2004
Rubus fruticosus	blackberry	5	21-Oct-2021
Senecio jacobaea	ragwort	17	07-Feb-2023
Ulex europaeus	gorse	51	10-May-2024

## Unverified Records

For more information about introduced weed species, please visit the following URL for contact details in your area:

<https://www.nre.tas.gov.au/invasive-species/weeds>

\*\*\* No Priority Weeds found within 500 metres \*\*\*



473016, 5401715

Please note that some layers may not display at all requested map scales

# Priority Weeds within 5000 m

Legend: Verified and Unverified observations

● Point Verified

● Point Unverified

▬ Line Verified

▬ Line Unverified

□ Polygon Verified

□ Polygon Unverified

Legend: Cadastral Parcels



# Priority Weeds within 5000 m

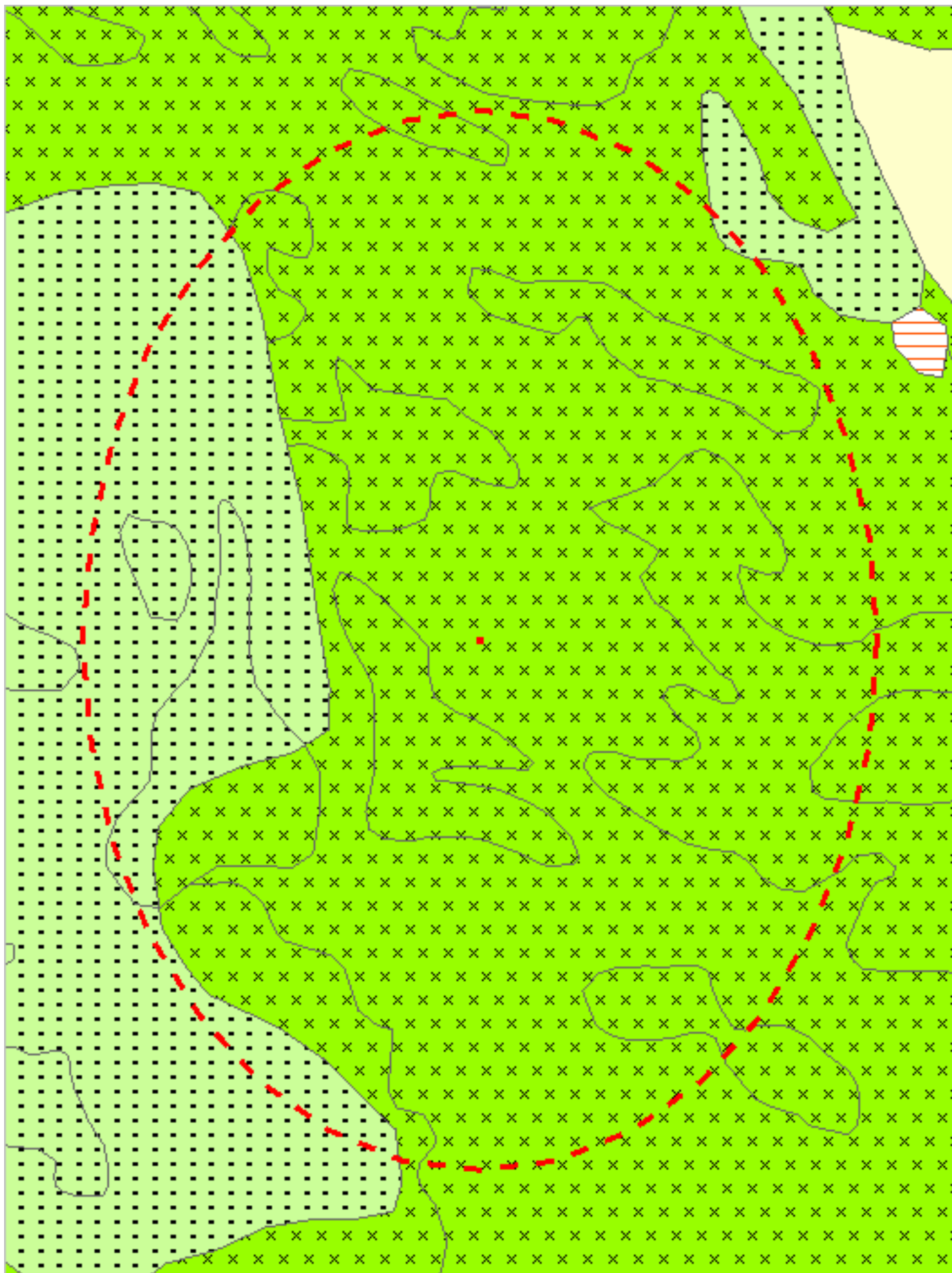
## Verified Records

Species	Common Name	Observation Count	Last Recorded
Prunus laurocerasus	cherry laurel	1	16-Dec-2014

## Unverified Records

For more information about introduced weed species, please visit the following URL for contact details in your area:

<https://www.nre.tas.gov.au/invasive-species/weeds>























































476038, 5405724






























Please note that some layers may not display at all requested map scales

# TASVEG 4.0 Communities within 1000 metres






































## Legend: TASVEG 4.0

	(AAP) Alkaline pans
	(AHF) Freshwater aquatic herbland
	(AHL) Lacustrine herbland
	(AHS) Saline aquatic herbland
	(ARS) Saline sedgeland / rushland
	(ASF) Fresh water aquatic sedgeland and rushland
	(ASP) Sphagnum peatland
	(ASS) Succulent saline herbland
	(AUS) Saltmarsh (undifferentiated)
	(AWU) Wetland (undifferentiated)
	(DAC) Eucalyptus amygdalina coastal forest and woodland
	(DAD) Eucalyptus amygdalina forest and woodland on dolerite
	(DAM) Eucalyptus amygdalina forest on mudstone
	(DAS) Eucalyptus amygdalina forest and woodland on sandstone
	(DAZ) Eucalyptus amygdalina inland forest and woodland on Cainozoic deposits
	(DBA) Eucalyptus barberi forest and woodland
	(DCO) Eucalyptus coccifera forest and woodland
	(DCR) Eucalyptus cordata forest
	(DDE) Eucalyptus delegatensis dry forest and woodland
	(DDP) Eucalyptus dalrympleana - Eucalyptus pauciflora forest and woodland
	(DGL) Eucalyptus globulus dry forest and woodland
	(DGW) Eucalyptus gunnii woodland
	(DKW) King Island Eucalypt woodland
	(DMO) Eucalyptus morrisbyi forest and woodland
	(DMW) Midlands woodland complex
	(DNF) Eucalyptus nitida Furneaux forest
	(DNI) Eucalyptus nitida dry forest and woodland
	(DOB) Eucalyptus obliqua dry forest
	(DOV) Eucalyptus ovata forest and woodland
	(DOW) Eucalyptus ovata heathy woodland
	(DPD) Eucalyptus pauciflora forest and woodland on dolerite
	(DPE) Eucalyptus perriniana forest and woodland
	(DPO) Eucalyptus pauciflora forest and woodland not on dolerite
	(DPU) Eucalyptus pulchella forest and woodland
	(DRI) Eucalyptus risdonii forest and woodland
	(DRO) Eucalyptus rodwayi forest and woodland
	(DSC) Eucalyptus amygdalina - Eucalyptus obliqua damp sclerophyll forest
	(DSG) Eucalyptus sieberi forest and woodland on granite
	(DSO) Eucalyptus sieberi forest and woodland not on granite
	(DTD) Eucalyptus tenuiramis forest and woodland on dolerite
	(DTG) Eucalyptus tenuiramis forest and woodland on granite
	(DTO) Eucalyptus tenuiramis forest and woodland on sediments
	(DVC) Eucalyptus viminalis - Eucalyptus globulus coastal forest and woodland
	(DVF) Eucalyptus viminalis Furneaux forest and woodland
	(DVG) Eucalyptus viminalis grassy forest and woodland
	(FAC) Improved pasture with native tree canopy
	(FAG) Agricultural land
	(FMG) Marram grassland
	(FPE) Permanent easements
	(FPF) Pteridium esculentum fernland
	(FPH) Plantations for silviculture - hardwood
	(FPS) Plantations for silviculture - softwood
	(FPU) Unverified plantations for silviculture
	(FRG) Regenerating cleared land
	(FSM) Spartina marshland
	(FUM) Extra-urban miscellaneous
	(FUR) Urban areas
	(FWU) Weed infestation
	(GCL) Lowland grassland complex

# TASVEG 4.0 Communities within 1000 metres

	{GHC} Coastal grass and herbfield
	{GPH} Highland Poa grassland
	{GPL} Lowland Poa labillardierei grassland
	{GRP} Rockplate grassland
	{GSL} Lowland grassy sedgeland
	{GTL} Lowland Themeda triandra grassland
	{HCH} Alpine coniferous heathland
	{HCM} Cushion moorland
	{HHE} Eastern alpine heathland
	{HHW} Western alpine heathland
	{HSE} Eastern alpine sedgeland
	{HSW} Western alpine sedgeland/herbland
	{HUE} Eastern alpine vegetation (undifferentiated)
	{MBE} Eastern buttongrass moorland
	{MBP} Pure buttongrass moorland
	{MBR} Sparse buttongrass moorland on slopes
	{MBS} Buttongrass moorland with emergent shrubs
	{MBU} Buttongrass moorland (undifferentiated)
	{MBW} Western buttongrass moorland
	{MDS} Subalpine Diplarrena latifolia rushland
	{MGH} Highland grassy sedgeland
	{MRR} Restionaceae rushland
	{MSW} Western lowland sedgeland
	{NAD} Acacia dealbata forest
	{NAF} Acacia melanoxylon swamp forest
	{NAL} Allocasuarina littoralis forest
	{NAR} Acacia melanoxylon forest on rises
	{NAV} Allocasuarina verticillata forest
	{NBA} Bursaria - Acacia woodland
	{NBS} Banksia serrata woodland
	{NCR} Callitris rhomboidea forest
	{NLA} Leptospermum scoparium - Acacia mucronata forest
	{NLE} Leptospermum forest
	{NLM} Leptospermum lanigerum - Melaleuca squarrosa swamp forest
	{NLN} Subalpine Leptospermum nitidum woodland
	{NME} Melaleuca ericifolia swamp forest
	{OAQ} Water, sea
	{ORO} Lichen lithosere
	{OSM} Sand, mud
	{RCO} Coastal rainforest
	{RFE} Rainforest fernland
	{RFS} Nothofagus gunnii rainforest scrub
	{RHP} Lagarostrobos franklinii rainforest and scrub
	{RKF} Athrotaxis selaginoides - Nothofagus gunnii short rainforest
	{RKP} Athrotaxis selaginoides rainforest
	{RKS} Athrotaxis selaginoides subalpine scrub
	{RKX} Highland rainforest scrub with dead Athrotaxis selaginoides
	{RML} Nothofagus - Leptospermum short rainforest
	{RMS} Nothofagus - Phyllocladus short rainforest
	{RMT} Nothofagus - Atherosperma rainforest
	{RMU} Nothofagus rainforest (undifferentiated)
	{RPF} Athrotaxis cupressoides - Nothofagus gunnii short rainforest
	{RPP} Athrotaxis cupressoides rainforest
	{RPW} Athrotaxis cupressoides open woodland
	{RSH} Highland low rainforest and scrub
	{SAL} Acacia longifolia coastal scrub
	{SBM} Banksia marginata wet scrub
	{SBR} Broad-leaf scrub
	{SCA} Coastal scrub on alkaline sands
	{SCH} Coastal heathland
	{SCL} Heathland on calcareous substrates

# TASVEG 4.0 Communities within 1000 metres

-  (SED) Eastern scrub on dolerite
-  (SHS) Subalpine heathland
-  (SHW) Wet heathland
-  (SKA) Kunzea ambigua regrowth scrub
-  (SLG) Leptospermum glaucescens heathland and scrub
-  (SLL) Leptospermum lanigerum scrub
-  (SLS) Leptospermum scoparium heathland and scrub
-  (SMM) Melaleuca squamea heathland
-  (SMP) Melaleuca pustulata scrub
-  (SMR) Melaleuca squarrosa scrub
-  (SRE) Eastern riparian scrub
-  (SRF) Leptospermum with rainforest scrub
-  (SRH) Rookery halophytic herbland
-  (SSC) Coastal scrub
-  (SSK) Scrub complex on King Island
-  (SSW) Western subalpine scrub
-  (SSZ) Spray zone coastal complex
-  (SWR) Western regrowth complex
-  (SWW) Western wet scrub
-  (WBR) Eucalyptus brookeriana wet forest
-  (WDA) Eucalyptus dalrympleana forest
-  (WDB) Eucalyptus delegatensis forest with broad-leaf shrubs
-  (WDL) Eucalyptus delegatensis forest over Leptospermum
-  (WDR) Eucalyptus delegatensis forest over rainforest
-  (WDU) Eucalyptus delegatensis wet forest (undifferentiated)
-  (W GK) Eucalyptus globulus King Island forest
-  (WGL) Eucalyptus globulus wet forest
-  (WNL) Eucalyptus nitida forest over Leptospermum
-  (WNR) Eucalyptus nitida forest over rainforest
-  (WNU) Eucalyptus nitida wet forest (undifferentiated)
-  (WOB) Eucalyptus obliqua forest with broad-leaf shrubs
-  (WOL) Eucalyptus obliqua forest over Leptospermum
-  (WOR) Eucalyptus obliqua forest over rainforest
-  (WOU) Eucalyptus obliqua wet forest (undifferentiated)
-  (WRE) Eucalyptus regnans forest
-  (WSU) Eucalyptus subcrenulata forest and woodland
-  (WVI) Eucalyptus viminalis wet forest

Legend: Cadastral Parcels



## TASVEG 4.0 Communities within 1000 metres

Code	Community	Canopy Tree
DOV	(DOV) Eucalyptus ovata forest and woodland	
DSC	(DSC) Eucalyptus amygdalina - Eucalyptus obliqua damp sclerophyll forest	

For more information contact: Coordinator, Tasmanian Vegetation Monitoring and Mapping Program.

Telephone: (03) 6165 4320

Email: [TVMMPsupport@nre.tas.gov.au](mailto:TVMMPsupport@nre.tas.gov.au)

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000



476038, 5405724

Please note that some layers may not display at all requested map scales

# Threatened Communities (TNVC 2020) within 1000 metres

## Legend: Threatened Communities

- 1 - Alkaline pans
- 2 - Allocasuarina littoralis forest
- 3 - Athrotaxis cupressoides/Nothofagus gunnii short rainforest
- 4 - Athrotaxis cupressoides open woodland
- 5 - Athrotaxis cupressoides rainforest
- 6 - Athrotaxis selaginoides/Nothofagus gunnii short rainforest
- 7 - Athrotaxis selaginoides rainforest
- 8 - Athrotaxis selaginoides subalpine scrub
- 9 - Banksia marginata wet scrub
- 10 - Banksia serrata woodland
- 11 - Callitris rhomboidea forest
- 13 - Cushion moorland
- 14 - Eucalyptus amygdalina forest and woodland on sandstone
- 15 - Eucalyptus amygdalina inland forest and woodland on cainozoic deposits
- 16 - Eucalyptus brookeriana wet forest
- 17 - Eucalyptus globulus dry forest and woodland
- 18 - Eucalyptus globulus King Island forest
- 19 - Eucalyptus morrisbyi forest and woodland
- 20 - Eucalyptus ovata forest and woodland
- 21 - Eucalyptus risdonii forest and woodland
- 22 - Eucalyptus tenuiramis forest and woodland on sediments
- 23 - Eucalyptus viminalis - Eucalyptus globulus coastal forest and woodland
- 24 - Eucalyptus viminalis Furneaux forest and woodland
- 25 - Eucalyptus viminalis wet forest
- 26 - Heathland on calcareous substrates
- 27 - Heathland scrub complex at Wingaroo
- 28 - Highland grassy sedge land
- 29 - Highland Poa grassland
- 30 - Melaleuca ericifolia swamp forest
- 31 - Melaleuca pustulata scrub
- 32 - Notelaea - Pomaderris - Beyeria forest
- 33 - Rainforest fernland
- 34 - Riparian scrub
- 35 - Seabird rookery complex
- 36 - Sphagnum peatland
- 36A - Spray zone coastal complex
- 37 - Subalpine Diplarrena latifolia rushland
- 38 - Subalpine Leptospermum nitidum woodland
- 39 - Wetlands

## Legend: Cadastral Parcels



# Threatened Communities (TNVC 2020) within 1000 metres

Scheduled Community Id	Scheduled Community Name
20	Eucalyptus ovata forest and woodland

For more information contact: Coordinator, Tasmanian Vegetation Monitoring and Mapping Program.

Telephone: (03) 6165 4320

Email: [TVMMPsupport@nre.tas.gov.au](mailto:TVMMPsupport@nre.tas.gov.au)

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

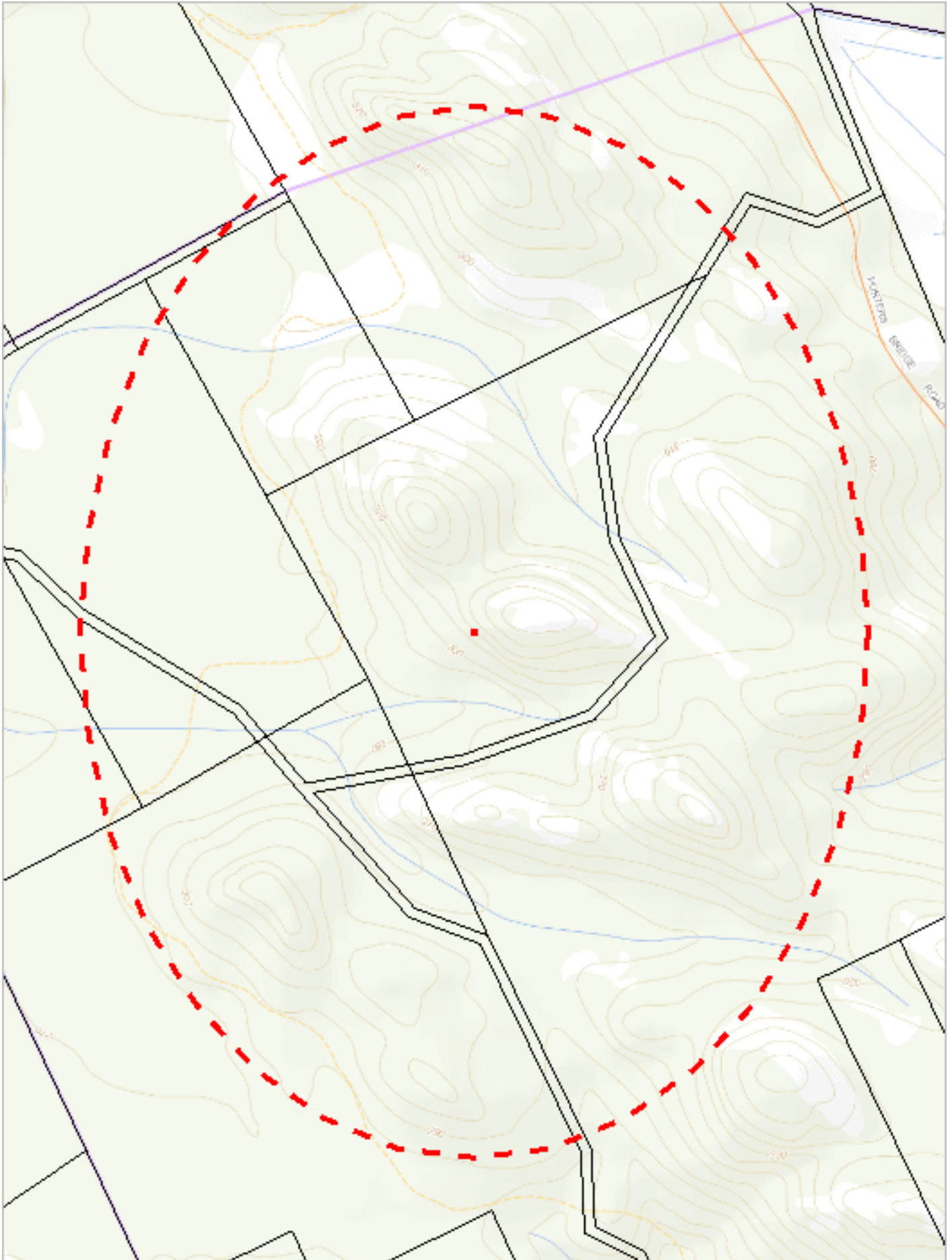
\*\*\* No Fire History (All) found within 1000 metres \*\*\*

\*\*\* No Fire History (Last Burnt) found within 1000 metres \*\*\*

\*\*\* No reserves found within 1000 metres \*\*\*

# Known biosecurity risks within 1000 meters

477849, 5408129



476038, 5405724

Please note that some layers may not display at all requested map scales

# Known biosecurity risks within 1000 meters

## Legend: Biosecurity Risk Species

● Point Verified

▬ Line Unverified

● Point Unverified

▭ Polygon Verified

▬ Line Verified

▭ Polygon Unverified

## Legend: Hygiene infrastructure

● Location Point Verified

▬ Location Line Verified

▭ Location Polygon Verified

● Location Point Unverified

▬ Location Line Unverified

▭ Location Polygon Unverified

## Legend: Cadastral Parcels



# Known biosecurity risks within 1000 meters

## Verified Species of biosecurity risk

No verified species of biosecurity risk found within 1000 metres

## Unverified Species of biosecurity risk

No unverified species of biosecurity risk found within 1000 metres

## Generic Biosecurity Guidelines

The level and type of hygiene protocols required will vary depending on the tenure, activity and land use of the area. In all cases adhere to the land manager's biosecurity (hygiene) protocols. As a minimum always Check / Clean / Dry (Disinfect) clothing and equipment before trips and between sites within a trip as needed <https://www.nre.tas.gov.au/invasive-species/weeds/weed-hygiene/keeping-it-clean-a-tasmanian-field-hygiene-manual>

On Reserved land, the more remote, infrequently visited and undisturbed areas require tighter biosecurity measures.

In addition, where susceptible species and communities are known to occur, tighter biosecurity measures are required.

Apply controls relevant to the area / activity:

- Don't access sites infested with pathogen or weed species unless absolutely necessary. If it is necessary to visit, adopt high level hygiene protocols.
- Consider not accessing non-infested sites containing known susceptible species / communities. If it is necessary to visit, adopt high level hygiene protocols.
- Don't undertake activities that might spread pest / pathogen / weed species such as deliberately moving soil or water between areas.
- Modify / restrict activities to reduce the chance of spreading pest / pathogen / weed species e.g. avoid periods when weeds are seeding, avoid clothing/equipment that excessively collects soil and plant material e.g. Velcro, excessive tread on boots.
- Plan routes to visit clean (uninfested) sites prior to dirty (infested) sites. Do not travel through infested areas when moving between sites.
- Minimise the movement of soil, water, plant material and hitchhiking wildlife between areas by using the Check / Clean / Dry (Disinfect when drying is not possible) procedure for all clothing, footwear, equipment, hand tools and vehicles <https://www.nre.tas.gov.au/invasive-species/weeds/weed-hygiene>
- Neoprene and netting can take 48 hours to dry, use non-porous gear wherever possible.
- Use walking track boot wash stations where available.
- Keep a hygiene kit in the vehicle that includes a scrubbing brush, boot pick, and disinfectant <https://www.nre.tas.gov.au/invasive-species/weeds/weed-hygiene/keeping-it-clean-a-tasmanian-field-hygiene-manual>
- Dispose of all freshwater away from natural water bodies e.g. do not empty water into streams or ponds.
- Dispose of used disinfectant ideally in town through a treatment or septic system. Always keep disinfectant well away from natural water systems.
- Securely contain any high risk pest / pathogen / weed species that must be collected and moved e.g. biological samples.

## Hygiene Infrastructure

No known hygiene infrastructure found within 1000 metres

**ATTACHMENT 2: BIODIVERSITY VALUES DATABASE (BVD) REPORT**

# Threatened Fauna Range Boundaries

**Search Point 477002E,5406860N is within the following fauna range boundaries as at Sat Apr 19 2025 08:31:08 GMT+1000 (Australian Eastern Standard Time)**

<b>Common name</b>	<b>Species name</b>	<b>Range Class</b>
grey goshawk	<i>Accipiter novaehollandiae</i>	Potential Range
wedge-tailed eagle	<i>Aquila audax</i> subsp. <i>fleayi</i>	Potential Range
Green Lined Ground	<i>Catadromus lacordairei</i>	Potential Range
spotted-tailed quoll	<i>Dasyurus maculatus</i> subsp. <i>maculatus</i>	Potential Range
eastern quoll	<i>Dasyurus viverrinus</i>	Core Range
eastern quoll	<i>Dasyurus viverrinus</i>	Potential Range
Swan galaxias	<i>Galaxias fontanus</i>	Potential Range
white-bellied sea-eagle	<i>Haliaeetus leucogaster</i>	Potential Range
swift parrot	<i>Lathamus discolor</i>	N and W Potential range
green and golden frog	<i>Litoria raniformis</i>	Potential Range
blue wing parrot	<i>Neophema chrysostoma</i>	Potential Range
eastern barred bandicoot	<i>Perameles gunnii</i>	Potential Range
eastern barred bandicoot	<i>Perameles gunnii</i>	Core Range
glossy grass skink	<i>Pseudemoia rawlinsoni</i>	Potential Range
tasmanian devil	<i>Sarcophilus harrisii</i>	Potential Range
masked owl	<i>Tyto novaehollandiae</i>	Potential Range
masked owl	<i>Tyto novaehollandiae</i>	Core Range

Showing 1 to 17 of 17 entries

# Threatened Fauna Records

Fauna Records within 5000m of 477002E,5406860N  
**NVA Data Currency: 19/4/2025 (7am)**

Species name	Common name	Position accuracy (m)	X	Y	Distance (m)	Obs. type	Obs. date	Obs. state	Project code + Foreign id	NVA id
Tyto novaehollandiae	masked owl	5000	479255	5402542	4870	Sighting	1983-03-31	Present	qvm-fos	<a href="#">NVA</a>
Tyto novaehollandiae	masked owl	5000	479255	5402542	4870	Sighting	1982-03-31	Present	qvm-fos	<a href="#">NVA</a>
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	50	478285	5405861	1626	Nest	2010-09-22	Present	rnd 193	<a href="#">NVA</a>
Eagle sp.	Eagle	10	475220	5404716	2788	Nest	2023-02-21	Present	rnd 3151	<a href="#">NVA</a>
Litoria raniformis	green and gold frog	9	474961	5405692	2352	Audible	2018-01-04	Present	am_fidu	<a href="#">NVA</a>
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	1000	475913	5407884	1495	Nest	2023-11-25	Present	rnd 125	<a href="#">NVA</a>
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	20	472646	5406058	4429	Nest	2024-03-05	Present	rnd 3349	<a href="#">NVA</a>
Pseudemoia rawlinsoni	glossy grass skink	8	474836	5411256	4901	Sighting	2022-09-18	Present	inat	<a href="#">NVA</a>
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	10	478279	5405904	1595	Nest	2024-06-16	Present	rnd 3462	<a href="#">NVA</a>
Pseudemoia rawlinsoni	glossy grass skink	31	474947	5411359	4946	Sighting	2024-05-05	Present	inat	<a href="#">NVA</a>
Pseudemoia rawlinsoni	glossy grass skink	29	474840	5411268	4910	Sighting	2024-12-18	Present	inat	<a href="#">NVA</a>
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	10	474914	5404500	3151	Nest	2024-10-23	Present	rnd 2682	<a href="#">NVA</a>

Showing 1 to 12 of 12 entries

## Summary of Threatened Flora Species in Search

<b>Species name</b>	<b>Common name</b>
Glycine microphylla	small-leaf glycine
Pimelea curviflora var. gracilis	slender curved riceflower

Showing 1 to 2 of 2 entries

# Threatened Flora Records

Flora Records within 2000m of 477002E, 5406860N

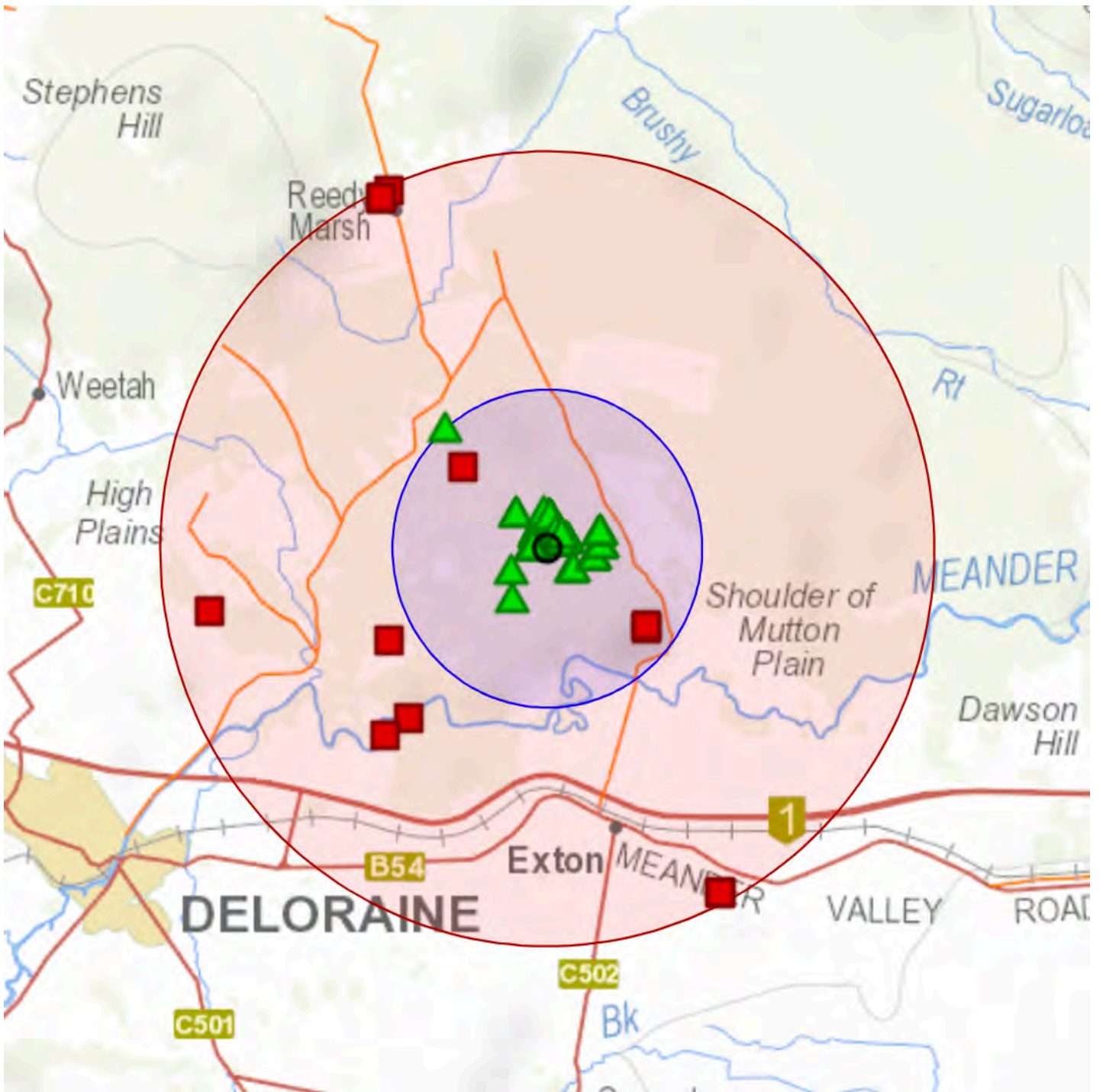
**NVA Data Currency: 19/4/2025 (7am)**

Species name	Common name	Position accuracy (m)	X	Y	Distance (m)	Obs. type	Obs. date	Obs. state	NVA id
Glycine microphylla	small-leaf glycine	5	475673	5408323	1977	Sighting	2009-03-17	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476548	5406180	818	Sighting	2008-03-28	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476537	5406545	562	Sighting	2008-03-28	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477237	5406945	250	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477248	5406945	260	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477248	5406947	261	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477256	5406945	268	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477258	5406948	271	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476858	5407016	212	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476864	5407026	216	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476881	5407047	223	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477000	5407190	330	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477015	5407195	335	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477015	5407196	336	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477007	5407185	325	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477004	5407180	320	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476878	5407012	196	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476896	5407048	216	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476889	5407059	229	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476903	5407059	222	Sighting	2022-03-09	Present	<a href="#">NVA</a>

Species name	Common name	Position accuracy (m)	X	Y	Distance (m)	Obs. type	Obs. date	Obs. state	NVA id
Pimelea curviflora var. gracilis	slender curved riceflower	5	476891	5407075	242	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476932	5407157	305	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477031	5407223	364	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477036	5407234	376	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477025	5407239	380	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477019	5407239	379	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477046	5407223	366	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477119	5406938	141	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477146	5406942	166	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477145	5406910	151	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477172	5406900	175	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477190	5406907	194	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476603	5407260	565	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476603	5407261	566	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476861	5407018	212	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476867	5407024	212	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476880	5407029	208	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477159	5406905	163	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476858	5407016	212	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476864	5407026	216	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476881	5407047	223	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477000	5407190	330	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477015	5407195	335	Sighting	2022-03-09	Present	<a href="#">NVA</a>

Species name	Common name	Position accuracy (m)	X	Y	Distance (m)	Obs. type	Obs. date	Obs. state	NVA id
Pimelea curviflora var. gracilis	slender curved riceflower	5	477015	5407196	336	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477007	5407185	325	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477004	5407180	320	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477313	5406574	423	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477346	5406566	453	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477600	5406731	612	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477602	5406729	614	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477607	5406728	619	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477708	5406870	706	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477699	5406878	697	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477685	5407040	706	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477685	5407041	707	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477682	5407042	704	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476805	5406840	198	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476808	5406844	195	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476812	5406840	191	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476948	5407187	331	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	476957	5407273	415	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477029	5407225	366	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477104	5407034	202	Sighting	2022-03-09	Present	<a href="#">NVA</a>
Pimelea curviflora var. gracilis	slender curved riceflower	5	477192	5406998	235	Sighting	2022-03-09	Present	<a href="#">NVA</a>

Showing 1 to 64 of 64 entries



**ATTACHMENT 3: PROTECTED MATTERS SEARCH TOOL (PMST) REPORT – EPBC ACT**



Australian Government

Department of Climate Change, Energy,  
the Environment and Water

# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 19-Apr-2025

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

# Summary

## Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	None
<a href="#">Wetlands of International Importance (Ramsar)</a>	None
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Listed Threatened Ecological Communities:</a>	2
<a href="#">Listed Threatened Species:</a>	28
<a href="#">Listed Migratory Species:</a>	9

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

<a href="#">Commonwealth Lands:</a>	1
<a href="#">Commonwealth Heritage Places:</a>	None
<a href="#">Listed Marine Species:</a>	15
<a href="#">Whales and Other Cetaceans:</a>	None
<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves Terrestrial:</a>	None
<a href="#">Australian Marine Parks:</a>	None
<a href="#">Habitat Critical to the Survival of Marine Turtles:</a>	None

## Extra Information

This part of the report provides information that may also be relevant to the area you have

<a href="#">State and Territory Reserves:</a>	9
<a href="#">Regional Forest Agreements:</a>	1
<a href="#">Nationally Important Wetlands:</a>	None
<a href="#">EPBC Act Referrals:</a>	4
<a href="#">Key Ecological Features (Marine):</a>	None
<a href="#">Biologically Important Areas:</a>	None
<a href="#">Bioregional Assessments:</a>	None
<a href="#">Geological and Bioregional Assessments:</a>	None

# Details

## Matters of National Environmental Significance

### Listed Threatened Ecological Communities

[ [Resource Information](#) ]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (Eucalyptus ovata / E. brookeriana)</a>	Critically Endangered	Community likely to occur within area	In feature area
<a href="#">Tasmanian white gum (Eucalyptus viminalis) wet forest</a>	Critically Endangered	Community likely to occur within area	In feature area

### Listed Threatened Species

[ [Resource Information](#) ]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
<b>BIRD</b>			
<a href="#">Aquila audax fleayi</a> Tasmanian Wedge-tailed Eagle, Wedge-tailed Eagle (Tasmanian) [64435]	Endangered	Breeding likely to occur within area	In feature area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Ceyx azureus diemenensis</a> Tasmanian Azure Kingfisher [25977]	Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area	In feature area
<a href="#">Neophema chrysostoma</a> Blue-winged Parrot [726]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Pterodroma leucoptera leucoptera</a> Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Tyto novaehollandiae castanops (Tasmanian population)</a> Masked Owl (Tasmanian) [67051]	Vulnerable	Breeding known to occur within area	In feature area
<b>FISH</b>			
<a href="#">Prototroctes maraena</a> Australian Grayling [26179]	Vulnerable	Species or species habitat may occur within area	In feature area
<b>FROG</b>			
<a href="#">Litoria raniformis</a> Southern Bell Frog, Growling Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat known to occur within area	In feature area
<b>MAMMAL</b>			
<a href="#">Dasyurus maculatus maculatus (Tasmanian population)</a> Spotted-tail Quoll, Spot-tailed Quoll, Tiger Quoll (Tasmanian population) [75183]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Dasyurus viverrinus</a> Eastern Quoll, Luaner [333]	Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Perameles gunnii gunnii</a> Eastern Barred Bandicoot (Tasmania) [66651]	Vulnerable	Species or species habitat known to occur within area	In feature area
<a href="#">Sarcophilus harrisii</a> Tasmanian Devil [299]	Endangered	Species or species habitat likely to occur within area	In feature area
<b>PLANT</b>			
<a href="#">Acacia axillaris</a> Midlands Mimosa, Midlands Wattle [13563]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
<a href="#">Barbarea australis</a> Native Wintercress, Riverbed Wintercress [12540]	Endangered	Species or species habitat likely to occur within area	In feature area
<a href="#">Colobanthus curtisiae</a> Curtis' Colobanth [23961]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Glycine latrobeana</a> Clover Glycine, Purple Clover [13910]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Lepidium hyssopifolium</a> Basalt Pepper-cress, Peppercress, Rubble Pepper-cress, Pepperweed [16542]	Endangered	Species or species habitat likely to occur within area	In buffer area only
<a href="#">Leucochrysum albicans subsp. tricolor</a> Hoary Sunray, Grassland Paper-daisy [89104]	Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Prasophyllum stellatum</a> Ben Lomond Leek-orchid [64955]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Pterostylis ziegeleri</a> Grassland Greenhood, Cape Portland Greenhood [64971]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Senecio psilocarpus</a> Swamp Fireweed, Smooth-fruited Groundsel [64976]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Xerochrysum palustre</a> Swamp Everlasting, Swamp Paper Daisy [76215]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<b>Listed Migratory Species</b> [ <a href="#">Resource Information</a> ]			
Scientific Name	Threatened Category	Presence Text	Buffer Status
<b>Migratory Marine Birds</b>			
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
<b>Migratory Terrestrial Species</b>			
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
<b>Migratory Wetlands Species</b>			
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area	In feature area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area	In buffer area only

## Other Matters Protected by the EPBC Act

### Commonwealth Lands

[ [Resource Information](#) ]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State	Buffer Status
Unknown		
Commonwealth Land - [60203]	TAS	In buffer area only

### Listed Marine Species

[ [Resource Information](#) ]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
<a href="#">Bubulcus ibis as Ardea ibis</a> Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area	In feature area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Breeding known to occur within area overfly marine area	In feature area
<a href="#">Neophema chrysostoma</a> Blue-winged Parrot [726]	Vulnerable	Species or species habitat likely to occur within area overfly marine area	In feature area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In buffer area only
<a href="#">Sterna striata</a> White-fronted Tern [799]		Migration route may occur within area	In feature area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area overfly marine area	In buffer area only

## Extra Information

State and Territory Reserves			[ Resource Information ]
Protected Area Name	Reserve Type	State	Buffer Status
Brushy Rivulet	Conservation Area	TAS	In buffer area only
Hollybank	Conservation Covenant	TAS	In buffer area only
Hollybank Goolagong Ruby Rise	Conservation Covenant	TAS	In buffer area only
Larcombes Rd Reedy Marsh	Conservation Covenant	TAS	In buffer area only

Protected Area Name	Reserve Type	State	Buffer Status
Pennicottage	Conservation Covenant	TAS	In buffer area only
Reedy Marsh	Conservation Area	TAS	In buffer area only
Ruby Rise Conservation Covenant	Conservation Covenant	TAS	In buffer area only
Saddlers Run	Conservation Covenant	TAS	In buffer area only
Wombat Way	Conservation Covenant	TAS	In buffer area only

## Regional Forest Agreements

[\[ Resource Information \]](#)

Note that all areas with completed RFAs have been included. Please see the associated resource information for specific caveats and use limitations associated with RFA boundary information.

RFA Name	State	Buffer Status
<a href="#">Tasmania RFA</a>	Tasmania	In feature area

## EPBC Act Referrals

[\[ Resource Information \]](#)

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
<a href="#">Remaining North West Transmission Developments for electricity network</a>	2022/09247		Assessment	In buffer area only

### Controlled action

<a href="#">Tasmania Natural Gas Project - Stage 2</a>	2001/211	Controlled Action	Post-Approval	In feature area
--	----------	-------------------	---------------	-----------------

### Not controlled action

<a href="#">2-D seismic data survey</a>	2001/135	Not Controlled Action	Completed	In buffer area only
<a href="#">Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia</a>	2015/7522	Not Controlled Action	Completed	In feature area

# Caveat

## 1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

## 2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

## 3 DATA SOURCES

### Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

### Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

## 4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

# Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact us](#) page.

[© Commonwealth of Australia](#)

Department of Climate Change, Energy, the Environment and Water

GPO Box 3090

Canberra ACT 2601 Australia

+61 2 6274 1111

**ATTACHMENT 4: THREATENED FLORA SPECIES NOTESHEETS**

# *Pimelea curviflora* var. *gracilis*



*Pimelea curviflora* var. *gracilis*.  
Tasmanian Herbarium specimen.

**FAMILY:** THYMELAEACEAE

**BOTANICAL NAME:** *Pimelea curviflora* var. *gracilis*, R.Br. Threlfall, *Fl. S. Austral.* 4: 2147 (1986)

**COMMON NAME:** Slender curved rice flower

**COMMONWEALTH STATUS:** (*EPBC Act*)  
Not Listed

**TASMANIAN STATUS:** (*TSP Act*) rare

## Description

A slender shrub that is much branched from the base with wiry branches that are erect or sloping upwards to 30-100 cm tall. The younger parts are covered in hairs that are pressed together. **Leaves:** The leaves are arranged alternately on the vegetative stems, where they are usually found near base, those on the flowering branches are arranged oppositely. The leaves are very shortly stalked and narrow or with the top of the leaf broader than the base. The surfaces are covered in hairs. **Flowers:** The inflorescence consists of heads with a few or many flowers at the ends of the branches. There are 2 to 4 leaf-like structures surrounding the inflorescence, which are shorter than the leaves. The flowers contain both sexes (hermaphrodite) or have no functional male parts (pistillate). Both these flower types can be in the same head of flowers. The hermaphrodite flowers have a tube that is between 5-9 mm long and is longer than flower bracts and very slender, sometimes curved. The tube and petals are yellow with scattered hairs. Flowering is from September to February (Flora of Victoria). **Fruit:** The fruit is dry. **Confusing species:** Distinguished from *Pimelea curviflora* var. *sericea* by having leaves with various shades of colour (description from Curtis 1967, Harris *et al.* 2001). Herbarium specimens have been collected from November to March.

## Distribution and Habitat

On the mainland this species occurs in South Australia, Victoria and New South Wales. In Tasmania, *Pimelea curviflora* var. *gracilis* predominantly occurs in the north of the State in wet sclerophyll forest (Curtis 1967, TPLUC 1996).

### **Key Sites and Populations**

Key populations include records from Deloraine, Ellendale, St. Pauls and Elizabeth Town. The species is also known from Wayatinah.

### **Known Reserves**

Reserved in the Warrawee Forest Reserve and the Wayatinah Conservation Area.

### **Ecology and Management**

Disturbance such as forest and agricultural clearing and farming are known to have adverse impacts. The species persists regardless of disturbance by fire and general grazing (TPLUC 1996). A lack of recent records for some populations is suggestive of a significant decline in the distribution of the species.

Butterflies and long-tongued flies are the most likely pollination vector for this species (A. Hingston pers. comm.).

### **Conservation Status Assessment**

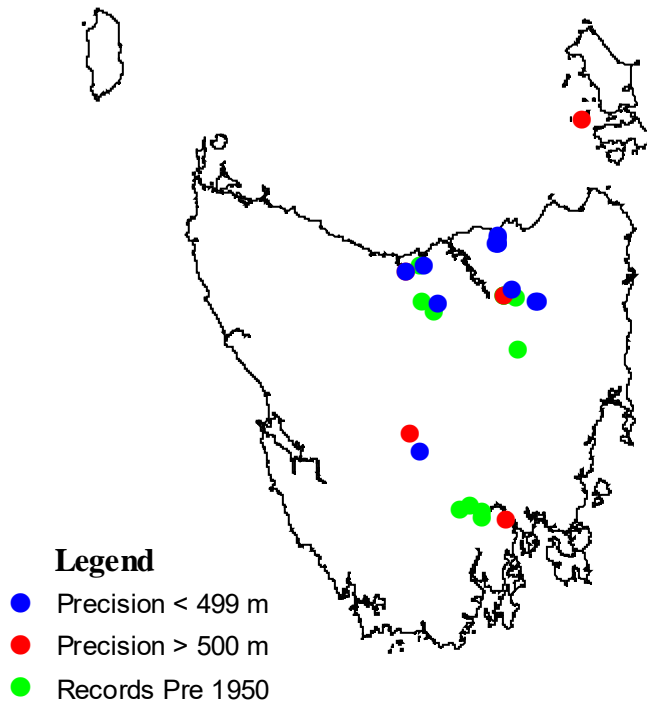
The taxonomy of this species remains confused. In the 2002 census, *Pimelea curviflora* var. *gracilis* and *Pimelea curviflora* var. *sericea* have been merged into *Pimelea curviflora*. However, the Threatened Species Unit will treat these entities separately until the taxonomic status is clarified.

### **Further Information**

- Corrick, MG & Fuhrer, B 2000, *Wildflowers of Victoria*, Blooming Books, Victoria.
- Cunningham, GM, Mulham, W, Milthorpe, P & Leigh, J 1992, *Plants of Western New South Wales*, Inkata Press, Sydney.
- Curtis, WM 1967, *The Student's Flora of Tasmania*, Part 3, Government Printer, Hobart.
- Eddy, D, Mallinson, D, Rehwinkel, R & Sharp S 1998, *Grassland Flora: A Field Guide for the Southern Tablelands (NSW & ACT)*, Environment ACT, Australia.
- Harris, S, Buchanan, A & Connolly, A 2001, *One Hundred Islands: The Flora of the Outer Furneaux*, Department of Primary Industries, Water and Environment, Hobart.
- Tasmanian Public Land Use Commission 1996, *Environment & Heritage Report Vol IV, Background Report*, Part C, Tasmanian Commonwealth Regional Forest Agreement, Hobart.

## Tasmanian Distribution

(As per Threatened Species Unit records, June 2003)



### 1:25 000 Map Sheets

Badger, Cleveland, Collinsvale, Deloraine, Giblin, Harford, Hobart, Latrobe, Launceston, New Norfolk, Nunamara, Railton, Strickland, Tarraleah, Uxbridge, Weymouth.

Date last modified: 18/07/2005

**ATTACHMENT 5: FLORA SPECIES (OBSERVED) LIST FOR THE SITE**

INTRO	ENDEMIC	SPNUMBER	CLADE	FAMILY	FULLNAME
		1548	Magnoliids	Lauraceae	<i>Cassytha pubescens</i> R.Br.
		2561	Magnoliids	Winteraceae	<i>Tasmannia lanceolata</i> (Poir.) A.C.Sm.
		899	Eudicots	Amaranthaceae	<i>Einadia nutans</i> (R.Br.) A.J.Scott subsp. <i>nutans</i>
		29	Eudicots	Amaranthaceae	<i>Ptilotus spathulatus</i> (R.Br.) Poir.
		48	Eudicots	Apiaceae	<i>Daucus glochidiatus</i> (Labill.) Fisch., C.A.Mey. & Avé-Lall.
		56	Eudicots	Apiaceae	<i>Eryngium vesiculosum</i> Labill.
		59	Eudicots	Araliaceae	<i>Hydrocotyle callicarpa</i> Bunge
		63	Eudicots	Araliaceae	<i>Hydrocotyle hirta</i> R.Br. ex A.Rich.
		66	Eudicots	Araliaceae	<i>Hydrocotyle muscosa</i> R.Br. ex A.Rich.
		68	Eudicots	Araliaceae	<i>Hydrocotyle sibthorpioides</i> Lam.
		129	Eudicots	Asteraceae	<i>Argentipallium dealbatum</i> (Labill.) Paul G.Wilson
	e	138	Eudicots	Asteraceae	<i>Bedfordia linearis</i> (Labill.) DC. subsp. <i>linearis</i>
	e	143	Eudicots	Asteraceae	<i>Bedfordia salicina</i> (Labill.) DC.
		167	Eudicots	Asteraceae	<i>Brachyscome spathulata</i> Gaudich.
i		184	Eudicots	Asteraceae	<i>Carduus pycnocephalus</i> L.
		188	Eudicots	Asteraceae	<i>Cassinia aculeata</i> (Labill.) R.Br. subsp. <i>aculeata</i>
		205	Eudicots	Asteraceae	<i>Centipeda elatinoides</i> (Less.) Benth. & Hook.f. ex O.Hoffm.
		5570	Eudicots	Asteraceae	<i>Chrysocephalum apiculatum</i> (Labill.) Steetz subsp. <i>apiculatum</i>
i		217	Eudicots	Asteraceae	<i>Cirsium arvense</i> (L.) Scop. var. <i>arvense</i>
i		219	Eudicots	Asteraceae	<i>Cirsium vulgare</i> (Savi) Ten.
		229	Eudicots	Asteraceae	<i>Coronidium scorpioides</i> (Labill.) Paul G.Wilson
	e	246	Eudicots	Asteraceae	<i>Craspedia glauca</i> (Labill.) Spreng.
		262	Eudicots	Asteraceae	<i>Cymbonotus preissianus</i> Steetz
		284	Eudicots	Asteraceae	<i>Euchiton involucreatus</i> (G.Forst.) Holub
		4398	Eudicots	Asteraceae	<i>Euchiton japonicus</i> (Thunb.) Holub
i		372	Eudicots	Asteraceae	<i>Hypochaeris glabra</i> L.
i		373	Eudicots	Asteraceae	<i>Hypochaeris radicata</i> L.
i		382	Eudicots	Asteraceae	<i>Lactuca serriola</i> L. f. <i>serriola</i>
		388	Eudicots	Asteraceae	<i>Lagenophora stipitata</i> (Labill.) Druce
i		4683	Eudicots	Asteraceae	<i>Leontodon rhagadioloides</i> (L.) Enke & Zidorn
		401	Eudicots	Asteraceae	<i>Leptorhynchus nitidulus</i> DC.
		403	Eudicots	Asteraceae	<i>Leptorhynchus squamatus</i> (Labill.) Less. subsp. <i>squamatus</i>

INTRO	ENDEMIC	SPNUMBER	CLADE	FAMILY	FULLNAME
		417	Eudicots	Asteraceae	<i>Microseris lanceolata</i> (Walp.) Sch.Bip.
		420	Eudicots	Asteraceae	<i>Millotia tenuifolia</i> Cass. var. <i>tenuifolia</i>
		428	Eudicots	Asteraceae	<i>Olearia argophylla</i> (Labill.) F.Muell. ex Benth.
		440	Eudicots	Asteraceae	<i>Olearia lirata</i> (Sims) Hutch.
		441	Eudicots	Asteraceae	<i>Olearia myrsinoides</i> (Labill.) F.Muell. ex Benth.
	e	5193	Eudicots	Asteraceae	<i>Olearia phlogopappa</i> (Labill.) DC. subsp. <i>phlogopappa</i>
		451	Eudicots	Asteraceae	<i>Olearia ramulosa</i> (Labill.) Benth.
		452	Eudicots	Asteraceae	<i>Olearia stellulata</i> (Labill.) DC.
		454	Eudicots	Asteraceae	<i>Olearia viscosa</i> (Labill.) Benth.
		465	Eudicots	Asteraceae	<i>Ozothamnus ferrugineus</i> (Labill.) Sweet
		515	Eudicots	Asteraceae	<i>Senecio hispidissimus</i> I.Thomps.
i		517	Eudicots	Asteraceae	<i>Senecio jacobaea</i> L.
		523	Eudicots	Asteraceae	<i>Senecio linearifolius</i> A.Rich. var. <i>linearifolius</i>
		529	Eudicots	Asteraceae	<i>Senecio minimus</i> Poir.
		549	Eudicots	Asteraceae	<i>Senecio quadridentatus</i> Labill.
		563	Eudicots	Asteraceae	<i>Solenogyne dominii</i> L.G.Adams
		564	Eudicots	Asteraceae	<i>Solenogyne gunnii</i> (Hook.f.) Cabrera
i		571	Eudicots	Asteraceae	<i>Sonchus oleraceus</i> L.
i		580	Eudicots	Asteraceae	<i>Taraxacum officinale</i> F.H.Wigg.
		624	Eudicots	Boraginaceae	<i>Cynoglossum australe</i> R.Br.
i		675	Eudicots	Brassicaceae	<i>Cardamine hirsuta</i> L.
		772	Eudicots	Campanulaceae	<i>Wahlenbergia gracilentata</i> Lothian
		773	Eudicots	Campanulaceae	<i>Wahlenbergia gracilis</i> (G.Forst.) A.DC.
		777	Eudicots	Campanulaceae	<i>Wahlenbergia multicaulis</i> Benth.
		780	Eudicots	Campanulaceae	<i>Wahlenbergia stricta</i> (R.Br.) Sweet subsp. <i>stricta</i>
i		1008	Eudicots	Caprifoliaceae	<i>Dipsacus fullonum</i> L.
i		795	Eudicots	Caryophyllaceae	<i>Cerastium glomeratum</i> Thuill.
		799	Eudicots	Caryophyllaceae	<i>Colobanthus apetalus</i> (Labill.) Druce var. <i>apetalus</i>
i		809	Eudicots	Caryophyllaceae	<i>Moenchia erecta</i> (L.) G.Gaertn., B.Mey. & Scherb.
i		812	Eudicots	Caryophyllaceae	<i>Petrorhagia nanteuilii</i> (Burnat) P.W.Ball & Heywood
i		820	Eudicots	Caryophyllaceae	<i>Sagina procumbens</i> L.
		823	Eudicots	Caryophyllaceae	<i>Scleranthus biflorus</i> (J.R.Forst. & G.Forst.) Hook.f.

INTRO	ENDEMIC	SPNUMBER	CLADE	FAMILY	FULLNAME
		847	Eudicots	Caryophyllaceae	<i>Stellaria flaccida</i> Hook.
i		849	Eudicots	Caryophyllaceae	<i>Stellaria media</i> (L.) Vill.
		853	Eudicots	Caryophyllaceae	<i>Stellaria pungens</i> Brongn.
		858	Eudicots	Casuarinaceae	<i>Allocasuarina littoralis</i> (Salisb.) L.A.S.Johnson
		861	Eudicots	Casuarinaceae	<i>Allocasuarina verticillata</i> (Lam.) L.A.S.Johnson
		2462	Eudicots	Celastraceae	<i>Stackhousia monogyna</i> Labill.
		939	Eudicots	Convolvulaceae	<i>Convolvulus angustissimus</i> R.Br. subsp. <i>angustissimus</i>
		943	Eudicots	Convolvulaceae	<i>Dichondra repens</i> J.R.Forst. & G.Forst.
		968	Eudicots	Crassulaceae	<i>Crassula sieberiana</i> (Schult. & Schult.f.) Druce
		993	Eudicots	Dilleniaceae	<i>Hibbertia empetrifolia</i> (DC.) Hoogland subsp. <i>empetrifolia</i>
		999	Eudicots	Dilleniaceae	<i>Hibbertia procumbens</i> (Labill.) DC.
		1001	Eudicots	Dilleniaceae	<i>Hibbertia riparia</i> (R.Br. ex DC.) Hoogland
		1020	Eudicots	Droseraceae	<i>Drosera macrantha</i> subsp. <i>planchonii</i> (Hook.f. ex Planch.) N.G.Marchant
		1023	Eudicots	Droseraceae	<i>Drosera peltata</i> Thunb.
		2518	Eudicots	Elaeocarpaceae	<i>Tetratheca labillardierei</i> Joy Thomps.
		1035	Eudicots	Ericaceae	<i>Acrotriche serrulata</i> R.Br.
		1074	Eudicots	Ericaceae	<i>Epacris impressa</i> Labill.
		1075	Eudicots	Ericaceae	<i>Epacris lanuginosa</i> Labill.
	e	1089	Eudicots	Ericaceae	<i>Epacris virgata</i> Hook.f.
i		1167	Eudicots	Ericaceae	<i>Erica lusitanica</i> Rudolphi
	e	5577	Eudicots	Ericaceae	<i>Leptecophylla parvifolia</i> (R.Br.) Jarman
		1099	Eudicots	Ericaceae	<i>Leucopogon collinus</i> (Labill.) R.Br.
		1121	Eudicots	Ericaceae	<i>Monotoca glauca</i> (Labill.) Druce
		5633	Eudicots	Ericaceae	<i>Styphelia humifusa</i> (Cav.) Pers.
		1184	Eudicots	Euphorbiaceae	<i>Amperea xiphoclada</i> (Sieber ex Spreng.) Druce var. <i>xiphoclada</i>
		1191	Eudicots	Euphorbiaceae	<i>Beyeria viscosa</i> (Labill.) Miq.
		1621	Eudicots	Fabaceae	<i>Acacia dealbata</i> Link subsp. <i>dealbata</i>
		1626	Eudicots	Fabaceae	<i>Acacia genistifolia</i> Link
		1636	Eudicots	Fabaceae	<i>Acacia melanoxylon</i> R.Br.
	e	1639	Eudicots	Fabaceae	<i>Acacia mucronata</i> Willd. ex H.L.Wendl. subsp. <i>mucronata</i>
		1663	Eudicots	Fabaceae	<i>Acacia verticillata</i> (L'Hér.) Willd. subsp. <i>verticillata</i>
		1215	Eudicots	Fabaceae	<i>Bossiaea cordigera</i> Benth. ex Hook.f.

INTRO	ENDEMIC	SPNUMBER	CLADE	FAMILY	FULLNAME
		1219	Eudicots	Fabaceae	Bossiaea prostrata R.Br.
		1220	Eudicots	Fabaceae	Bossiaea riparia A.Cunn. ex Benth.
		1228	Eudicots	Fabaceae	Daviesia latifolia R.Br.
		1247	Eudicots	Fabaceae	Glycine clandestina J.C.Wendl.
		1255	Eudicots	Fabaceae	Goodia lotifolia Salisb.
		1260	Eudicots	Fabaceae	Hovea heterophylla A.Cunn. ex Hook.f.
		1267	Eudicots	Fabaceae	Indigofera australis Willd. subsp. australis
		1270	Eudicots	Fabaceae	Kennedia prostrata R.Br.
		1322	Eudicots	Fabaceae	Pultenaea dentata Labill.
		1329	Eudicots	Fabaceae	Pultenaea juniperina Labill.
i		1375	Eudicots	Fabaceae	Vicia hirsuta (L.) Gray
i		1398	Eudicots	Gentianaceae	Centaurium erythraea Rafn
i		1433	Eudicots	Geraniaceae	Erodium moschatum (L.) L'Hér. ex Aiton
		1439	Eudicots	Geraniaceae	Geranium potentilloides L'Hér. ex DC. var. potentilloides
		1447	Eudicots	Geraniaceae	Pelargonium australe Willd.
		1459	Eudicots	Goodeniaceae	Goodenia humilis R.Br.
		1460	Eudicots	Goodeniaceae	Goodenia lanata R.Br.
		1475	Eudicots	Haloragaceae	Gonocarpus micranthus Thunb. subsp. micranthus
		1479	Eudicots	Haloragaceae	Gonocarpus tetragynus Labill.
		1480	Eudicots	Haloragaceae	Gonocarpus teucrioides DC.
		925	Eudicots	Hypericaceae	Hypericum gramineum G.Forst.
		928	Eudicots	Hypericaceae	Hypericum japonicum Thunb.
		1507	Eudicots	Lamiaceae	Ajuga australis R.Br.
i		1516	Eudicots	Lamiaceae	Marrubium vulgare L.
		1528	Eudicots	Lamiaceae	Prostanthera lasianthos Labill.
i		1531	Eudicots	Lamiaceae	Prunella vulgaris L.
		1561	Eudicots	Linaceae	Linum marginale A.Cunn.
i		1590	Eudicots	Malvaceae	Malva arborea (L.) Webb & Berthel.
		2394	Eudicots	Mazaceae	Mazus pumilio R.Br.
	e	1700	Eudicots	Myrtaceae	Eucalyptus amygdalina Labill.
		1727	Eudicots	Myrtaceae	Eucalyptus obliqua L'Hér.
		1728	Eudicots	Myrtaceae	Eucalyptus ovata Labill. var. ovata

INTRO	ENDEMIC	SPNUMBER	CLADE	FAMILY	FULLNAME
	e	1740	Eudicots	Myrtaceae	<i>Eucalyptus rodwayi</i> R.T.Baker & H.G.Sm.
	e	5843	Eudicots	Myrtaceae	<i>Eucalyptus tasmaniensis</i> (Boland) D.Nicolle
		1751	Eudicots	Myrtaceae	<i>Eucalyptus viminalis</i> Labill. subsp. <i>viminalis</i>
		1755	Eudicots	Myrtaceae	<i>Euryomyrtus ramosissima</i> (A.Cunn.) Trudgen
		1762	Eudicots	Myrtaceae	<i>Leptospermum lanigerum</i> (Sol. ex Aiton) Sm.
		1769	Eudicots	Myrtaceae	<i>Leptospermum scoparium</i> J.R.Forst. & G.Forst.
		1773	Eudicots	Myrtaceae	<i>Melaleuca ericifolia</i> Sm.
		1775	Eudicots	Myrtaceae	<i>Melaleuca pallida</i> (Bonpl.) Craven
		1778	Eudicots	Myrtaceae	<i>Melaleuca squarrosa</i> Donn ex Sm.
	e	1779	Eudicots	Myrtaceae	<i>Melaleuca virens</i> Craven
		1786	Eudicots	Oleaceae	<i>Notelaea ligustrina</i> Vent.
		1789	Eudicots	Onagraceae	<i>Epilobium billardioreanum</i> Ser. ex DC. subsp. <i>billardioreanum</i>
		1825	Eudicots	Oxalidaceae	<i>Oxalis magellanica</i> G.Forst.
		1204	Eudicots	Phyllanthaceae	<i>Phyllanthus gunnii</i> Hook.f.
		1205	Eudicots	Phyllanthaceae	<i>Poranthera microphylla</i> Brongn.
		1200	Eudicots	Picrodendraceae	<i>Micrantheum hexandrum</i> Hook.f.
	e	1853	Eudicots	Pittosporaceae	<i>Billardiera longiflora</i> Labill.
		1861	Eudicots	Pittosporaceae	<i>Bursaria spinosa</i> Cav. subsp. <i>spinosa</i>
		1864	Eudicots	Pittosporaceae	<i>Pittosporum bicolor</i> Hook.
	e	1886	Eudicots	Plantaginaceae	<i>Plantago gunnii</i> Hook.f.
i		1888	Eudicots	Plantaginaceae	<i>Plantago lanceolata</i> L.
		1896	Eudicots	Plantaginaceae	<i>Plantago varia</i> R.Br.
		2421	Eudicots	Plantaginaceae	<i>Veronica gracilis</i> R.Br.
i		1913	Eudicots	Polygonaceae	<i>Acetosella vulgaris</i> Fourr.
		1983	Eudicots	Proteaceae	<i>Banksia marginata</i> Cav.
		2005	Eudicots	Proteaceae	<i>Hakea lissosperma</i> R.Br.
	e	2021	Eudicots	Proteaceae	<i>Lomatia tinctoria</i> (Labill.) R.Br.
		2046	Eudicots	Ranunculaceae	<i>Clematis aristata</i> R.Br. ex Ker Gawl.
		2073	Eudicots	Ranunculaceae	<i>Ranunculus lappaceus</i> Sm.
i		2095	Eudicots	Resedaceae	<i>Reseda lutea</i> L.
		2104	Eudicots	Rhamnaceae	<i>Pomaderris apetala</i> Labill. subsp. <i>apetala</i>
		2110	Eudicots	Rhamnaceae	<i>Pomaderris elliptica</i> Labill. var. <i>elliptica</i>

INTRO	ENDEMIC	SPNUMBER	CLADE	FAMILY	FULLNAME
		2149	Eudicots	Rosaceae	<i>Acaena novae-zelandiae</i> Kirk
i		2158	Eudicots	Rosaceae	<i>Cotoneaster franchetii</i> Bois
i		2164	Eudicots	Rosaceae	<i>Crataegus monogyna</i> Jacq.
i		2180	Eudicots	Rosaceae	<i>Prunus spinosa</i> L.
i		2182	Eudicots	Rosaceae	<i>Rosa rubiginosa</i> L.
		2191	Eudicots	Rosaceae	<i>Rubus parvifolius</i> L.
		2204	Eudicots	Rubiaceae	<i>Asperula conferta</i> Hook.f.
		2219	Eudicots	Rubiaceae	<i>Coprosma quadrifida</i> (Labill.) B.L.Rob.
		2276	Eudicots	Rutaceae	<i>Correa reflexa</i> (Labill.) Vent. var. <i>reflexa</i>
		2295	Eudicots	Rutaceae	<i>Zieria arborescens</i> Sims subsp. <i>arborescens</i>
i		2315	Eudicots	Salicaceae	<i>Salix</i> × <i>fragilis</i> L. nothovar. <i>fragilis</i>
		2321	Eudicots	Santalaceae	<i>Exocarpos cupressiformis</i> Labill.
		2327	Eudicots	Santalaceae	<i>Leptomeria drupacea</i> (Labill.) Druce
i		2	Eudicots	Sapindaceae	<i>Acer pseudoplatanus</i> L.
		2332	Eudicots	Sapindaceae	<i>Dodonaea viscosa</i> subsp. <i>spatulata</i> (Sm.) J.G.West
i		2408	Eudicots	Scrophulariaceae	<i>Verbascum thapsus</i> L.
i		2409	Eudicots	Scrophulariaceae	<i>Verbascum virgatum</i> Stokes
		2446	Eudicots	Solanaceae	<i>Solanum laciniatum</i> Aiton
i		2449	Eudicots	Solanaceae	<i>Solanum nigrum</i> L.
		2481	Eudicots	Stylidiaceae	<i>Stylidium graminifolium</i> Sw.
		2491	Eudicots	Thymelaeaceae	<i>Pimelea curviflora</i> R.Br.
		2492	Eudicots	Thymelaeaceae	<i>Pimelea drupacea</i> Labill.
		2497	Eudicots	Thymelaeaceae	<i>Pimelea humilis</i> R.Br.
	e	2506	Eudicots	Thymelaeaceae	<i>Pimelea nivea</i> Labill.
		2536	Eudicots	Urticaceae	<i>Urtica incisa</i> Poir.
		787	Eudicots	Viburnaceae	<i>Sambucus gaudichaudiana</i> DC.
		2548	Eudicots	Violaceae	<i>Viola betonicifolia</i> Sm. subsp. <i>betonicifolia</i>
		2553	Eudicots	Violaceae	<i>Viola fuscoviolacea</i> (L.G.Adams) T.A.James
		2558	Eudicots	Violaceae	<i>Viola hederacea</i> Labill.
i		2567	Monocots	Alismataceae	<i>Alisma plantago-aquatica</i> L.
		2997	Monocots	Alstroemeriaceae	<i>Drymphila cyanocarpa</i> R.Br.
		4058	Monocots	Asparagaceae	<i>Lomandra longifolia</i> Labill.

INTRO	ENDEMIC	SPNUMBER	CLADE	FAMILY	FULLNAME
		2973	Monocots	Asphodelaceae	Bulbine glauca (Raf.) E.M.Watson
		2993	Monocots	Asphodelaceae	Dianella revoluta R.Br. var. revoluta
		2995	Monocots	Asphodelaceae	Dianella tasmanica Hook.f.
		2614	Monocots	Cyperaceae	Carex appressa R.Br.
		2630	Monocots	Cyperaceae	Carex fascicularis Sol. ex Boott
		2639	Monocots	Cyperaceae	Carex iynx Nelmes
		2684	Monocots	Cyperaceae	Ficinia nodosa (Rottb.) Goetgh., Muasya & D.A.Simpson
		2688	Monocots	Cyperaceae	Gahnia grandis (Labill.) S.T.Blake
		2699	Monocots	Cyperaceae	Isolepis aucklandica Hook.f.
		2706	Monocots	Cyperaceae	Isolepis inundata R.Br.
		2720	Monocots	Cyperaceae	Lepidosperma concavum R.Br.
		2725	Monocots	Cyperaceae	Lepidosperma elatius Labill.
		2726	Monocots	Cyperaceae	Lepidosperma ensiforme (Rodway) D.I.Morris
		2733	Monocots	Cyperaceae	Lepidosperma laterale R.Br.
	e	2755	Monocots	Cyperaceae	Schoenus absconditus Kük.
		2756	Monocots	Cyperaceae	Schoenus apogon Roem. & Schult.
	e	2824	Monocots	Iridaceae	Diplarrena latifolia Benth.
		2875	Monocots	Juncaceae	Juncus australis Hook.f.
		2876	Monocots	Juncaceae	Juncus bassianus L.A.S.Johnson
		2891	Monocots	Juncaceae	Juncus gregiflorus L.A.S.Johnson
		2892	Monocots	Juncaceae	Juncus holoschoenus R.Br.
		2898	Monocots	Juncaceae	Juncus pallidus R.Br.
		2899	Monocots	Juncaceae	Juncus pauciflorus R.Br.
		2919	Monocots	Juncaceae	Luzula densiflora (H.Nordensk.) Edgar
		3041	Monocots	Orchidaceae	Acianthus pusillus D.L.Jones
		3080	Monocots	Orchidaceae	Caladenia carnea R.Br.
		3105	Monocots	Orchidaceae	Caladenia mentiens D.L.Jones
	e	3136	Monocots	Orchidaceae	Chiloglottis gunnii Lindl.
	e	3141	Monocots	Orchidaceae	Chiloglottis triceratops D.L.Jones
		3171	Monocots	Orchidaceae	Cyrtostylis reniformis R.Br.
		3179	Monocots	Orchidaceae	Dipodium roseum D.L.Jones & M.A.Clem.
		3200	Monocots	Orchidaceae	Gastrodia procera G.W.Carr

INTRO	ENDEMIC	SPNUMBER	CLADE	FAMILY	FULLNAME
		3234	Monocots	Orchidaceae	<i>Microtis unifolia</i> (G.Forst.) Rchb.f.
		3335	Monocots	Orchidaceae	<i>Pterostylis melagramma</i> D.L.Jones
		3337	Monocots	Orchidaceae	<i>Pterostylis nana</i> R.Br.
		3338	Monocots	Orchidaceae	<i>Pterostylis nutans</i> R.Br.
		3342	Monocots	Orchidaceae	<i>Pterostylis pedunculata</i> R.Br.
		3352	Monocots	Orchidaceae	<i>Pterostylis tasmanica</i> D.L.Jones
i		3467	Monocots	Poaceae	<i>Agrostis capillaris</i> L.
		3474	Monocots	Poaceae	<i>Agrostis propinqua</i> S.W.L.Jacobs
i		3482	Monocots	Poaceae	<i>Agrostis stolonifera</i> L.
i		3488	Monocots	Poaceae	<i>Aira caryophyllea</i> L. subsp. <i>caryophyllea</i>
i		3493	Monocots	Poaceae	<i>Aira praecox</i> L.
i		3509	Monocots	Poaceae	<i>Anthoxanthum odoratum</i> L.
		3516	Monocots	Poaceae	<i>Australopyrum pectinatum</i> (Labill.) Á.Löve
		3540	Monocots	Poaceae	<i>Austrostipa flavescens</i> (Labill.) S.W.L.Jacobs & J.Everett
		3550	Monocots	Poaceae	<i>Austrostipa stipoides</i> (Hook.f.) S.W.L.Jacobs & J.Everett
		3551	Monocots	Poaceae	<i>Austrostipa stuposa</i> (Hughes) S.W.L.Jacobs & J.Everett
i		3562	Monocots	Poaceae	<i>Briza maxima</i> L.
i		3598	Monocots	Poaceae	<i>Cynosurus echinatus</i> L.
i		3599	Monocots	Poaceae	<i>Dactylis glomerata</i> L.
		3648	Monocots	Poaceae	<i>Deyeuxia quadriseta</i> (Labill.) Benth.
		3654	Monocots	Poaceae	<i>Dichelachne crinita</i> (L.f.) Hook.f.
		3655	Monocots	Poaceae	<i>Dichelachne inaequiglumis</i> (Hack. ex Cheeseman) Edgar & Connor
		3659	Monocots	Poaceae	<i>Dichelachne rara</i> (R.Br.) Vickery
		3789	Monocots	Poaceae	<i>Microlaena stipoides</i> (Labill.) R.Br. var. <i>stipoides</i>
		3846	Monocots	Poaceae	<i>Phragmites australis</i> (Cav.) Trin. ex Steud.
		3868	Monocots	Poaceae	<i>Poa labillardierei</i> Steud. var. <i>labillardierei</i>
		3877	Monocots	Poaceae	<i>Poa rodwayi</i> Vickery
		3879	Monocots	Poaceae	<i>Poa sieberiana</i> Spreng. var. <i>sieberiana</i>
		3881	Monocots	Poaceae	<i>Poa tenera</i> F.Muell. ex Hook.f.
		3897	Monocots	Poaceae	<i>Rytidosperma caespitosum</i> (Gaudich.) Connor & Edgar
	e	3910	Monocots	Poaceae	<i>Rytidosperma pauciflorum</i> (R.Br.) Connor & Edgar
		3919	Monocots	Poaceae	<i>Rytidosperma setaceum</i> (R.Br.) Connor & Edgar

INTRO	ENDEMIC	SPNUMBER	CLADE	FAMILY	FULLNAME
		3982	Monocots	Poaceae	<i>Themeda triandra</i> Forssk.
i		3991	Monocots	Poaceae	<i>Vulpia bromoides</i> (L.) Gray
	e	2582	Monocots	Restionaceae	<i>Centrolepis monogyna</i> (Hook.f.) Benth.
i		4055	Monocots	Typhaceae	<i>Typha latifolia</i> L.
		4111	Pteridophytes	Adiantaceae	<i>Cheilanthes austrotenuifolia</i> H.M.Quirk & T.C.Chambers
		4117	Pteridophytes	Adiantaceae	<i>Pellaea falcata</i> (R.Br.) Fée
		4123	Pteridophytes	Aspleniaceae	<i>Asplenium flabellifolium</i> Cav.
		4145	Pteridophytes	Blechnaceae	<i>Blechnum nudum</i> (Labill.) Mett. ex Luerss.
		4148	Pteridophytes	Blechnaceae	<i>Blechnum penna-marina</i> subsp. <i>alpina</i> (R.Br.) T.C.Chambers & P.A.Farrant
		4152	Pteridophytes	Blechnaceae	<i>Blechnum wattsii</i> Tindale
		4174	Pteridophytes	Dennstaedtiaceae	<i>Histiopteris incisa</i> (Thunb.) J.Sm.
		4181	Pteridophytes	Dennstaedtiaceae	<i>Hypolepis rugosula</i> (Labill.) J.Sm.
		5387	Pteridophytes	Dennstaedtiaceae	<i>Pteridium esculentum</i> (G.Forst.) Cockayne subsp. <i>esculentum</i>
		4185	Pteridophytes	Dicksoniaceae	<i>Dicksonia antarctica</i> Labill.
		4192	Pteridophytes	Dryopteridaceae	<i>Polystichum proliferum</i> (R.Br.) C.Presl
		4201	Pteridophytes	Gleicheniaceae	<i>Gleichenia microphylla</i> R.Br.
		4257	Pteridophytes	Lycopodiaceae	<i>Lycopodium deuterodensum</i> Herter
		4276	Pteridophytes	Polypodiaceae	<i>Microsorium pustulatum</i> (G.Forst.) Copel. subsp. <i>pustulatum</i>

**ATTACHMENT 6: DA22308 (PERMIT TO TAKE – *PIMELEA CURVIFLORA*) GRANTED ON 14 APRIL 2022**

# Department of Natural Resources and Environment Tasmania

ENVIRONMENT, HERITAGE AND LAND DIVISION

**Hobart** GPO Box 44, Hobart, Tasmania, 7001  
**Launceston** PO Box 46, Kings Meadows, Tasmania, 7249  
**Devonport** PO Box 303, Devonport, Tasmania, 7310  
Ph 1300 368 550  
Web nre.tas.gov.au



Enquiries : Monique Case  
Phone : 0457 228 752  
Email : Monique.Case@nre.tas.gov.au  
Our Ref : D22-113548

14 April 2022

Doug Tangney  
Project Manager  
Walters Contracting – Earthmoving and Quarrying  
PO Box 257  
Deloraine TAS 7304

Dear Mr Tangney

## **PERMIT TO TAKE THREATENED FLORA – DA22308**

I refer to your application for a permit to take threatened flora in order to construct a quarry at Porters Bridge road, Exton.

I have enclosed a permit to take issued in accordance with the *Regulations under the Threatened Species Protection Act 1995*.

Please note that a Crown Lands Authorisation is not included with the permit.

Please read the conditions carefully prior to commencing any of the relevant activities under the permit.

Please note that in accordance with Regulation (5)(2) of the *Threatened Species Protection Regulations 2016* the Secretary may amend or revoke a permit after giving notice to the permit holder of the intention to do so.

If you have any queries, please contact the officer nominated at the head of this letter.

Yours sincerely

A handwritten signature in blue ink, appearing to read "M. Richardson".

Michelle Richardson  
A/Section Head, Conservation Assessment and Wildlife Management  
Policy, Projects and Regulatory Services Branch

*Encl.* Permit DA 22308



**PERMIT TO TAKE THREATENED FLORA**

**Permit No. DA 22308**

*Issued in accordance with Regulation 4 of the Threatened Species Protection Regulations 2016*

**Doug Tangney**  
**Project Manager**  
**Walters Contracting Pty Ltd**  
**PO Box 257**  
**Deloraine TAS 7304**

Inquiries : Michelle Richardson  
Phone : 616 54418  
Our Ref. : D22-113548/003  
Email : Michelle.Richardson@nre.tas.gov.au

**is authorised to take**

*Pimelea curviflora var. gracilis* (Slender curved rice flower) - up to 13 individuals

**from**

190 Porters Bridge Road, Exton

**for**

Porters Bridge Road Quarry

**subject to the conditions in Schedule 1 (overleaf)**

**This authority is valid only from 20/04/2022 to 30/06/2025**

**Issued by:**

Date: 11/04/2022

Michelle Richardson



**PERMIT TO TAKE THREATENED FLORA**

**Permit No. DA 22308**

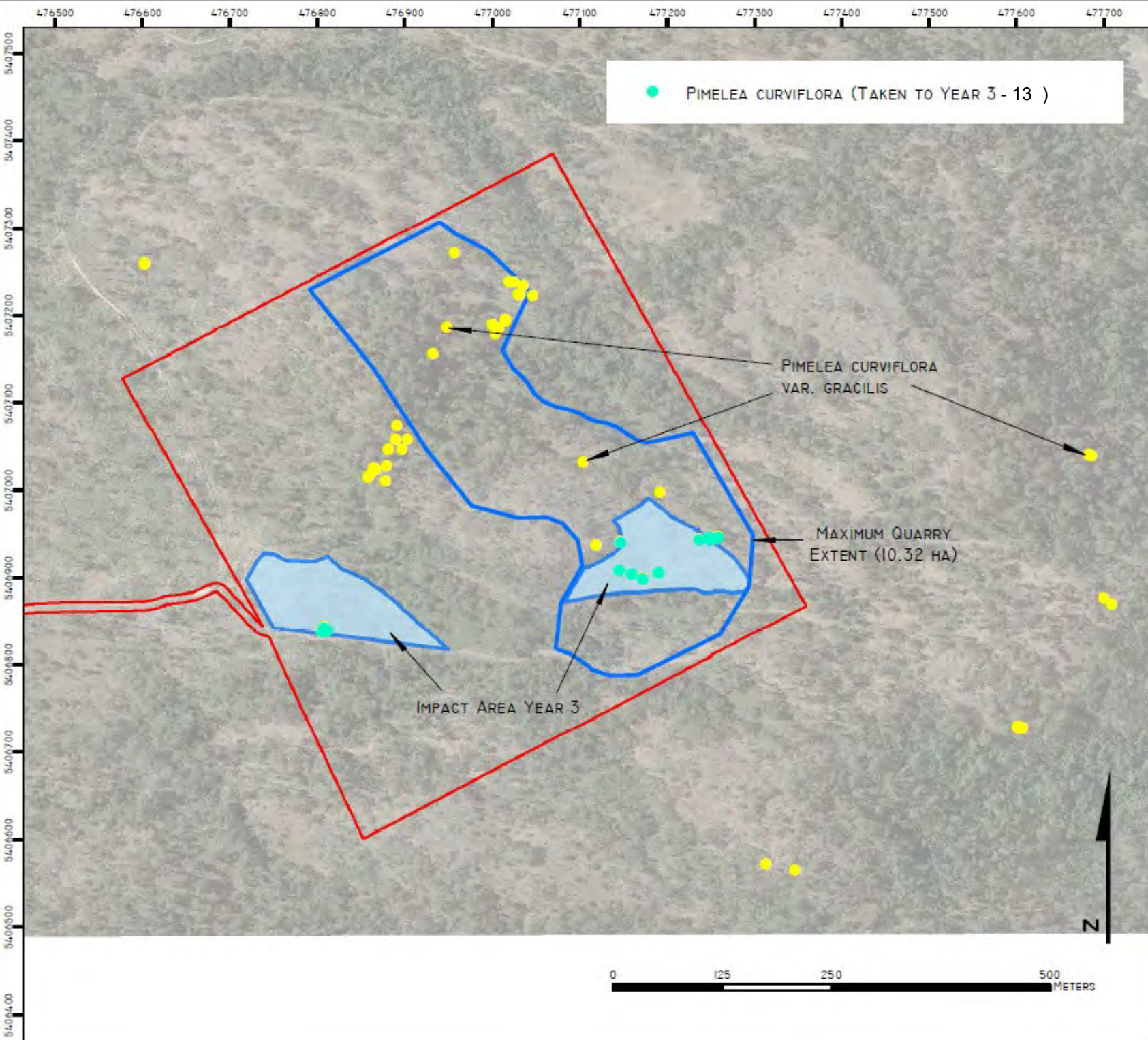
*Issued in accordance with Regulation 4 of the Threatened Species Protection Regulations 2016*

**SCHEDULE 1 Conditions of Permit**

1. This permit must be carried while taking the threatened flora specified on this permit and shown to an authorised officer on request
2. Only the permit holder and those persons listed on Schedule 2 are authorised to take the threatened flora specified on this permit.
3. This permit does not constitute permission to enter land. Permission must be obtained from landowners or land managers prior to entering their land to take the threatened flora specified on this permit.
4. All known threatened flora locations adjacent to the permitted take area (take area shown in Schedule 3), must be taped or fenced off by a suitably qualified person to prevent incursion by machinery or personnel.
5. Mechanical disturbance, dumping of fill, alteration of drainage patterns and soil compaction on sites known or likely to support threatened flora listed under the *Threatened Species Protection Act 1995* must be avoided.
6. Topsoil from areas containing the threatened flora specified on this permit must be stockpiled and used for rehabilitation on site.
7. To minimise impacts on the threatened flora specified on this permit, measures to control the introduction, spread and movement of disease and weeds by equipment and on ground operations must be undertaken in accordance with DPIPWE (2015) '*Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania*'.
8. The Conservation Assessments and Wildlife Management Section (CAWM). Department of Natural Resources and Environment Tasmania must be notified in writing within 30 days of the completion of the activity authorised under this permit or the expiration of the permit, whichever is the sooner. Details of individual plants taken, or the area of population taken, along with the date and location of the works undertaken that directly impacted the threatened species must be entered into the Permit Activity Report Form (the form) attached in Schedule 4, and the form returned to ConservationAssessments@nre.tas.gov.au.

**SCHEDULE 2 The following people are joint holders of this permit**

Any employees or subcontractors of a person named in this permit acting on that persons behalf on their written authority.



● PIMELEA CURVIFLORA (TAKEN TO YEAR 3 - 13 )

PORTERS BRIDGE ROAD QUARRY

ENVIRONMENTAL EFFECTS REPORT (EER) AND PLANNING INFORMATION (PI)

FIGURE I: OBSERVED PIMELEA CURVIFLORA VAR. GRACILIS AT PORTERS BRIDGE ROAD QUARRY

TASMAP: DELORAINE 4640

LGA: MEANDER VALLEY

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH

**Van Diemen CONSULTING**  
PO BOX 1 NEW TOWN TAS 7008

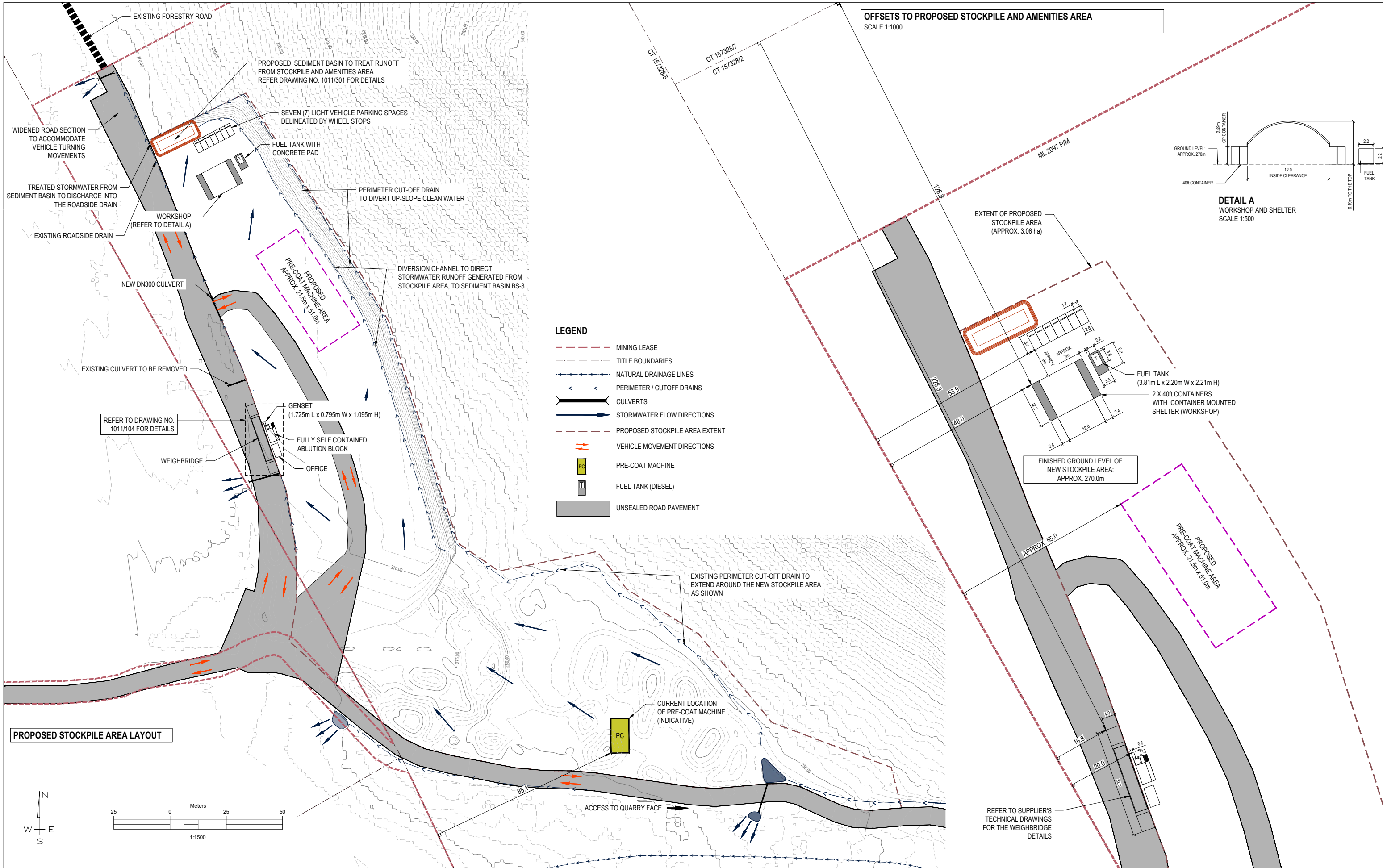


DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT: WALTERS CONTRACTING PTY LTD

DATE: 8 MAR 2022

**ATTACHMENT 4. PROPOSED STOCKPILE LAYOUT AND BUILDING SPECIFICATIONS**



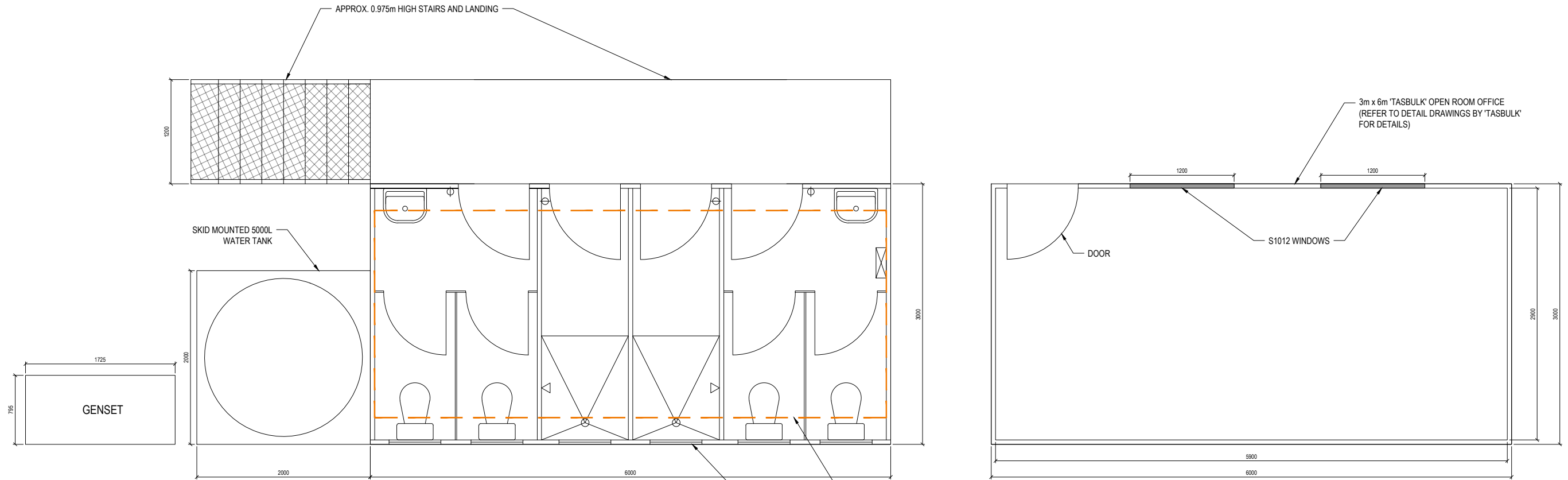
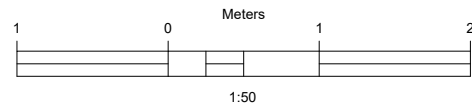
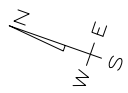
REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED	DO NOT SCALE FROM THE DRAWING.
C	DIMENSIONS UPDATED	10/09/2025	S.I.	C.M.	CLIENT: WALTERS CONTRACTING PTY LTD
B	MINOR AMENDMENTS	06/08/2025	S.I.	C.M.	ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 7304
A	INITIAL PLAN	29/05/2025	S.I.	C.M.	HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD
REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED	ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED
REVISION HISTORY					DO NOT SCALE FROM THE DRAWING.
					PROJECT NUMBER: 1011

**PROPOSED STOCKPILE AREA**

DRAWING NUMBER: 1011/102

A3





WEIGHBRIDGE

6000L 'FORMIT' WASTETANK WITH FRAME  
(REFER TO DESIGN DRAWINGS BY 'FORMIT SERVICES PTY LTD'  
FOR DETAILS)

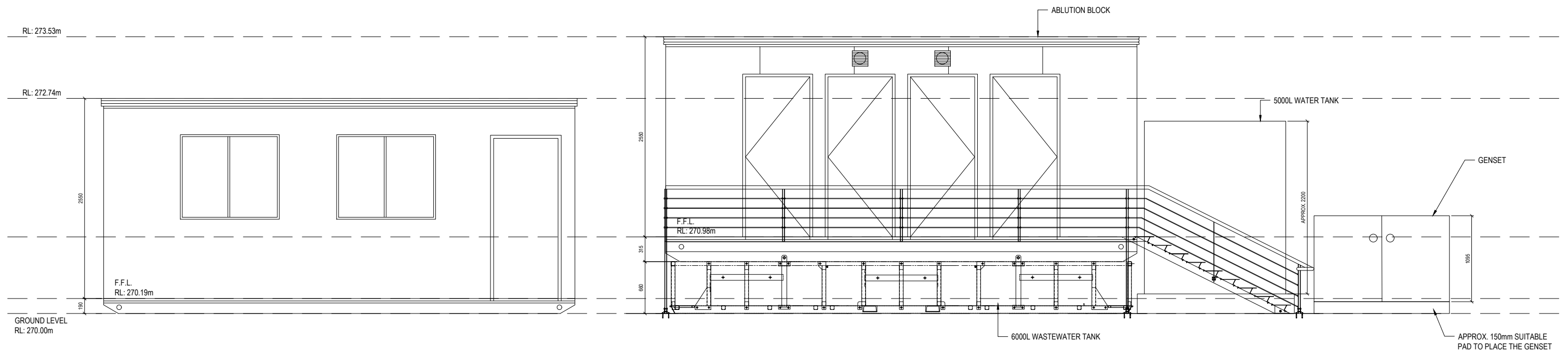
3m x 6m 'TASBULK' ABLUTION BLOCK  
(REFER TO DESIGN DRAWINGS BY 'TASBULK'  
FOR DETAILS)

					CLIENT: WALTERS CONTRACTING PTY LTD
					ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 7304
B	GENSET DIMENSIONS UPDATED	10/09/2025	S.I.	C.M.	HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD
A	INITIAL PLAN	06/08/2025	S.I.	C.M.	ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED
REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED	DO NOT SCALE FROM THE DRAWING.
REVISION HISTORY					PROJECT NUMBER: 1011

## AMENITIES LAYOUT PLAN

DRAWING NUMBER: 1011/104





SCALE 1:50

					CLIENT: WALTERS CONTRACTING PTY LTD
					ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 7304
B	GENSET DIMENSIONS UPDATED	10/09/2025	S.I.	C.M.	HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD
A	INITIAL PLAN	06/08/2025	S.I.	C.M.	ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED
REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED	DO NOT SCALE FROM THE DRAWING.
REVISION HISTORY					PROJECT NUMBER: 1011

**AMENITIES  
(FRONT ELEVATION)**

DRAWING NUMBER: 1011/105



Search for answers

### Your Attention Please!

Beware of scams in our industry

[Learn More >](#)

Home > Transportable Buildings > 6.0 x 3.0m Open Room Office

### Like What You See?

Get a quick quote now!

[Let's Go >](#)



# 6.0 x 3.0m Open Room Office

Available For

Purchase

Hire

## Description

The 6.0 x 3.0m Open Room Office is a versatile and spacious solution for sites requiring a substantial, flexible workspace. This unit is perfectly suited for a range of commercial activities, from construction site offices to temporary administrative hubs for events. Its open-plan design provides a blank canvas to set up workstations, meeting areas, or a project management office, tailored to the specific needs of your operation.

Constructed with functionality and durability in focus, this office space is designed to support the dynamic demands of the Australian workplace. Featuring robust insulation with 50mm EPS panels for walls and roof, it ensures a comfortable working environment in any weather. The inclusion of high-quality, reverse cycle air conditioning maintains optimal temperature control, making it an ideal, all-year-round workspace solution. For businesses looking for a practical, adaptable office space that can be quickly set up on site, our 6.0 x 3.0m Open Room Office stands out as a top choice.

## Delivery Options

Share:   



Call us on 1300 20 40 00 for more details!



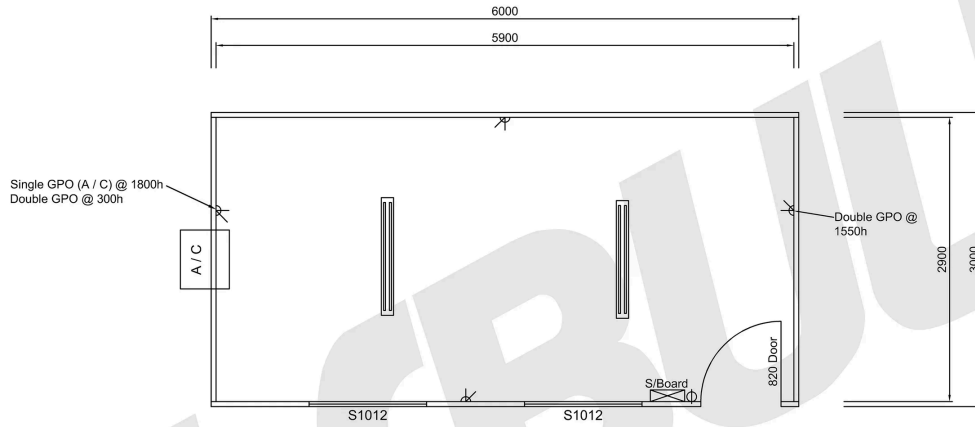
## Payment & Security

### Payment methods






Tasbulk offer multiple options for the payment of purchased goods. Options that we offer are as below:

Bank Transfer

Credit Card Over the Phone (Surcharge applies if over \$5,000.00)



**LEGEND :**

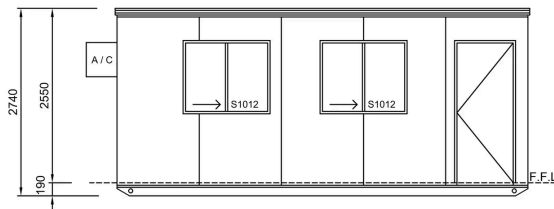
-  = 10a Double GPO (300h U.N.O.)
-  = "Vista" 40W4K L.E.D. Light
-  = Batten Holder Light
-  = Single Gang Light Switch
-  = Sub Board (12 Pole Enclosure)

- All Double GPO's at 300 high, unless noted otherwise.

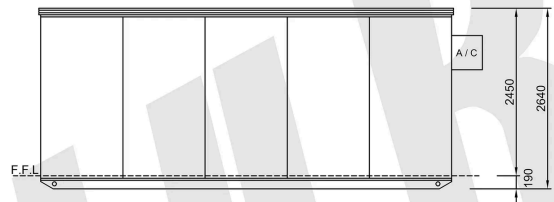
6 x 3m - OPEN PLAN

**TASBULK**

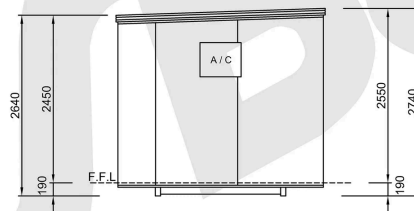
2 WEILY PARK ROAD, BRIGHTON INDUSTRIAL ESTATE  
 sales@tasbulk.com.au | (03) 6263 6855 | © COPYRIGHT



FRONT ELEVATION



REAR ELEVATION

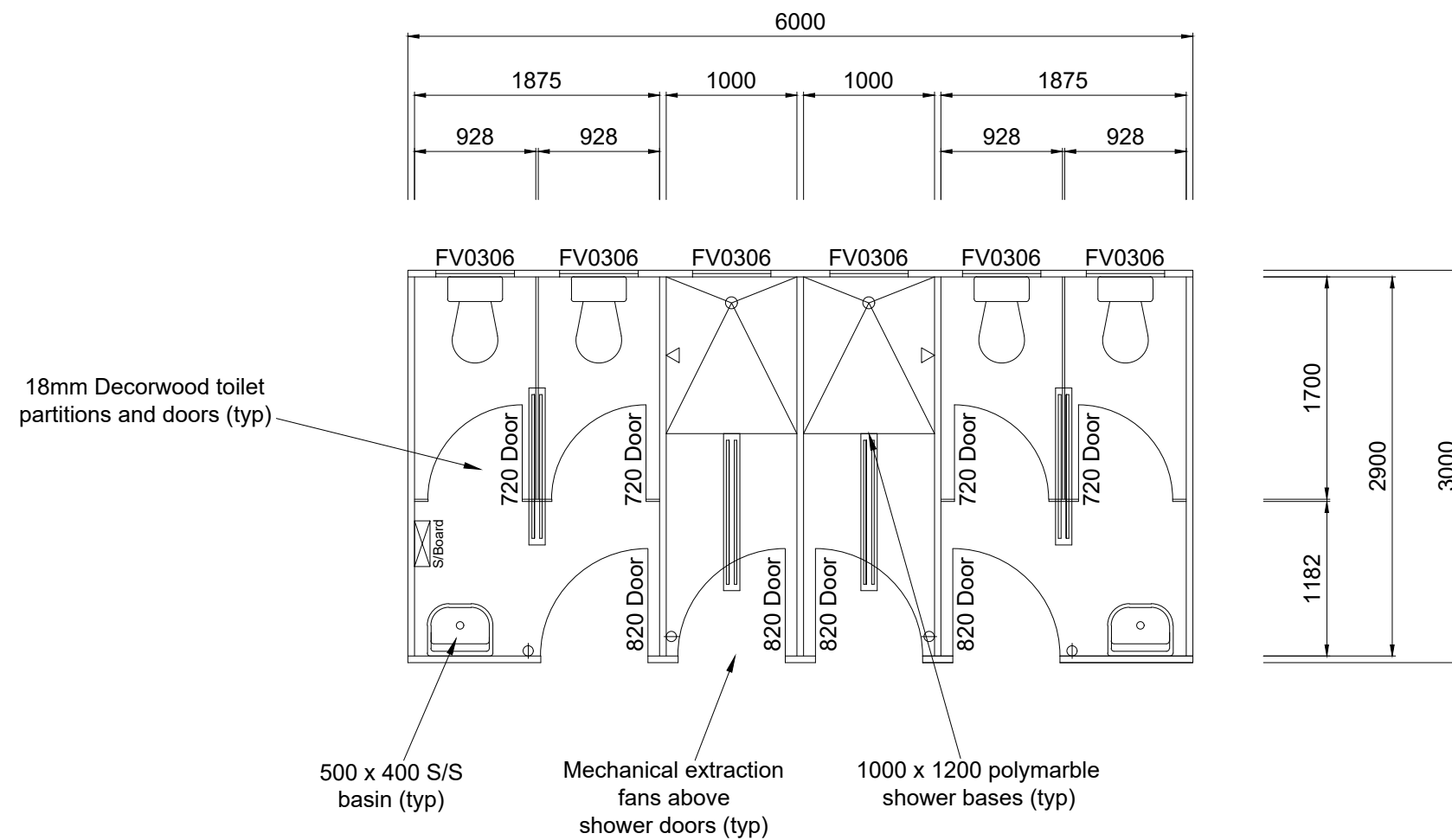


SIDE ELEVATION

6 x 3m - OPEN PLAN





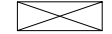
**TASBULK**

2 WEILY PARK ROAD, BRIGHTON INDUSTRIAL ESTATE  
 sales@tasbulk.com.au | (03) 6263 6855 | © COPYRIGHT




### FLOOR PLAN

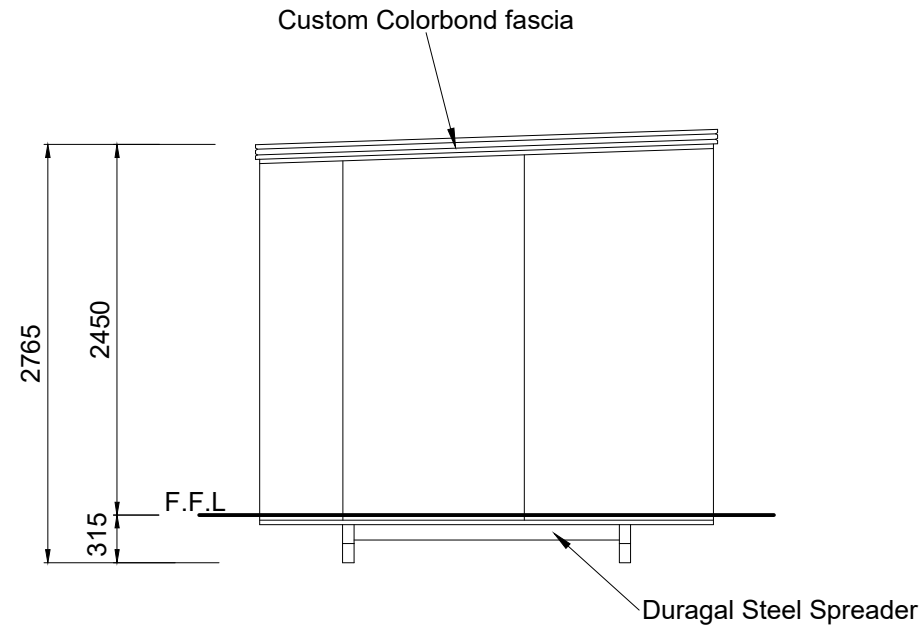
**LEGEND :**

-  = 10a Double GPO (300h U.N.O)
-  = "Vista" 40W4K L.E.D. Light (Weatherproof to shower areas)
-  = Batten Holder Light
-  = Single Gang Light Switch
-  = Sub Board (12 Pole Enclosure)

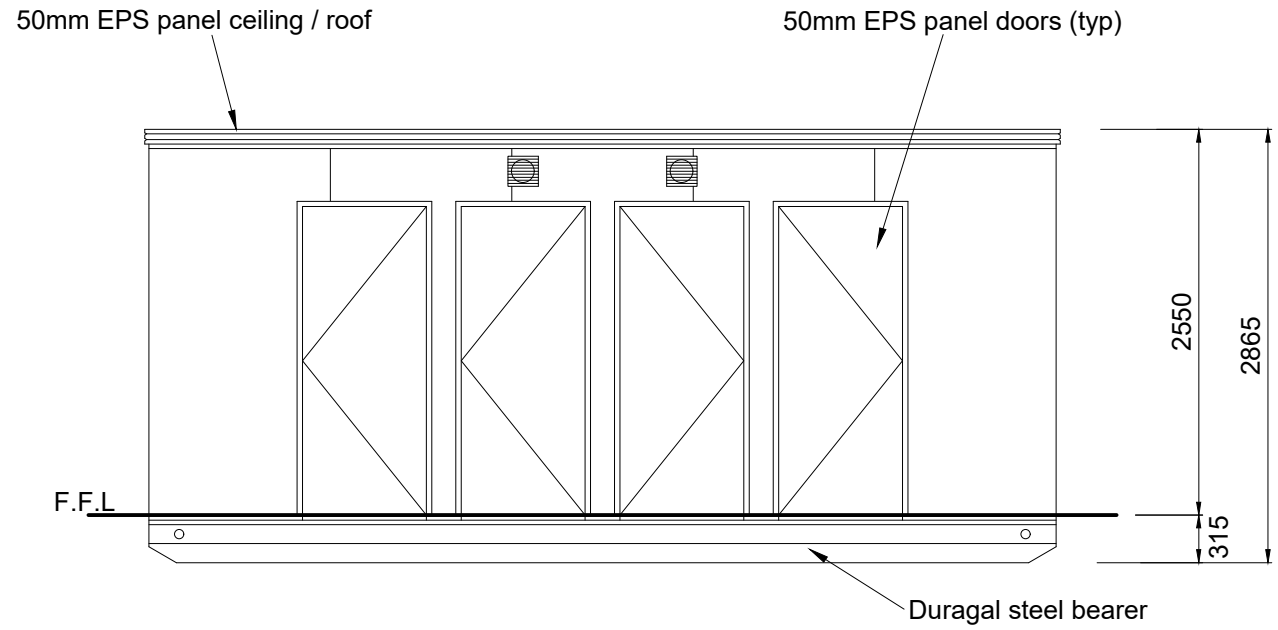
- All Double GPO's at 300 high, unless noted otherwise.

- Powdercoated steel window bars not required.

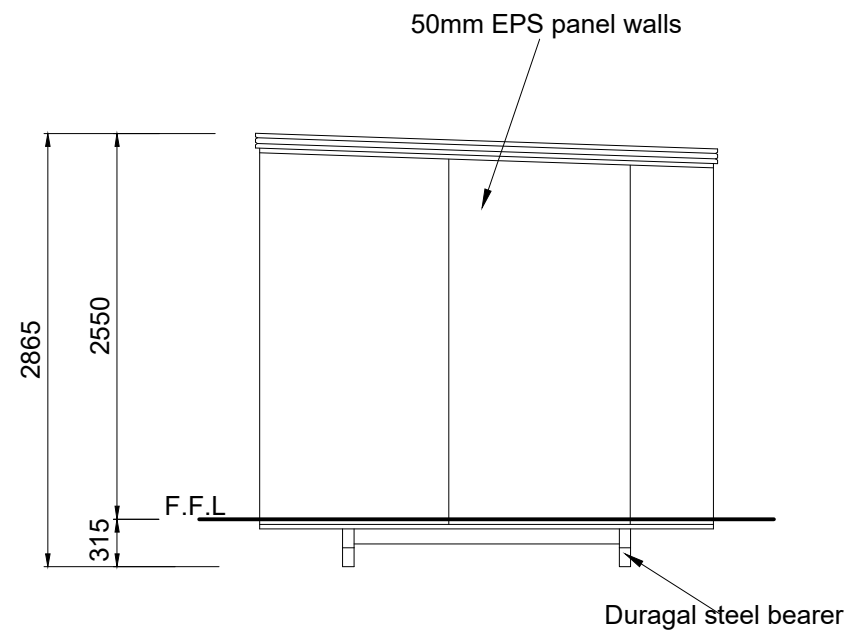
 2 WEILY PARK ROAD, BRIGHTON INDUSTRIAL ESTATE BRIGHTON, TAS 7030 P (03) 6263 6833 F (03) 6263 6844 © COPYRIGHT 2024	Project 6 x 3m - Custom Ablution		Site Address Hydro Tasmania		
	Drawing Floor Plan		Scale 1:50	Drawn D.R	Date 14/11/2024
				Chassis No ---	Drawing No B01



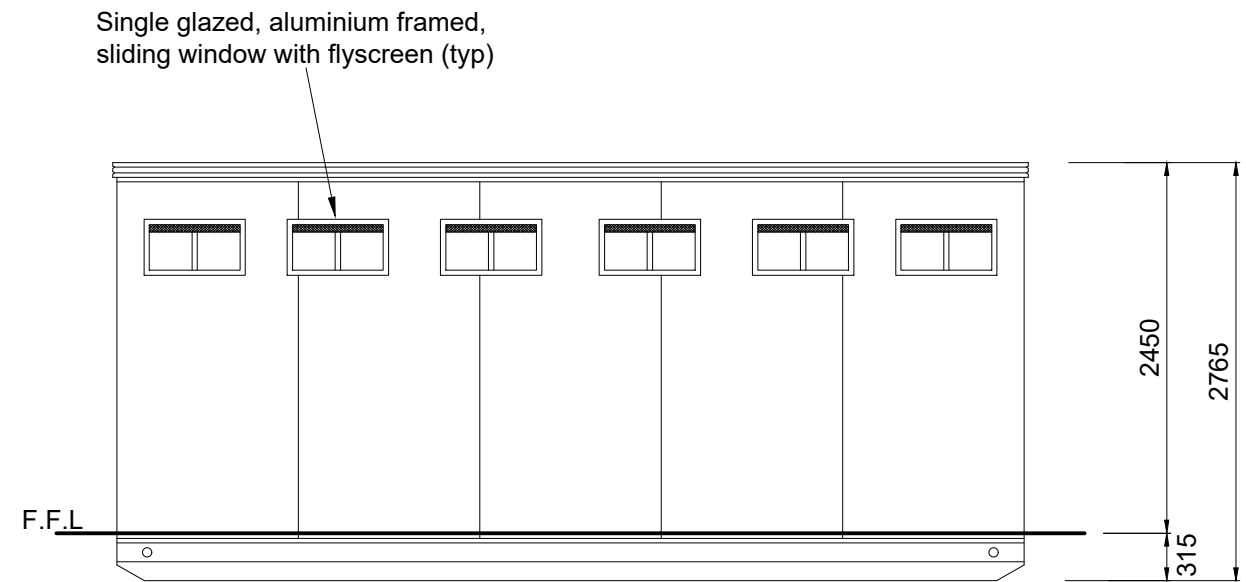
**LEFT ELEVATION**




**FRONT ELEVATION**



**RIGHT ELEVATION**



**REAR ELEVATION**

 2 WEILY PARK ROAD, BRIGHTON INDUSTRIAL ESTATE BRIGHTON, TAS 7030 P (03) 6263 6833 F (03) 6263 6844 © COPYRIGHT 2024	Project 6 x 3m - Custom Ablution		Site Address Hydro Tasmania		
	Drawing Elevations		Scale 1:50	Drawn D.R	Date 14/11/2024
				Chassis No ---	Drawing No B01

**Formit Services Pty Ltd**

**STRUCTURAL CERTIFICATION OF 6000L EFFLUENT TANK  
SKID FRAME**

**7 October 2022**

**Rev No. 5**

J7620-C02-REV5.DOCX

Revision	Issue Date	Revision Details
5	07/10/2022	Revised Wording
4	08/02/2022	Dragging Added
3	23/08/2013	Tine Tubes Added – Lifting By Forklift
2	30/07/2010	Increased Building Load
1	11/11/2008	Lifting Added
0	27/03/2008	Original Certificate

Author: Benjamin Landers BEng(Civil) GradMIEAust  
Graduate Structural / Civil Engineer

Signed:



Reviewed By: Zane Rendell BEng(Civil)(Hons) MIEAust  
Senior Structural / Civil Engineer

Signed:



*“This document is copyright. Reproduction of the whole or any part thereof must not be made without the express permission of Izzat Consulting Engineers. This document and the results shown and any recommendations or advice made herein are based upon information, drawings, samples and tests referred to in the document.”*

## TABLE OF CONTENTS

1. INTRODUCTION .....	1
2. ENGINEER .....	1
3. SUPERVISING ENGINEER .....	1
4. GENERAL.....	1
5. DESIGN BASIS.....	1
6. DEFINED CRITERIA .....	2
7. DESIGN LOADINGS .....	2
8. STATEMENTS & DISCLAIMERS.....	2
APPENDIX A DRAWINGS.....	4

## 1. INTRODUCTION

In accordance with Formit Service's request to provide updated certification of 6000L effluent tank frame supporting an amenities building structure, we submit the following information.

## 2. ENGINEER

### Benjamin Landers

Bachelor of Engineering (Civil)(Hons)  
University of Newcastle

## 3. SUPERVISING ENGINEER

### Zane Rendell

Bachelor of Engineering (Civil)(Hons)  
University of Newcastle  
Member of the Institution of Engineers Australia (Reg No.4204684)

## 4. GENERAL

This document should be read in conjunction with drawings listed below in Table 1, provided by Formit Services, located in Appendix A.

**Table 1: Engineering Drawings**

Drawing Number	Revision	Title
WT-1208-112	3	FORMIT WASTE TANK 6000 Lt FRAME– FLAT PACK UPPER FRAME DETAIL
WT-1208-115	4	FORMIT WASTE TANK 6000 Lt FRAME LOWER FRAME – FLAT PACK WITH TINE TUBES - ASSEMBLY
WT-1208-116	2	FORMIT WASTE TANK 6000 Lt FRAME LOWER FRAME – FLAT PACK WITH TINE - DETAIL
WT-1208-117	3	FORMIT WASTE TANK 6000 Lt FRAME LOWER FRAME – FLAT PACK WITH TINE – COMPONENT DETAIL
WT-1208-118	3	FORMIT WASTE TANK 6000 Lt FRAME LOWER FRAME – SIDE FRAME ASSEMBLIES

## 5. DESIGN BASIS

Our office was engaged to provide a design certification for the 6000L effluent tank skid frame which can be lifted by a forklift, or a crane, and dragged on ground. The tanks are to be completely emptied before being lifted or dragged. The loads are to be evenly distributed on the 2 forklift tines which are to penetrate at least halfway into the tine tubes, or evenly distributed on the 4 lifting lugs for lifting, and 2 end-rod drag loops for dragging.

This certification covers four situations for the fully assembled frame;

- 1) Skid frame located on the ground and supporting the effluent tanks and amenities block
- 2) Skid frame and tank (empty) being lifted by forklift
- 3) Skid frame and tank (empty) being lifted by crane with slings evenly arranged between the 4 lifting points.
- 4) Skid frame and tank (empty) being dragged with slings evenly arranged between two end-rod drag loops.

All design loads are as determined by Australian Standards.

All design work was carried out in accordance with the following standards;

- AS/NZS 1170.0 General principles
- AS/NZS 1170.1 Permanent, imposed and other actions

- AS/NZS 1170.2 Wind loads
- AS 4100 Steel structures
- AS 1418.1 Cranes, hoists, and winches

For wind loading the structure is to be located in an environment equivalent to a (at worst) wind region A and terrain category 2 in accordance with AS1170.2. If the location of the structure is such that it will be subject to greater loads than an engineer must be consulted.

We have not assessed the suitability of the forklift or lifting devices. We believe this is to be the responsibility of others.

Tie downs and fixing of the of the amenities structures to the frame is considered responsibility of others.

## 6. DEFINED CRITERIA

Rational engineering judgment has been used to decide which components require checking with design certification calculations. A finite element analysis model was used to determine to distribution of loads and capacity of members.

## 7. DESIGN LOADINGS

The tank frame was certified to support an amenities structure with a uniform mass of 7000kg plus a maximum of 12 people uniformly distributed inside.

Three plastic effluent 2000L tanks sit along the 5.86m frame. This weight is uniformly distributed along the square hollow sections of the bottom frame. The amenities building structure, with a mass of 7000kg and considering 12 occupants, is supported as described above.

The tanks contents are mostly water. The sections used were 300 grade steel members and 350 grade galvanized steel members. The amenities structure is supported on rails 0.3m from the edge of the frame and is required to be fixed to the skid frame.

The maximum combined mass of the skid frame and empty waste tank to be lifted by either crane or forklift is 1000kg.

Ultimate limit states design factors used in the design are as follows:

- Dead load (only) factor of 1.35
- Dead load factor of 1.2
- Live load factor of 1.5
- Dynamic factor of 1.2

## 8. STATEMENTS & DISCLAIMERS

We confirm that the 6000L effluent tank skid frame with tine tubes as detailed in the drawings noted in Table 1 (above), is structurally satisfactory for the Load Limits noted in Section 7 above, provided the following are adhered to;

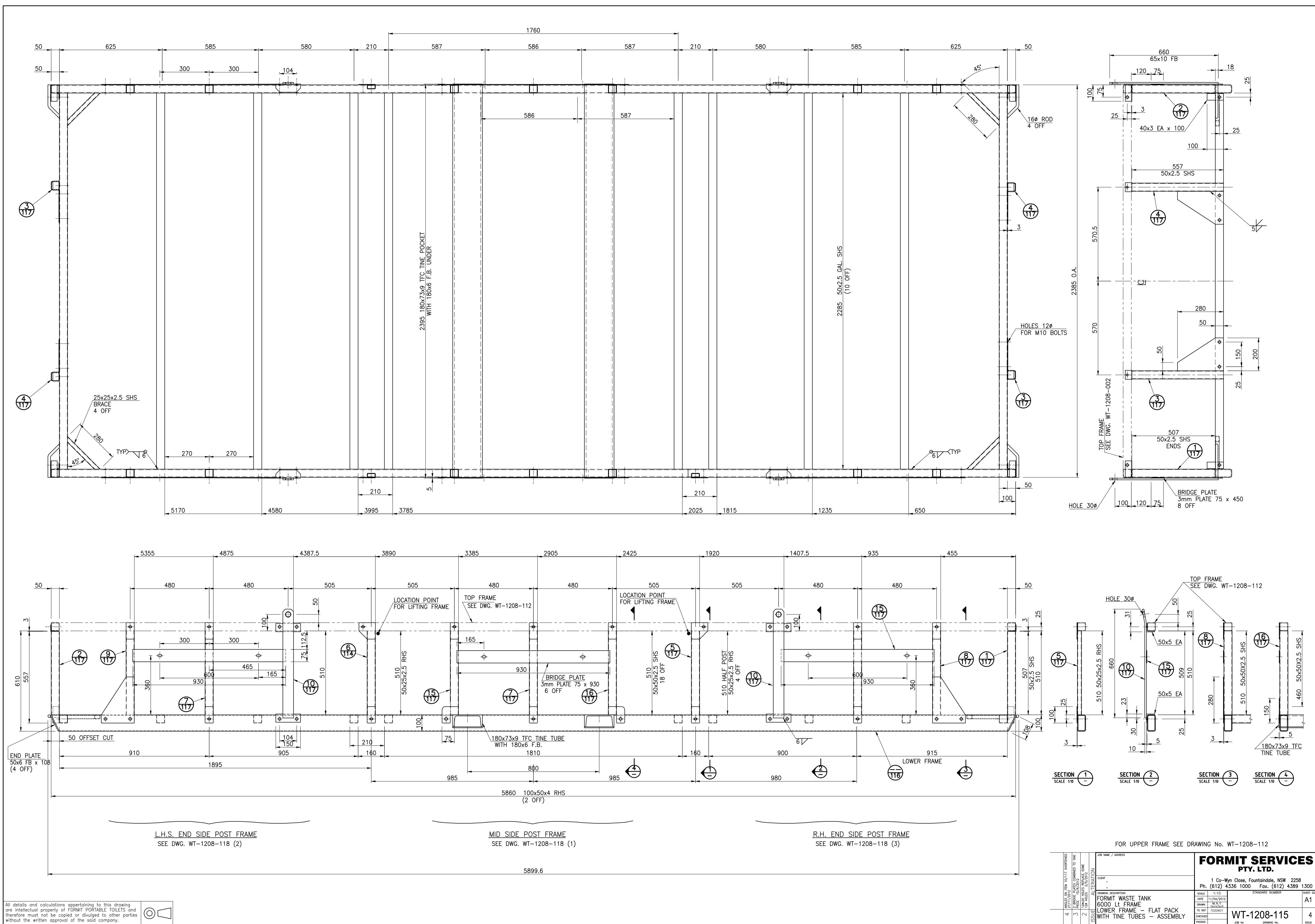
- The structure is inspected every 12 months (maximum), or as otherwise required to ensure no structural damage is evident.
- The above certificate is applicable only if the frame is not affected by heat, adverse chemicals, excessive vibrations or other external factors unknown and not noted to the certifying engineer.
- The design certification is provided on the basis that materials used meet Australian Standards, Construction practices are in accordance with industry standards.
- No modifications shall be made from the drawings attached in Appendix A, and the frame is fully assembled.
- The amenities structure is removed before moving the skid frame.
- The forklift tines penetrate at least halfway into the tine tubes.
- The effluent tanks are pumped out such that they are empty before moving the skid frame.

- The allowable bearing capacity of the ground is to be at least 100kPa
- The structure is located in no worse than wind region A and terrain category 2 as per AS1170.2

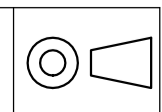
Depending on the ground type, the base frame may compress into the ground such that the 50 SHS members will be touching the ground. John Aitken at Formit Services has accepted this possibility.

The increased load, as detailed in Section 8, induces a maximum deflection of 25mm in the members of the top frame. As such it should be ensured there is adequate free space between the effluent tank and the members of the top frame to cater for this deflection.

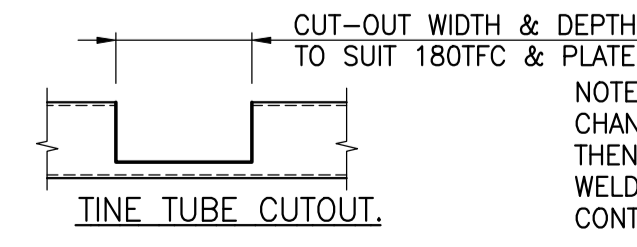
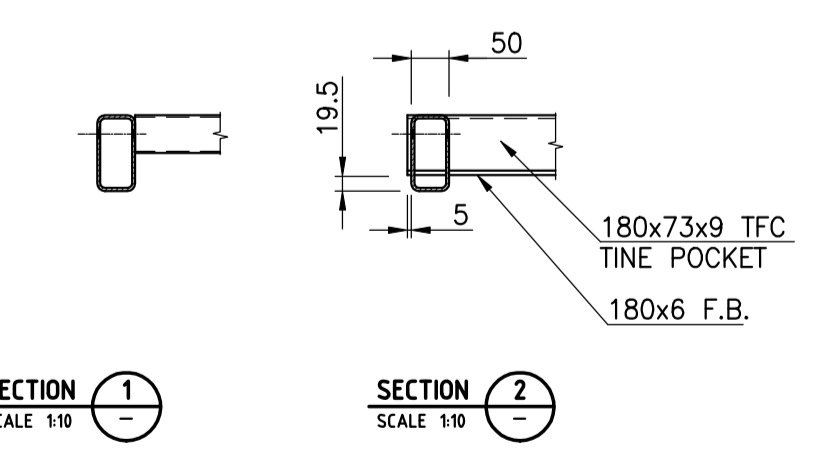
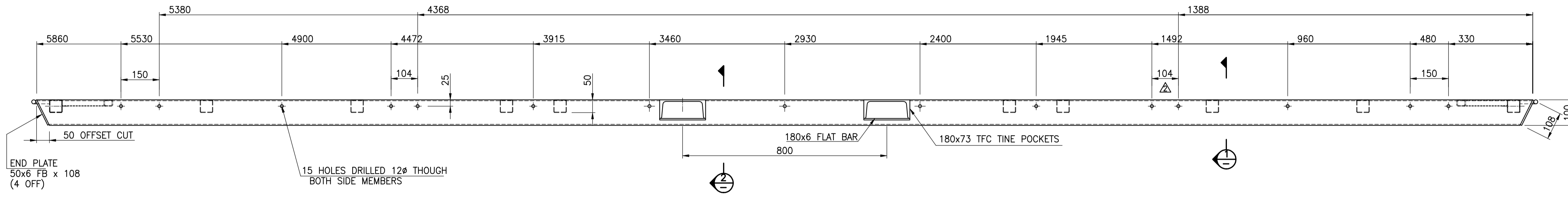
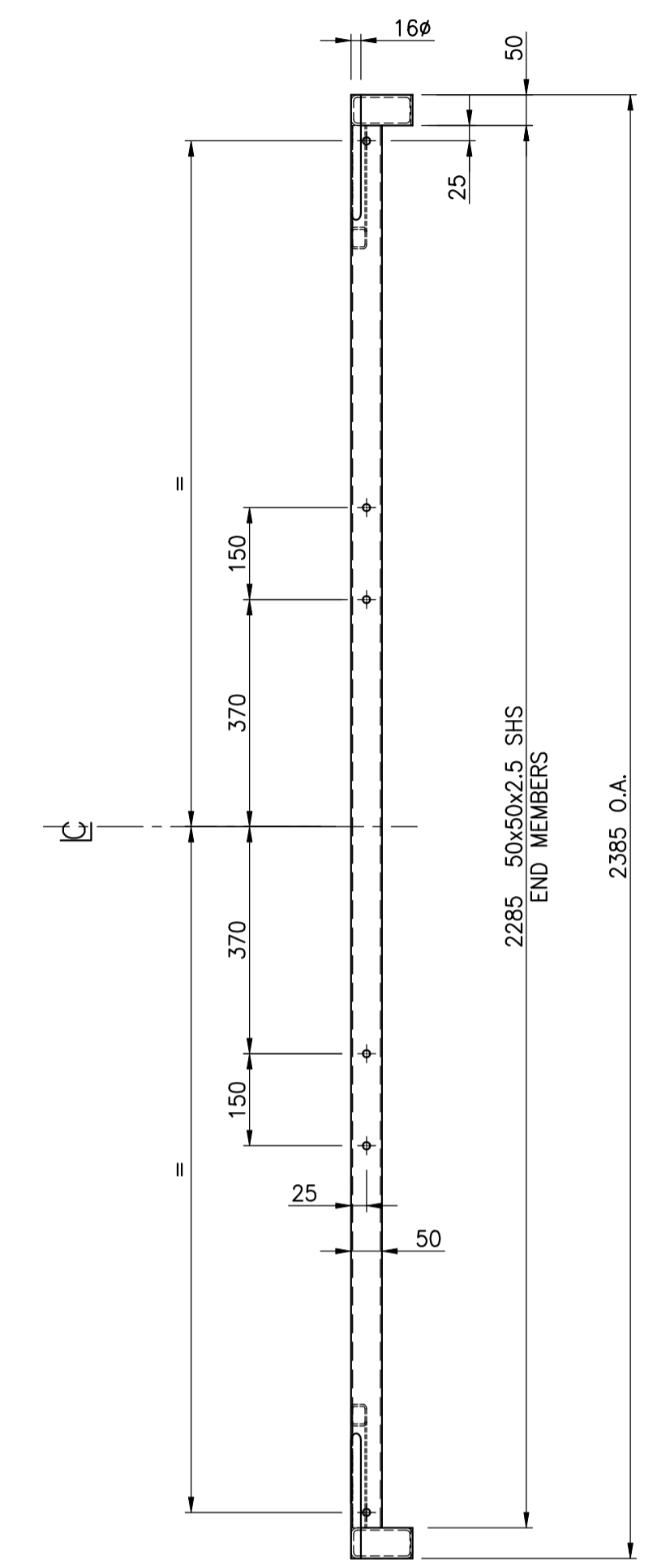
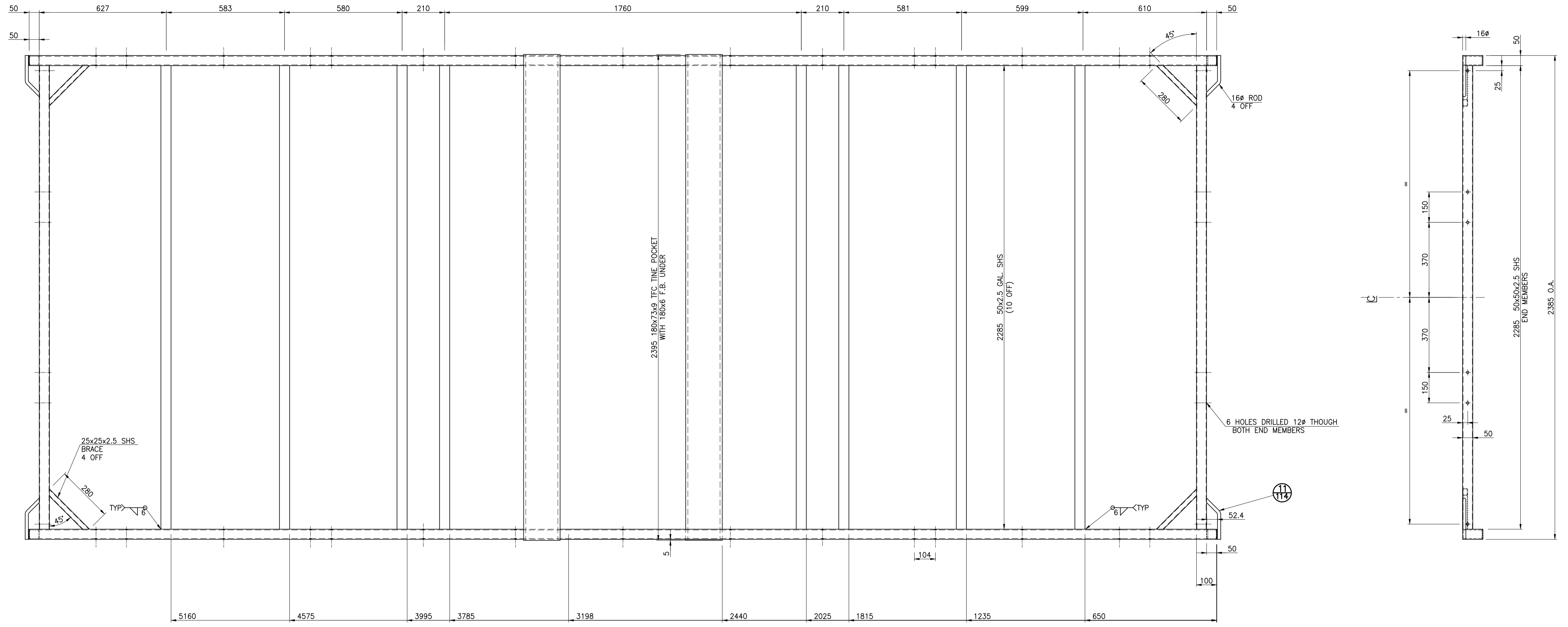
## APPENDIX A      DRAWINGS



All details and calculations pertaining to this drawing are intellectual property of FORMIT PORTABLE TOILETS and therefore must not be copied or divulged to other parties without the written approval of the said company.



4 ANGLES ON END TO TTY SHORTENED 377/10/2012 3 FACE 10/10/2012 2 12# BOLTS TO 27/2/2012, 50#		JOB NAME / ADDRESS CLIENT DRAWING DESCRIPTION <b>FORMIT WASTE TANK          6000 LL FRAME          LOWER FRAME - FLAT PACK          WITH TINE TUBES - ASSEMBLY</b>		SCALE 1:10 DATE 11/04/2012 DRAWN "MEL" JAC TS REF JAC/JAC CHECKED JAC/JAC PASSED		STANDARD NUMBER <b>WT-1208-115</b>		SHEET SIZE <b>A1</b>	
ISSUE ALTERNATION 1 2 3		FOR UPPER FRAME SEE DRAWING No. WT-1208-112		FORMIT SERVICES <b>PTY. LTD.</b> 1 Co-Wyn Close, Fountaine, NSW 2258 Ph. (612) 4336 1000 Fax. (612) 4389 1300		JOB No <b>WT-1208-115</b>		DRAWING No. <b>4</b> ISSUE	

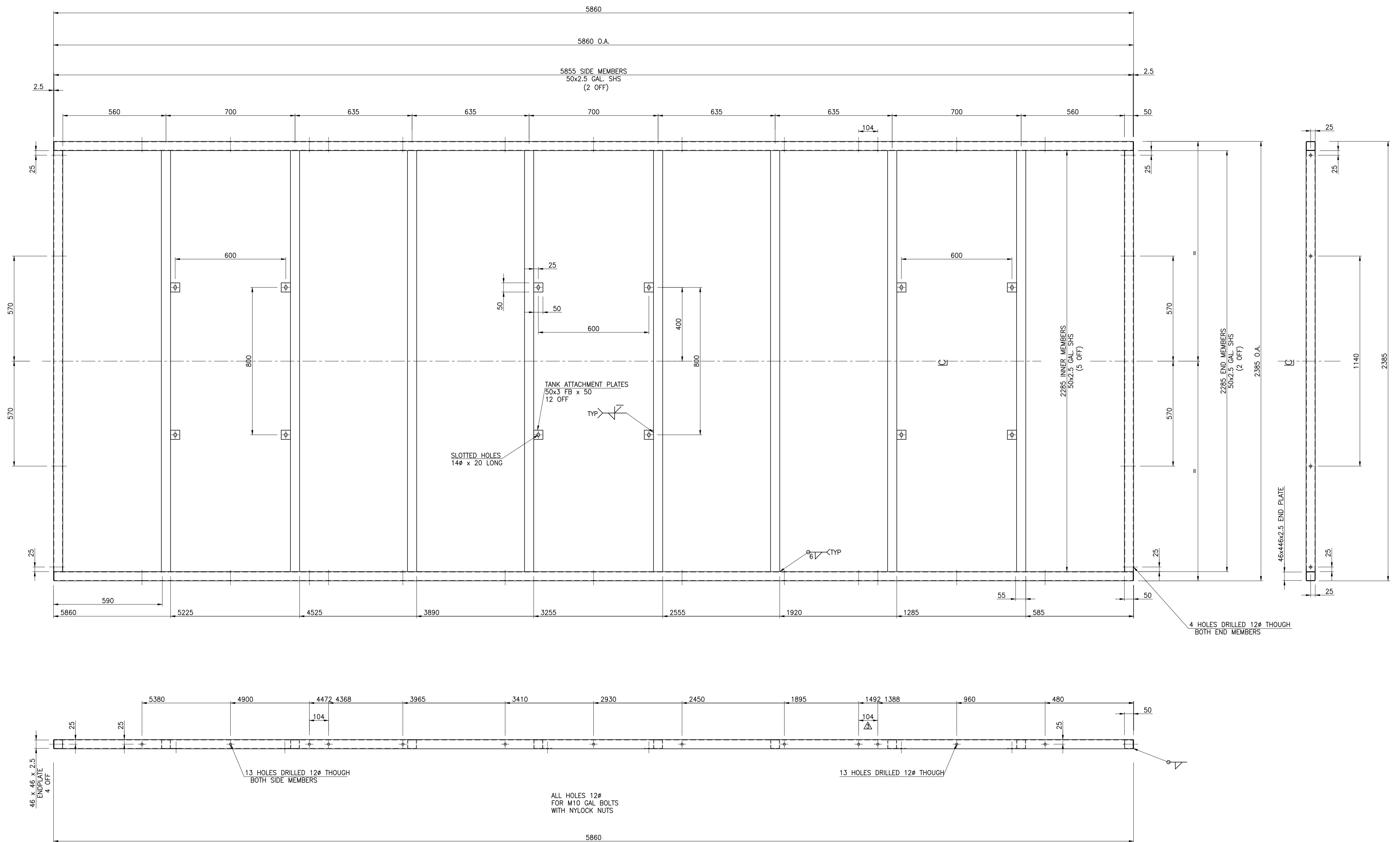


NOTE: TINE TUBE CHANNEL IS TO FINISH FLUSH WITH TOP OF BASE RHS CHANNEL & FLAT BAR ARE TO BE FULLY WELDED FOR 300 AT EACH END THEN WITH 50 LONG WELDS WITH 200 SPACES. WELDING BETWEEN TINE TUBE AND MAIN RHS TO BE FULL PENETRATION AND CONTINUOUS ON BOTH SIDES OF THE RHS.

All details and calculations appertaining to this drawing are intellectual property of FORMIT PORTABLE TOILETS and therefore must not be copied or divulged to other parties without the written approval of the said company.

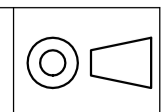
FOR UPPER FRAME SEE DRAWING No. WT-1208-112

2 - 27/7/2012 ISSUE ALTERNATION	JOB NAME / ADDRESS CLIENT DRAWING DESCRIPTION <b>FORMIT WASTE TANK          6000 LT FRAME          LOWER FRAME - FLAT PACK          WITH TINE - DETAIL</b>	SCALE 1:10 DATE 11/04/2012 DRAWN JESSIE JAC TS REF JESSIE JAC CHECKED JESSIE JAC PASSED	<b>FORMIT SERVICES          PTY. LTD.</b> 1 Co-Wyn Close, Fountainsdale, NSW 2258 Ph. (612) 4336 1000 Fax. (612) 4389 1300	STANDARD NUMBER <b>WT-1208-116</b> SHEET SIZE <b>A1</b> 2 ISSUE
	JOB No. DRAWING No.			2

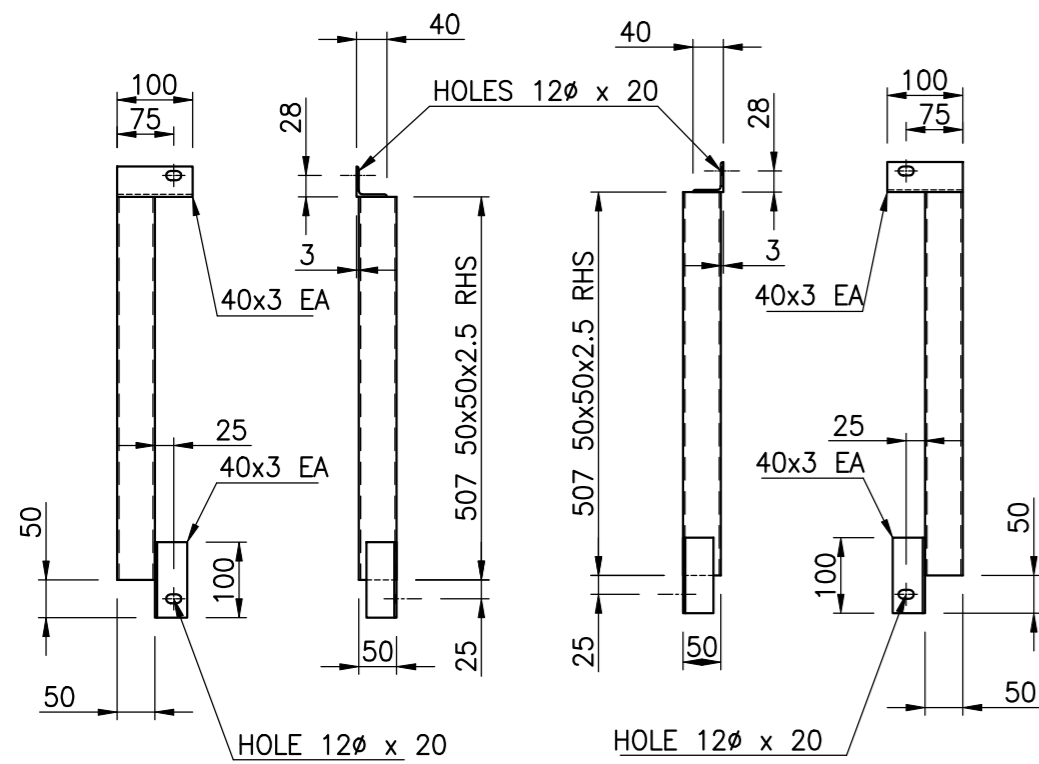


FOR LOWER FRAME SEE DRAWING No. WT-1208-111

All details and calculations appertaining to this drawing are intellectual property of FORMIT PORTABLE TOILETS and therefore must not be copied or divulged to other parties without the written approval of the said company.

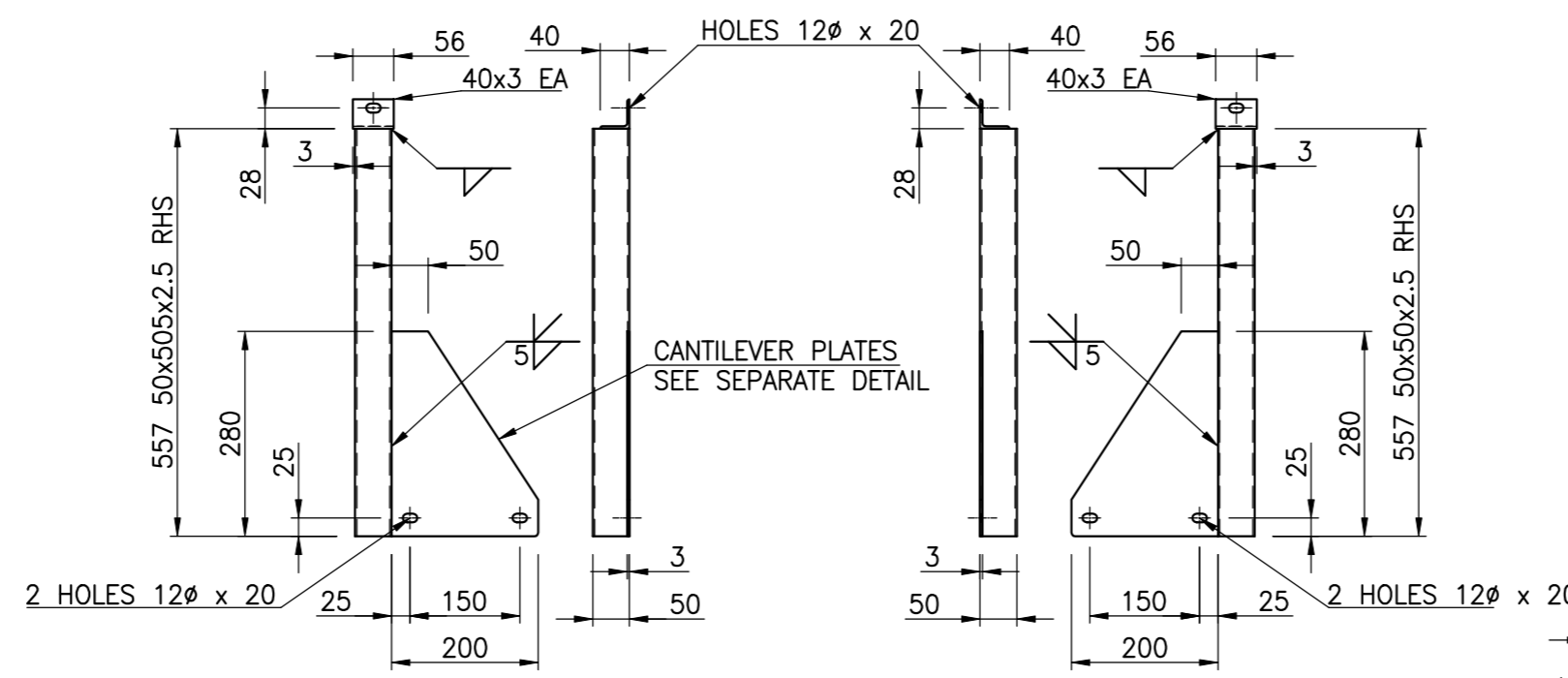


3 27/11/2012 2 20/11/2012 1 19/11/2012	JOB NAME / ADDRESS . .	<b>FORMIT SERVICES</b> <b>PTY. LTD.</b> 1 Co-Wyn Close, Fountainsdale, NSW 2258 Ph. (612) 4336 1000 Fax. (612) 4389 1300	SCALE 1:10 DATE 24/09/2012 DRAWN JESSIE TS REF FDS0001 CHECKED PASSED	STANDARD NUMBER <b>WT-1208-112</b> JOB No DRAWING No.	SHEET SIZE <b>A1</b> 3 ISSUE
	DRAWING DESCRIPTION <b>FORMIT WASTE TANK</b> <b>6000 Ltr FRAME - FLAT PACK</b> <b>UPPER FRAME</b> <b>DETAIL</b>		PASSED	3 ISSUE	



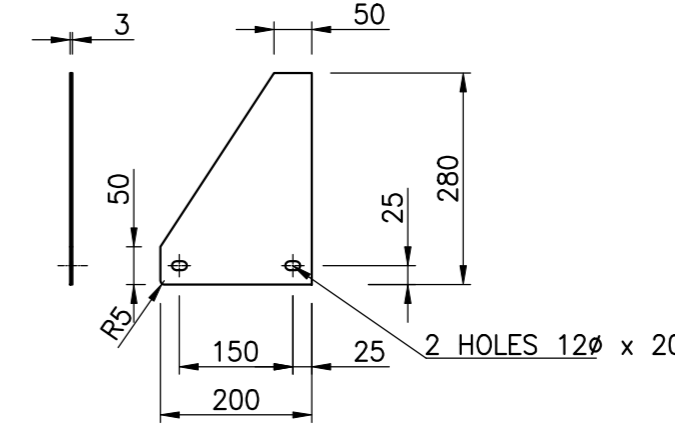
**(1) CORNER POST L.H.**  
2 OFF PER ASSEMBLY

**(2) CORNER POST R.H.**  
2 OFF PER ASSEMBLY

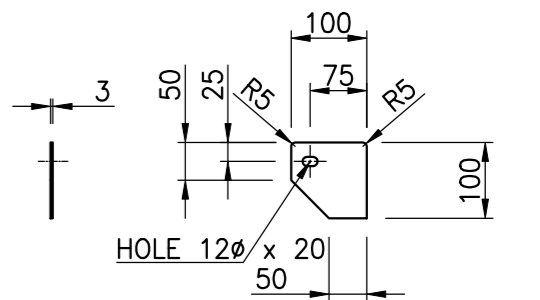


**(3) END MID POST L.H.**  
2 OFF PER ASSEMBLY

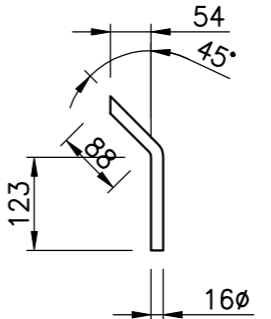
**(4) END MID POST R.H.**  
2 OFF PER ASSEMBLY



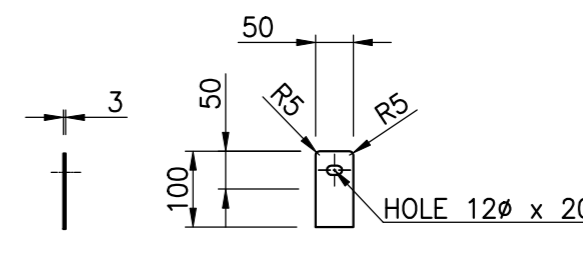
**(12) GUSSET PLATE**  
MATERIAL: 3mm G350 PLATE  
8 OFF PER ASSEMBLY



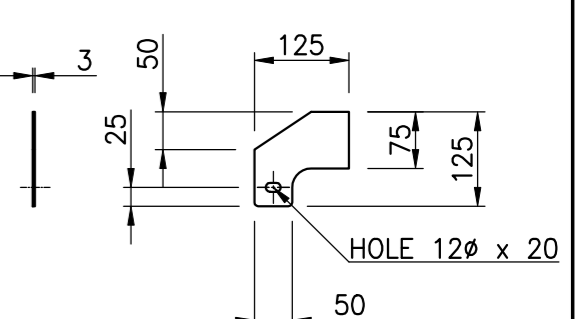
**(13) SINGLE OFFSET GUSSET**  
MATERIAL: 3mm G350 PLATE  
4 OFF PER ASSEMBLY



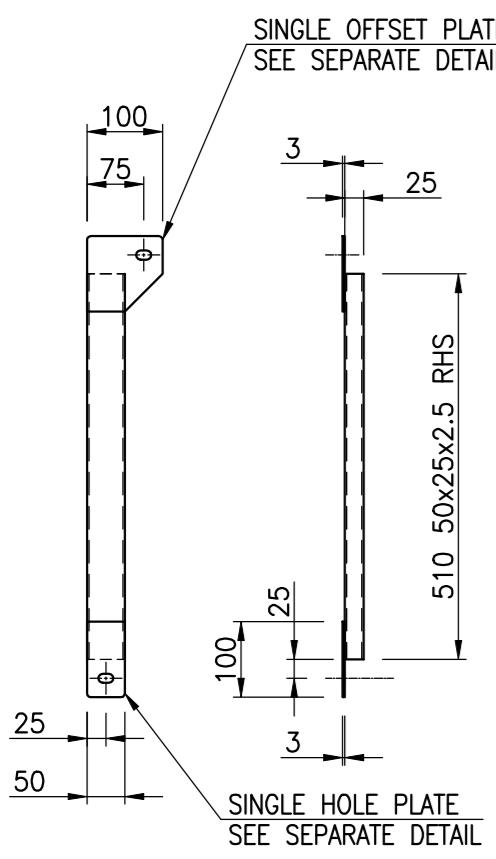
**(11) END ROD**  
MATERIAL: 16mm G300 ROD x 225  
4 REQUIRED PER ASSEMBLY



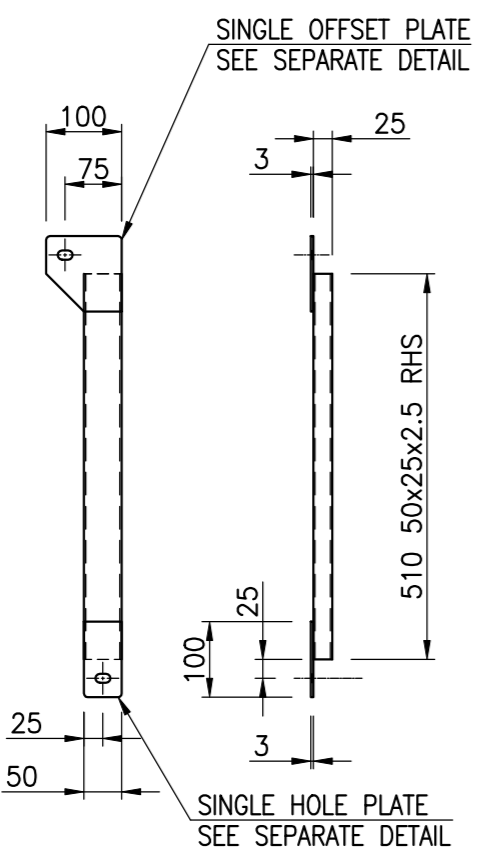
**(14) SINGLE HOLE PLATE**  
MATERIAL: 3mm G350 PLATE  
24 OFF PER ASSEMBLY



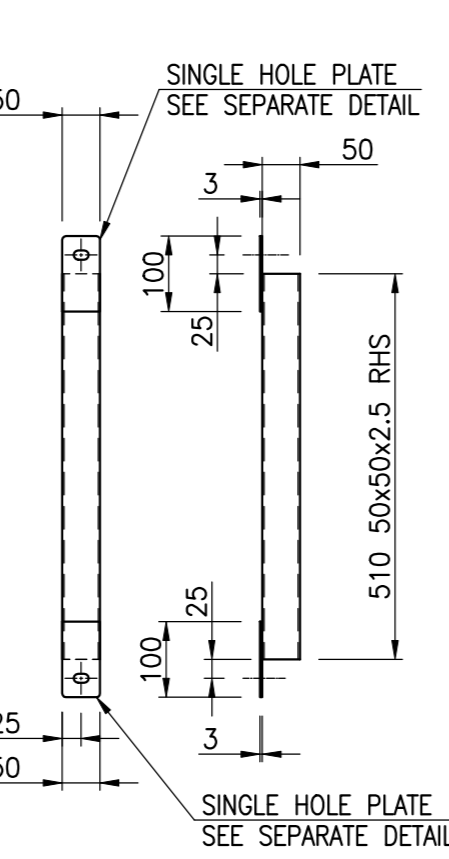
**(17) MID SIDE PLATE**  
MATERIAL: 3mm G350 PLATE  
4 OFF PER ASSEMBLY



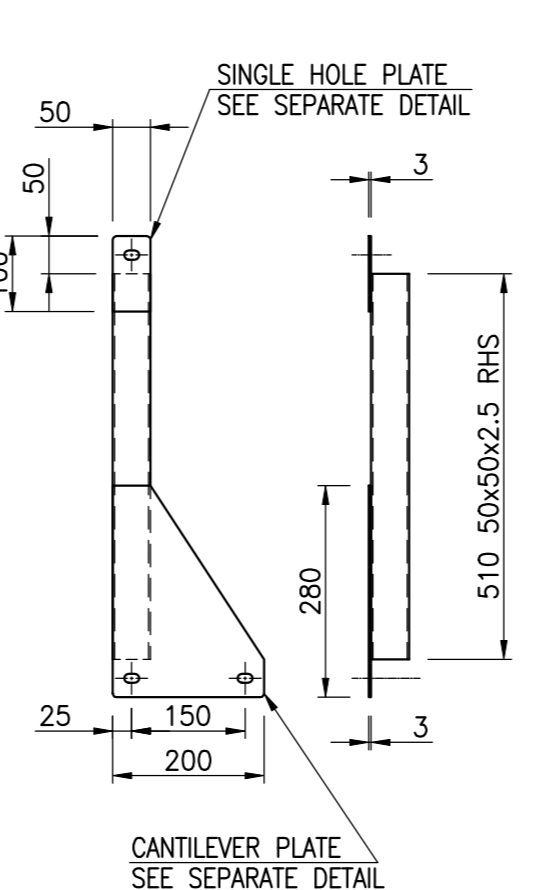
**(5) HALF POST R.H.**  
2 OFF PER ASSEMBLY



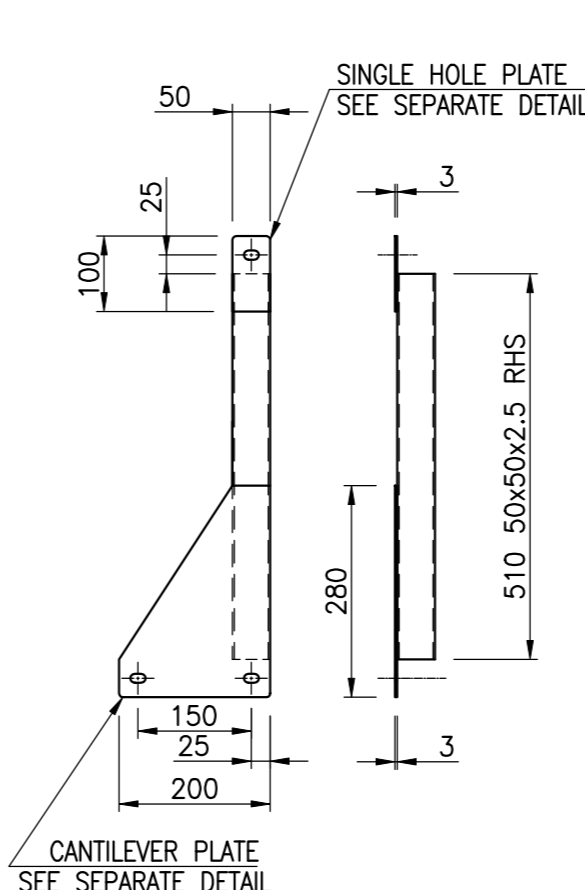
**(6) HALF POST L.H.**  
2 OFF PER ASSEMBLY



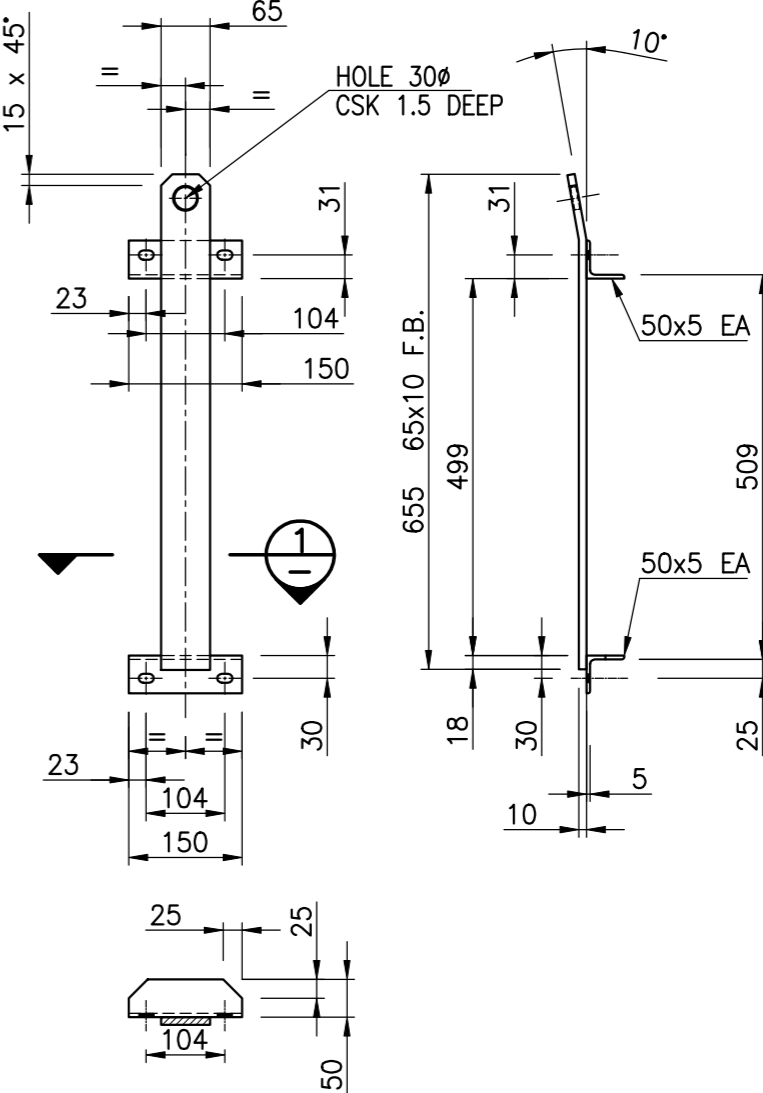
**(7) SIDE POST**  
6 OFF PER ASSEMBLY



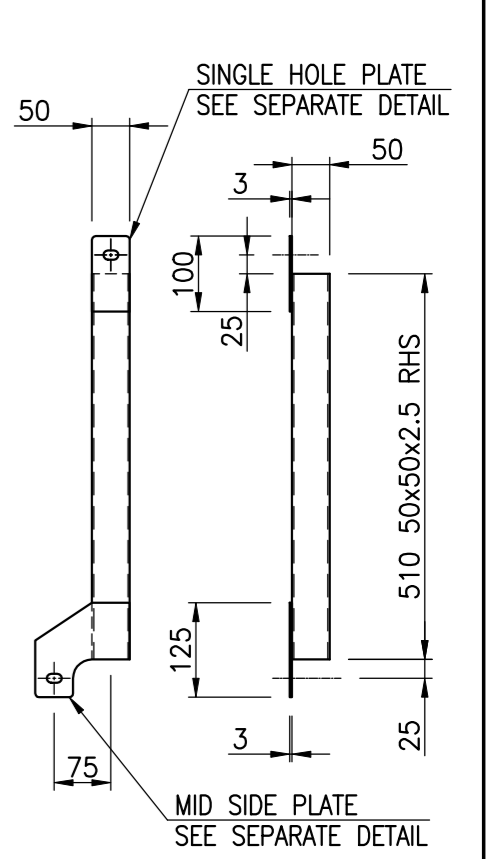
**(8) OFFSET POST R.H.**  
2 OFF PER ASSEMBLY



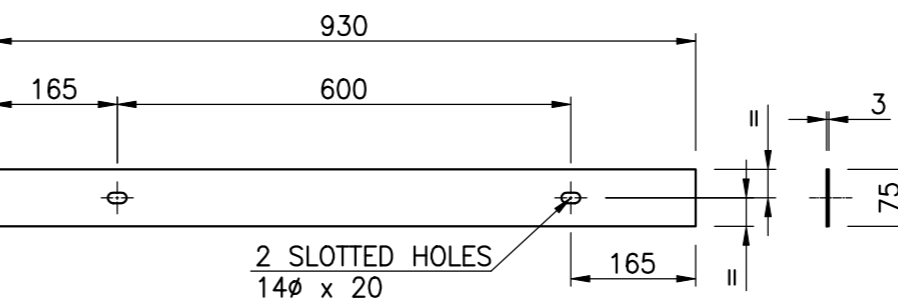
**(9) OFFSET POST L.H.**  
2 OFF PER ASSEMBLY



**(10) LIFTING BAR ASSEMBLY**  
4 OFF PER ASSEMBLY

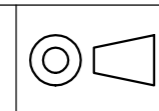


**(15-16) MID SIDE POST**  
2 OFF AS SHOWN (15)  
2 OFF OPP HAND (16)

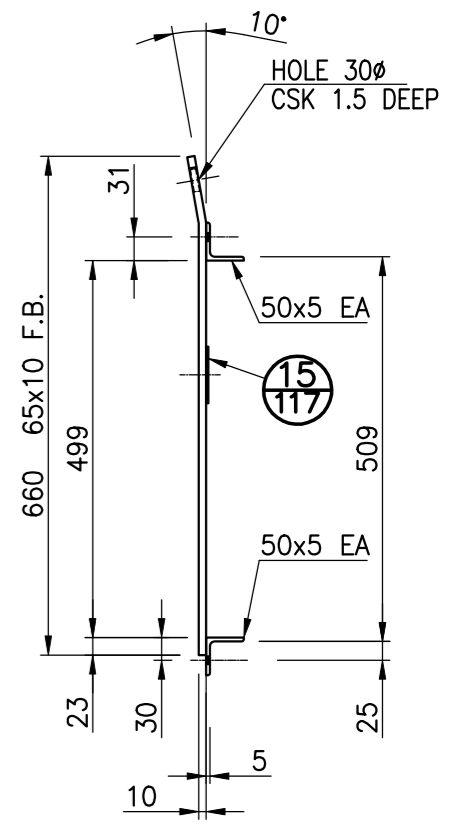
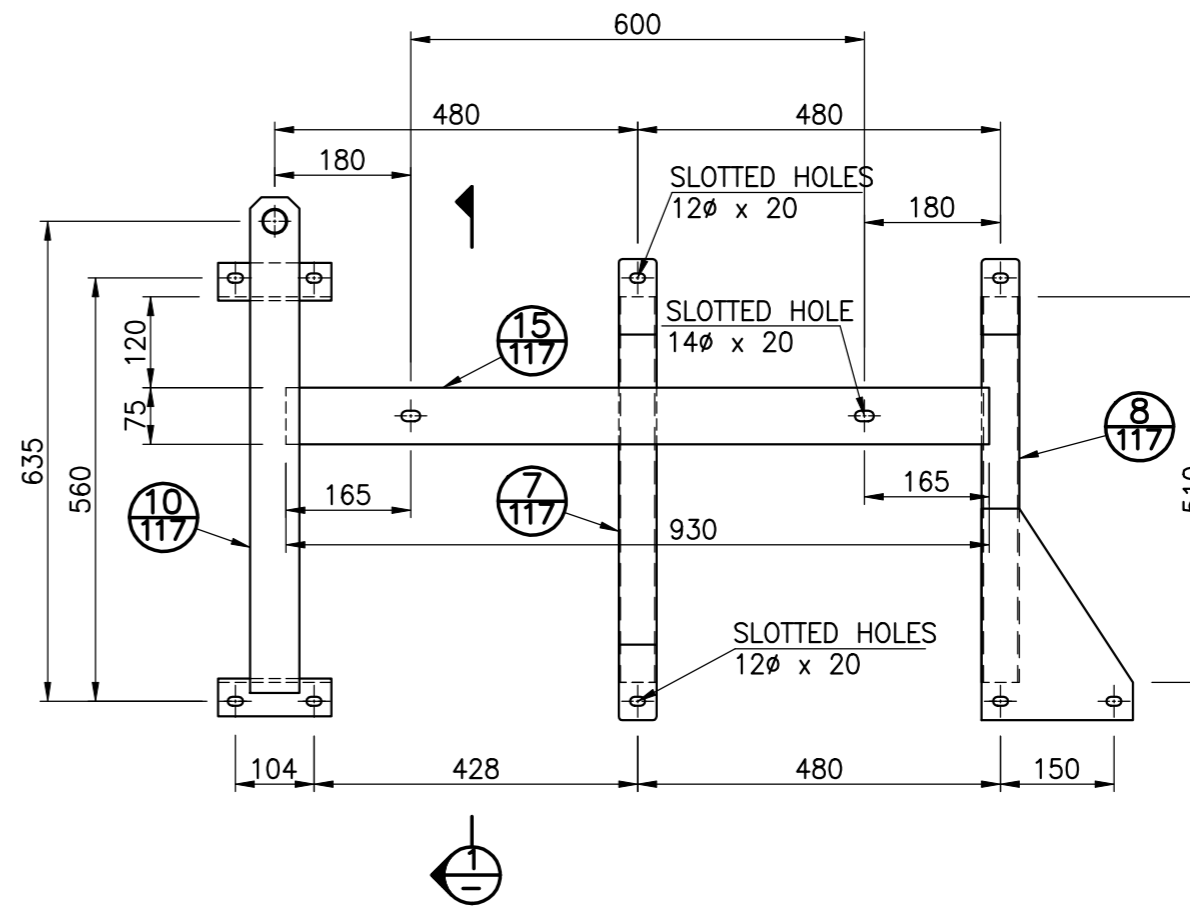
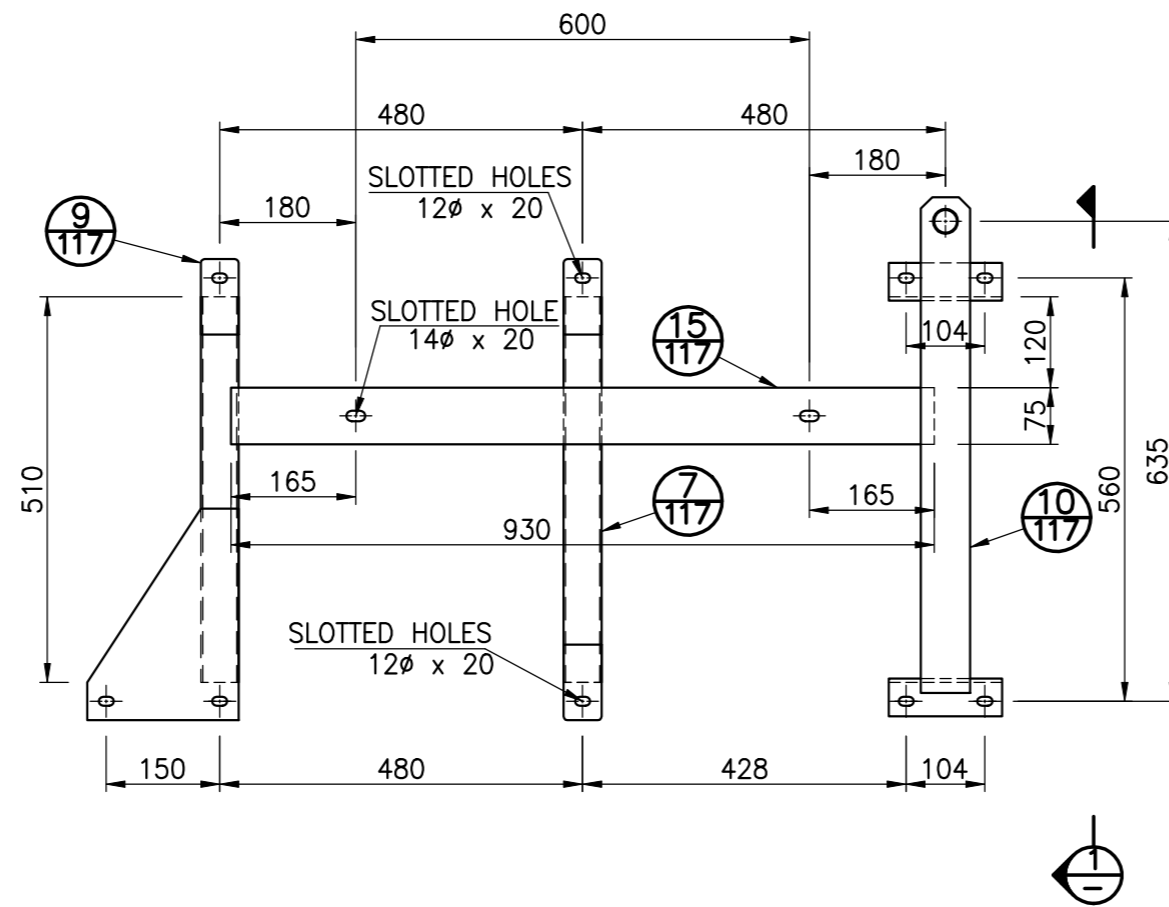
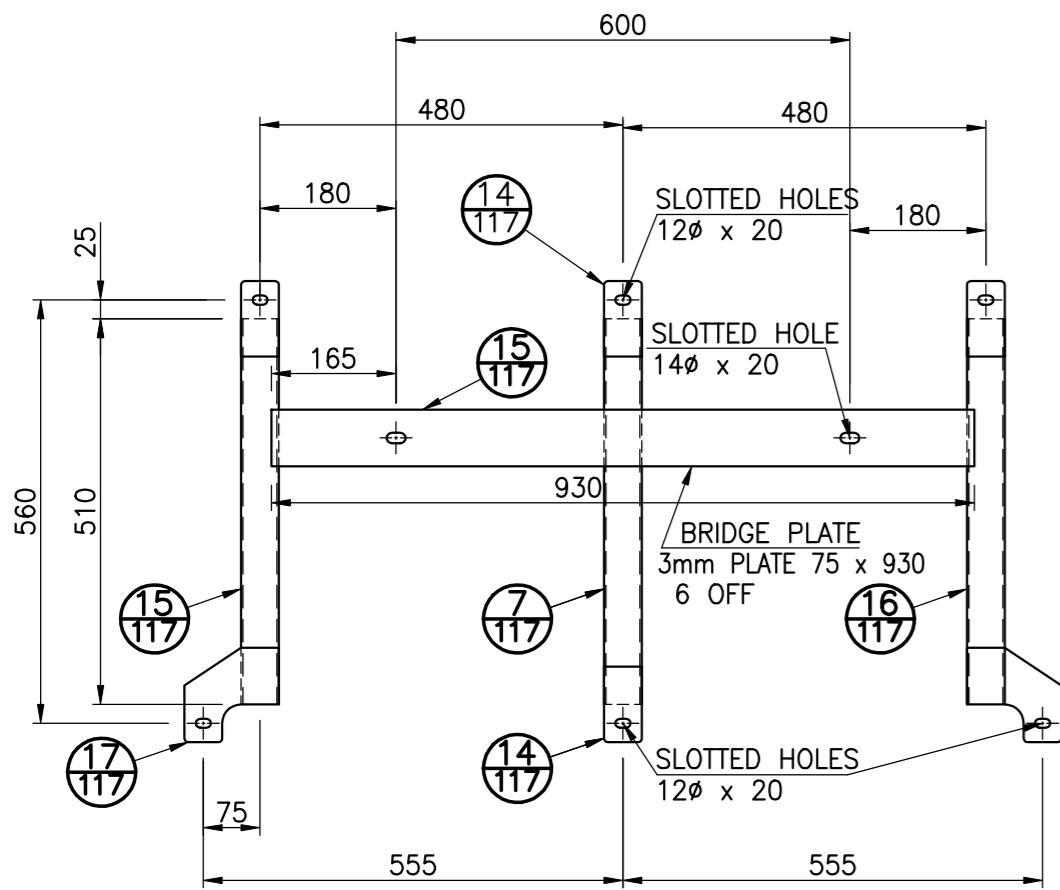
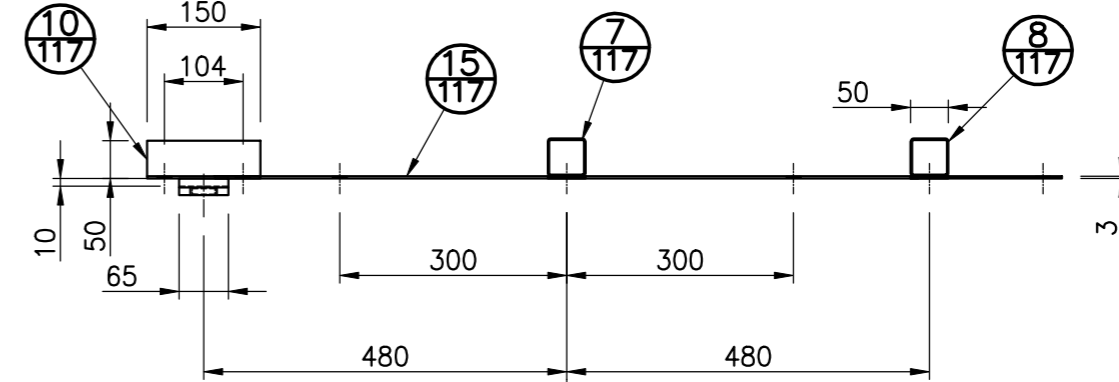
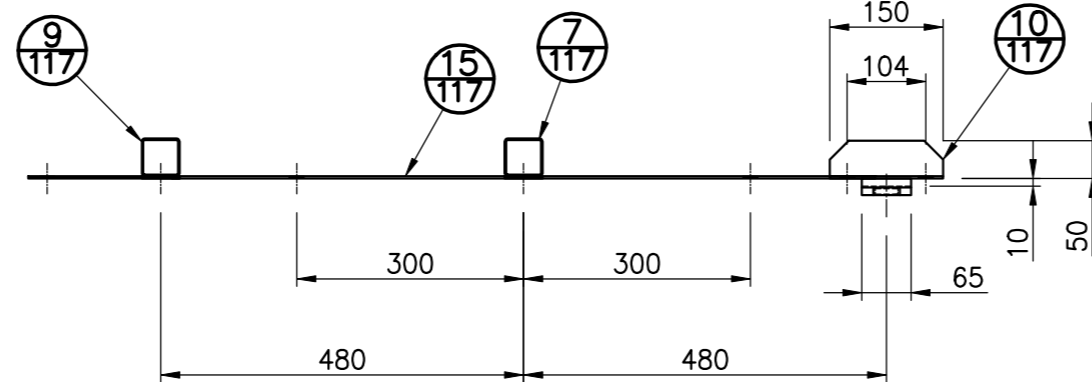
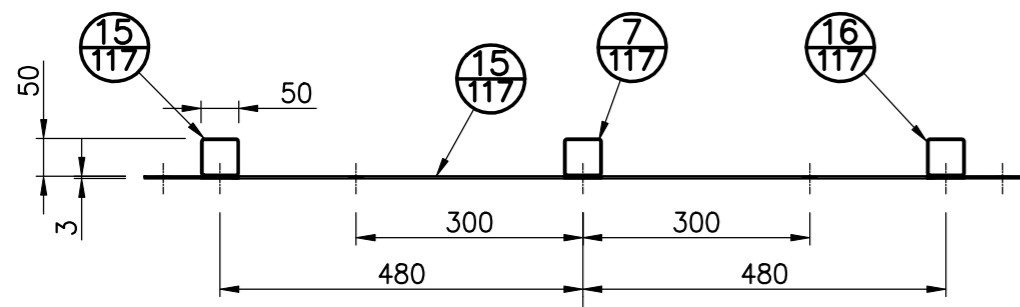


**(15) BRIDGE PLATE**  
MATERIAL 3mm G350 GAL STEEL  
6 OFF PER ASSEMBLY

All details and calculations appertaining to this drawing are intellectual property of FORMIT PORTABLE TOILETS and therefore must not be copied or divulged to other parties without the written approval of the said company.



3 ANGLE PIPES SHORTENED & SPACED DIM. NOTES CORRECTED 27/11/2012 2 BRIDGE PLATES COMBINED TO ONE 3 PIECE 15/07/2012 2 12mm HOLES TO 12mm HOLES 7/5/2013		JOB NAME / ADDRESS CLIENT DRAWING DESCRIPTION <b>FORMIT WASTE TANK          6000 Lt FRAME - FLAT PACK          LOWER FRAME - COMPONENT DETAILS</b>		SCALE 1:10 DATE 11/04/2012 DRAWN M.A.Y. YozzaTech TS REF 7500601 CHECKED PASSED	STANDARD NUMBER SHEET SIZE <b>A2</b>
ISSUE ALTERATION 1 2 3		<b>FORMIT SERVICES PTY. LTD.</b> 1 Co-Wyn Close, Fountaingdale, NSW 2258 Ph. (612) 4336 1000 Fax. (612) 4389 1300		<b>WT-1208-117</b> JOB No. DRAWING No. ISSUE	

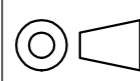


**MID SIDE POST FRAME (1)**  
2 OFF AS SHOWN

**L.H. END SIDE POST FRAME (3)**  
2 OFF

**R.H. END SIDE POST FRAME**  
2 OFF

All details and calculations appertaining to this drawing are intellectual property of FORMIT PORTABLE TOILETS and therefore must not be copied or divulged to other parties without the written approval of the said company.



3 ANGLE PIECES SHORTER & SPACED PLAN VIEWS ADDED - 27/11/2012 2 REVISIONS MADE 15/7/2012 1 ISSUE	JOB NAME / ADDRESS CLIENT	<b>FORMIT SERVICES PTY. LTD.</b> 1 Co-Wyn Close, Fountaindale, NSW 2258 Ph. (612) 4336 1000 Fax. (612) 4389 1300	
	DRAWING DESCRIPTION FORMIT WASTE TANK 6000 Lt FRAME LOWER FRAME - SIDE FRAME ASSEMBLIES	SCALE 1:10 DATE 2/6/2012 DRAWN M.A.Y. YarraTech TS REF 7500601	STANDARD NUMBER <b>WT-1208-118</b>



## PRODUCT TYPE:

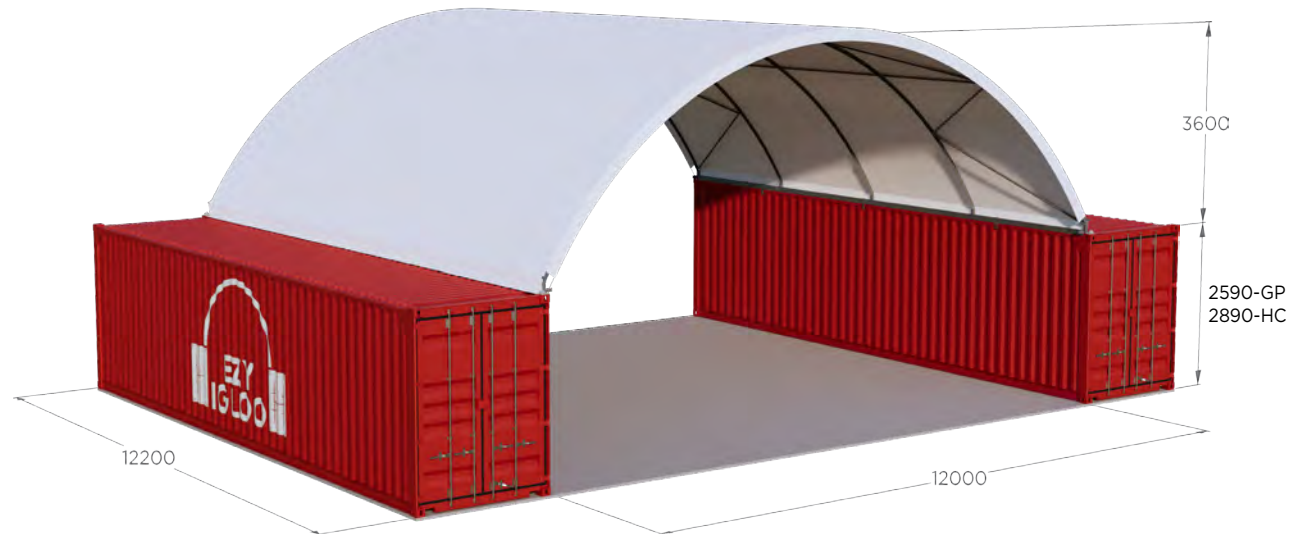
Standard - Container Mounted

## PRODUCT SIZE:

12m wide x 12m long x 3.6m high

## TECHNICAL INFORMATION:

- Engineer Certified to Level of Importance 2.
- Wind load calculated in accordance with current AS/NZS 1170.
- Wind Rated for regions A, B or C.
- RHS galvanised steel frame complies with Australian Standards.
- Australian made Canvacon 7000E polyfabric cover.
- Base Rail comes as standard with each standard Igloo.
- Weld Test Certificate carried out on all Standard Igloo frames.
- Mill Test Certificate available on all Standard Igloo frames.
- 10-year Structural Warranty.
- 20-year UV Warranty on all covers.
- Full Installation services available.



\*All dimensions are approximate. Drawings not to scale.



1

Full End Wall



2

Half End Wall

FULL RANGE OF CUSTOM ACCESSORIES AVAILABLE

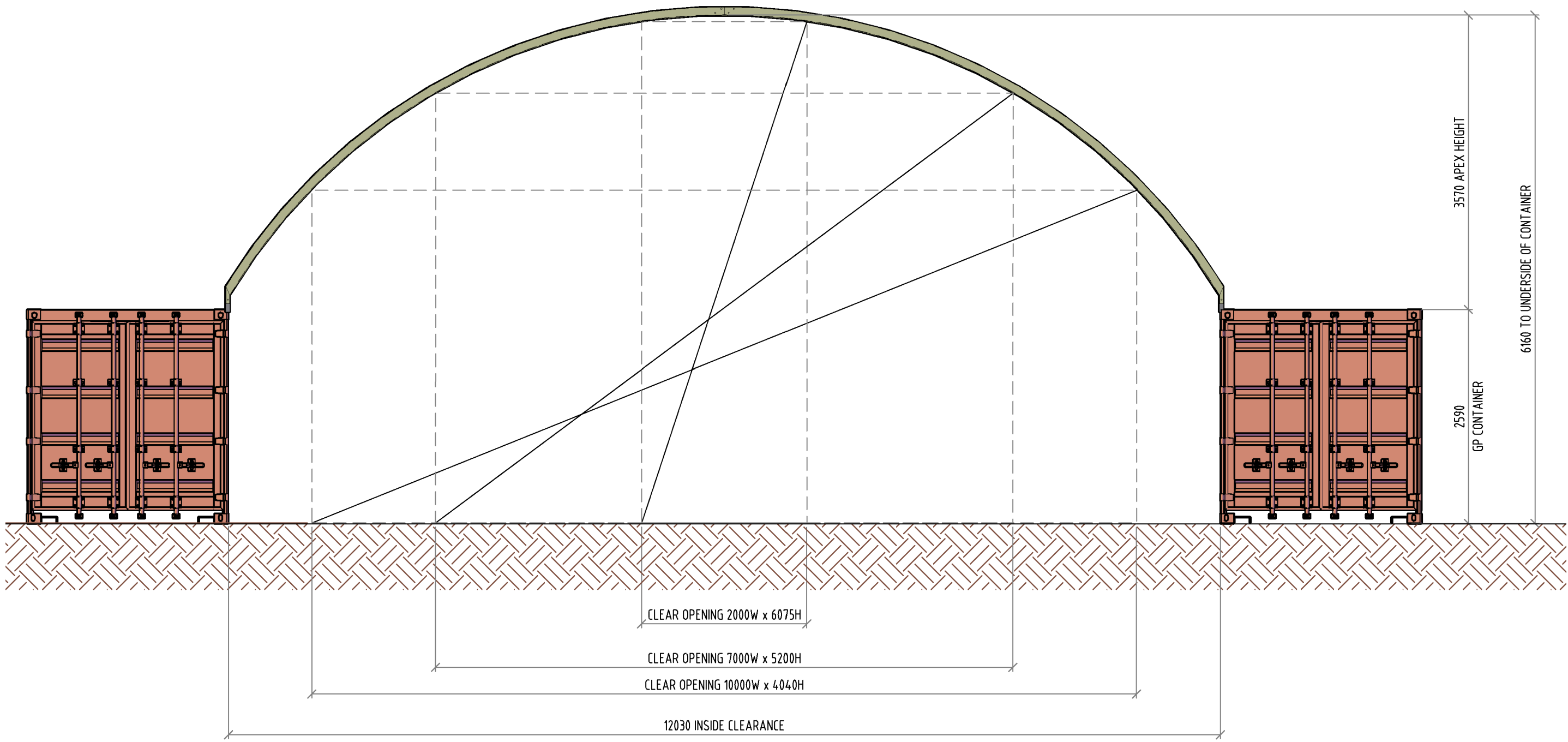
CONTACT US

✉ [info@ezyigloo.com.au](mailto:info@ezyigloo.com.au)

☎ 1300 399 445

🌐 [ezyigloo.com.au](http://ezyigloo.com.au)

FOR QUOTATION ONLY



DRAWING NUMBER  
D-HC-12.0-3.6-ISM

DRAWING NUMBER	TITLE
---	---
ASSOCIATED DRAWING	

REV.	DATE	DESCRIPTION	DRW.	CHK.	APV.	RPEQ No.	AUTHORISATION
A	29/11/2024	FOR CONSTRUCTION	KM	KM	KM		
0	29/11/2024	FOR APPROVAL	KM	KM	KM		

DESIGNED	P.WHITLA	13/04/2021
DRAWN	K.MCMAHON	29/11/2024
CHECKED	K.MCMAHON	29/11/2024
PROD. MNGR.	----	----
PROJ. MNGR.	----	----
RPEQ ENGR.	----	----

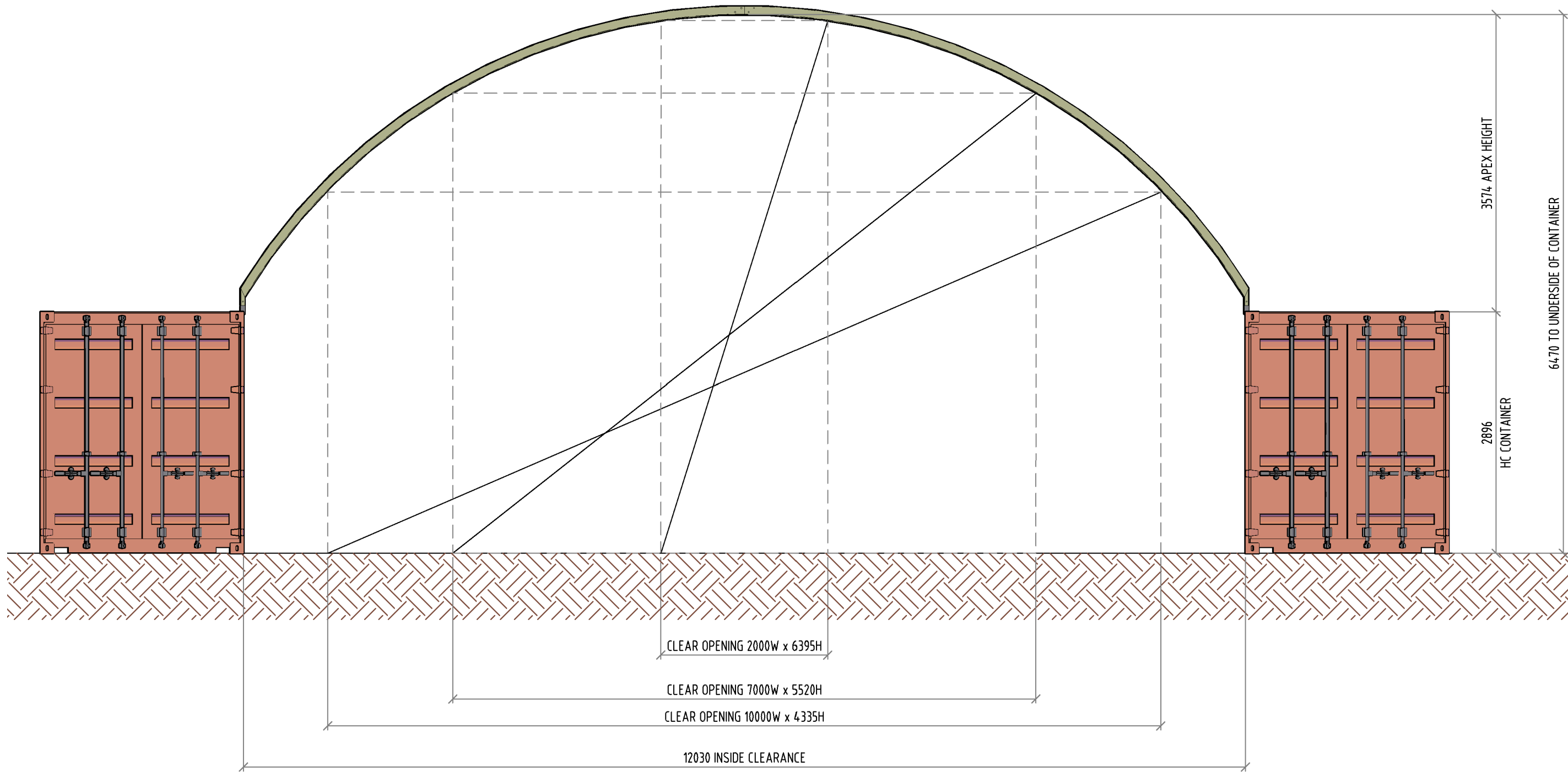
SCALE: 1:50 DO NOT SCALE - IF IN DOUBT ASK

COPYRIGHT 2019 - 2024

THIS DRAWING IS THE PROPERTY OF OLD SHADESHELTERS PTY. LTD. ALL INFORMATION CONTAINED IS CONFIDENTIAL AND MUST NOT BE REPRODUCED, COPIED OR DISCLOSED TO ANY THIRD PARTY WITHOUT THE PRIOR WRITTEN CONSENT OF OLD SHADESHELTERS PTY. LTD.

DRAWING STATUS	FOR CONSTRUCTION
EZY IGLOO	
TITLE 12.0m x 3.6m EZY IGLOO HEIGHT CLEARANCE GP CONTAINER OPTION INSIDE MOUNT	
DRAWING NUMBER	D-HC-12.0-3.6-ISM
SHEET 01 OF 01 SHEETS	REV A


FOR QUOTATION ONLY



DRAWING NUMBER D-HC-12.0-3.6-ISM		
DRAWING NUMBER	TITLE	
	ASSOCIATED DRAWING	

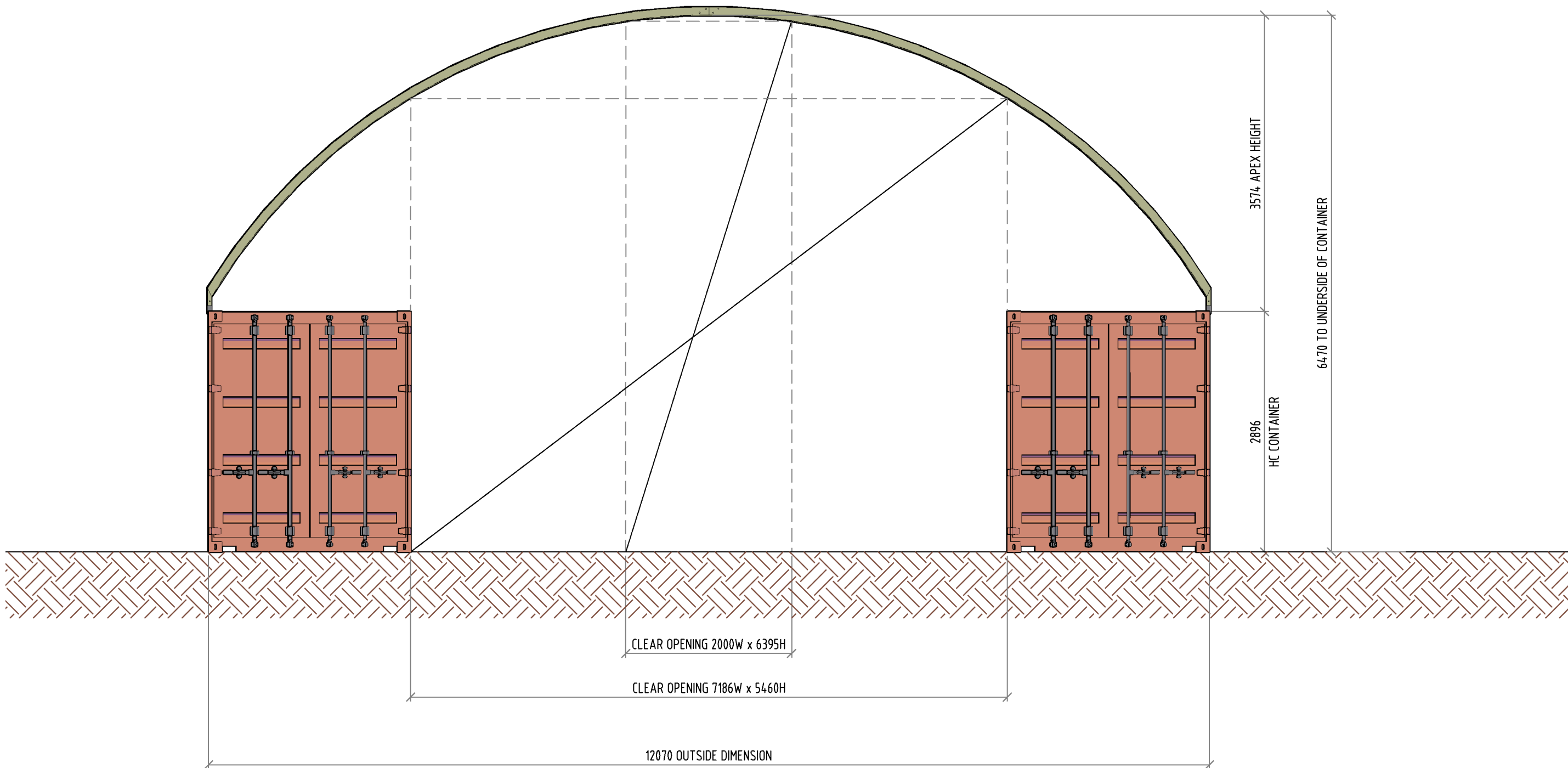
REV.	DATE	DESCRIPTION	DRW.	CHK.	APV.	RPEQ No.	AUTHORISATION
A	29/11/2024	FOR CONSTRUCTION	KM	KM	KM		
0	29/11/2024	FOR APPROVAL	KM	KM	KM		

DESIGNED	P.WHITLA	13/04/2021
DRAWN	K.McMAHON	29/11/2024
CHECKED	K.McMAHON	29/11/2024
PROD. MNGR.	----	----
PROJ. MNGR.	----	----
RPEQ ENGR.	----	----

SCALE: 1:50	DO NOT SCALE - IF IN DOUBT ASK	DRAWING STATUS: FOR CONSTRUCTION
 <p>COPYRIGHT 2019 - 2024</p> <p>THIS DRAWING IS THE PROPERTY OF OLD SHADESHELTERS PTY. LTD. ALL INFORMATION CONTAINED IS CONFIDENTIAL AND MUST NOT BE REPRODUCED, COPIED OR DISCLOSED TO ANY THIRD PARTY WITHOUT THE PRIOR WRITTEN CONSENT OF OLD SHADESHELTERS PTY. LTD.</p>		TITLE: 12.0m x 3.6m EZY IGLOO HEIGHT CLEARANCE HC CONTAINER OPTION INSIDE MOUNT
		DRAWING NUMBER: D-HC-12.0-3.6-ISM
SHEET 01 OF 01 SHEETS	REV A	



FOR QUOTATION ONLY



DRAWING NUMBER  
D-HC-12.0-3.6-OSM

DRAWING NUMBER	TITLE
---	---
ASSOCIATED DRAWING	

REV.	DATE	DESCRIPTION	DRW.	CHK.	APV.	RPEQ No.
A	29/11/2024	FOR CONSTRUCTION	KM	KM	KM	
0	29/11/2024	FOR APPROVAL	KM	KM	KM	

DESIGNED	P.WHITLA	13/04/2021
DRAWN	K.MCMAHON	29/11/2024
CHECKED	K.MCMAHON	29/11/2024
PROD. MNGR.	----	----
PROJ. MNGR.	----	----
RPEQ ENGR.	----	----
AUTHORISATION		

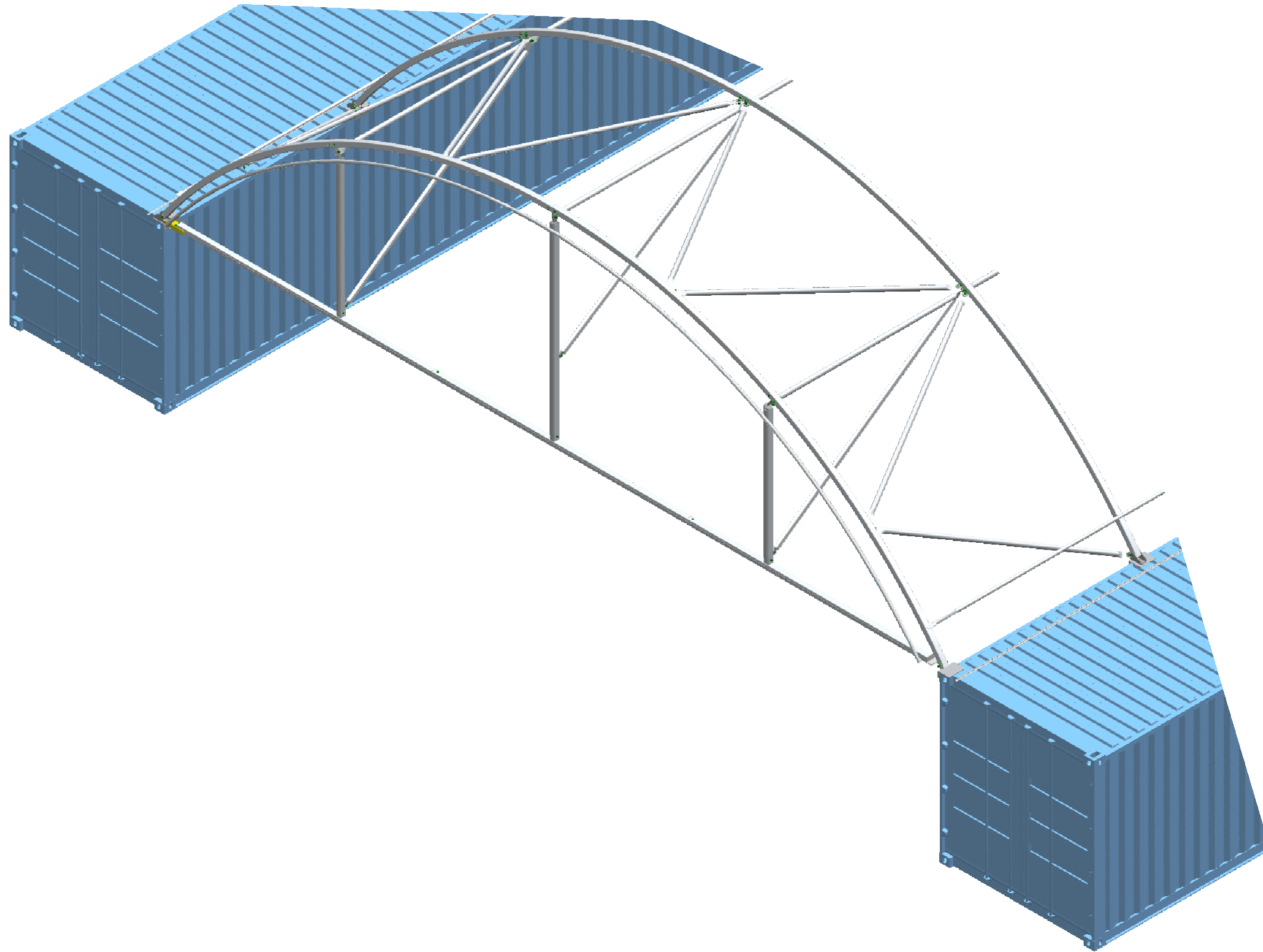
SCALE: 1:50 DO NOT SCALE - IF IN DOUBT ASK

COPYRIGHT 2019 - 2024


THIS DRAWING IS THE PROPERTY OF OLD SHADESHELTERS PTY. LTD. ALL INFORMATION CONTAINED IS CONFIDENTIAL AND MUST NOT BE REPRODUCED, COPIED OR DISCLOSED TO ANY THIRD PARTY WITHOUT THE PRIOR WRITTEN CONSENT OF OLD SHADESHELTERS PTY. LTD.

DRAWING STATUS	FOR CONSTRUCTION
TITLE	EZY IGLOO
TITLE	12.0m x 3.6m EZY IGLOO HEIGHT CLEARANCE HC CONTAINER OPTION OUTSIDE MOUNT
DRAWING NUMBER	D-HC-12.0-3.6-OSM
SHEET 01 OF 01 SHEETS	REV A

THE DESIGN AND DRAWINGS SHOWN HEREON ARE COPYRIGHT AND SHALL NOT BE COPIED, REPRODUCED, SCANNED, STORED IN ANY ELECTRONIC DATABASE, RE-TRANSMITTED, DISCLOSED, DISTRIBUTED, OR COMMERCIALISED WITHOUT THE WRITTEN CONSENT OF ALLSHELTER. THIS DRAWING AND INFORMATION REMAINS THE PROPERTY OF ALLSHELTER AND MAY NOT BE USED FOR ANY OTHER PURPOSE THAN THAT FOR WHICH IT IS SUPPLIED. ALLSHELTER WILL NOT HESITATE TO TAKE APPROPRIATE LEGAL ACTION IF ITS RIGHTS IN THIS RESPECT ARE INFRINGED.

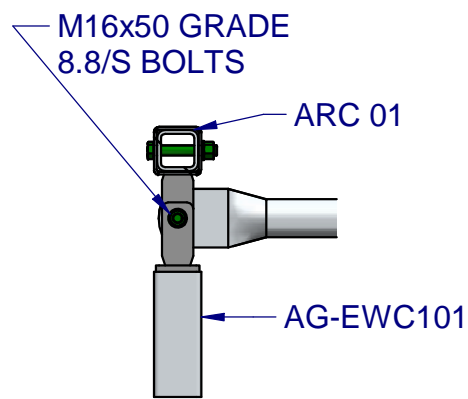
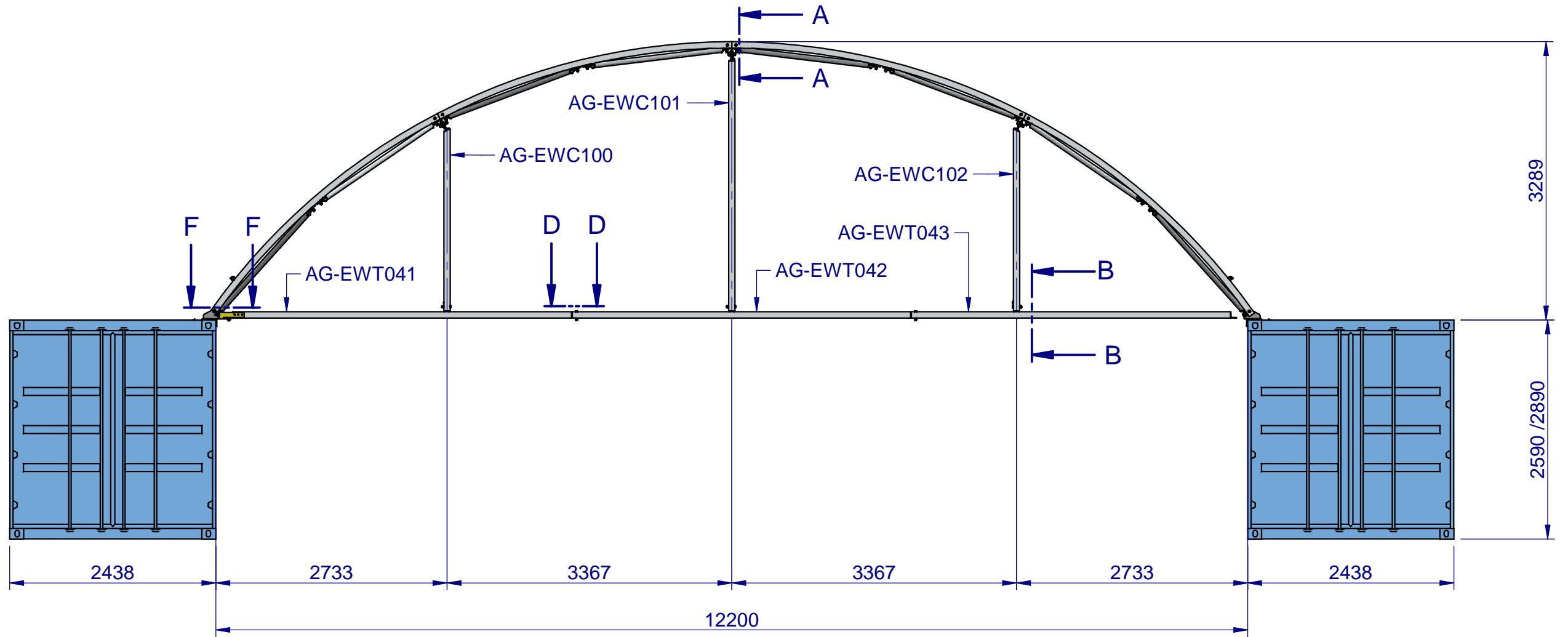


E	-	-		
D	-	-		
C	-	-		
B	-	-		
A	12/02/21	RELEASE FOR APPROVAL		
REV	DATE	DETAILS	APPROVED	

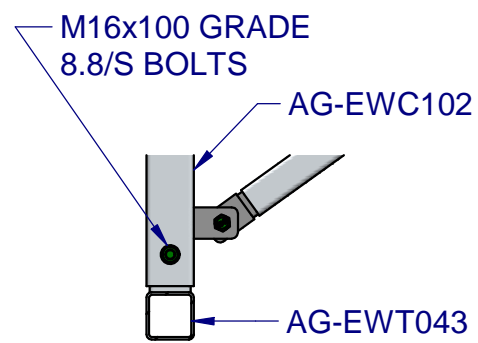
JOB NUMBER:			
9348			
			
DRAWN:	DATE:	SCALE:	PAGE:
Hemayat	27/11/19	NTC	2 of 6

TITLE:	<b>PARTIAL END WALL</b>
SHELTER CODE:	<b>CASA1212A-PE</b>

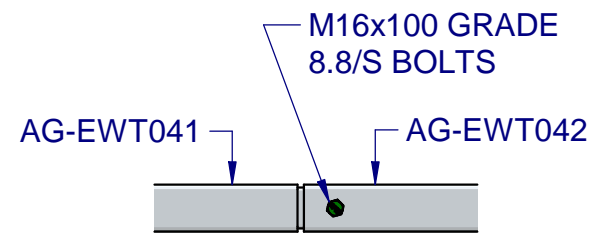
THE DESIGN AND DRAWINGS SHOWN HEREON ARE COPYRIGHT AND SHALL NOT BE COPIED, REPRODUCED, SCANNED, STORED IN ANY ELECTRONIC DATABASE, RE-TRANSMITTED, DISCLOSED, DISTRIBUTED, OR COMMERCIALISED WITHOUT THE WRITTEN CONSENT OF ALLSHELTER. THIS DRAWING AND INFORMATION REMAINS THE PROPERTY OF ALLSHELTER AND MAY NOT BE USED FOR ANY OTHER PURPOSE THAN THAT FOR WHICH IT IS SUPPLIED. ALLSHELTER WILL NOT HESITATE TO TAKE APPROPRIATE LEGAL ACTION IF ITS RIGHTS IN THIS RESPECT ARE INFRINGED.



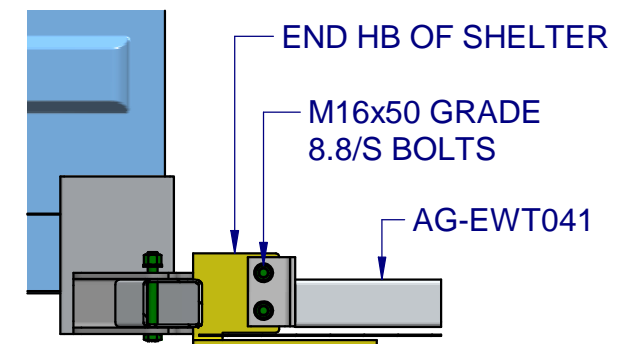
SECTION A-A



SECTION B-B



SECTION D-D



SECTION F-F

**FRAME CONNECTION DETAILS**

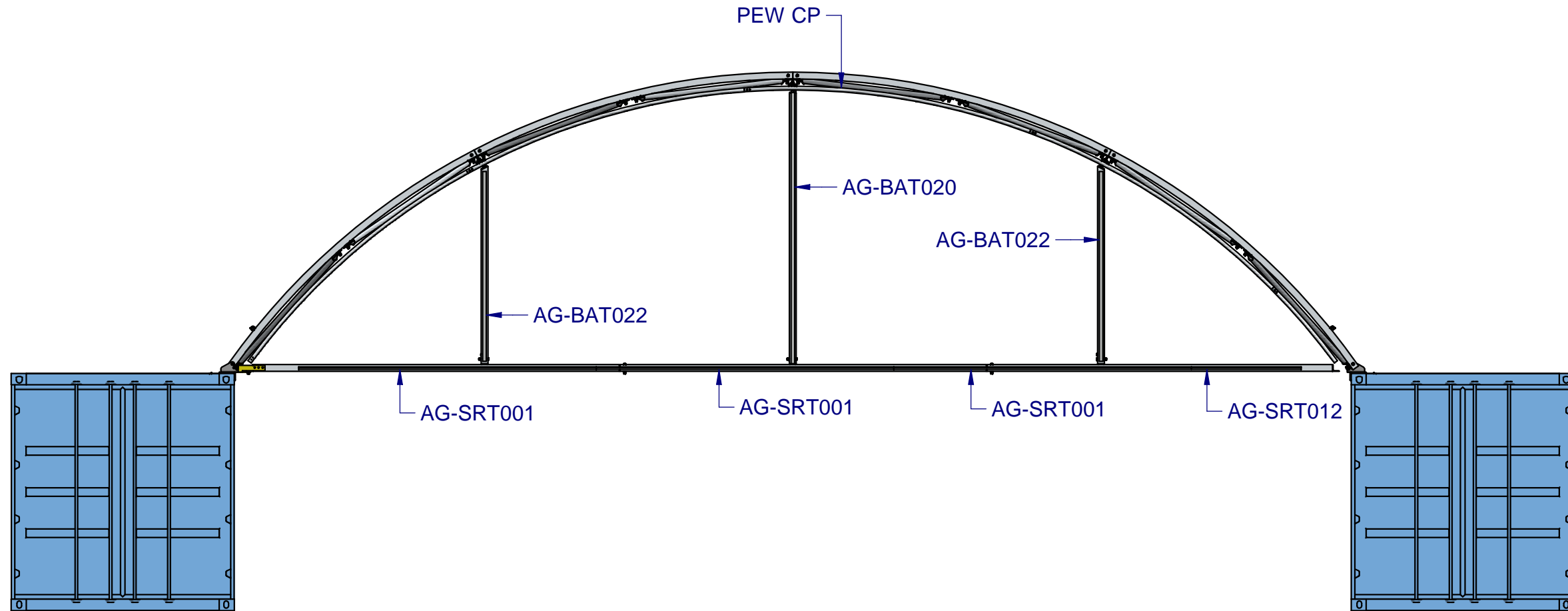


REV	DATE	DETAILS	APPROVED
E	-	-	
D	-	-	
C	-	-	
B	-	-	
A	12/02/21	RELEASE FOR APPROVAL	

JOB NUMBER:			
9348			
DRAWN:	DATE:	SCALE:	PAGE:
Hemayat	27/11/19	NTC	3 of 6

TITLE:	<b>PARTIAL END WALL</b>
SHELTER CODE:	<b>CASA1212A-PE</b>

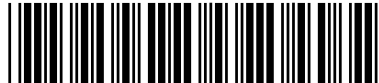
THE DESIGN AND DRAWINGS SHOWN HEREON ARE COPYRIGHT AND SHALL NOT BE COPIED, REPRODUCED, SCANNED, STORED IN ANY ELECTRONIC DATABASE, RE-TRANSMITTED, DISCLOSED, DISTRIBUTED, OR COMMERCIALISED WITHOUT THE WRITTEN CONSENT OF ALLSHELTER. THIS DRAWING AND INFORMATION REMAINS THE PROPERTY OF ALLSHELTER AND MAY NOT BE USED FOR ANY OTHER PURPOSE THAN THAT FOR WHICH IT IS SUPPLIED. ALLSHELTER WILL NOT HESITATE TO TAKE APPROPRIATE LEGAL ACTION IF ITS RIGHTS IN THIS RESPECT ARE INFRINGED.



### COVER FIXING DETAILS



E	-	-	
D	-	-	
C	-	-	
B	-	-	
A	12/02/21	RELEASE FOR APPROVAL	
REV	DATE	DETAILS	APPROVED

JOB NUMBER:			
9348			
DRAWN:	DATE:	SCALE:	PAGE:
Hemayat	27/11/19	NTC	5 of 6

TITLE:	<b>PARTIAL END WALL</b>
SHELTER CODE:	<b>CASA1212A-PE</b>

**ATTACHMENT 5. PORTERS BRIDGE ROAD QUARRY INTENSIFICATION ENVIRONMENTAL NOISE, GROUND VIBRATION AND AIR BLAST OVERPRESSURE ASSESSMENT**

**Van Diemen Consulting**  
**Porters Bridge Road Quarry**  
**intensification**  
**environmental noise, ground vibration**  
**and air blast overpressure assessment**



Report No. 7021\_AC/MIB\_R

**TARKARRI ENGINEERING PTY LTD**

PO Box 506

Kings Meadows TAS 7249

August 2025



**Tarkarri**  
**Engineering**



Air Quality • Acoustics • Environment • Vibration



DOCUMENT CONTROL

<b>VAN DIEMEN CONSULTING                  PORTERS BRIDGE ROAD QUARRY INTENSIFICATION                  ENVIRONMENTAL NOISE ASSESSMENT</b>	
<b>Report No.</b> 7021_AC/VIB_R_R1 <b>Prepared for</b> Van Diemen Consulting 32 Banticks Road Mangalore Tasmania 7030	<b>Library Code</b> AC/VIB <b>Prepared by</b> Tarkarri Engineering Pty Ltd PO Box 506 Kings Meadows Tasmania 7249
<b>Contact</b> Dr Richard Barnes  <b>Mobile</b> +61(0)438 588 695 <b>Email</b> <a href="mailto:rwbarnes73@gmail.com">rwbarnes73@gmail.com</a>	<b>Contact</b> Dr Alex McLeod  <b>Mobile</b> +61 3 6343 2077 <b>Mobile</b> +61(0)439 357 297 <b>Email</b> <a href="mailto:alex.mcleod@tarkarri.com">alex.mcleod@tarkarri.com</a>

<b>Author</b>	Alex McLeod Director / Principal Consultant	Date: 11 August 2025
<b>Revision History</b>		
<b>Revision No.</b>	<b>Date Issued</b>	<b>Reason/Comments</b>
0	17/06/2025	Initial release
1	11/08/2025	Additional information
<b>Distribution</b>		
<b>Copy No.</b> _____	<b>Revision No.</b>	<b>Location</b>
1	1	Project/Client File
2	1	Client
3	1	Tarkarri Engineering Library
<b>Keywords</b>	<b>Airborne noise</b> (dB re 20 µPa) <b>dBA</b> – Decibels A-weighted. <b>A-weighting</b> – Weighting of the audible frequencies reflective of the response of the human ear to noise. <b>L<sub>Aeq,T</sub></b> – Equivalent continuous A-weighted sound pressure level over a given time (T). <b>L<sub>A90,T</sub></b> – A-weighted sound pressure level exceeded for 90 % of a given time period (T), typically known as the background. <b>L<sub>A10,T</sub></b> – A-weighted sound pressure level exceeded for 10 % of a given time period (T). <b>PPV</b> – peak particle velocity (mm/s) <b>dB L</b> – Decibels linear (unweighted)	



## Table of Contents

Executive Summary .....	5
1 Introduction .....	6
2 Site description .....	8
3 Environmental noise .....	11
3.1 Assessment criteria .....	11
3.2 Existing noise levels .....	11
3.2.1 Position M1 .....	13
3.2.2 Position M2 .....	14
3.2.3 Position M3 .....	15
3.2.4 Observed spectra .....	16
3.2.5 Noise statistics percentiles .....	17
3.3 Environmental noise modelling .....	17
3.3.1 Model input data .....	18
3.3.2 Atmospheric conditions .....	19
3.3.3 Model scenarios .....	19
3.3.4 Modelling results and discussion .....	31
3.4 Discussion and conclusions .....	43
4 Ground vibration and air blast overpressure .....	44
4.1 Ground vibration .....	44
4.2 Air blast overpressure .....	47
4.3 Prediction validation .....	49
4.4 Discussion and conclusions .....	49
Appendix .....	50

## List of figures

Figure 2-1: Aerial view of Porters Bridge Road Quarry mining lease and surrounds. ....	9
Figure 2-2: Aerial view of Porters Bridge Road Quarry and surrounds with environmental noise model receivers marked. ....	10
Figure 3-2: Aerial view of Porters Bridge Road Quarry and surrounds with environmental noise monitoring locations marked. ....	12
Figure 3-2: Position M1 (taken by Tarkarri Engineering). ....	13
Figure 3-3: Position M1, time trace of $L_{Aeq,10min}$ , $L_{A10,10min}$ and $L_{A90,10min}$ levels. ....	13
Figure 3-4: Position M1 (taken by Tarkarri Engineering). ....	14
Figure 3-5: Position M2, time trace of $L_{Aeq,10min}$ , $L_{A10,10min}$ and $L_{A90,10min}$ levels. ....	14
Figure 3-6: Position M3 (taken by Tarkarri Engineering). ....	15
Figure 3-9: Model plan view of the <b>Existing</b> model scenario. ....	20
Figure 3-10: Model plan view of the <b>Existing</b> model scenario. ....	21
Figure 3-11: Model wire frame view of the <b>Existing</b> model scenario, from the south. ....	22
Figure 3-12: Model plan view of the <b>Stage 2</b> model scenario. ....	23
Figure 3-13: Model wire frame view of the <b>Stage 2</b> model scenario, from the south. ....	24
Figure 3-14: Model plan view of the <b>Stage 4</b> model scenario. ....	25
Figure 3-15: Model wire frame view of the <b>Stage 4</b> model scenario, from the south. ....	26
Figure 3-16: Model plan view of the <b>Stage 5</b> model scenario. ....	27
Figure 3-17: Model wire frame view of the <b>Stage 5</b> model scenario, from the south. ....	28
Figure 3-18: Model plan view of the <b>Stage 6</b> model scenario. ....	29
Figure 3-19: Model wire frame view of the <b>Stage 6</b> model scenario, from the south. ....	30
Figure 3-13: Predicted noise emission contours, <b>Existing</b> scenario, CONCAWE wcw. ....	34
Figure 3-14: Predicted noise emission contours, <b>Stage 2</b> scenario, ISO. ....	35
Figure 3-15: Predicted noise emission contours, <b>Stage 2</b> scenario, CONCAWE wcw. ....	36



Figure 3-16: Predicted noise emission contours, <b>Stage 4</b> scenario, ISO.....	37
Figure 3-17: Predicted noise emission contours, <b>Stage 4</b> scenario, CONCAWE wcw.....	38
Figure 3-18: Predicted noise emission contours, <b>Stage 5</b> scenario, ISO.....	39
Figure 3-19: Predicted noise emission contours, <b>Stage 5</b> scenario, CONCAWE wcw.....	40
Figure 3-20: Predicted noise emission contours, <b>Stage 6</b> scenario, ISO.....	41
Figure 3-21: Predicted noise emission contours, <b>Stage 6</b> scenario, CONCAWE wcw.....	42
Figure 4-1: Predicted ground vibration contours, average regression constant.....	46
Figure 4-2: Predicted ground vibration contours, upper bound regression constant.....	46
Figure 4-3: Predicted air blast overpressure contours.....	48
Figure 4-4: Predicted air blast overpressure contours.....	48

## List of tables

Table 2-1: Environmental noise measurement and model receiver positions.....	10
Table 3-1: Environmental noise monitoring positions.....	11
Table 3-1: Position M3, observed noise statistics.....	15
Table 3-3: Measured noise statistics percentiles.....	17
Table 3-4: Overall sound power levels and data source information.....	18
Table 3-5: 1/1-octave band sound power level spectra.....	19
Table 3-6: Predicted noise emission levels.....	31
Table 4-1: Predicted ground vibration.....	45
Table 4-2: Predicted air blast overpressure.....	47
Table 4-3: Measured and predicted ground vibration and air blast overpressure at PBRQ.....	49

## References

- [1] SoundPLAN Acoustic modelling software - Braunstein & Berndt GmbH.
- [2] ISO 9613-2:2024 Acoustics — Attenuation of sound during propagation outdoors Part 2: Engineering method for the prediction of sound pressure levels outdoors
- [3] CONCAWE The oil companies' international study group for conservation of clean air and water – Europe (est. 1963) report 4/81.
- [4] Office of Surface Mining Reclamation and Enforcement (<https://www.osmre.gov/>).



## Executive Summary

Tarkarri Engineering was commissioned Van Diemen Consulting on behalf of Walters Contracting Pty Ltd to conduct an environmental noise, ground vibration and air blast overpressure assessment as part of an Environmental Effects Report in relation to the intensification operations of the Porters Bridge Road Quarry, Exton.

Monitoring noise at locations surrounding the quarry showed compliance with the existing permit conditions for noise and environmental noise modeling of quarry operations (i.e. extraction, carting, crushing, loading and transporting off site) also demonstrated compliance. Topography within the mining lease and surrounds and buffer distances provide the attenuation required to maintain compliance with noise criteria.

Predicted ground vibration and air blast overpressure levels comply with the assessment criteria with a charge mass/delay of 162 kg. Ground vibration and air blast over pressure have the potential to be perceptible but are below levels where human comfort may be impacted. It is recommended that the charge mass/delay for blasting at the quarry be limited to 162 kg.



# 1 Introduction

Tarkarri Engineering was commissioned by Van Diemen Consulting (VDC) on behalf of Walters Contracting Pty Ltd to conduct an environmental noise, ground vibration and air blast overpressure assessment as part of an Environmental Effects Report (EER) in relation to the intensification of operations at the Porters Bridge Road Quarry (PBRQ), Exton.

Project Specific Guidelines were issued by the Tasmanian Environment Protection Authority (EPA). The section relevant to environmental noise, ground vibration and air blast overpressure is shown below:

## 5.1 Noise emissions

All methods of measurement should be in accordance with the *Tasmanian Noise Measurement Procedure Manual*.

### 5.1.1 Existing Environment

- Provide a map showing the location of the noise sensitive premises (NSPs) within 1.5 kilometres of the Boundary of the proposed activity area, and proposed noise sources on site.
- Provide a list of NSPs displayed in the map with distances to the proposed noise sources on site.
- Undertake and provide results of the following noise surveys to provide context of the existing environment, noting there are other activities operating in the area:
  - Conduct 7-days of unattended noise monitoring (including a weekend period) to evaluate the existing acoustic environment of the NSPs.
  - Conduct noise monitoring at NSPs for a representative period of time to assess noise emissions from the existing operations. The monitoring should be undertaken over a period that captures the extent of existing activities e.g. crushing, screening, blasting.

### 5.1.2 Assessment

- Specify the proposed hours of operation for the activity and detail the likely duration (hours per day and weeks or months per year) of the noise generating activities. Identify those activities which will be undertaken during daytime, evening, and night-time (as relevant).
- List all noise sources, including heights, size, sound power levels and associated 1/3 octave source noise data (C and A-weighted) to assess for low frequency and tonal noise for all mobile and fixed noise generating equipment required for the proposal. For existing noise sources, provide source noise data (C and A-weighted) based on the source measurements conducted at the existing site.
- Discuss the existing and proposed blasting regime, including charge and frequency.
- Identify appropriate noise criteria at NSPs for daytime, evening and nighttime hours of operation.
- Discuss noise-related environmental impacts associated with current and altered traffic on residences adjacent to roads.
- Analyse the potential for noise emissions (during both construction and operational phases) to cause nuisance for nearby land users, particularly at noise sensitive premises. When assessing nuisance at noise-sensitive premises, discuss the *Environment Protection Policy (Noise) 2009* and the existing acoustic environment.



- Undertake and discuss the following:
  - results from the completed noise monitoring including rating background noise levels ( $L_{A90}$ ) and the minimum  $L_{Aeq,10mins}$  noise levels for day, evening, and nighttime periods.
  - predicted air blast over pressure and peak particle velocity at nearby residences at key stages in the quarry development, and the potential for blast effects to impact the residences.
  - results of ground vibration modelling of activities to predict peak particle velocity contours out to 1 mm/s.
  - results of air-blast overpressure modelling of proposed activities to predict dB(lin) level contours out to 100 dB(lin).
- Provide the results of a noise model for the proposal undertaken by a suitably qualified person. The noise model must include consideration of the potential impacts of noise emitted by the activity on NSP, including under average and worst-case meteorological conditions.
- The noise modelling must predict the 35, 40, 45 and 50 dB(A) noise level contours for normal and worst-case weather (downwind, Pasquill stability class F and vector wind speed 2 m/s) scenarios for operating activities and provide at minimum the following details:
  - Figure/s showing the top view and 3-D view of the modelled scenario/s identifying all modelled noise sources in a clearly readable format.
  - Source noise or predicted noise levels should be adjusted for any dominant and intrusive noise characteristics (tonality, impulsiveness, modulation and low frequency noise).
  - Comparison scenarios between the existing and proposed scenarios.
  - Provide predicted results and noise contour map/s for 'with' and 'without' mitigation scenarios.
  - Provide details of all assumptions and noise attenuation factors adopted for this assessment.
  - Provide a list of source contributions predicted at the worst affected NSP.
  - Discuss and assess the potential for cumulative noise impacts from the activity with other nearby existing activities at the identified key NSPs at risk.

### 5.1.3 Avoidance and mitigation measures

- Investigate and implement all feasible mitigation measures to reduce noise emissions at each NSP considering the following: Measures should aim to sufficiently protect the existing acoustic amenity of the surrounding NSP.
- All noisy fixed plant equipment that has a line of sight to any sensitive premises should have acoustic screen/enclosure to minimise noise emissions.
- Ensure that any evening and night-time activities associated with the proposal do not contain any intrusive or dominant characteristics to cause nuisance at any sensitive premises, when assessed in accordance with Tasmanian *Noise Measurement Procedure Manual*.
- In order to protect the existing acoustic amenity of the NSPs, consider appropriate noise attenuation measures to ensure that cumulative noise emissions ( $L_{Aeq}$ ) from the operation do not cause nuisance and do not result in creeping the existing background noise levels at NSPs.



- Consideration should be given to the requirements in section 7 of the *Quarry Code of Practice* and the Tasmanian *Environment Protection Policy (Noise) 2009*.
- Provide measures to mitigate the potential for blast effects to impact upon NSPs.
- Demonstrate that the proposal is consistent with environmental performance requirements, including any identified in the *Environment Protection Policy (Noise) 2009*.

## 2 Site description

The PBRQ is located on Porters Bridge Road, approx. 3.5 km north north-west of the township of Exton. The quarry is located on and bounded by land zoned Rural with Rural Living zoned land further to the west (approx. 850 m) and Agriculture zoned land further to the east (approx. 730 m). Noise sensitive residential premises are located to the west and east on the Rural Living and Agriculture zoned land respectively.

The quarry is Jurassic dolerite with 50,000 tonnes per annum currently extracted. Extraction and processing involves the following and would remain unchanged following intensification:

- Removal of vegetation
- Clearing over burden with an excavator or dozer
- Drill and blast based on a pattern designed by blast contractor
- Crush material using crusher (jaw)
- Screen material (mechanised/vibratory)
- Stockpile material
- Loading into trucks with a wheel loader

The intensification of operations at the PBRQ would see extraction increased to 320,000 tonnes per annum. The activity has a lifespan of at least 15 years if full production levels are achieved every year from the commencement of the activity.

The operating hours for the quarry is 0600 – 1700 hrs Monday to Saturday, 0700-1600 hrs Sundays and statewide public holidays (i.e. standard hours under the *Quarry Code of Practice*). 0600 to 0700 weekdays, 0700 to 0800 and 1600 to 1700 hrs Saturdays, 0700 hrs to 1600 hrs Sundays and statewide Public holidays only loading of crushed and screened materials into transport trucks and carting off-site occurs. Under the intensification this would remain unchanged.

Blasting occurs between 1000 and 1400 hrs Monday to Friday. Currently blasting occurs approx. 3 to 4 times per year. Under the intensification blasting would likely occur approx. 10 to 12 times per year.

Figure 2-1 presents an aerial view with the location of the mining lease (ML) shown.



Figure 2-1: Aerial view of Porters Bridge Road Quarry mining lease and surrounds.

Thirteen environmental noise model receivers were identified from aerial photography and building polygon and point data on LISTmap in conjunction with local ground surveys. These locations are utilised here for the prediction of the environmental noise, ground vibration and air blast overpressure.

Position location information is provided in Table 2-1 below along with approx. distances to existing extraction and processing activities and Figure 2-2 presents the location of the quarry with model receiver positions marked.



Environmental noise model receiver positions					
Number	Location	Coordinates (MGA94, Zone 55 G)		Distance to activity (km)	
				Processing	Extraction
R1	190 Porters Bridge Rd	478222	5405320	2.2	1.9
R2	304 Porters Bridge Rd	478576	5406195	2.0	1.6
R3	340 Porters Bridge Rd	478326	5406553	1.6	1.2
R4	420 Porters Bridge Rd	478010	5407375	1.4	1.0
R5	550 Porters Bridge Rd	477880	5408353	1.9	1.6
R6	610 River Rd	474915	5407607	2.0	2.4
R7	75 Saddlers Run Rd	475217	5407136	1.5	2.0
R8	130 Saddlers Run Rd	475238	5406457	1.6	2.0
R9	155 Saddlers Run Rd	475719	5406329	1.2	1.6
R10	119 Silver Wattle Dr	475242	5405561	2.0	2.4
R11	197 Silver Wattle Dr	475888	5405663	1.5	1.8
R12	184 Johns Rd	476330	5404795	2.1	2.3
R13	115 Saddlers Run Rd	475526	5406869	1.2	1.6

Table 2-1: Environmental noise measurement and model receiver positions.

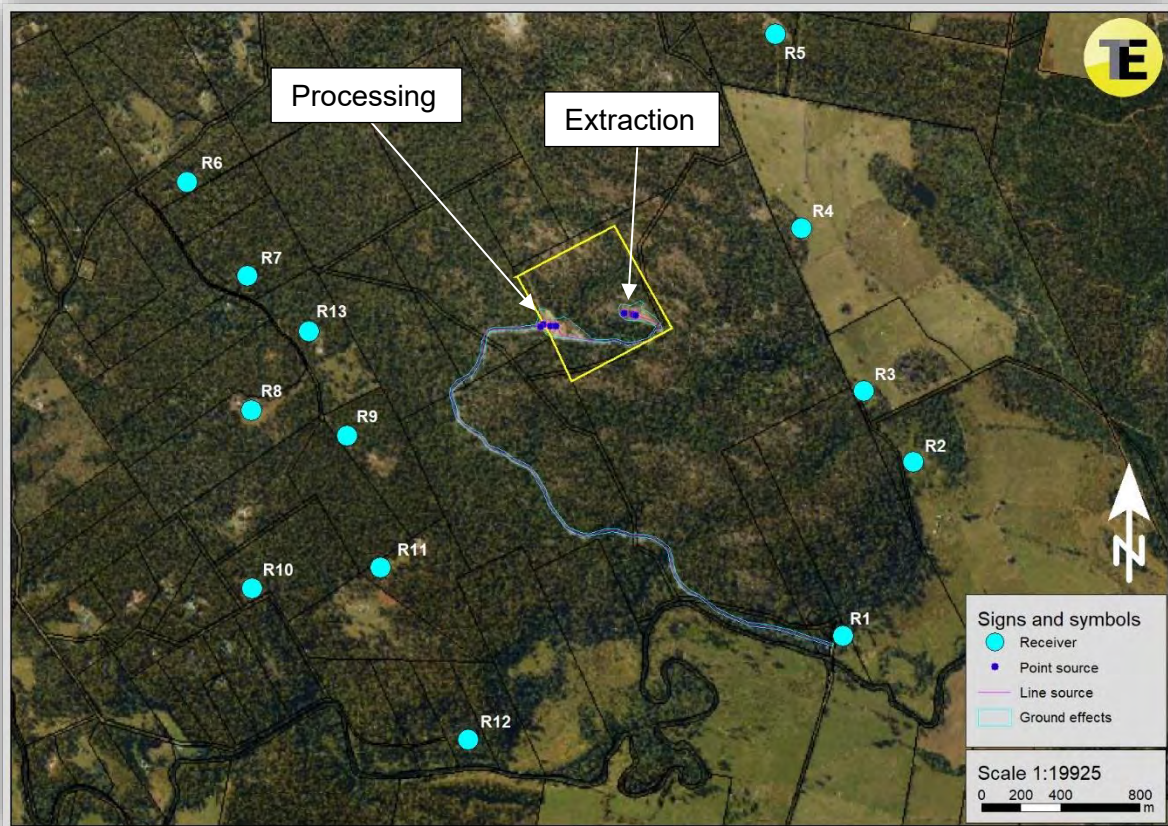


Figure 2-2: Aerial view of Porters Bridge Road Quarry and surrounds with environmental noise model receivers marked.



### 3 Environmental noise

#### 3.1 Assessment criteria

Criteria for the assessment of environmental noise emissions from quarry operations are taken from the sites existing Permit Conditions - Environmental (PCE) No. 10885. The relevant section from the PCE is provided below (this is in accordance with the requirements of section 7 of the *Quarry Code of Practice* in relation to noise):

**Noise Control**

**N1 Noise emission limits**

- 1 Noise emissions from the activity when measured at any noise sensitive premises in other ownership and expressed as the equivalent continuous A-weighted sound pressure level must not exceed:
  - 1.1 45 dB(A) between 0700 hours and 1900 hours (Day time); and
  - 1.2 40 dB(A) between 1900 hours and 2200 hours (Evening time); and
  - 1.3 35 dB(A) between 2200 hours and 0700 hours (Night time).
- 2 Where the combined level of noise from the activity and the normal ambient noise exceeds the noise levels stated above, this condition will not be considered to be breached unless the noise emissions from the activity are audible and exceed the ambient noise levels by at least 5 dB(A).
- 3 The time interval over which noise levels are averaged must be 10 minutes or an alternative time interval specified in writing by the Director.
- 4 Measured noise levels must be adjusted for tonality, impulsiveness, modulation and low frequency in accordance with the Tasmanian Noise Measurement Procedures Manual.
- 5 All methods of measurement must be in accordance with the Tasmanian Noise Measurement Procedures Manual.

#### 3.2 Existing noise levels

Environmental noise monitoring was conducted at three locations surrounding the PBRQ. Table 3-1 provides location information for the three monitoring locations while Figure 3-2 presents an aerial view with the monitoring locations marked.

Environmental noise monitoring positions		
Number	Location	Coordinates (MGA94, Zone 55 G)
M1	190 Porters Bridge Rd (residence)	478206 5405349
M2	185 Porters Bridge Rd (east boundary)	477771 5407469
M3	185A Porters Bridge Rd (west boundary)	476083 5406328

Table 3-1: Environmental noise monitoring positions.



Figure 3-1: Aerial view of Porters Bridge Road Quarry and surrounds with environmental noise monitoring locations marked.

Unobserved monitoring was conducted at measurement positions M 1 and M2 logging 10-minute equivalent continuous ( $L_{eq}$ ) and  $L_1$ ,  $L_{10}$ ,  $L_{50}$ ,  $L_{90}$  and  $L_{99}$  A-weighted sound pressure levels between 21 January and 3 February 2025. At setup or decommissioning sound measurements were observed and short duration (approx. 1-minute) 1/3-octave band and narrow band measurements were taken. Narrow band measurements were taken across the following range:

- Narrow band data 0 to 1000 Hz (0.15625 Hz resolution).

**NB:** The unattended monitoring system at position M3 was stolen during the measurement period and consequently extended unobserved data isn't available for this position. 1-hour of observed 10-minute statistic data was collected as an alternative and are provide in tabular format.

In the following subsections a time trace of the following logged noise statistics is provided for each location (excepting position M3):

- $L_{Aeq,10min}$
- $L_{A90,10min}$
- $L_{A10,10min}$

Short duration spectra are presented graphically while in the final subsection presents percentile values for thee above noise statistics are presented in tabular form.



### 3.2.1 Position M1

At the time of setup, the noise environment at position M1 was controlled by distant Bass Hwy traffic, local traffic (with occasional truck movements at the quarry entrance) and local bird and insect activity.



Figure 3-2: Position M1 (taken by Tarkarri Engineering).

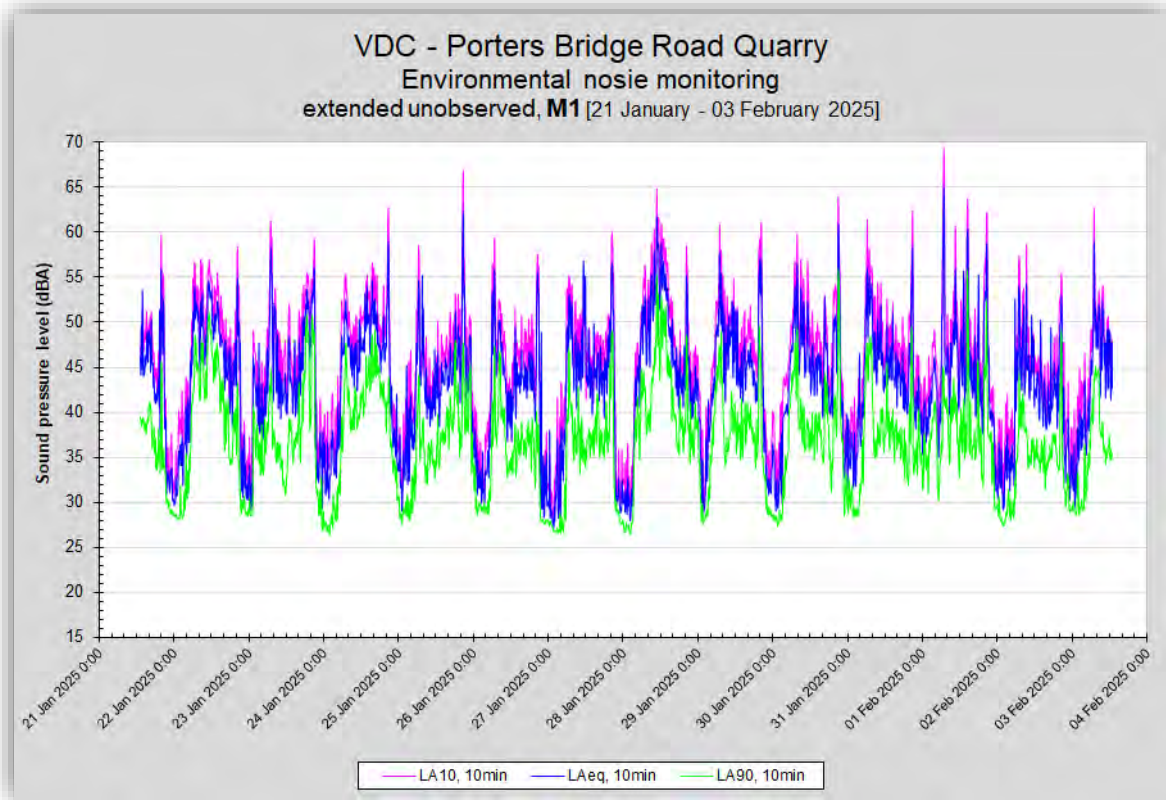


Figure 3-3: Position M1, time trace of  $L_{Aeq,10min}$ ,  $L_{A10,10min}$  and  $L_{A90,10min}$  levels.



### 3.2.2 Position M2

At the time of setup, the noise environment at position M2 was controlled by local traffic, local bird and insect activity and nearby agricultural activity. PBRQ wasn't audible.



Figure 3-4: Position M1 (taken by Tarkari Engineering).

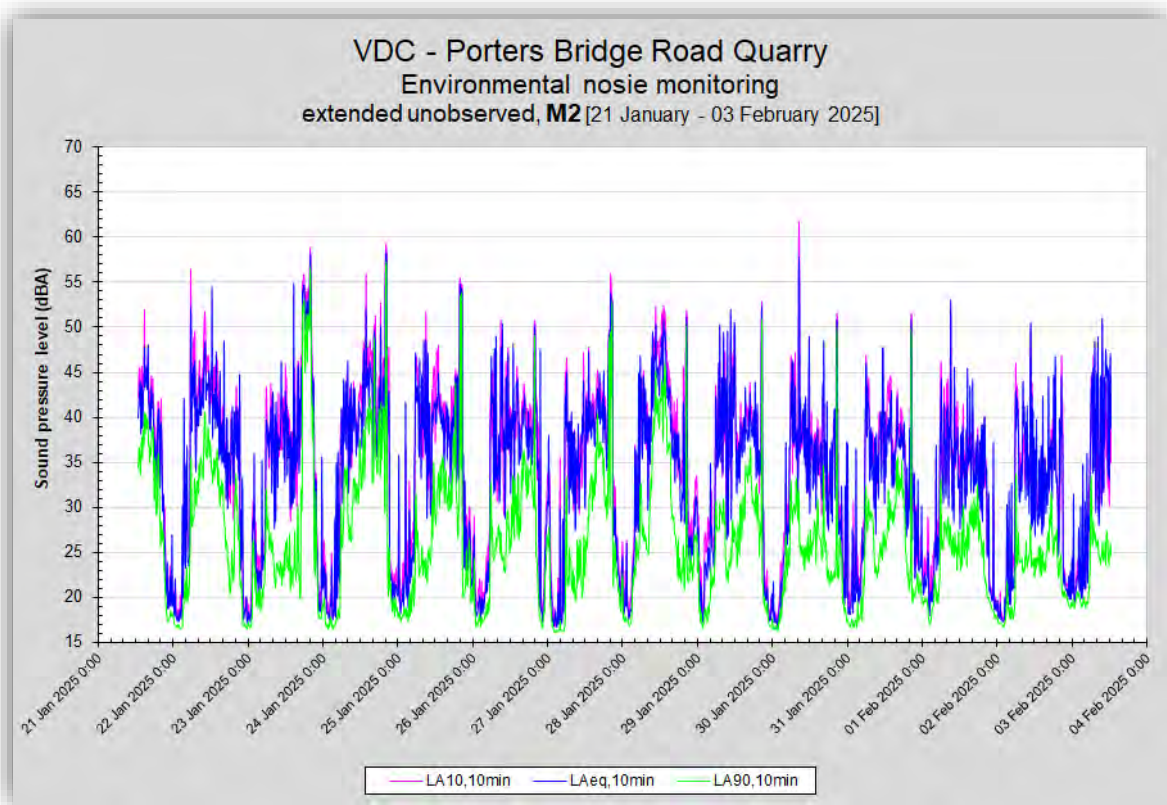


Figure 3-5: Position M2, time trace of  $L_{Aeq,10min}$ ,  $L_{A10,10min}$  and  $L_{A90,10min}$  levels.



### 3.2.3 Position M3

During the measurement period the noise environment at position M3 was controlled by distant traffic, insect activity and leaf rustle as wind moved through nearby vegetation. Truck movements on the PBRQ entry road were audible but not frequency enough to lift  $L_{Aeq}$  levels while quarry processing equipment was faintly audible along with occasional reversing alarms.



Figure 3-6: Position M3 (taken by Tarkarri Engineering).

Position M3												
Period	Date	Time	$L_{Aeq}$	$L_{Amin}$	$L_{Amax}$	LA1	LA10	LA50	LA90	LA99	Weather	Audible sources
Day	11 Feb 2025	11:37	40.8	33.4	64.0	46.5	43.2	39.1	36.7	34.2	Scattered cloud light breeze NW	<u>External:</u> Traffic - distant Birds/Insects Leaf rustle
		11:47	38.1	30.1	50.7	44.3	40.8	36.6	33.3	30.8		<u>PBRQ:</u> Processing (faint) FEL - NBRA
		11:57	37.9	29.4	54.6	47.9	40.1	35.0	31.2	30.1		Trucks (on access rd)
		12:07	38.4	28.7	63.5	48.2	40.5	33.9	31.1	30.2		
		12:17	39.9	29.7	59.9	50.4	43.0	35.0	32.0	30.6		
		12:27	46.1	28.6	68.3	59.9	46.1	35.2	30.7	29.4		

Table 3-2: Position M3, observed noise statistics.



### 3.2.4 Observed spectra

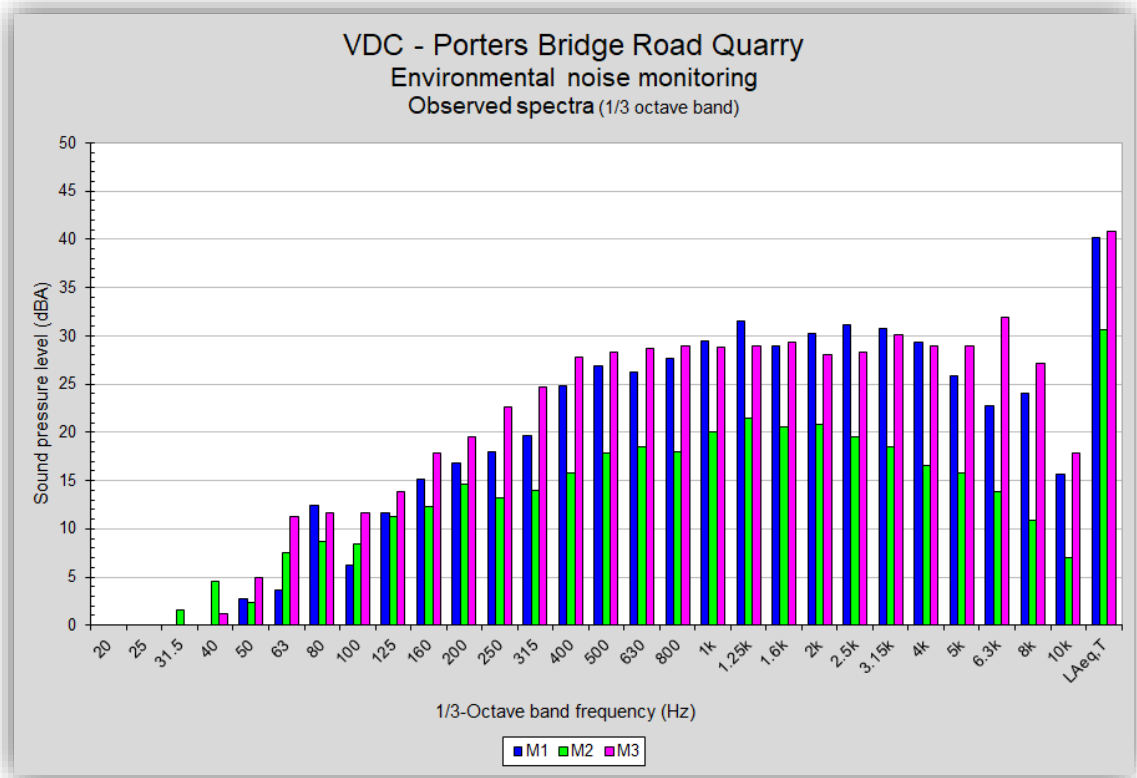


Figure 3-7: Observed, short duration 1/3-octave band spectra.

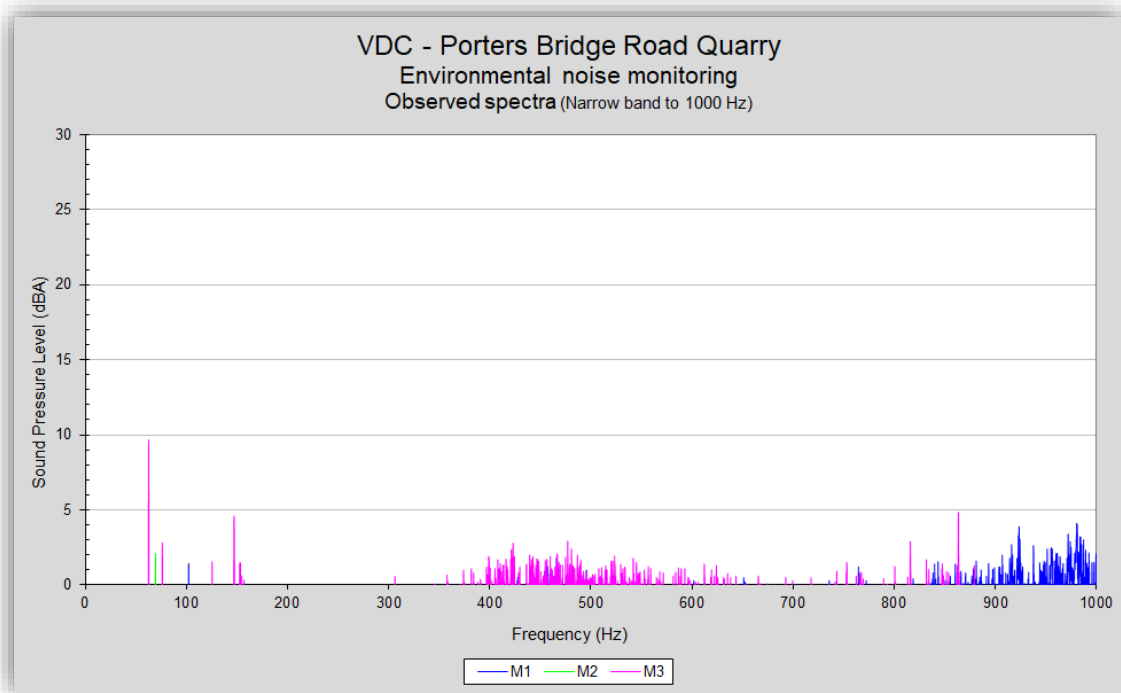


Figure 3-8: Observed, short duration narrow band spectra (0 - 1000 Hz).



### 3.2.5 Noise statistics percentiles

Noise statistic percentiles (dBA)							
Period	Percentile	M1			M2		
		L <sub>Aeq</sub>	L <sub>A10</sub>	L <sub>A90</sub>	L <sub>Aeq</sub>	L <sub>A10</sub>	L <sub>A90</sub>
Day	90 <sup>th</sup>	51.1	53.4	41.9	44.3	44.7	33.1
	50 <sup>th</sup>	45.8	48.4	37.6	38.5	39.4	27.6
	10 <sup>th</sup>	42.6	44.6	35.1	32.5	33.3	24.0
Evening	90 <sup>th</sup>	53.3	55.9	44.8	44.8	46.7	31.1
	50 <sup>th</sup>	44.1	46.3	37.9	36.6	35.9	26.6
	10 <sup>th</sup>	39.4	41.2	32.8	26.8	27.4	21.1
Night	90 <sup>th</sup>	47.0	50.0	39.9	38.2	37.0	26.1
	50 <sup>th</sup>	36.4	39.5	30.5	22.0	23.4	19.0
	10 <sup>th</sup>	31.5	33.2	28.4	18.5	19.4	17.2

Table 3-3: Measured noise statistics percentiles.

### 3.3 Environmental noise modelling

SoundPLAN<sup>[1]</sup> software was used for carrying out detailed noise emission spectra and contour modelling. This program allows the use of the ISO 9613-2:2024<sup>[2]</sup> and CONCAWE<sup>[3]</sup> calculation methods for modelling atmospheric attenuation/amplification of noise. Parameters influencing sound propagation and attenuation include:

- Source type (point, line, plane).
- Relative source and receiver height.
- Topography and barriers.
- Industrial buildings as sources and/or barriers.
- Ground absorption.
- Distance attenuation.
- Atmospheric conditions (Pasquill stability, temperature, humidity and vector wind speed).
- Reflecting surfaces.
- Source directivity.

As all propagation and attenuation parameters are frequency dependent, all input source data has been based on 1/3-octave band sound power spectra.

Geo-referenced topographic, transport, building and hydrologic data was obtained from LISTdata. This provided contours at 10 m intervals; residential locations; road layouts; cadastral parcels; and river and stream courses for the wider area modelled. For the mining lease area 1 m contours provided by VDC were utilised for the different stages of the PBRQ development

Equipment list and layout data was provided by VDC.

All source and geodata is referenced to the Map Grid of Australia (MGA).



### 3.3.1 Model input data

Input sound power (SWL) spectra were determined from measurements conducted at the PBRQ and from Tarkarri Engineering library data. Table 3-4 presents overall SWLs and equipment details while Table 3-5 presents 1/1-octave band SWL spectra. A-weighted and C-weighted SWL spectra are presented in the Appendix.

**NB:** A bitumen precoating machine that operates intermittently is present to the east of the crushing and screening line at the PBRQ. This noise source wasn't included in the model. With an overall SWL of less than 102 dBA is wasn't considered a significant source of noise emissions from the processing area of the quarry given the presence of other noise sources with substantially higher acoustic energy output.

Overall sound power levels (dBA)		
Source	SWL (L <sub>Aeq</sub> )	Comment
Crushers and Screens	121	From measurements conducted at PBRQ.
Excavators	104	Tarkarri Engineering library data CAT 345B Excavator.
FEL	99	From measurements conducted at Nook Quarry on CAT 950K Front End Loader (FEL).
Trucks (pit to ROM)	103* <sup>h</sup>	From measurements conducted at Nook Quarry on CAT articulated mine truck (25 t). <b>NB:</b> X2 Trucks at high engine revs
Trucks (ROM to road)	106* <sup>h</sup>	Tarkarri Engineering library data for a Road Truck. <b>NB:</b> X2 trucks at high engine revs.
Drill	Engine	105
	Drilling	110*
	Rattling	112*
		From measurements conducted at Nook Quarry on Pantera DP1100i.

\* SWL presented has been scaled for time of operation in a 10-minute period.

<sup>h</sup> A point source representing a 2-minute period of engine idle while being loaded is modelled at the beginning of each line source (SWL data for these point sources isn't presented).

Table 3-4: Overall sound power levels and data source information.

1/1-octave band sound power levels spectra (dBA) L <sub>Aeq</sub>											
Source	Frequency (Hz)									Total	
	31.5	63	125	250	500	1k	2k	4k	8k		
Crusher and Screen	74	99	103	107	115	116	114	109	99	<b>121</b>	
Excavator	70	78	91	92	99	98	98	92	84	<b>104</b>	
FEL	57	80	84	88	95	92	92	86	77	<b>99</b>	
Trucks (pit to ROM)	58	78	86	91	95	99	97	92	85	<b>103</b>	
Trucks (ROM to road)	62	81	90	94	98	102	101	96	88	<b>106</b>	
Drill	Engine	56	83	88	84	93	97	100	100	93	<b>105</b>
	Drilling	58	81	90	88	96	102	105	104	100	<b>110</b>
	Rattling	48	66	78	79	93	99	107	108	107	<b>112</b>



Table 3-5: 1/1-octave band sound power level spectra.

### 3.3.2 Atmospheric conditions

In this study the following propagation condition was considered:

- **ISO 9613-2:2024<sup>[2]</sup>**
- **CONCAWE worst case propagation (wcw):** CONCAWE<sup>[3]</sup> models atmospheric attenuation using Pasquill stability indices in combination with vector wind speed and direction to determine appropriate frequency dependent attenuation/amplification. This condition considers all receiver points to be downwind with a Pasquill stability class F and a vector wind speed of 2 m/s. Under these conditions noise contours will typically represent the highest predicted noise levels at any location.

**NB:** A relative humidity of 70 %, air pressure of 1013.3 mbar and temperature of 10 °C was modelled. Ground absorption was modelled at 0.3 for all quarry surfaces.

### 3.3.3 Model scenarios

The following operational scenarios were modelled as day operation covering approx. the next 15 yrs of production through to full extraction:

- **Existing:** Crusher and Screen, FEL and Excavator (loading the crusher) operating at the ROM. Drill and Excavator operating at the pit. Mine trucks operating between the pit and ROM and Road trucks operating on the quarry access road at 25 km /hr.
- **Stage 2:** As above for the Establishment scenario with altered pit topography.
- **Stage 4:** As above for the Establishment scenario with altered pit topography.
- **Stage 5:** As above for the Establishment scenario with altered pit topography.
- **Stage 6:** As above for the Establishment scenario with altered pit topography.

**NB:** Loading and carting of materials outside of the material processing hours at the quarry wasn't considered here. This is an approved activity at the quarry and was assessed in the previous environmental noise assessment of the quarry (See extract from Tarkarri Engineering report 5582\_AC\_R in the Appendix for details) and is unchanged by the intensification in activity.

Figures 3-9 to 3-19 present model plan and wire frame views (topography within the mining lease only) of the each of the modelling scenarios with quarry topography and source locations shown.



Figure 3-9: Model plan view of the **Existing** model scenario.

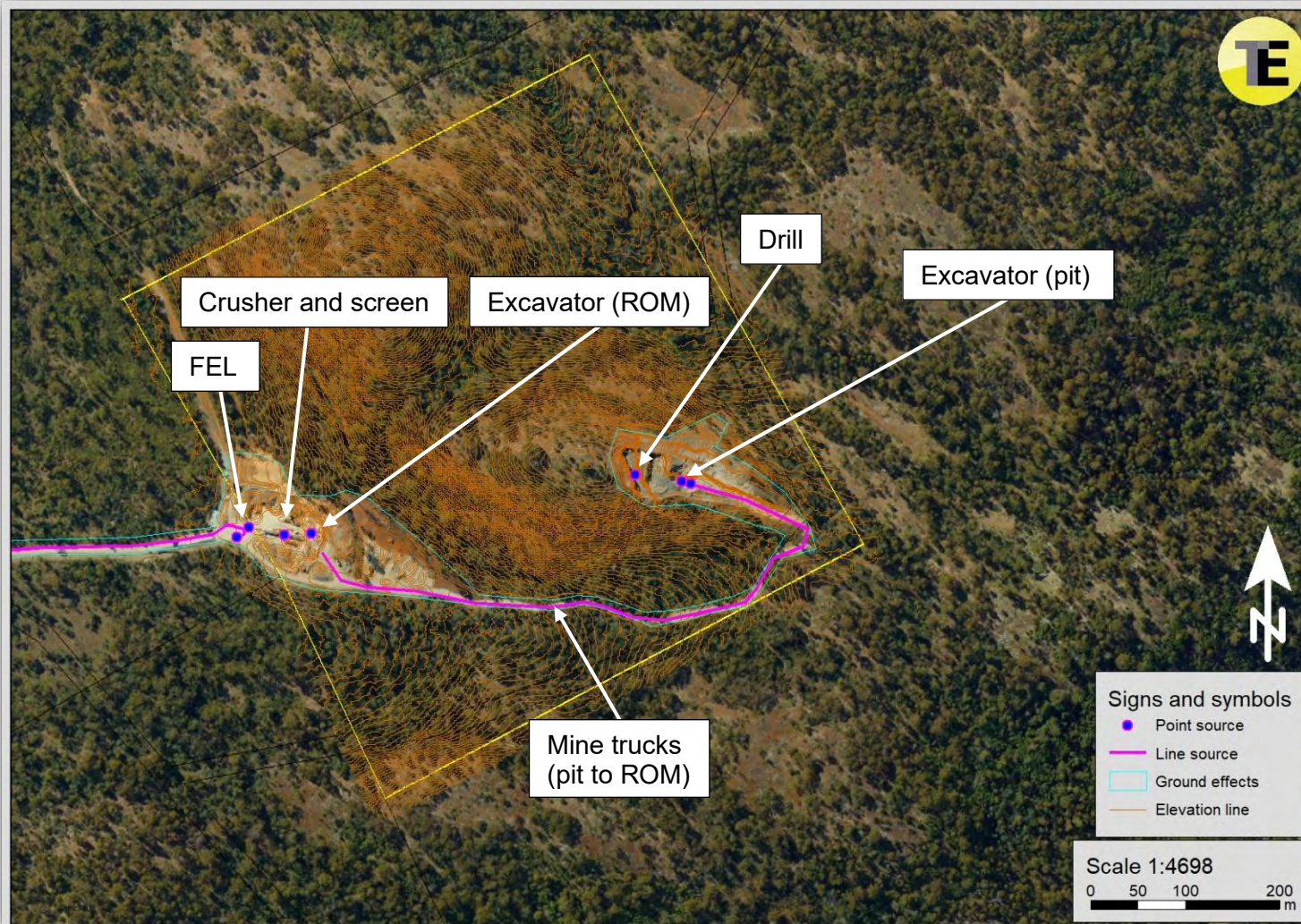


Figure 3-10: Model plan view of the **Existing** model scenario.

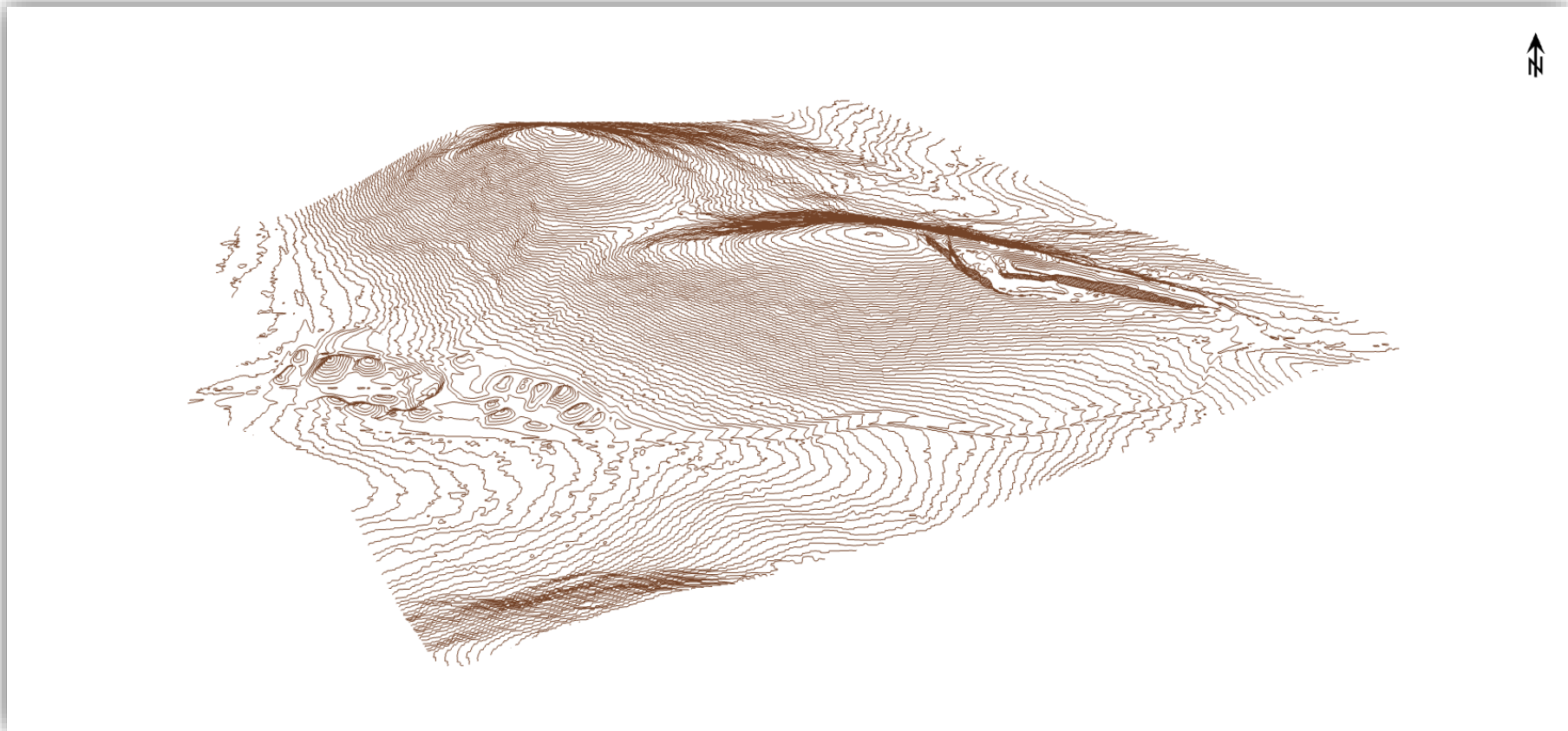


Figure 3-11: Model wire frame view of the **Existing** model scenario, from the south.

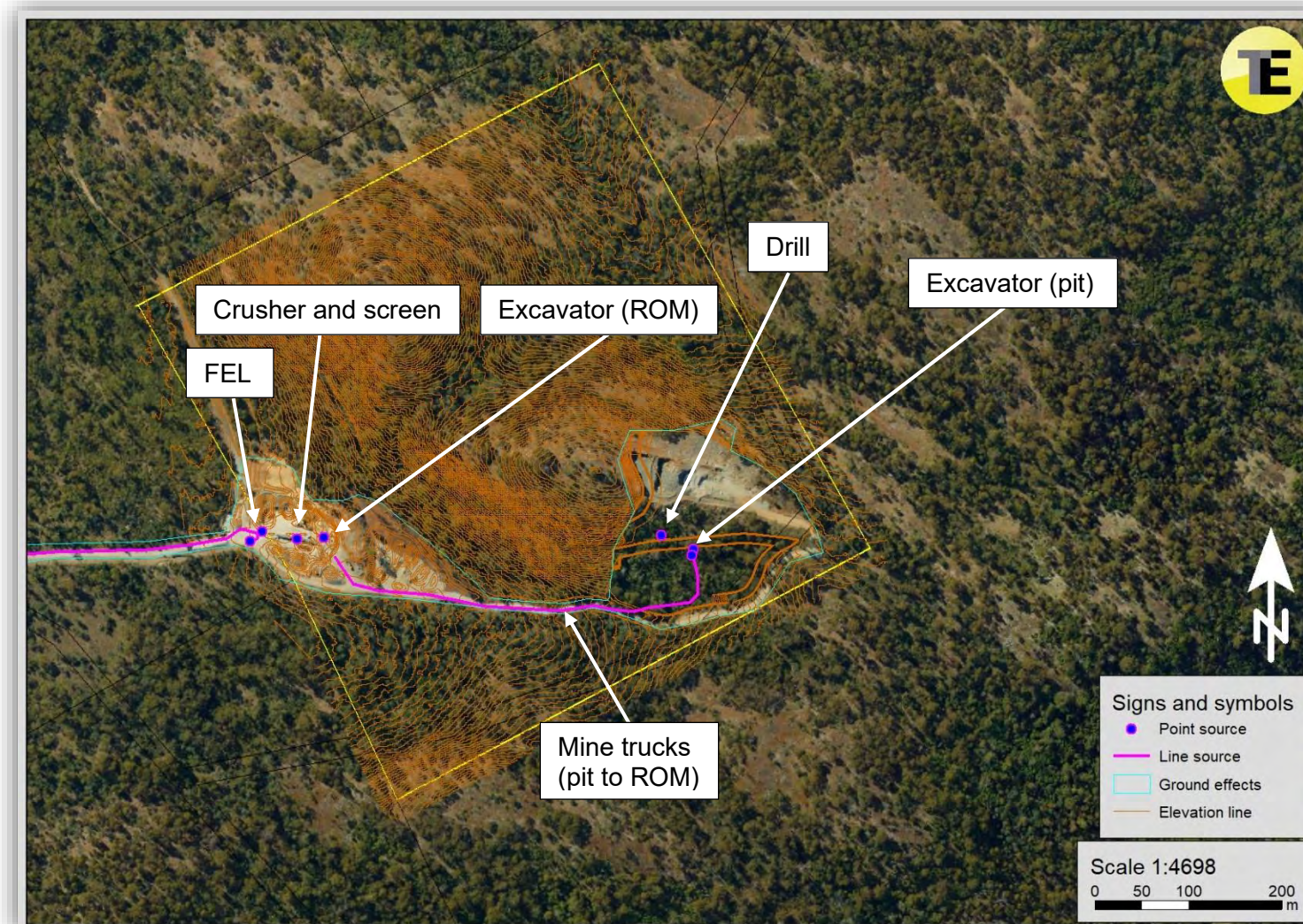


Figure 3-12: Model plan view of the **Stage 2** model scenario.

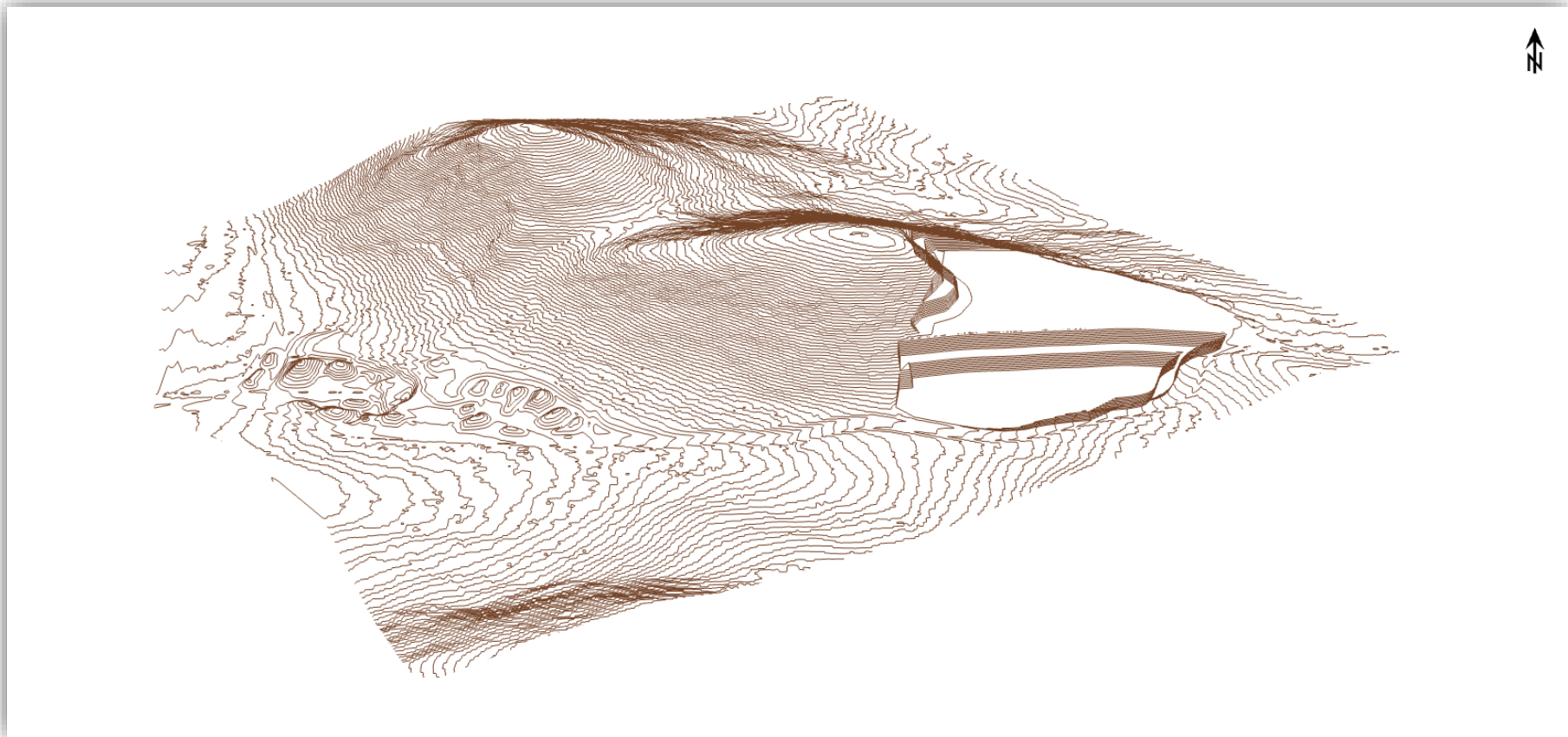
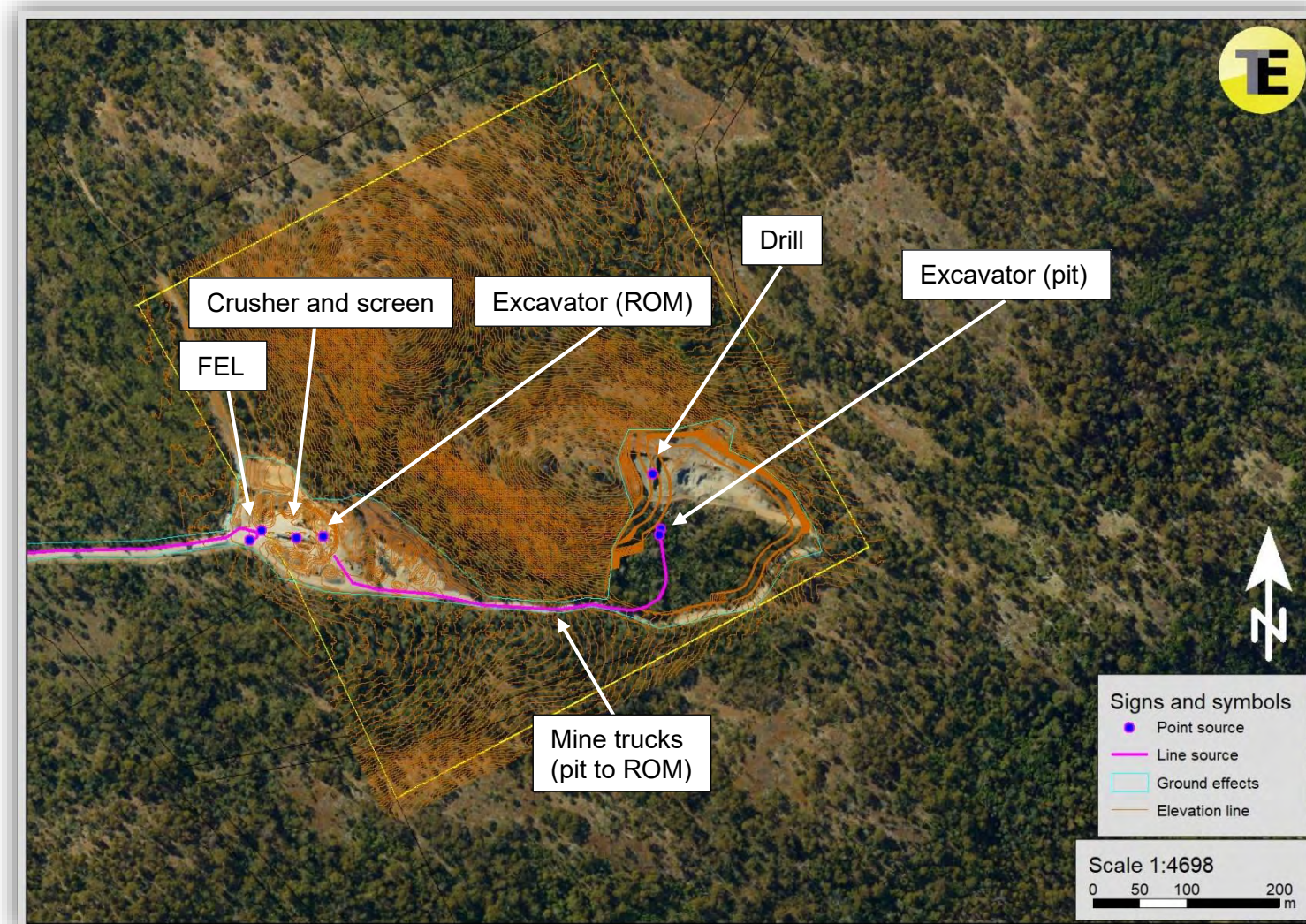


Figure 3-13: Model wire frame view of the **Stage 2** model scenario, from the south.



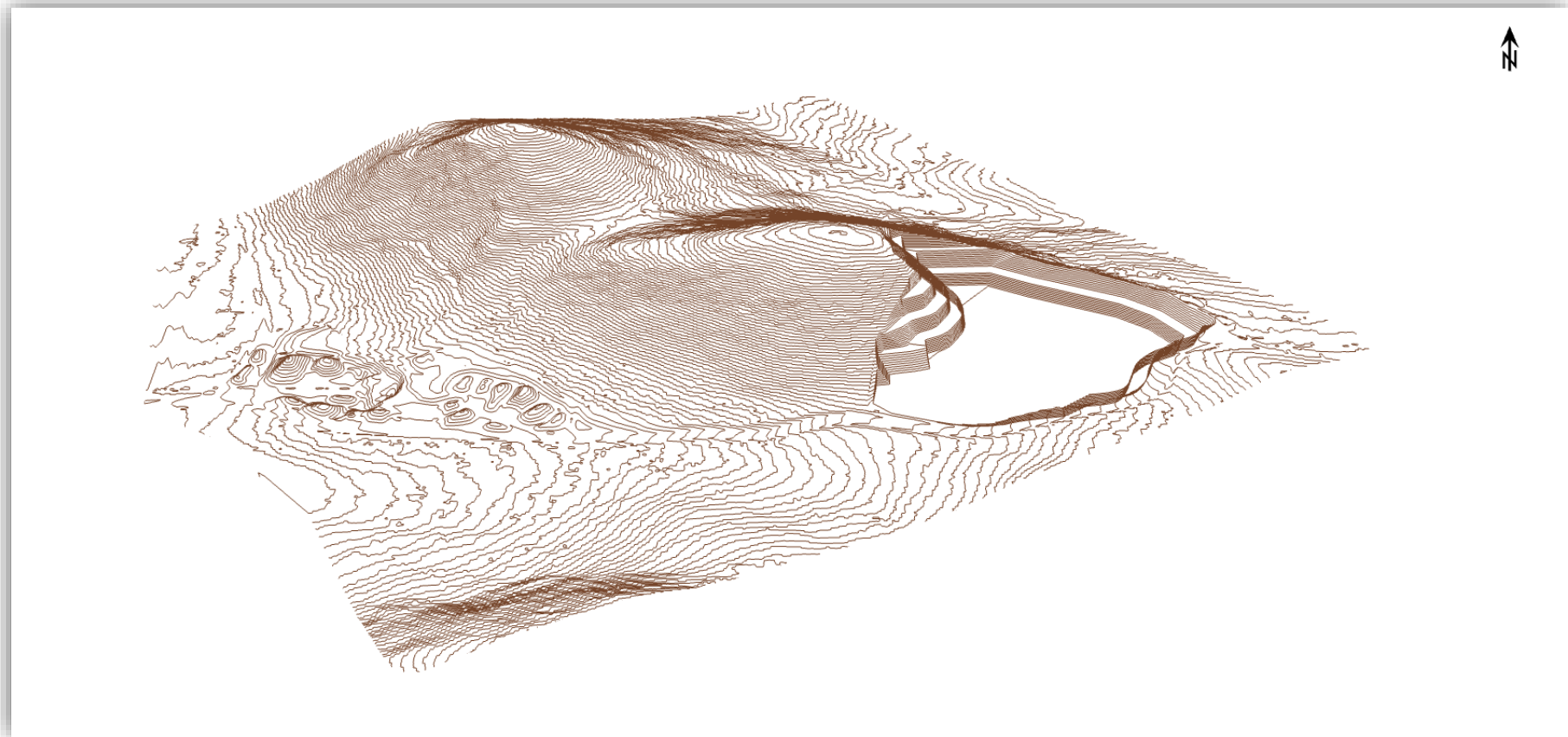


Figure 3-15: Model wire frame view of the **Stage 4** model scenario, from the south.

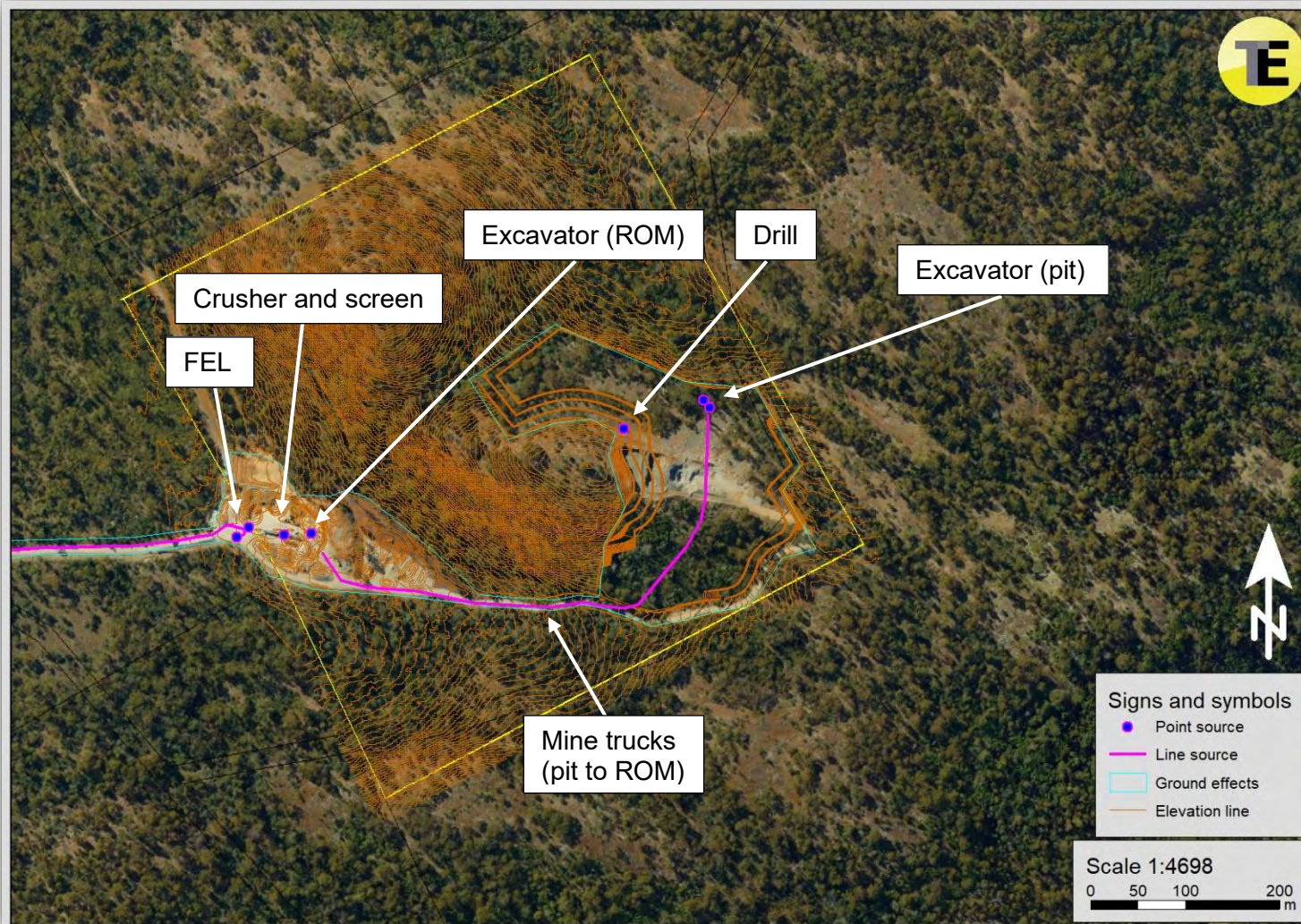


Figure 3-16: Model plan view of the **Stage 5** model scenario.

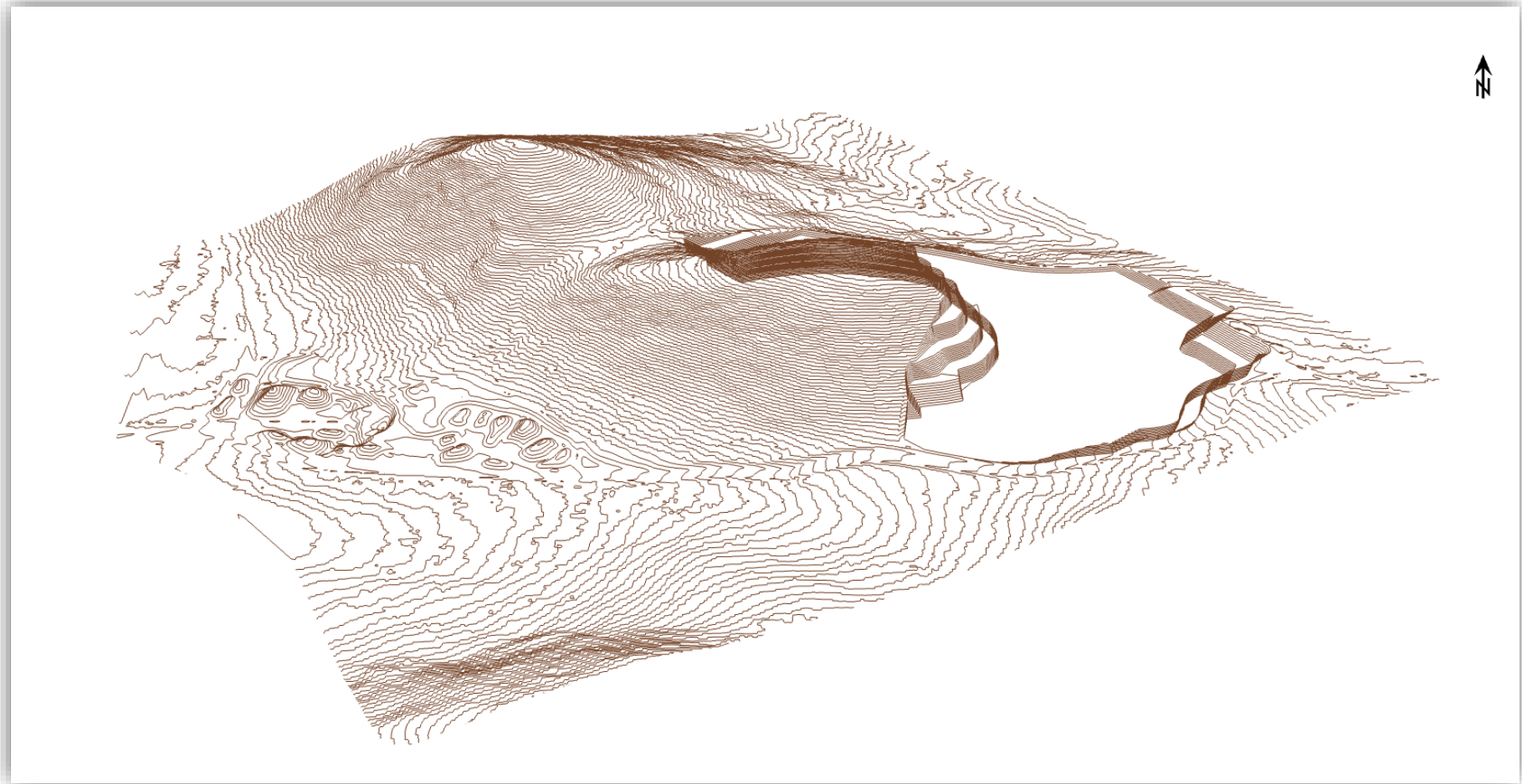


Figure 3-17: Model wire frame view of the **Stage 5** model scenario, from the south.

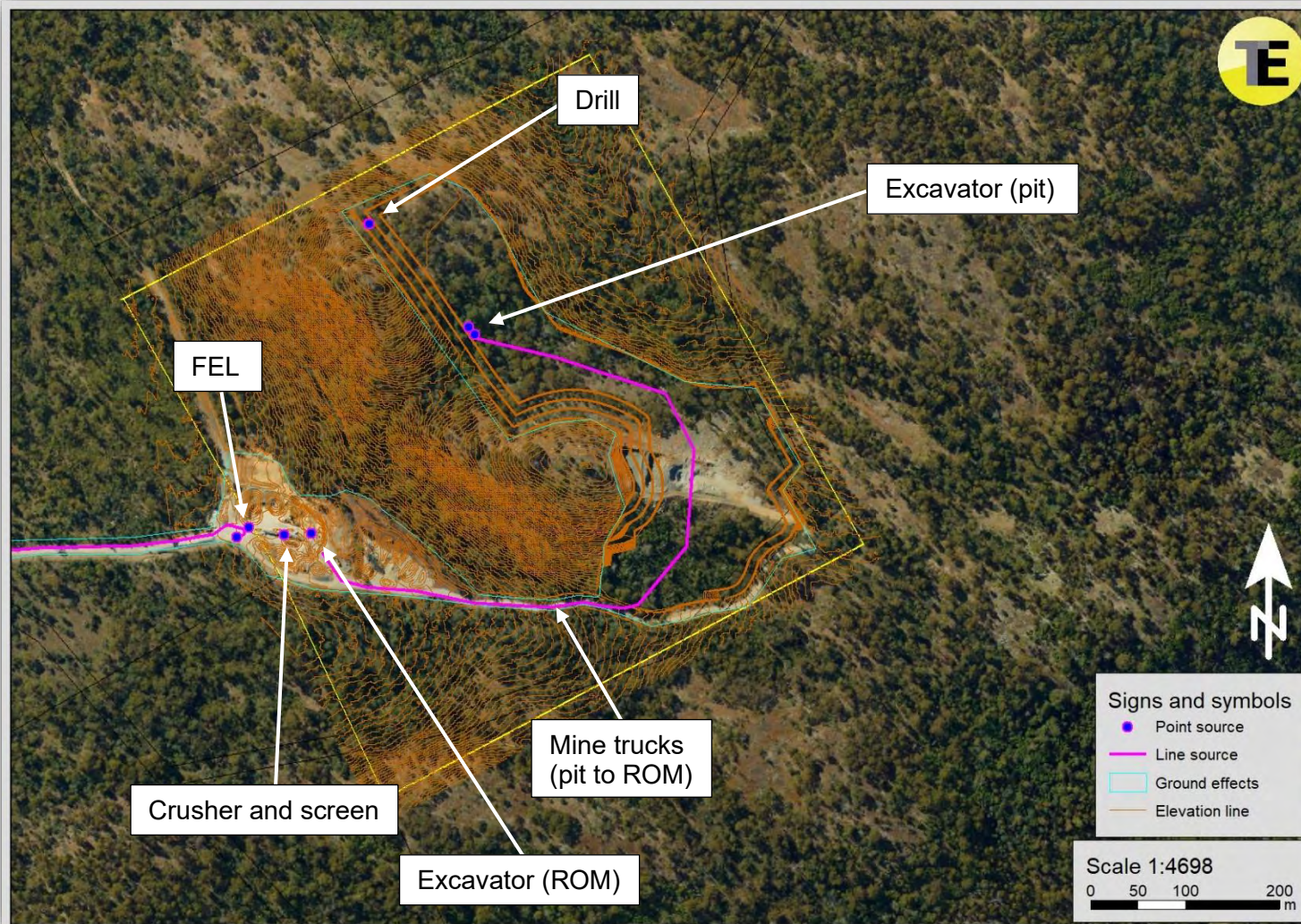


Figure 3-18: Model plan view of the **Stage 6** model scenario.

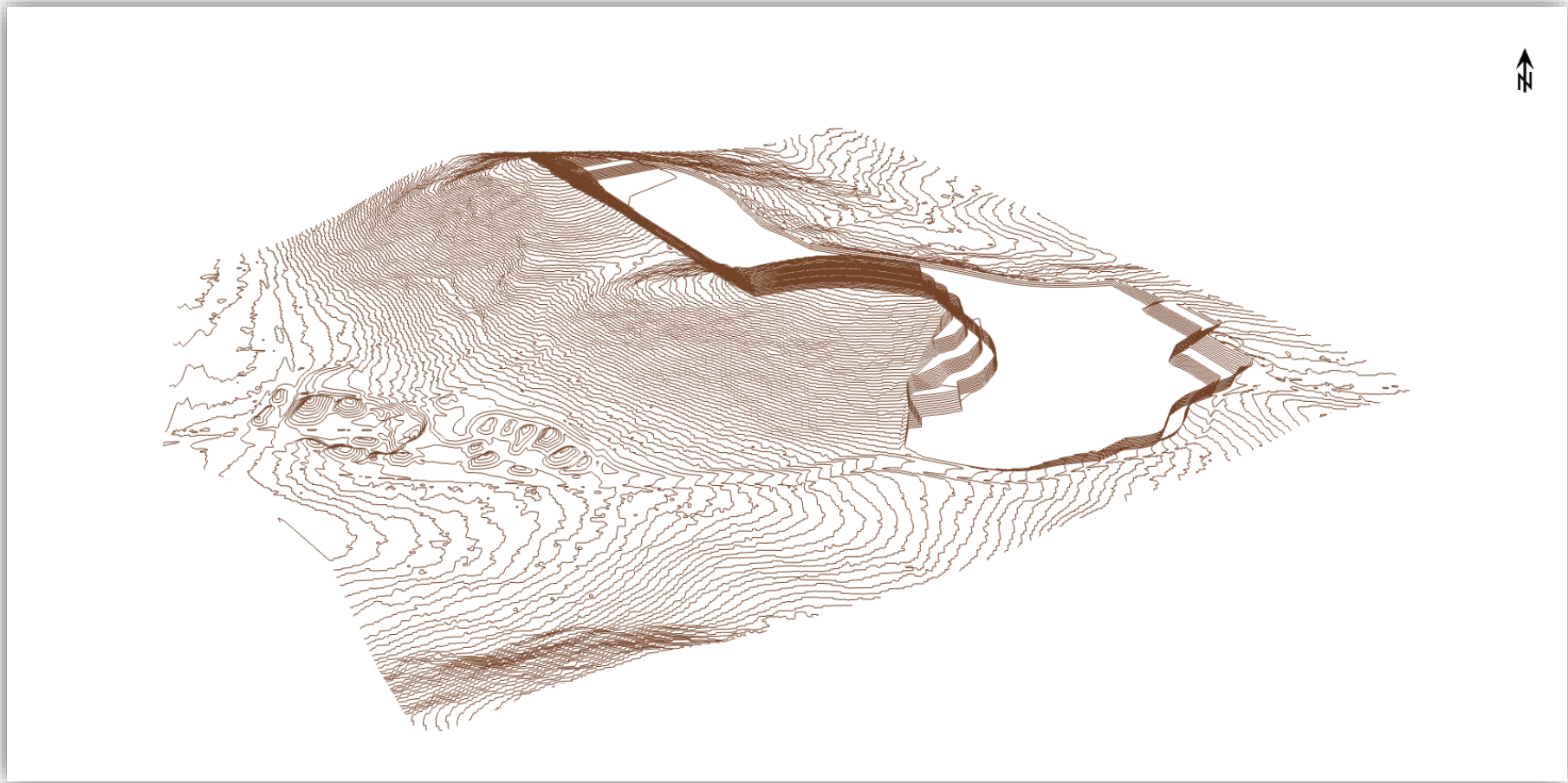


Figure 3-19: Model wire frame view of the **Stage 6** model scenario, from the south.



### 3.3.4 Modelling results and discussion

#### 3.3.4.1 Predicted single point receiver levels

Table 3-6 presents predicted  $L_{Aeq}$  noise emission levels at the thirteen receiver locations for each of the operational model scenarios. Where predicted noise levels exceed the day noise emission criterion outlined in section 3.1 cells are highlighted.

**NB:** Predicted spectra at the receiver locations were assessed for excessive low frequency and tonality in accordance with the procedures in the *Tasmanian Noise Measurement Procedures Manual*. Predicted spectra contain excessive low frequency content (i.e.  $L_{Ceq}$  levels 15 dB above  $L_{Aeq}$  levels) where predicted where  $L_{Aeq}$  levels were at or below 35 dBA and only under the ISO prediction algorithm). Tonal adjustments (based on predicted spectra without consideration of ambient noise source contribution) are provided for reference for the two prediction algorithms (they're not added to the predicted levels presented). Impulsive and modulating noise emissions are not expected from the quarry operations.

Predicted sound pressure levels (dBA)												
Receiver	Existing		Stage 2		Stage 4		Stage 5		Stage 6		Tonal adj (dB)	
	ISO	wcw	ISO	wcw	ISO	wcw	ISO	wcw	ISO	wcw	ISO	wcw
R1	39	42	39	42	39	42	39	42	39	42	1.3	0.9
R2	31	26	31	17	31	18	31	18	30	17	1.5	0.5
R3	27	20	25	20	24	20	25	20	26	20	1.4	0.8
R4	20	19	20	17	20	19	20	19	21	17	1.2	0.7
R5	31	28	30	26	31	26	31	26	31	28	1.5	0.7
R6	36	36	36	36	36	36	36	36	36	36	1.5	0.8
R7	39	37	39	37	39	37	39	37	39	37	1.2	0.7
R8	35	34	36	34	35	34	35	34	35	34	3.6	0.7
R9	42	36	42	36	42	36	42	36	42	36	0.9	0.6
R10	35	31	35	32	35	31	35	31	35	31	1.6	0.8
R11	39	29	39	30	39	29	39	29	39	29	1.3	0.6
R12	21	14	23	14	22	14	22	14	21	14	1.7	0.8
R13	42	38	42	38	42	38	42	38	42	38	0.7	0.7

Exceeds day noise emission criterion limit.

Table 3-6: Predicted noise emission levels.

From the above:

- The predicted noise emission levels presented above are all below the day criterion limit of 45 dBA under both prediction algorithms.
- The highest predicted noise levels are at receiver R1 where the predicted noise level is controlled by truck traffic on the quarry access road and receivers R9 and R13 where the noise level is controlled by crushing and screening activity.
- At other receiver locations predicted noise levels don't exceed 39 dBA, 6 dBA below the day criterion (crushing and screening activity is the highest contributing noise source at all remaining receiver locations).



### 3.3.4.2 Predicted noise emission contours

To assist in the visualisation of noise propagation from the PBRQ site to the surrounding environment predicted noise contours (at 1.5 m above ground height) for the following model scenarios are presented:

- **Existing** operations under ISO
- **Existing** operations under CONCAWE worst case weather
- **Stage 2** operations under ISO
- **Stage 2** operations under CONCAWE worst case weather
- **Stage 4** operations under ISO
- **Stage 4** operations under CONCAWE worst case weather
- **Stage 5** operations under ISO
- **Stage 5** operations under CONCAWE worst case weather
- **Stage 6** operations under ISO
- **Stage 6** operations under CONCAWE worst case weather

**NB:** The predicted noise contours don't include adjustments for tonality. The relevant criterion contour level is highlighted in turquoise.

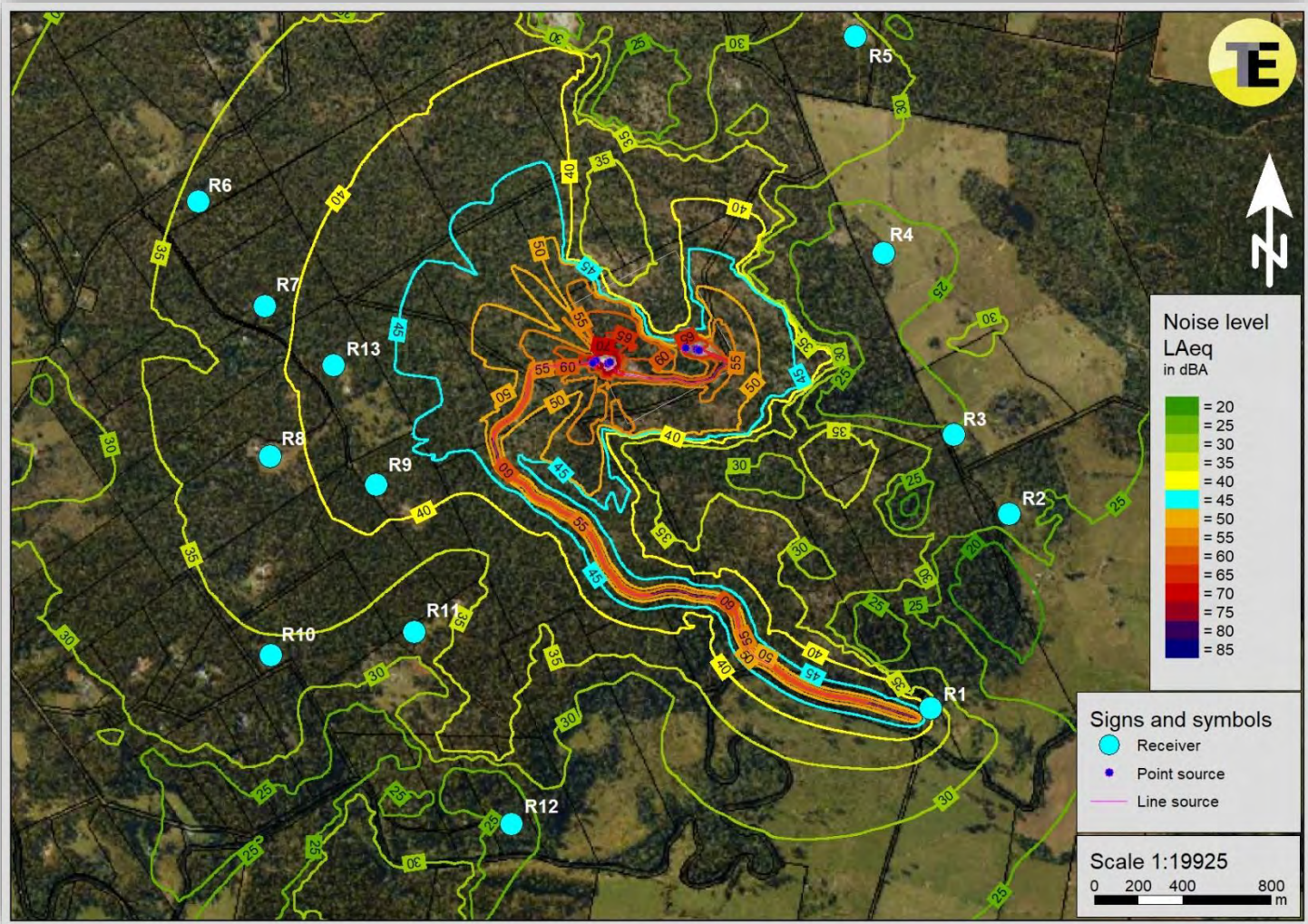


Figure 3-20: Predicted noise emission contours, **Existing** scenario, ISO.

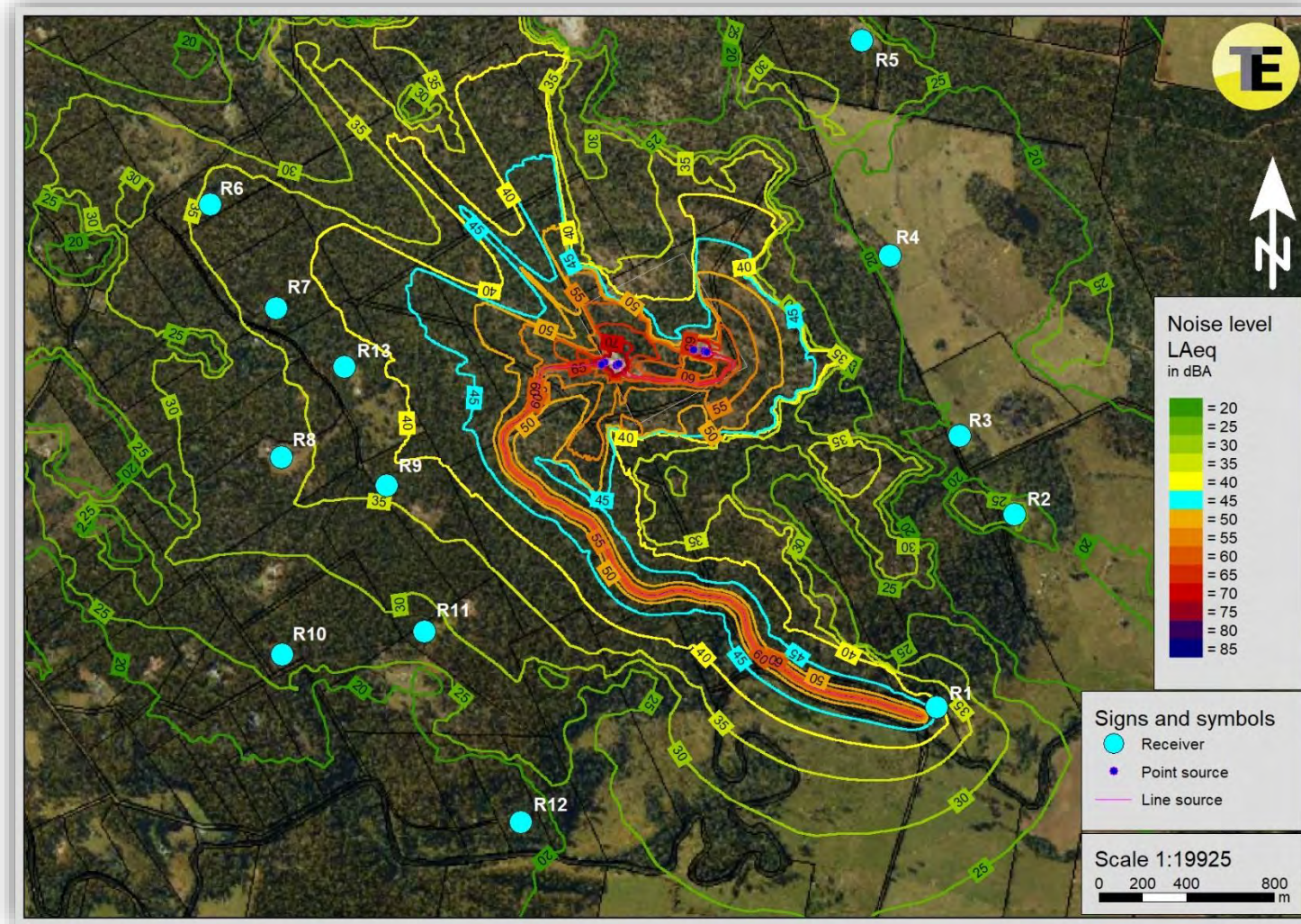


Figure 3-21: Predicted noise emission contours, **Existing** scenario, CONCAWE wcw.

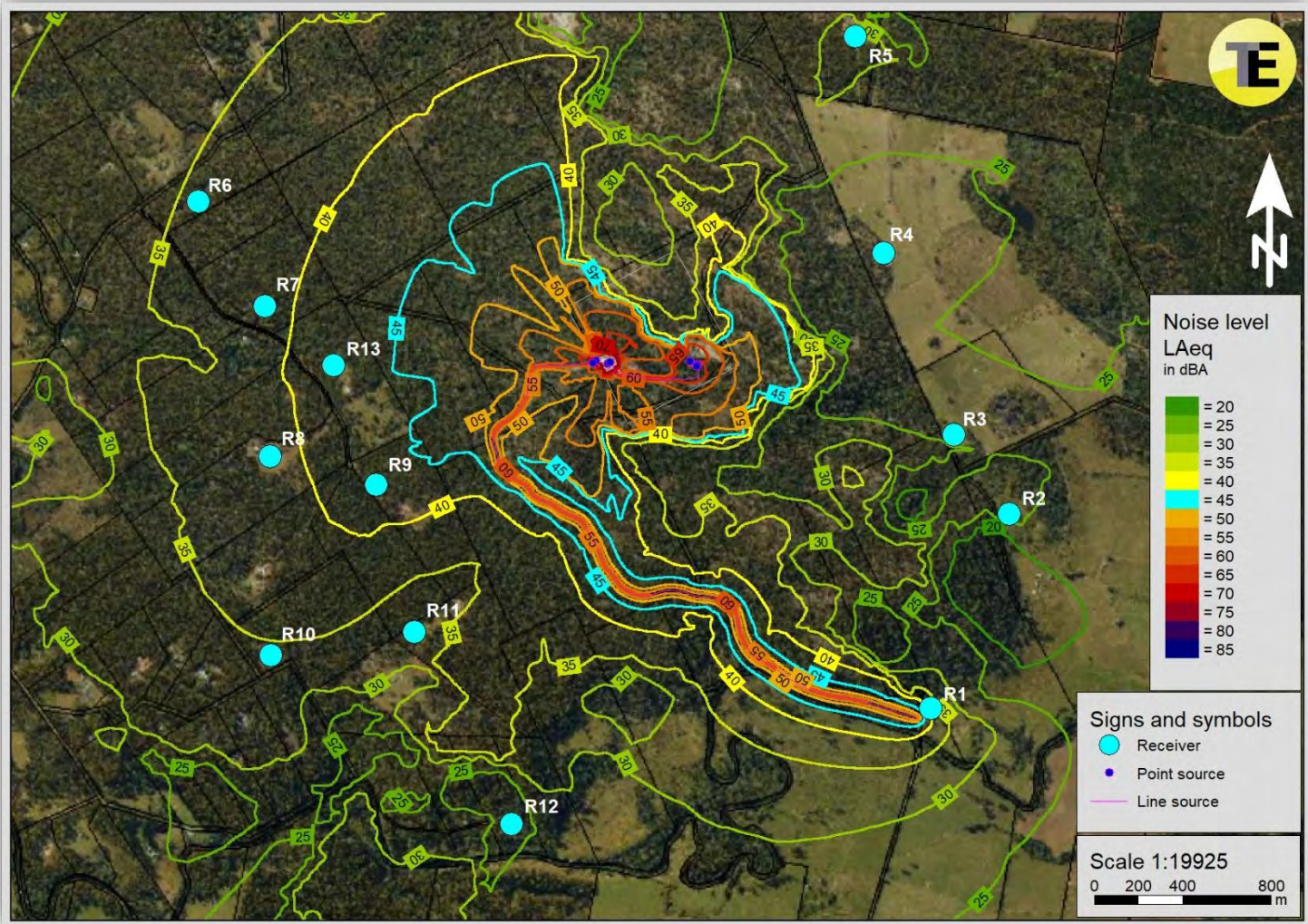


Figure 3-22: Predicted noise emission contours, **Stage 2** scenario, ISO.

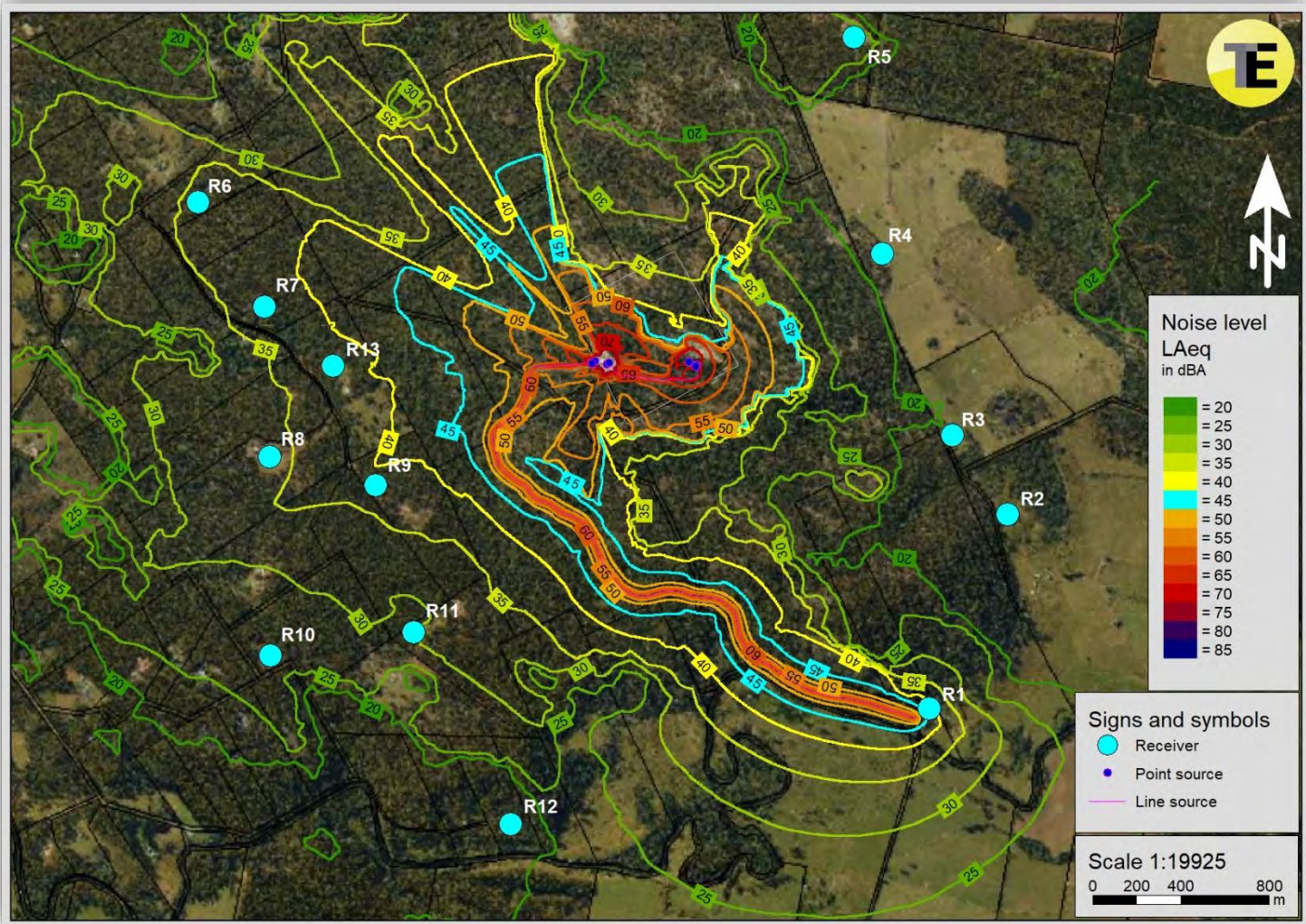


Figure 3-23: Predicted noise emission contours, **Stage 2** scenario, CONCAWE wcv.

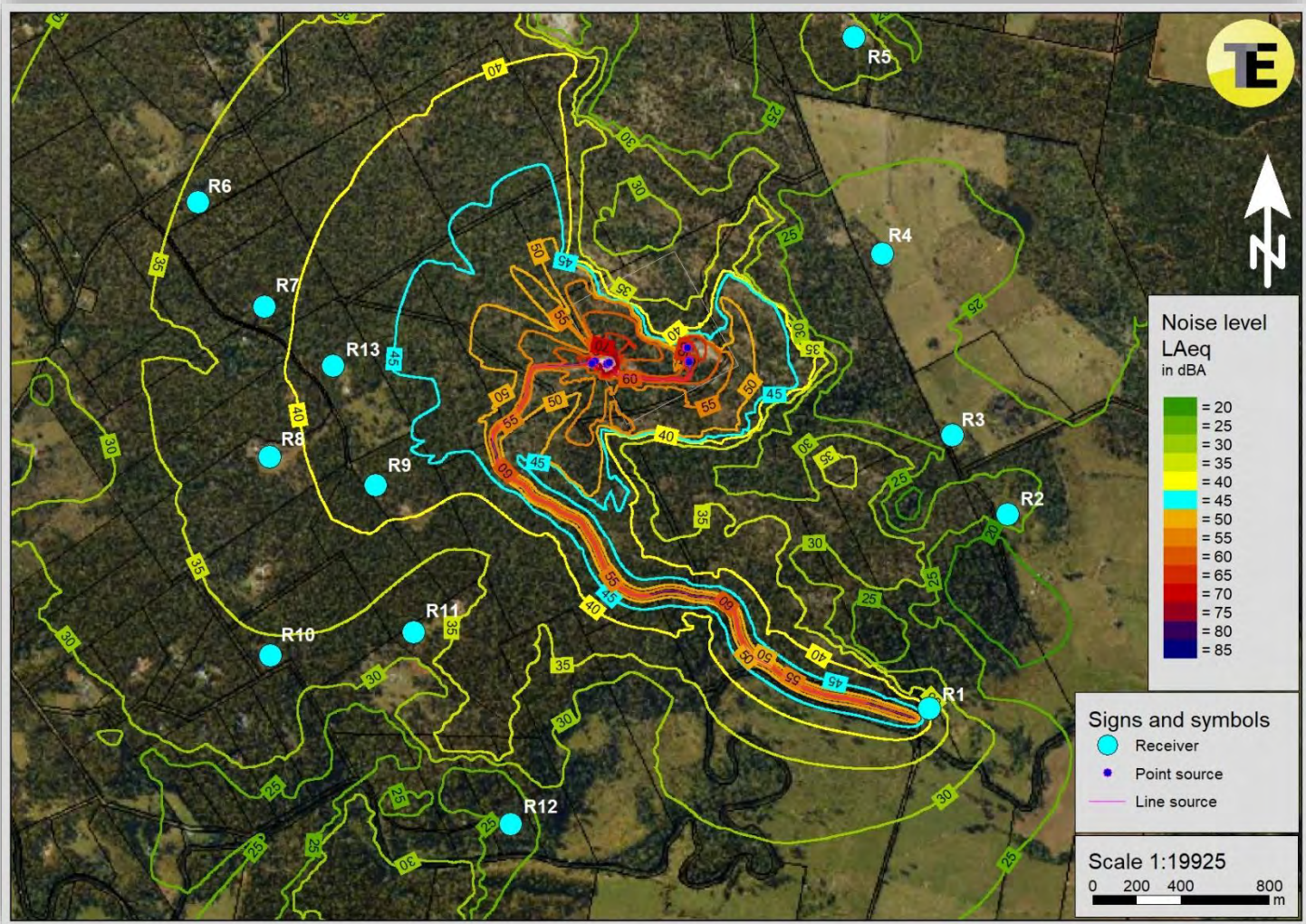


Figure 3-24: Predicted noise emission contours, **Stage 4** scenario, ISO.

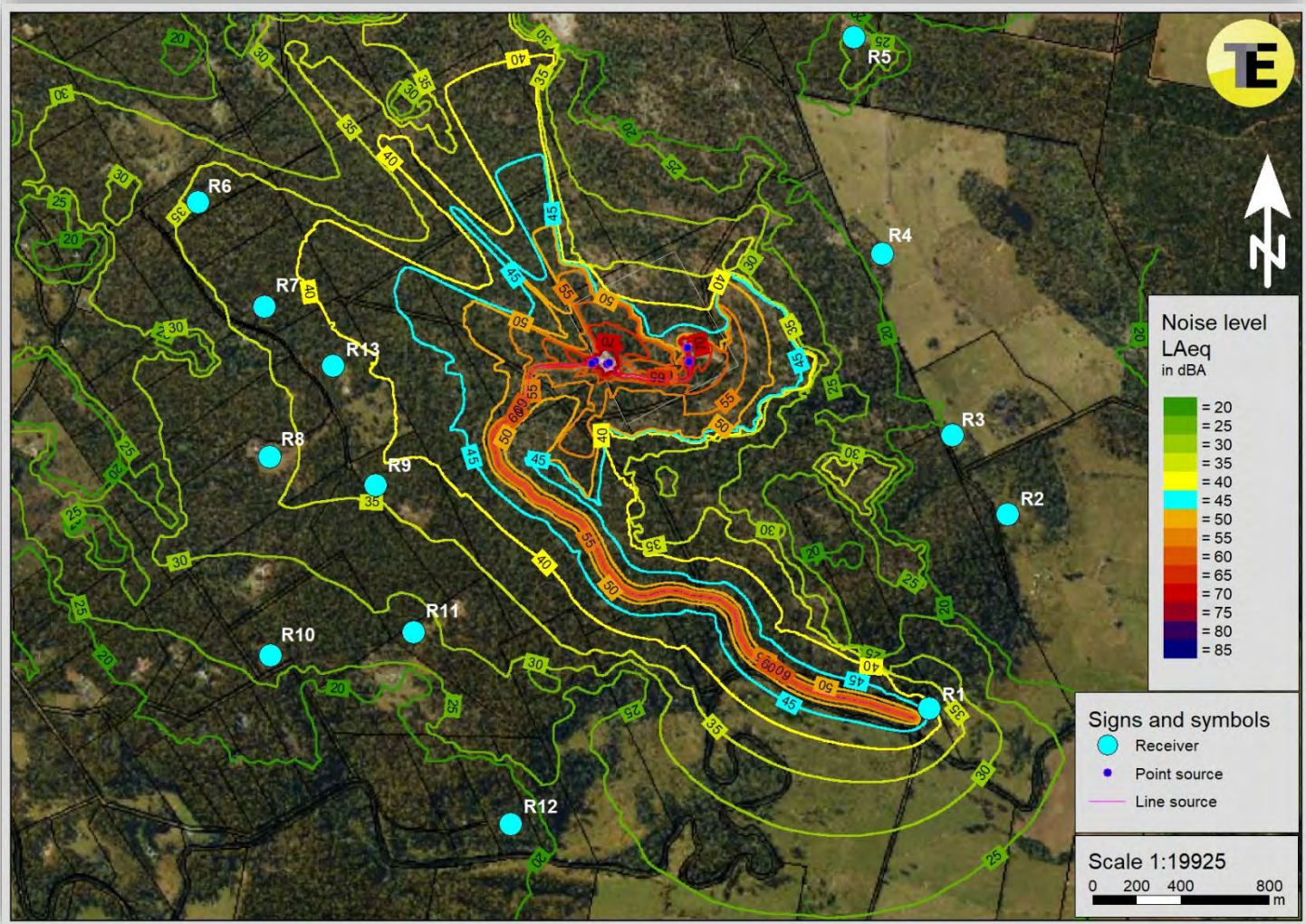


Figure 3-25: Predicted noise emission contours, **Stage 4** scenario, CONCAWE wcv.

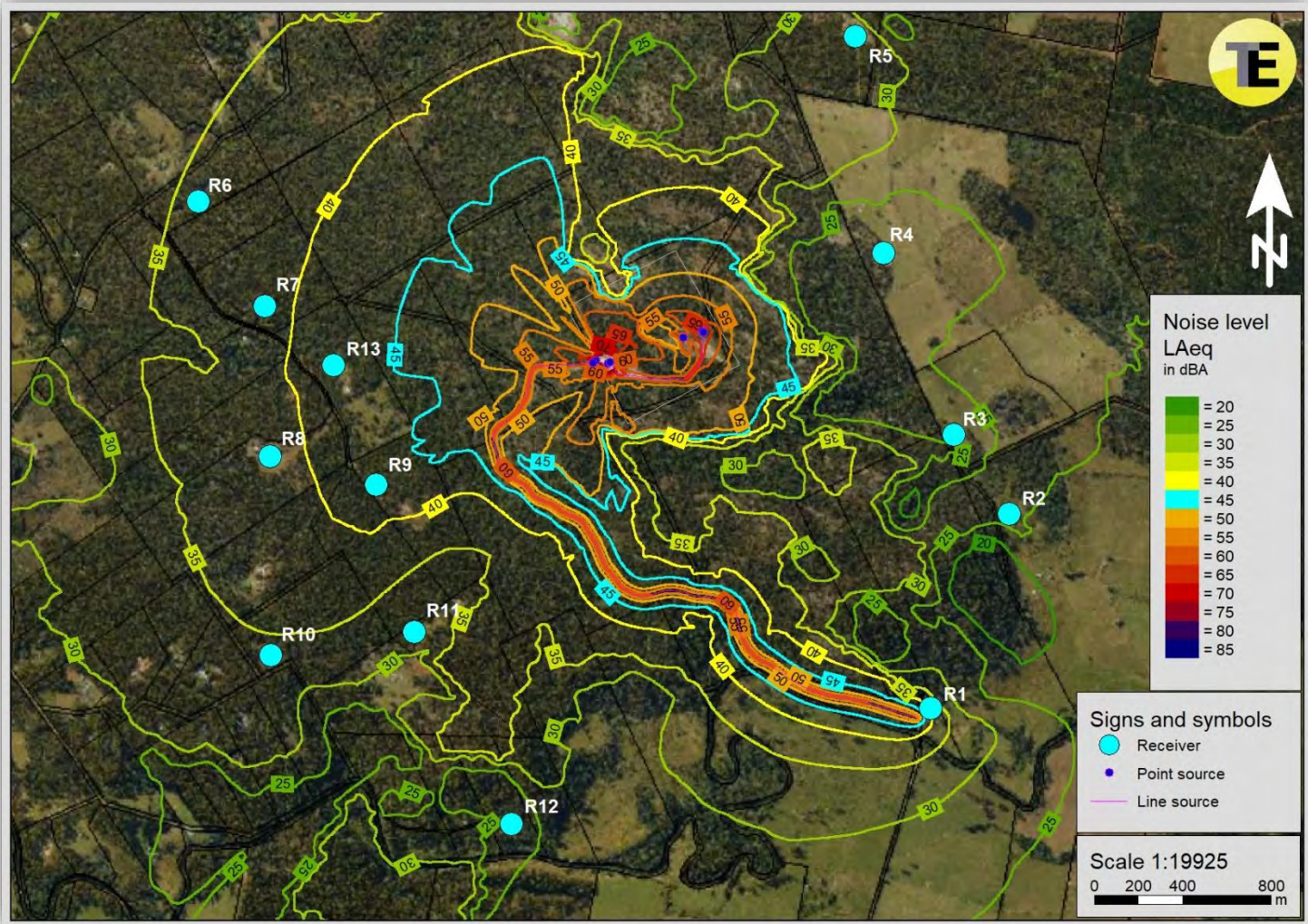


Figure 3-26: Predicted noise emission contours, **Stage 5** scenario, ISO.

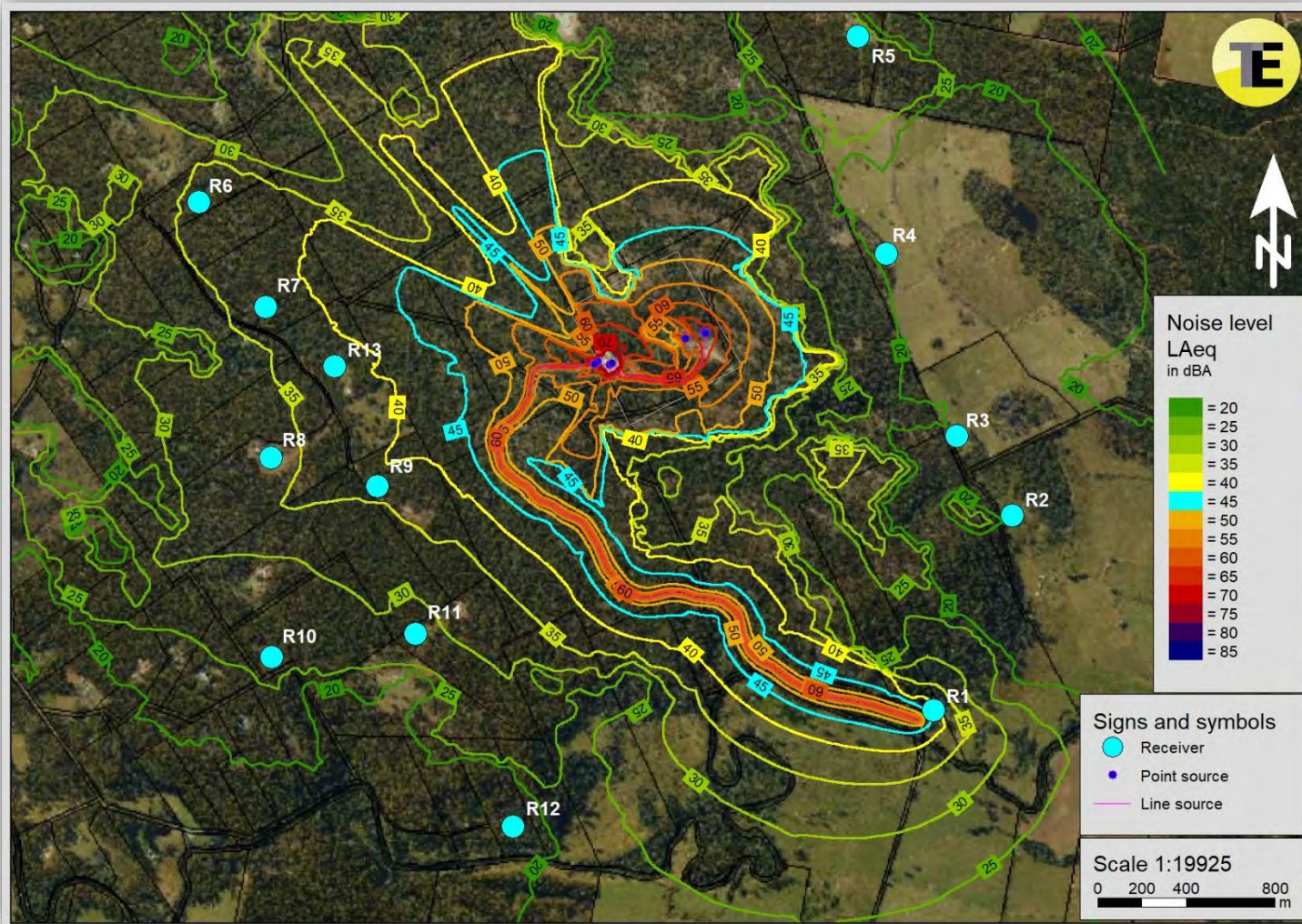


Figure 3-27: Predicted noise emission contours, **Stage 5** scenario, CONCAWE wcv.

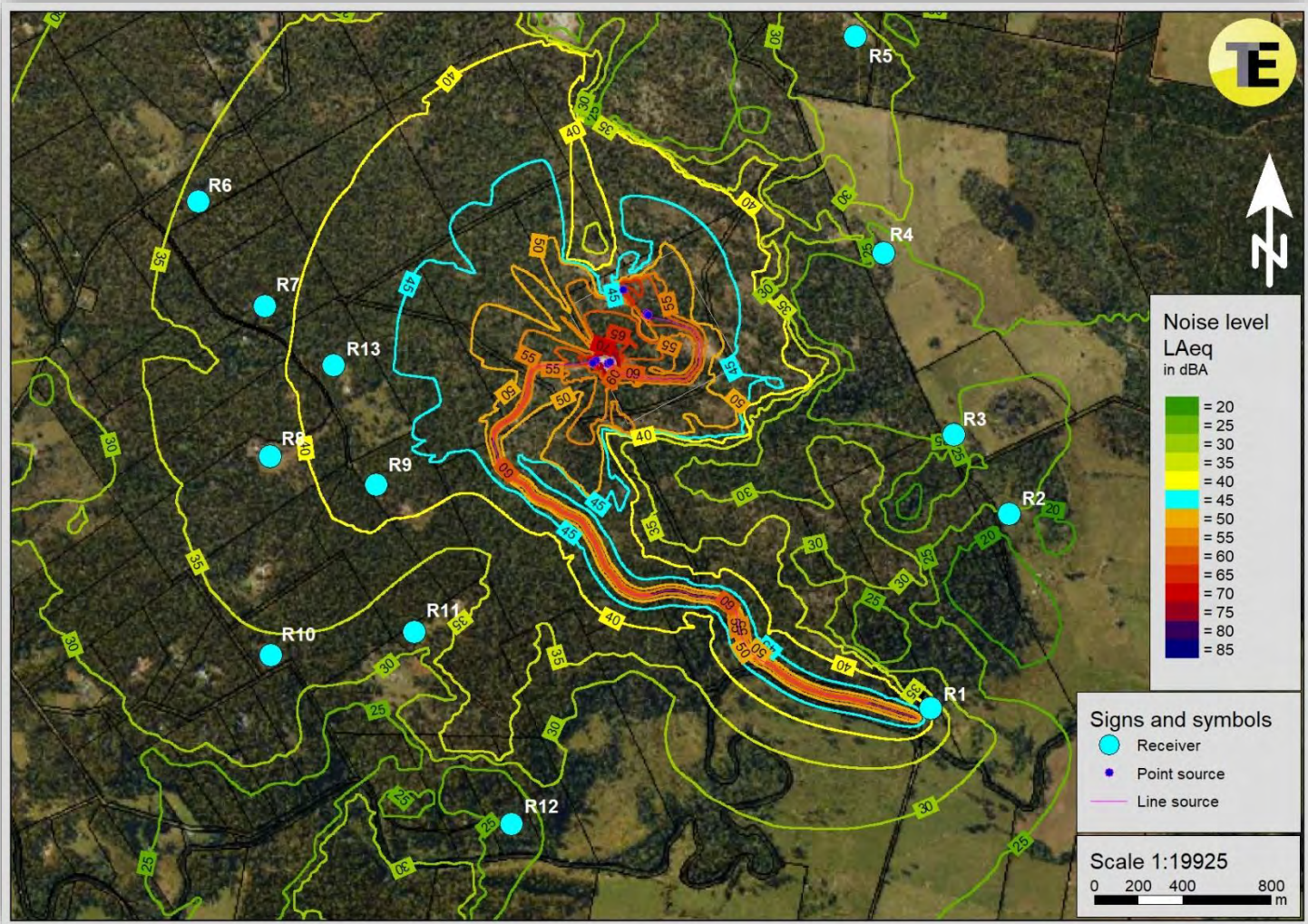


Figure 3-28: Predicted noise emission contours, **Stage 6** scenario, ISO.

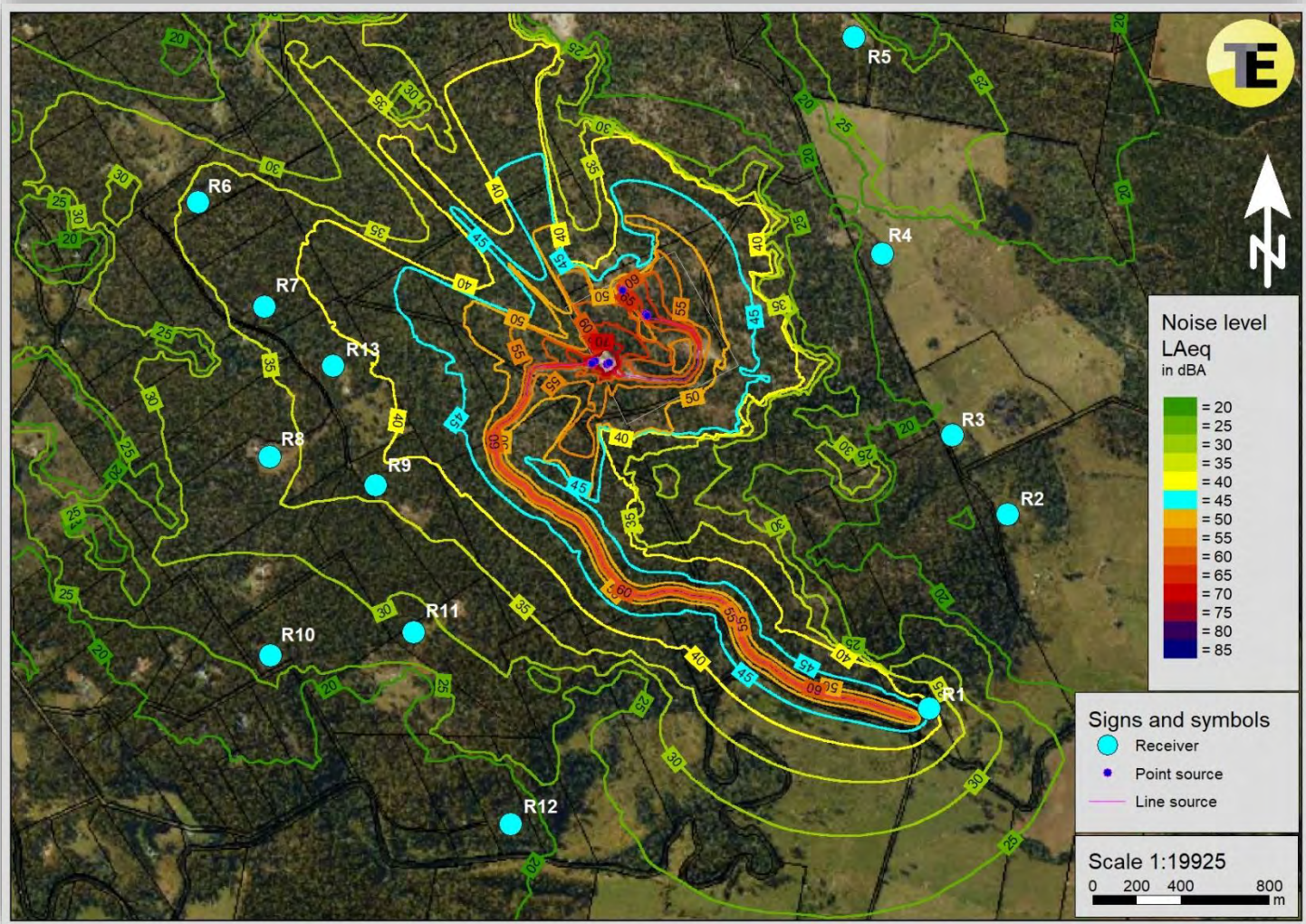


Figure 3-29: Predicted noise emission contours, **Stage 6** scenario, CONCAWE wcv.



### 3.4 Discussion and conclusions

Measured noise levels at locations surrounding the quarry demonstrate existing operations are compliant with the PBRQ's PCE conditions for noise. Quarry operations weren't audible at locations to the east (M1 and M2) with the exception of at M1 where trucks arriving or departing from the quarry were audible at times. To the west at position M3 truck movements on the entry/exit road were audible and crushing and screening was faintly audible from the processing area, however, the noise environment was controlled by other noise sources including leak rustle from wind movement through nearby foliage and distant Bass Hwy traffic.

The predicted noise emission results demonstrate that noise emission levels from the PBRQ are compliant with the sites existing noise emission conditions. The predicted levels are generally more than 5 dB below the criterion limit of 45 dBA. The highest predicted levels are at receiver R1; approx. 80 m from the quarry access road entry and noise levels from operations at this location are controlled by truck traffic on the access road to the quarry; and R9 and R13 which are the closest receivers to the west of the processing area. Topography within the mining lease and surrounds and buffer distances provide the attenuation required to maintain compliance with noise criteria.

**NB:** It should be noted (as previously stated in Tarkarri Engineering report 5582\_AC\_R) that receiver R1 is owned and occupied by the land owner on which the Porters Bridge Road Quarry is located. A Compensation Agreement between the owner (and resident of R1) and Walters Contracting giving permission for Walters Contract to extract materials from the quarry land is in place. As such, it is not expected that the resident of R1 would object to management of out of hours works as detailed above.

Intrusive characteristics from the PBRQ are not expected to be significant with excessive low frequency noise only predicted were A-weighted predicted levels are very low and adjustments for tonality (which don't include the influence of ambient noise) generally around 1 dB.

The intensification of operations isn't expected to add additional acoustic energy to the environment with operations remaining unchanged and the progression of the extraction pit remaining well shielded such that noise levels at sensitive locations are not raised over time.

The *Environment Protection Policy (Noise) 2009* (Noise EPP) (made under section 96K of the *Environmental Management and Pollution Control Act 1994*) is a framework for noise management in Tasmania through the setting out of objectives and principles for noise control with human health as a value to be protected.

The environmental values identified in the Noise EPP are the qualities of the acoustic environment that are conducive to:

- the wellbeing of the community or a part of the community, including its social and economic amenity; or
- the wellbeing of an individual, including the individual's –
  - health; and
  - opportunity to work and study and to have sleep, relaxation and conversation without unreasonable interference from noise.

Under the intensification in activity proposed for the PBRQ the environmental values of the surrounding noise sensitive residential locations are well protected.



## 4 Ground vibration and air blast overpressure

Ground vibration and air blast overpressure predictions are assessed here against conditions applicable under the PBRQ’s existing Permit Conditions - Environmental (PCE) No. 10885. The relevant section from the PCE is provided below (this is in accordance with the requirements of section 7 of the *Quarry Code of Practice* in relation to blasting):

### B2 Blasting - noise and vibration limits

- 1 Blasting on The Land must be carried out in accordance with blasting best practice environmental management (BP EM) principles, and must be carried out such that, when measured at the curtilage of any residence (or other noise sensitive premises) in other occupation or ownership, airblast overpressure and ground vibration comply with the following:
  - 1.1 for 95% of blasts, airblast overpressure must not exceed 115dB (Lin Peak);
  - 1.2 airblast overpressure must not exceed 120dB (Lin Peak);
  - 1.3 for 95% of blasts ground vibration must not exceed 5mm/sec peak particle velocity; and
  - 1.4 ground vibration must not exceed 10mm/sec peak particle velocity.
- 2 All measurements of airblast overpressure and peak particle velocity must be carried out in accordance with the methods set down in *Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration*, Australian and New Zealand Environment Council, September 1990.

Prediction of ground vibration and air blast overpressure was conducted using scaled regression equations developed by the *Office of Surface Mining Reclamation and Enforcement*<sup>[4]</sup> (OSMRE), a bureau of the United States Department of the Interior.

Predictions are made to residence up to approx. 2 km from the quarry (receivers R1 – R12 as shown in Figure 2-1) with the distances to receiver locations used the minimum distances from the boundary of the mining lease. A maximum charge mass/delay of **162 kg** is assumed based on records of recent blasting at the quarry.

Predicted ground vibration and air blast overpressure contours are provided for a blast located at MGA coords. 477246, 5407026 (GDA94). This location is the closest position within the quarry extent to any residential premises (specifically receiver R4).

### 4.1 Ground vibration

Prediction of ground vibration was conducted using the following regression equation from OSM with a square root scaled distance:

$$PPV = k \left( \frac{\sqrt{m}}{D} \right)^a$$

PPV = peak particle velocity (in/s)

k = constant

m = charge mass / delay (lb)

D = distance to receiver (ft)

a = exponent

The constant (k) and exponent (a) used were developed by OSMRE from quarry production blast data are as follows:-

**Average:** k = 52, a = 1.38

**Upper bound:** k = 138, a = 1.38



The equation above and the constants and exponent are for imperial data and as such all relevant data was first converted to imperial before PPV predictions were made. The subsequent answers were then converted back to metric and are presented in Table 4-1 below.

Predicted ground vibration (mm/s) PPV for 162 kg charge mass/delay			
Receiver	Regression constant	Min distance to receiver (km)	Predicted PPV
R1	Average	1.78	0.5
	Upper bound		1.3
R2	Average	1.37	0.7
	Upper bound		1.8
R3	Average	1.04	1.0
	Upper bound		2.7
R4	Average	0.82	1.4
	Upper bound		3.7
R5	Average	1.25	0.8
	Upper bound		2.1
R6	Average	1.73	0.5
	Upper bound		1.3
R7	Average	1.36	0.7
	Upper bound		1.9
R8	Average	1.55	0.6
	Upper bound		1.6
R9	Average	1.15	0.9
	Upper bound		2.3
R10	Average	1.93	0.4
	Upper bound		1.1
R11	Average	1.35	0.7
	Upper bound		1.9
R12	Average	1.88	0.4
	Upper bound		1.2

exceeds 5 mm/s.

Table 4-1: Predicted ground vibration.

From the above:

- The predicted ground vibration levels from the ‘average’ OSMRE regression are well below the 5 mm/s limit and are also below 5 mm/s under the ‘upper bound’ OSMRE regression.
- The predicted ground vibration levels from the ‘average’ OSMRE regression are below the regulatory goal level of 2 mm/s and only exceed at receiver R4 under the ‘upper bound’ OSMRE regression by 0.7 mm/s.

Figures 4-1 and 4-2 present predicted ground vibration contours for the two regression constants

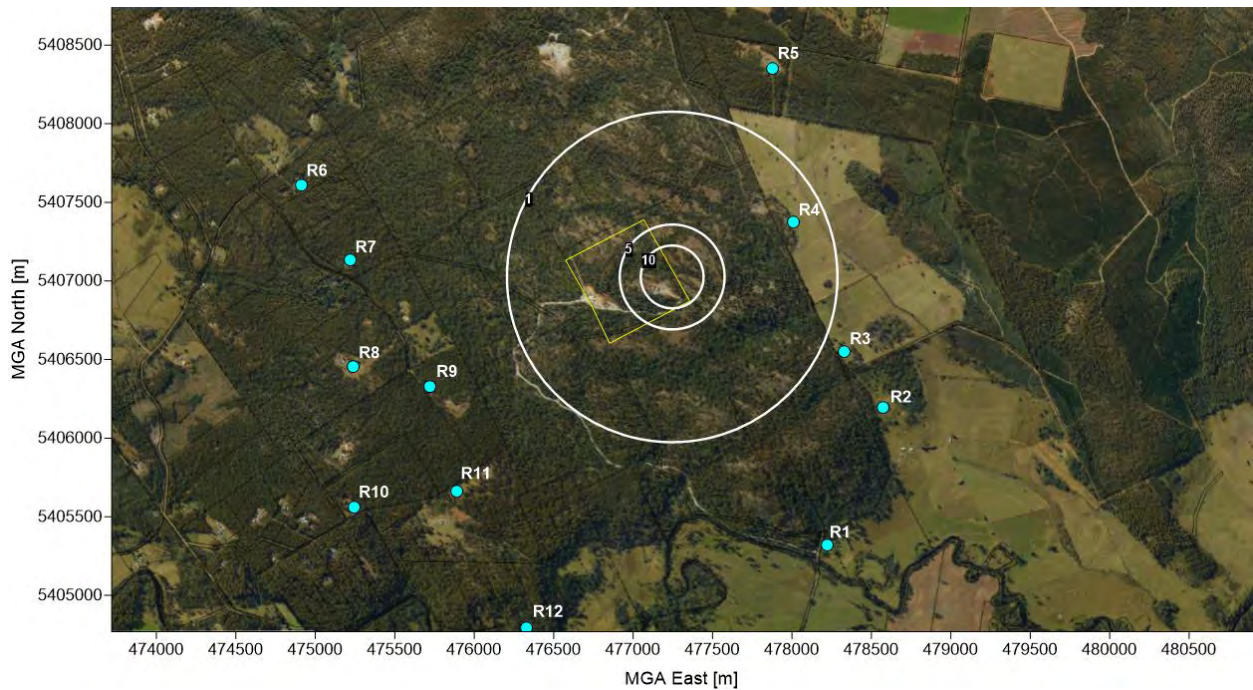


Figure 4-1: Predicted ground vibration contours, average regression constant.

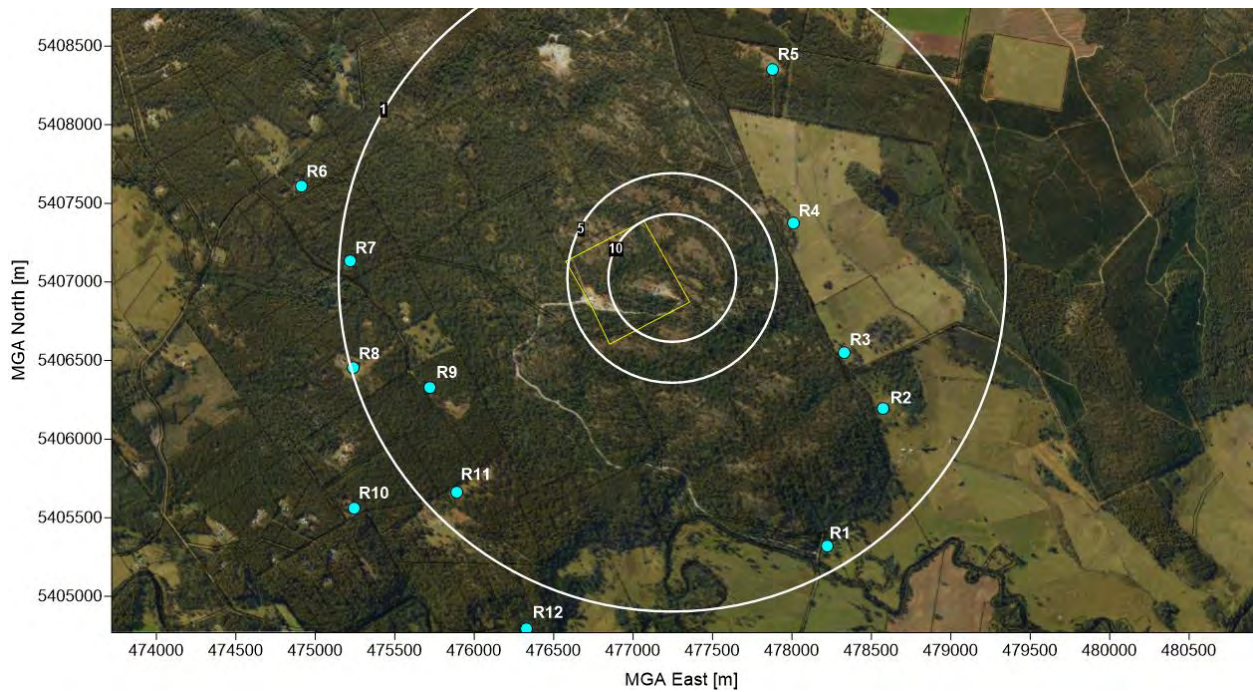


Figure 4-2: Predicted ground vibration contours, upper bound regression constant.



## 4.2 Air blast overpressure

Air blast overpressure prediction was conducted using the following regression equation from OSM with a cube root scaled distance:

$$PSI = k \left( \frac{\sqrt[3]{m}}{D} \right)^a$$

PSI = pounds per square inch

k = constant

m = charge mass / delay (lb)

D = distance to receiver (ft)

a = exponent

Subsequent predictions of PSI are converted to dBL via the following equation:-

$$dBL = 20 \log_{10} \left( \frac{PSI}{2.9 \times 10^{-9}} \right)$$

These equations are for imperial input data and all relevant data was converted to imperial prior to prediction being made.

The predicted level is calculated from the equations presented above with the OSMRE constant (k) and exponent (a) for highwall blasting.

k=0.162

a=0.794

Table 4-2 presents the predicted air blast overpressure levels with a charge mass/delay of 100 kg.

Predicted air blast overpressure (dB) for 162 kg charge mass/delay			
Receiver	Regression constant	Min distance to receiver (km)	Predicted ABO
R1	Highwall	1.78	109
R2		1.37	110
R3		1.04	112
R4		0.82	114
R5		1.25	111
R6		1.73	109
R7		1.36	111
R8		1.55	110
R9		1.15	112
R10		1.93	108
R11		1.35	111
R12		1.88	108

exceeds 115 dB,  exceeds 120 dB.

Table 4-2: Predicted air blast overpressure.

From the above:-

- The predicted air blast overpressure levels don't exceed 115 dB.



Figures 4-3 and 4-2 present predicted air blast overpressure contours.

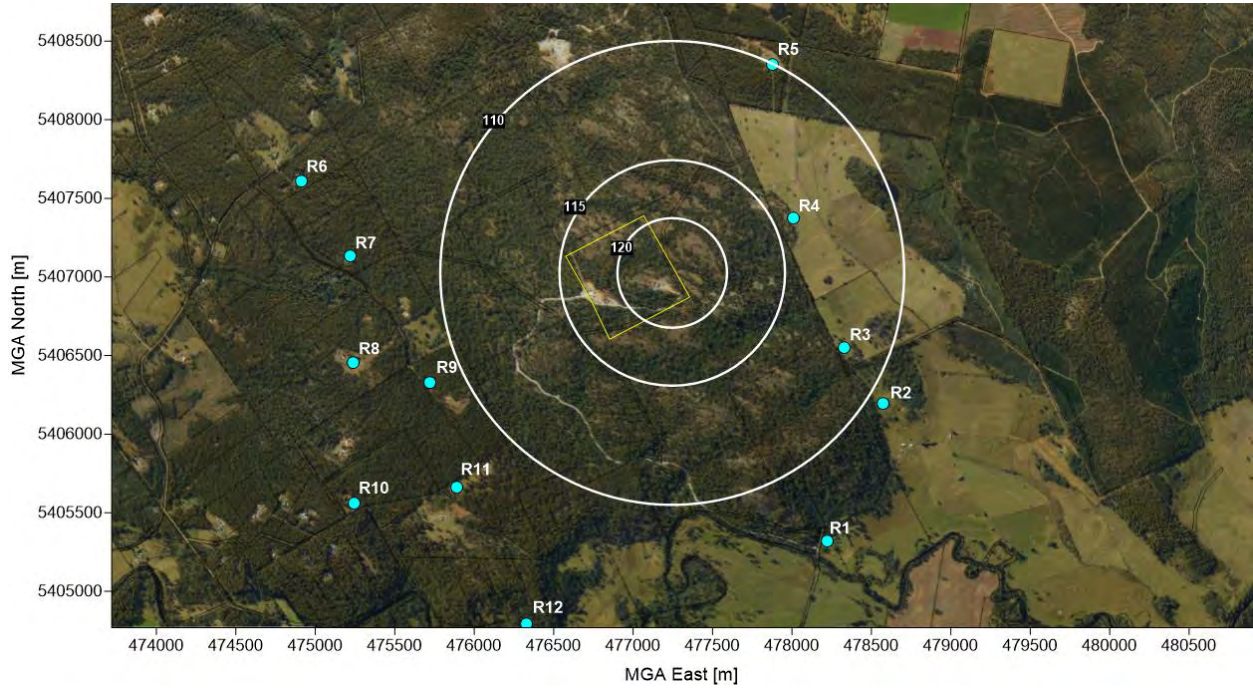


Figure 4-3: Predicted air blast overpressure contours.

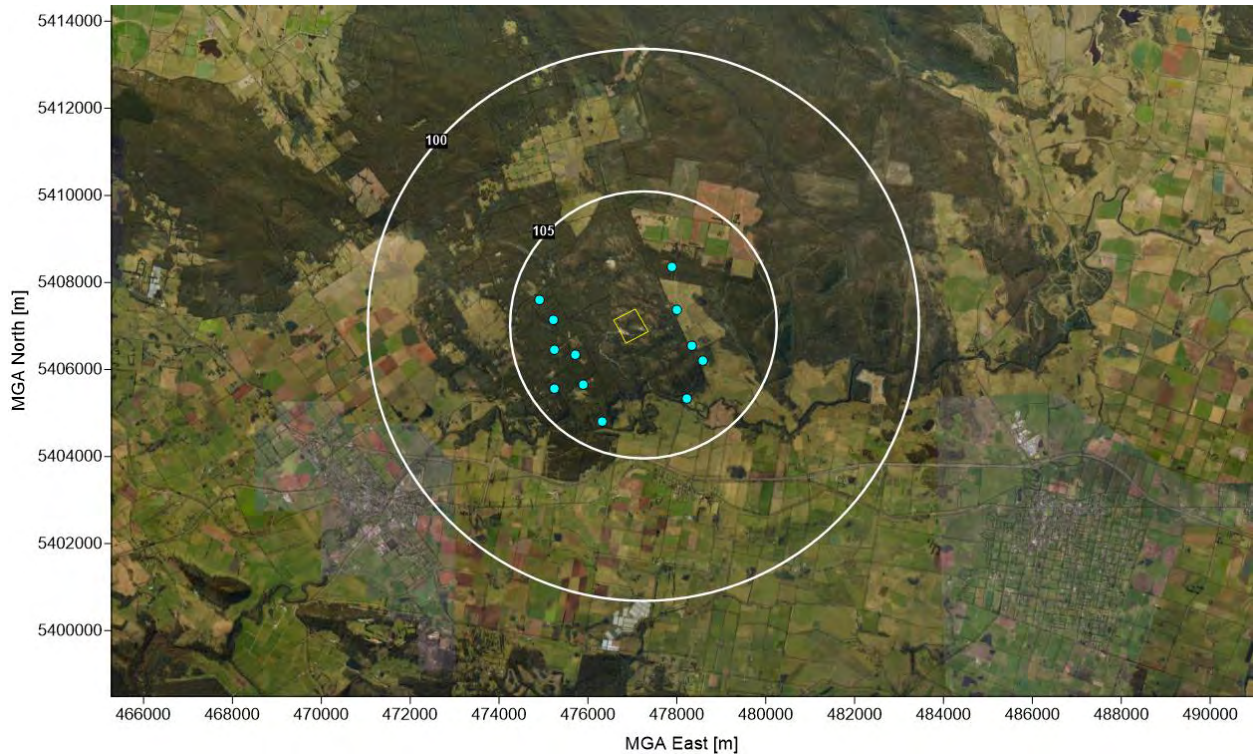


Figure 4-4: Predicted air blast overpressure contours.



### 4.3 Prediction validation

Table 4.3 presents the results of measurement and prediction of ground vibration and air blast overpressure at the PBRQ for a blast that occurred on 27/02/2024 with a charge mass/delay of 138 kg (the monitoring results are also provided in the Appendix, also showing the monitor locations).

Measured and predicted ground vibration and air blast overpressure, PBRQ							
Parameter		Location					
		Monitor 1 (384 m)		Monitor 2 (827 m)		20 Porters Bridge Rd (753 m)	
Peak particle velocity (mm/s)	Measured	8.70		2.82		0.08	
	Predicted	3.6	9.5	1.2	3.3	1.4	3.8
Air blast overpressure (dB)	Measured	109.0		100.5		114.1	
	Predicted	119		114		114	

Table 4-3: Measured and predicted ground vibration and air blast overpressure at PBRQ.

The results demonstrate that ground vibration levels are within the bounds of the ground vibration predictions (i.e. average and upper bound regression constants), with the exception of the monitor at 20 Porters Bridge Rd where the ground vibration level recorded was very low. The measured and predicted air blast overpressure level at 20 Porters Bridge Rd shows excellent correlation while at the other monitor locations the measured levels are very low (noting that substantial topographic shielding is present between these monitor locations and extraction area of the quarry).

### 4.4 Discussion and conclusions

Predicted ground vibration and air blast overpressure levels comply with the assessment criteria with a charge mass/delay of 162 kg. At the predicted levels both ground vibration and air blast over pressure have the potential to be perceptible but are below levels where human comfort may be impacted (i.e. criterion levels applicable under the quarry’s existing PCE). It is recommended that the charge mass/delay for blasting at the quarry be limited to 162 kg given the results of past blast monitoring and the predicted levels presented here, in particular relating to air blast overpressure.



## Appendix

1/3-octave band sound power levels spectra (dBA) L <sub>Aeq</sub>																
Source	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	
Crusher and Screen	51	62	68	73	78	85	99	100	94	99	100	103	102	108	111	
Excavator	-	48	55	69	70	70	77	89	79	84	88	86	89	92	96	
FEL	43	39	55	53	60	69	79	83	73	79	81	80	85	88	90	
Trucks (pit to ROM)	42	39	52	57	72	67	76	83	79	81	89	86	83	89	90	
Trucks (ROM to road)	45	43	55	60	75	71	79	87	82	85	92	89	86	92	93	
Drill	Engine	32	35	48	55	57	64	83	85	78	82	81	78	80	85	89
	Drilling	35	36	54	56	59	66	81	84	81	89	85	82	83	87	89
	Rattling	25	26	39	48	48	56	66	70	69	77	75	74	74	77	89
Source	630	800	1k	1.25k	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	Total		
Crusher and Screen	110	111	112	112	110	109	109	106	103	100	97	93	87	<b>121</b>		
Excavator	94	93	92	94	95	94	90	89	86	84	82	79	74	<b>104</b>		
FEL	91	86	88	88	89	87	85	83	81	79	75	72	67	<b>99</b>		
Trucks (pit to ROM)	91	95	95	92	93	93	92	89	87	85	83	77	74	<b>103</b>		
Trucks (ROM to road)	94	98	98	96	96	96	95	93	90	88	86	81	77	<b>106</b>		
Drill	Engine	90	90	92	93	94	95	96	95	95	94	90	88	86	<b>105</b>	
	Drilling	93	95	97	99	100	100	102	100	99	99	97	95	92	<b>110</b>	
	Rattling	90	90	93	97	99	102	103	104	104	102	103	104	97	<b>112</b>	



1/3-octave band sound power levels spectra (dBC) L <sub>Ceq</sub>																
Source	20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	
Crusher and Screen	96	102	105	106	107	110	121	119	110	112	111	111	109	113	115	
Excavator	-	89	91	102	99	95	99	108	95	97	98	95	95	96	99	
FEL	87	79	91	85	89	94	101	101	89	92	92	89	92	92	93	
Trucks (pit to ROM)	83	80	88	90	100	93	98	102	95	95	99	94	90	93	93	
Trucks (ROM to road)	89	83	91	93	104	96	101	106	98	98	103	98	93	97	97	
Drill	Engine	76	75	84	87	86	90	105	104	94	96	92	86	86	90	92
	Drilling	79	77	90	89	88	91	103	102	96	102	96	90	90	92	93
	Rattling	70	66	76	80	77	81	88	89	85	90	85	82	81	82	92
Source	630	800	1k	1.25k	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	Total		
Crusher and Screen	112	112	112	111	109	108	107	105	101	98	95	91	85	<b>126</b>		
Excavator	96	94	92	93	94	92	88	88	85	83	80	77	73	<b>112</b>		
FEL	93	87	88	88	88	86	83	81	79	77	73	70	65	<b>107</b>		
Trucks (pit to ROM)	93	96	95	92	92	92	90	88	85	83	81	76	72	<b>109</b>		
Trucks (ROM to road)	96	99	98	95	95	95	93	91	89	86	84	79	75	<b>112</b>		
Drill	Engine	92	91	92	93	93	94	94	94	93	92	88	86	84	<b>110</b>	
	Drilling	95	96	97	98	99	99	100	98	97	98	95	93	91	<b>111</b>	
	Rattling	92	91	93	96	98	101	102	102	102	100	101	102	95	<b>111</b>	



### 3.4.1.1 Out of hours loading and carting

Loading and carting as a standalone operation is proposed for operating times that are outside of the standard *Quarry Code of Practice* hours. The noise emission levels produced by this activity are assessed here against the night criterion limit of 35 dBA as a conservative assessment level for potential nuisance at non-standard times. The predicted levels are provided in Table 3-4 below.

**NB:** Predicted spectra at the receiver locations were assessed for excessive low frequency and tonality in accordance with the procedures in the *Tasmanian Noise Measurement Procedures Manual*. Predicted spectra didn't contain excessive low frequency content (i.e.  $L_{Ceq}$  levels where no more than 12 dB above  $L_{Aeq}$  levels) and tonal adjustments (this is done based on predicted spectra without consideration of ambient noise source contribution) have been added to the predicted levels presented in Table 3-3 below, the tonal adjustment amount is also provided for reference. Impulsive and modulating noise emissions are not expected from these operations.

Predicted sound pressure levels (dBA) Out of hours loading and carting			
Receiver	neu	wcw	Tonal adj (dB)
R1	32	34	0.9
R2	-	-	-
R3	-	1	-
R4	-	-	-
R5	-	-	-
R6	10	15	-
R7	14	20	0.6
R8	15	20	0.5
R9	20	26	0.5
R10	12	17	0.6
R11	16	21	1.1
R12	-	4	-

Exceeds night noise emission criterion limit.

Table 0-1: Predicted noise emission levels, **Out of hours loading and carting**.

From the above:

- Predicted noise emission levels at receivers R2 – R12 are below the criterion limit of 35 dBA by 9 or more dB.
- The most impact receiver is R1 with predicted level within 1 dB of the criterion limit. This is due to the proximity of the receiver to the quarry access road entry (approx. 80 m).

## 3.5 Discussion and conclusions

...

Loading of crushed and screened materials outside of standard *Quarry Code of Practice* hours was considered in the model with the results demonstrating that noise levels lower than the night criterion limit of 35 dBA are possible. At this level noise impact would not be unreasonable. This can be achieved with management structures put in place to ensure the following occurs and impact remains acceptable, particularly at receiver R1:



- Only one truck allowed on the access road at a time during out of hours works.
- Low engine revs to be utilised, as far as practically possible, particularly on the first 800 m of the road along the banks of the Mersey River (section of road shared with Johns Rd). Speed on this section of road would be limited to 10 km/h and combined with the flat gradient for this road section excessive revs are unlikely to be required.
- Parking up to wait for access to the quarry is not done near the entrance to the quarry access road.

A noise management plan for out of hours loading and carting works should be developed and should include the following as a minimum:

- Roles and responsibilities for quarry personnel.
- Step by step process for accessing quarry outside to standard hours.
- Communication protocols for managing truck access to the quarry.
- Map with clearly marked park up area to be used when waiting for access to quarry (away from residential locations).
- Noise monitoring protocols at receiver R1 to demonstrate compliance and to assist with improving management.

**NB:** It should be noted that receiver R1 is owned and occupied by the land owner on which the Porters Bridge Road Quarry is located. A Compensation Agreement between the owner (and resident of R1) and Walters Contracting giving permission for Walters Contract to extract materials from the quarry land is in place. As such, it is not expected that the resident of R1 would object to management of out of hours works as detailed above.



# MAXAM

WALTERS PORTER'S BRIDGE                      2408 328m RL - 318m RL  
 Date Fired    27/02/2024                      Time Fired    2:04:00 PM  
 MIC    138 kg                      Actual Powder factor    0.92 kg/m<sup>3</sup>

### Environmental monitor results

Location	Ground Vibration	Air overpressure	Distance to blast
20 Porters Bridge Roa	0.08 mm/s	114.1 dBL	753 m
Monitor 1	8.70 mm/s	109.0 dBL	384 m
Monitor 2	2.82 mm/s	100.5 dBL	827 m

### Monitor locations



**ATTACHMENT 6. TRAFFIC IMPACT ASSESSMENT – HUBBLE TRAFFIC**



# INTENSIFICATION OF PORTERS BRIDGE QUARRY

## TRAFFIC IMPACT ASSESSMENT

Hubble Traffic

Updated June 2025

Disclaimer: This report has been prepared based on and in reliance upon the information provided to Hubble Traffic Consulting by the client and gathered by Hubble Traffic Consulting during the preparation of the report. Whilst all reasonable skill, care and diligence has been used in preparation of the report, Hubble Traffic Consulting take no responsibility for errors or omissions arising from misstatements by third parties.

This report has been prepared specifically for the exclusive use of the client named in the report and to the extent necessary, Hubble Traffic Consulting disclaim responsibility for any loss or damage occasioned by use of or reliance upon this report, or the data produced herein, by any third party.

Version	Date	Reason for Issue
<b>Draft</b>	December 2023	Draft issued for client feedback
<b>Final</b>	January 2024	Final Issued
<b>Updated</b>	June 2025	Updated to reflect RFI

## Table of Contents

<b>1.</b>	<b>Introduction</b> .....	<b>1</b>
<b>2.</b>	<b>Site Description</b> .....	<b>2</b>
<b>3.</b>	<b>Development proposal</b> .....	<b>3</b>
<b>4.</b>	<b>Trip generation by this development</b> .....	<b>4</b>
<b>4.1.</b>	<b>Current trips generated by the quarry</b> .....	<b>4</b>
<b>4.2.</b>	<b>Expected trips generated by intensification of the quarry</b> .....	<b>5</b>
<b>4.3.</b>	<b>Summary of traffic intensification</b> .....	<b>6</b>
<b>5.</b>	<b>Existing road network</b> .....	<b>7</b>
<b>5.1.</b>	<b>Quarry access road characteristics</b> .....	<b>7</b>
<b>5.2.</b>	<b>Porters Bridge Road characteristics</b> .....	<b>8</b>
<b>5.3.</b>	<b>Meander Valley Road characteristics</b> .....	<b>10</b>
<b>5.4.</b>	<b>Junction of Porters Bridge Road and Meander Valley Road</b> .....	<b>10</b>
<b>5.5.</b>	<b>Traffic activity on Porters Bridge Road</b> .....	<b>12</b>
<b>5.6.</b>	<b>Traffic activity on Meander Valley Road</b> .....	<b>14</b>
<b>5.7.</b>	<b>Traffic flows at the junction of Meander Valley Rd and Porters Bridge Rd</b> .....	<b>14</b>
<b>5.8.</b>	<b>Summary of current flow on Porters Bridge Road</b> .....	<b>16</b>
<b>5.9.</b>	<b>Road safety of surrounding road network</b> .....	<b>16</b>
<b>5.10.</b>	<b>Speed limits operating on the surrounding roads</b> .....	<b>17</b>
<b>6.</b>	<b>Impact from traffic generated by this development</b> .....	<b>18</b>
<b>6.1.</b>	<b>Consideration of turning treatments on Meander Valley Road</b> .....	<b>19</b>
<b>6.2.</b>	<b>Lane capacity and level of service for Meander Valley Road users</b> .....	<b>20</b>
<b>6.3.</b>	<b>Traffic impact on Porters Bridge Road</b> .....	<b>21</b>
<b>6.4.</b>	<b>Suitability of Porters Bridge Road</b> .....	<b>21</b>
<b>6.5.</b>	<b>Single-lane bridge</b> .....	<b>22</b>
<b>7.</b>	<b>Access arrangement to and from the development site</b> .....	<b>23</b>
<b>7.1.</b>	<b>Existing vehicular access into and out of the development</b> .....	<b>23</b>
<b>7.2.</b>	<b>Sight distance at existing quarry access</b> .....	<b>24</b>
<b>8.</b>	<b>Feedback from Meander Valley Council</b> .....	<b>26</b>
<b>9.</b>	<b>Response to Councils RFU</b> .....	<b>27</b>
<b>10.</b>	<b>Planning scheme</b> .....	<b>28</b>
<b>10.1.</b>	<b>C2.0 Parking and Sustainable Transport Code</b> .....	<b>28</b>

10.2.C3.0 Road and Railway Assets Code ..... 30

11. Conclusion..... 32

12. Appendix A– LGAT Standard drawings ..... 33

13. Appendix B – Metro counter data ..... 36



## 1. Introduction

Van Diemen Consulting has engaged Hubble Traffic to prepare an independent Traffic Impact Assessment, to consider the traffic impacts of the intensification of Porters Bridge Quarry, located outside of Exton.

This assessment has considered the type and amount of traffic that is expected to be generated and the likely traffic impacts to the surrounding road network.

This report has been prepared to satisfy the requirements of Austroads, Guide to Traffic Management Part 12: Traffic Impacts of Developments, 2019, and referred to the following information and resources:

- Tasmanian Planning Scheme (Meander Valley Council)
- Road Traffic Authority NSW (RTA) Guide to Traffic Generating Developments
- Australian Standards AS2890 parts 1, 2 and 6
- Austroads series of Traffic Management and Road Design
  - Part 4: Intersection and crossings, General
  - Part 4a: Unsignalised and Signalised Intersections
  - Part 12: Traffic Impacts of Development
- Land Information Database (LIST)

In considering the application the Meander Valley Council (Council) has issued a RFI dated 2 August 2024, requesting the following additional information:

- 5(a) – suitability of the road standard of Porters Bridge Road to absorb the increase in traffic flow generated by the quarry expansion.
- 5(b) – the percent of heavy vehicles turning at the junction of Meander Valley Road and Porters Bridge Road.
- 5(c) – Updated traffic flow data for Porters Bridge Road.
- 5(d) – Traffic management at the single lane bridge located near the development site access

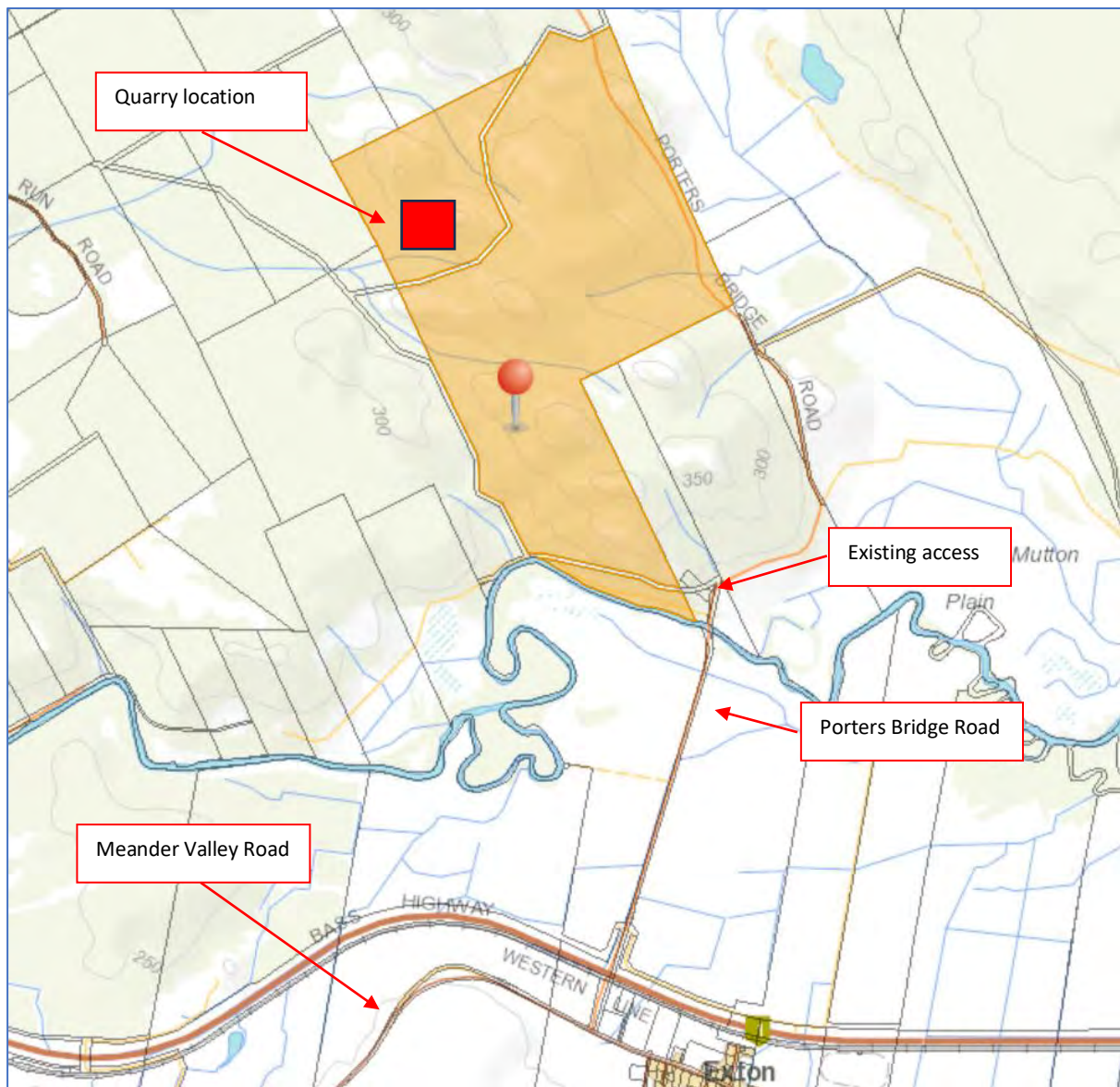
This assessment has been updated to reflect Council's request, with a summary available in section 9.

## 2. Site Description

The development site is a large parcel of land located at 190 Porters Bridge Road, which operates as Porters Bridge Quarry (quarry), Mining Lease 2097P/M. According to the Land Information Database (LIST), the parcel of land is zoned as Rural, with an extractive industry considered a suitable land use.

Vehicular access to the quarry is via a private internal road that connects with Porters Bridge Road, which is located on the northern side of Bass Highway (highway) that connects to the Meander Valley Road via a highway overpass.

Diagram 2.0 – Extract from LIST land information database



### 3. Development proposal

The development proposal is to intensify the annual extraction of rock and aggregate production, from 32,000 cubic metres to 200,000 cubic metres.

The developer has advised the quarry's increase in production will require an increase in on-site employees from four to seven, with service vehicles increasing from one to two. Operational hours will remain the same from 6:00am to 6:00pm.

## 4. Trip generation by this development

A trip in this report is defined as a one way vehicular movement from one point to another excluding the return journey. Therefore, a return trip to and from a land use is counted as two trips.

Information is usually sourced from the RTA Guide to Traffic Generating Developments (RTA Guide), to determine the number of trips likely to be generated. As the RTA Guide does not contain information on quarries, an estimation of the trip generation will be based on the transport task of moving the product, the number of employees, and other service vehicles.

### 4.1. Current trips generated by the quarry

The existing quarry is capped at 32,000 cubic metres of product per annum. While this cap limits the maximum number of truck movements per year, the number of vehicle movements per day and per hour, is strongly influenced by demand for the product. The developer has advised the standard vehicle transporting the product is a truck and trailer, with an average carrying capacity of 32 tonnes of product. The developer has also advised there is limitations on the volume of product that can be processed and transported in a day, which is estimated at 29 laden truck movements, and this is considered the maximum or worst case scenario.

The average number of truck movements per workday, is calculated by dividing the total 32,000 cubic metres of product by the number of workdays (estimated at 240 days), which equates to 133 cubic metres of product per day. Using a bulking factor of 1.6, these 133 cubic metres translates to 213 tonnes of product for transporting and would generate seven laden truck movements per day.

A maximum of four employees are on site at any one time, with most employees working core business hours, arriving on site at 6:00am and leaving at 6:00pm. On average the development generates one service vehicle which services on-site machinery, generally occurring outside of peak periods.

Based on the available information, the quarry has the potential to generate a worst case of 68 daily vehicle movements, with 16 of these trips occurring in the morning and evening peak periods when the surrounding roads are at their busiest, or can generate an average of 24 daily trips, with eight peak hour trips.

Table 4.1 – Estimate of vehicle movements currently generated from the site

Vehicle type	Worst case scenario		Based on average day	
	Daily	Peak Hour	Daily	Peak Hour
Laden truck and trailer	29	6	7	2
Un-laden truck and trailer	29	6	7	2
Service vehicles (maximum one)	2	0	2	0
Employees (maximum four)	8	4	8	4
<b>Total</b>	<b>68</b>	<b>16</b>	<b>24</b>	<b>8</b>

## 4.2. Expected trips generated by intensification of the quarry

The mining lease is proposed to increase from 32,000 to 200,000 cubic metres of product per annum. The developer has indicated that the operational hours of the quarry will remain the same, while the number of employees on-site will increase from four to seven.

While the intensification of production will allow for more product to be processed and transported within the year, there is a limitation of the volume of product that can be processed and transported on any one day.

The developer has advised the same type of transport vehicle will continue to be used, where a maximum of 43 laden vehicles can be accommodated in any one day.

Based on the same methodology used to calculate the existing vehicle movements, the increase in production has the potential to generate a maximum (worst case) of 104 daily vehicle movements, with 25 of these predicted to operate within the peak hour periods.

Based on an average day, the increase has the potential to generate 102 daily vehicle movements, with 25 of these movements expected to occur in the peak hour periods.

Table 4.2 – Prediction of traffic movements when the development is operating

Vehicle type	Worst case scenario		Based on average day	
	Daily	Peak Hour	Daily	Peak Hour
Laden truck and trailer	43	8	42	8
Un-laden truck and trailer	43	8	42	8
Service vehicles (maximum two)	4	2	4	2
Employees (maximum seven)	14	7	14	7
<b>Total</b>	<b>104</b>	<b>25</b>	<b>102</b>	<b>25</b>

### 4.3. Summary of traffic intensification

The mining lease will increase the yearly production from 32,000 to 200,000 cubic metres of product, which represents a 625 percent increase in production. However, this traffic assessment predicts the number of daily and peak hour vehicle movements will not increase by the same proportion.

Based on a worst case scenario (maximum processing and transport capacity) this assessment predicts the number of daily vehicle trips to increase from 68 to 104, which is an additional 36 vehicle trips per day, or a 53 percent increase. Of these trips, the number of trips within the peak hour periods are predicted to increase from 16 to 25.

In summary, the increase in production will intensify the traffic flow on the surrounding road network throughout the working day, with the highest number of vehicle trips in any one hour period likely to be 25, which is in the peak hour when employees are arriving or leaving the site. These traffic predictions are based on the contents of the table below and will be used within this traffic assessment.

There is virtually no difference in the number of daily trips between the worst case and average day, indicating the quarry is expected to operate at capacity most days.

Table 4.3 – Prediction of increase in vehicle movements

Vehicle type	Worst Case scenario				Based on average day			
	Existing		Increase production		Existing		Increase production	
	Daily	Peak	Daily	Peak	Daily	Peak	Daily	Peak
Laden	29	6	43	8	7	2	42	8
Un-laden	29	6	43	8	7	2	42	8
Service	2	0	4	2	2	0	4	2
Employees	8	4	14	7	8	4	14	7
<b>Total</b>	<b>68</b>	<b>16</b>	<b>104</b>	<b>25</b>	<b>24</b>	<b>8</b>	<b>102</b>	<b>25</b>

## 5. Existing road network

All vehicles need to use Meander Valley Road and Porters Bridge Road to access the development site, with access to the quarry by an existing private quarry access road.

### 5.1. Quarry access road characteristics

Quarry access road is a private road, commencing from Porters Bridge Road and terminating at the quarry, and expected to be primarily used by employees and transport vehicles associated with the quarry.

The road is built to a typical low-volume rural standard, with an unsealed gravel surface, and table drain running along the northern side. The road width varies along the route, with the majority of the width suitable to accommodate two-way movements for light vehicles. Where the road width decreases making it difficult for opposing heavy vehicles to pass, passing bays have been provided. To coordinate the use of the passing bays there are UHF signs installed along the route for heavy vehicle driver communication.

Road alignment is generally straight, with some short series of curves, while there is a gentle incline from Porters Bridge Road, up to the quarry. Motorists have reasonable sight lines between opposing drivers, the UHF radio communication system assists with the movement of heavy vehicles and allow vehicles to manoeuvre along the road without causing adverse safety impact.

The site inspection found the standard of this road is considered fit-for-purpose, having consideration that users are familiar with the road, and a low operating speed is expected.

Photograph 5.1 – Quarry access road standard



## 5.2. Porters Bridge Road characteristics

Porters Bridge Road extends in a northerly direction from Meander Valley Road, providing access to a small number of rural properties and the quarry. The road has been constructed to a rural standard, with varying sealed bitumen road width, with table 5.2 providing width at various locations where the width changes, with the chainage commencing at the Meander Valley Road.

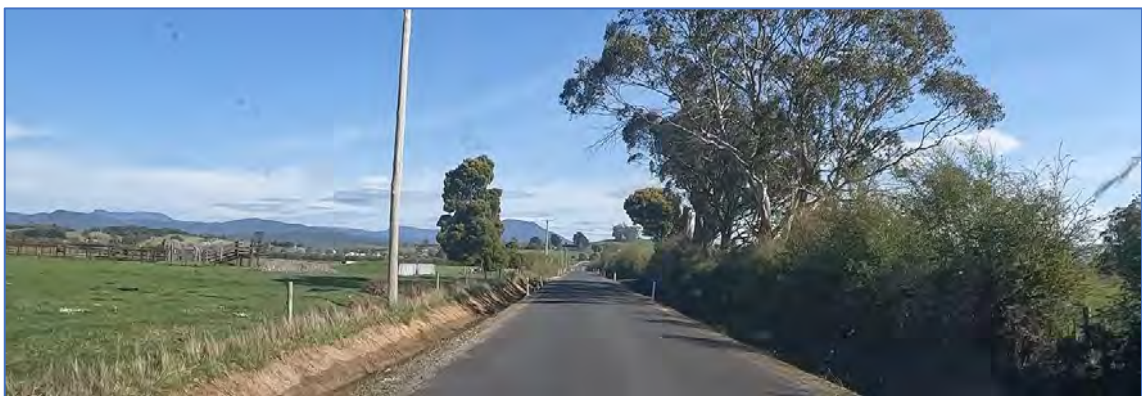
Apart from the single lane bridge spanning the Meander River, Porters Bridge Road has sufficient width to support two-way traffic flow, as there is a minimum of 5.5 metres wide.

Table 5.2 – Porters Bridge Road measured road widths

Chainage	Location	Road width
0.0 km	Porters Bridge Road and Meander Valley Road junction	7.5 metres
0.1 km	Bass Highway overpass	6.3 metres
0.2 km		5.8 metres
0.65 km	End point of newly sealed section	5.7 metres
0.85 km	Farm gates on both sides of the road	5.5 metres
1.5 km	Small bridge before Meander River bridge	6.6 metres
1.7 km	Meander River bridge (one-way only bridge)	4.8 metres

The section of Porters Bridge Road to the quarry access is straight, there are vertical crests along the road, particularly at the highway overpass. Generally, there are no centreline road markings, signifying the road does not have a significant transport function, and delineation of the alignment is by guideposts.

Photograph 5.2A – Porters Bridge Road standard



Along the route there are two significant bridge structures, the first bridge crosses the Meander River, located immediately south of the quarry access, and is signed as a one-lane bridge. The alignment of the approaching roads is reasonably straight, offering motorists with suitable forward sight distance, with no operational traffic issues identified.

Photograph 5.2B – One Lane bridge over the Meander River



The second bridge structure crosses the highway, opposing traffic flows are separated by an isolated section of centreline road marking, and there is sufficient road width to accommodate two-way traffic flow.

Photograph 5.2C – Bridge over the Bass Highway



Beyond the quarry access the standard of the road significantly reduces, which aligns with the road function of providing local access to a small number of rural properties. The route assessment determined Porters Bridge Road is of sufficient standard to accommodate the traffic flow generated by the quarry.

### 5.3. Meander Valley Road characteristics

Meander Valley Road is part of the State Road Network and is classified as a Category 5 – Other Roads. Category 5 roads are primarily used as access roads for private properties. The road was previously the main arterial road connecting the northwest regions to Launceston and Hobart, prior to the construction of the current Bass Highway, and therefore has high road characteristics for a Category 5 road. The road alignment allows for high operating speeds, there are three metre wide traffic lanes in each direction, narrow sealed shoulders, verges along both sides of the road, and a table drain along the southern side. The delineation of the alignment is provided by marked centreline, edgelines, and guideposts.

Meander Valley Road connects with Bass Highway at a grade separated interchange 4.3 kilometres west of Porter Bridge Road, providing a high quality route to the Category 1 road network for vehicles generated by the quarry.

Photograph 5.3 – Meander Valley Road standard



### 5.4. Junction of Porters Bridge Road and Meander Valley Road

All traffic generated by the quarry must turn at the junction of Meander Valley Road and Porters Bridge Road, which is a standard T-Junction. As Porters Bridge Road is the terminating road, traffic priority is provided to Meander Valley Road motorists. This traffic priority is reinforced with the provision of a Give Way sign, supplemented with a marked holding line, set back two metres from the edge of the through traffic lane.

The junction has an asphalt surface that is in good condition, with the junction throat widened to accommodate heavy vehicles turning, with sufficient width to accommodate heavy vehicles to enter and leave at the same time.

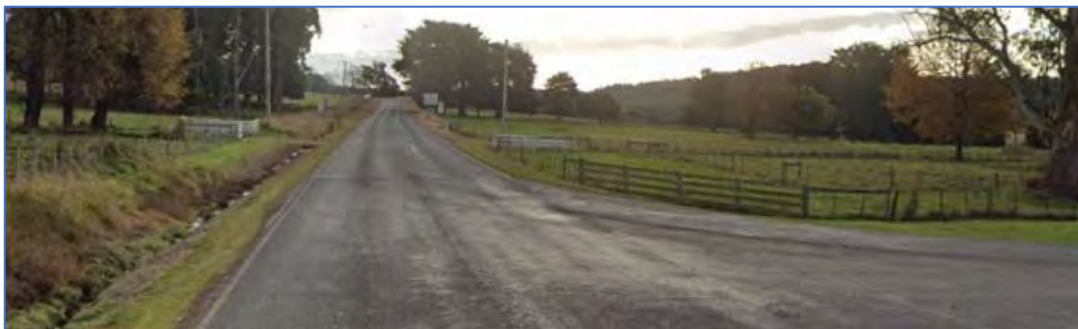
Meander Valley Road has a posted 80 km/h speed limit at the Porters Bridge Road junction, and available sight distance was measured at this junction. Based on the driver being 1.05 metres above the road surface, with approaching vehicles being 1.2 metres high. In both directions the available sight distance exceeds 300 metres.

Austrroads Guide to Road Design provides guidance of Safe Intersection Sight Distance (SISD), based on the speed environment. For an 80 km/h speed limit the recommended SISD is 181 metres, based on a driver reaction time of 1.5 seconds, and three seconds observation time. With the available sight distance exceeding 300 metres in both directions, there is sufficient sight distance for vehicles to turn at the junction in a safe and efficient manner, without causing adverse impact to other users.

Photograph 5.4A – Available sight distance to the left



Photograph 5.4B – Available sight distance to the right



## 5.5. Traffic activity on Porters Bridge Road

### Traffic flow based on first principles

According to the Land Information System Tasmania (LIST), Porters Bridge Road beyond the quarry access serves approximately 12 rural residential properties. The number of daily and peak hour traffic movements has been calculated using the RTA Guide, specifying a rural residential property is likely to generate 7.4 daily vehicle trips, with 0.78 of these trips occurring in the peak hour periods. This means the 12 residential properties are expected to generate less than 100 daily vehicle trips, with nine of these movements likely to occur in the peak hour periods.

As estimated earlier, the quarry is predicted to generate an average of 24 daily vehicle movements, with eight of these movements occurring during the peak hour periods. While when operating at maximum capacity, the quarry could generate 68 daily vehicle movements, with 24 of these occurring during the peak hour periods.

In summary, Porters Bridge Road is lightly trafficked, less than 200 two-way vehicles per day, with a maximum 33 two-way vehicles operating in the peak hour periods, as shown in the table below.

Table 5.5A – Estimated traffic flow for Porters Bridge Road

Traffic generator	Estimated daily two-way	Peak hour two-way
12 rural properties	100	9
Quarry – average	24*	8*
Maximum flow	68	24
<b>Total</b>	<b>168</b>	<b>33</b>

\* Figures in red not included in total

### Traffic flow based on actual survey data

In response to Council's RFI request, a traffic counter was installed, one kilometre from the Meander Valley Road junction, from Thursday 17 to Wednesday 23 of October 2024. The table below demonstrates the daily and directional traffic flows, revealing that Porters Bridge Road generates less than 200 vehicles per day.

Table 5.5B - Porters Bridge Road daily two-way traffic flow

Day	Northbound	Southbound	Total
Thursday	83	95	178
Friday	74	81	155
Saturday	45	56	101
Sunday	46	37	80
Monday	60	75	135
Tuesday	78	90	168
Wednesday	78	87	165
<b>Weekday average</b>	<b>75</b>	<b>86</b>	<b>161</b>

The table below breaks down the traffic flows into hourly intervals, with peak periods generally observed between 7:00am to 9:00am in the morning and 3:00pm to 5:00pm in the afternoon. On average, less than 20 two-way vehicles were observed along Porters Bridge Road, representing less than one vehicle every three minutes.

Table 5.5C – Hourly breakdown of two-way traffic flow

Weekday hour	Northbound		Southbound		Two-way	
	Average	Maximum	Average	Maximum	Average	Maximum
600-700	5	7	4	5	9	12
700-800	10	12	7	10	17	22
800-900	5	8	8	13	13	21
900-1000	6	10	6	8	12	18
1000-1100	3	6	4	7	7	13
1100-1200	5	10	6	11	11	21
1200-1300	4	8	5	7	9	15
1300-1400	6	8	5	7	11	15
1400-1500	5	6	6	13	11	19
1500-1600	5	9	7	14	12	23
1600-1700	8	13	7	9	15	22
1700-1800	7	11	4	6	11	17
1800-1900	2	3	3	6	5	9
1900-2000	3	4	1	3	4	7

The table 5.5.D below demonstrates the type of vehicle class using Porters Bridge Road. The data captured indicates that on a weekday, light vehicles account for 72 percent of vehicles, with heavy vehicles (medium and long vehicles) accounting for 28 percent.

During the weekend, only eight percent of the total vehicles were observed to be heavy vehicles, with all heavy vehicles captured using the road on a Saturday and only light vehicles captured on a Sunday.

Table 5.5D – Vehicle classification for weekdays and weekends

Austroads vehicle classification	Weekdays			Weekends		
	Total	Daily Ave	%	Total	Daily Ave	%
Short <5.5m	602	120	72%	167	83	92%
Medium >5.5 and <14.5m	107	21	13%	10	5	6%
Long >11.5 and <19m	131	26	16%	4	2	2%
Long Comb >17.5 and <36.5m	0	0	0	0	0	0
Large Comb < 33m	0	0	0	0	0	0
			100%			100%

Metro traffic counter data is available in appendix B.

## 5.6. Traffic activity on Meander Valley Road

Department of State Growth (Department) maintains a traffic database for the State Road network, with the nearest traffic station on the Meander Valley Road 3.8 kilometres west of Porters Bridge Road, with the latest traffic data collected in May 2021.

The extract below is from the Department's database, with the red rectangles highlighting the heaviest hourly two-way traffic flow, of 154 in the morning, and 199 in the evening. These traffic flows indicate Meander Valley Road is moderately trafficked.

Extract 5.6 – Department's traffic database

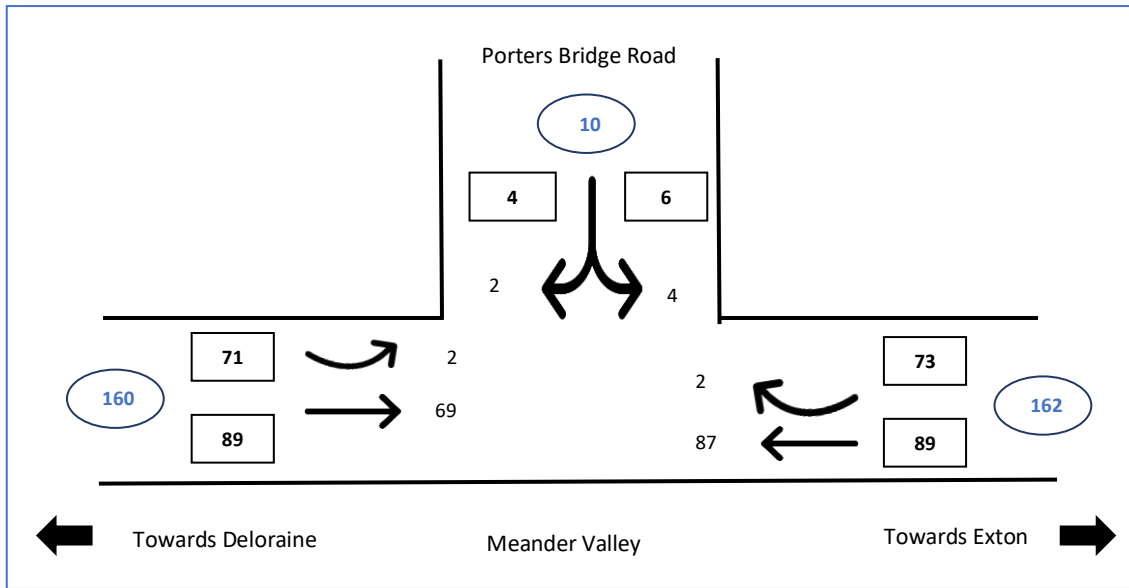
	Westbound	Eastbound	Total
00:00	1	0	1
01:00	0	0	0
02:00	1	0	1
03:00	1	0	1
04:00	2	1	4
05:00	6	4	10
06:00	31	33	65
07:00	46	60	106
08:00	78	76	154
09:00	78	73	151
10:00	79	74	153
11:00	81	71	153
12:00	79	75	153
13:00	81	75	155
14:00	96	77	173
15:00	112	87	199
16:00	100	84	183
17:00	77	62	139
18:00	40	30	70
19:00	22	22	43
20:00	11	15	26
21:00	5	9	15
22:00	7	7	14
23:00	2	3	5

## 5.7. Traffic flows at the junction of Meander Valley Rd and Porters Bridge Rd

A recent manual survey was undertaken at the Porters Bridge Road and Meander Valley Road junction on Thursday 17 of October between 7:00am and 9:00am, with the peak hour extracted and shown in diagram 1.3A below.

The survey revealed that the junction is lightly trafficked, with less than 200 vehicles observed travelling through the junction. During the morning peak hour, three heavy vehicles were observed using Porters Bridge Road, generating 30 percent of the total vehicle movements. This closely correlates with the data captured using the traffic counter.

Diagram 5.7A – Morning peak hour traffic movements

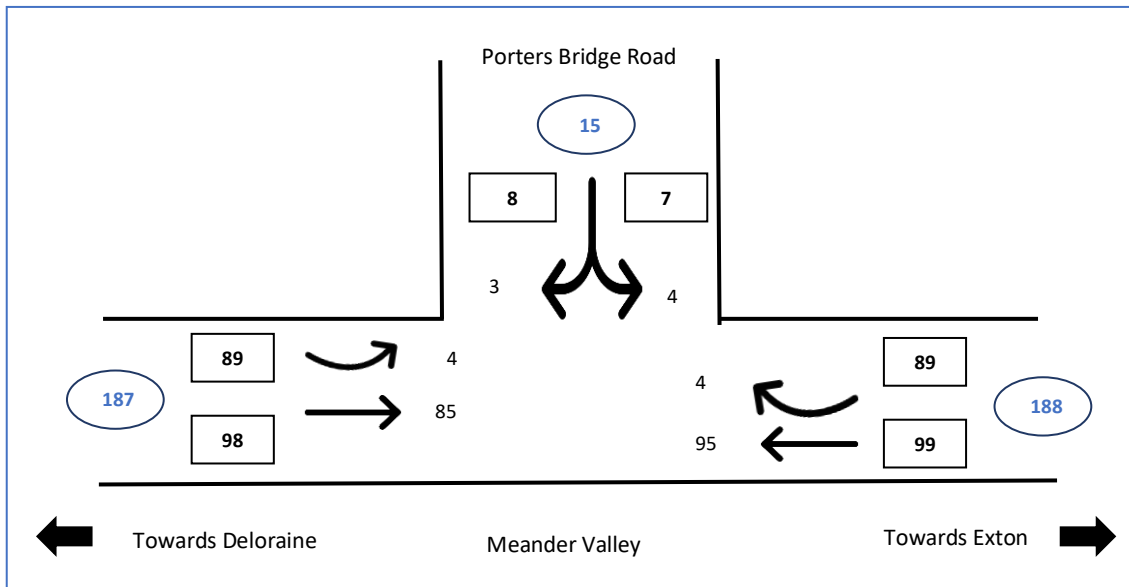


\*Heavy vehicles accounted for 30% of movements into and out of Porters Bridge Road

Diagram below estimates the turning movements through the junction, during the evening peak period. Data has been used from the traffic counter on Porters Bridge Road and the Department’s database for movements generated along Meander Valley Road.

Similar to the morning peak period, heavy vehicles accounts for 30 percent of the vehicles generated by Porters Bridge Road.

Diagram 5.7B – Evening peak hour traffic movements



\*Heavy vehicles accounted for 30% of movements into and out of Porters Bridge Road

## 5.8. Summary of current flow on Porters Bridge Road

The traffic counter data aligns with the initial first principal method, showing that Porters Bridge Road has an average daily two-way flow of 161 vehicles. Of these, an average of 15 vehicles operates during peak hours, and on the busiest day a maximum of 23 vehicles.

Additionally, the daily traffic flow consists of 72% light vehicles. The remaining vehicles include 13% medium rigid and 16% long vehicles.

Overall, Porters Bridge Road is lightly trafficked with less than 200 vehicles per day.

## 5.9. Road safety of surrounding road network

The Department maintains a database of reported road crashes, a check of this database found the following crashes occurring on the surrounding roads in the last five completed years of 2018 to 2022, as follows:

- Porters Bridge Road between the development access and Meander Valley Road, no crashes reported. A hit animal crash was reported on Porters Bridge Road north of the development access in April 2019, with this crash resulting in property damage.
- Porters Bridge Road and Meander Valley Road junction, no crashes reported.
- Meander Valley Road between Porters Bridge Road and the roundabout, leading to the on and off ramps onto the Bass Highway, three crashes reported. These crashes resulted in one minor injury and two property damage, with all crashes being a single light vehicle losing control and leaving the carriageway. Two vehicles lost control whilst negotiating a curve, with the other losing control on a straight road section.
- Roundabout, one crash reported in 2020, where a light vehicle hit an obstruction on the road causing property damage.
- Link between the roundabout and Bass Highway grade separated interchange, two crashes reported. A rear-end crash in 2022 resulting in property damage, which involved a light and heavy vehicle, and a crash in 2019 resulting in property damage, with a light vehicle losing control while using the westbound off-ramp.

Overall, this crash data does not signify that motorists are experiencing any difficulty with negotiating the surrounding road network. There is no overrepresentation of crashes involving heavy vehicles, indicating the route is suitable to accommodate an increase in heavy vehicles.

## 5.10. Speed limits operating on the surrounding roads

### Meander Valley Road

Through Exton the speed limit is 60 km/h, changing to 80 km/h west of Exton, with Porters Bridge Road junction located within an 80 km/h speed limit. This speed limit changes to 100 km/h approximately 120 metres west of the junction.

### Porters Bridge Road

Along Porters Bridge Road, there is no speed limit signs for motorists turning from Meander Valley Road, technically under the Australian Road Rules the speed limit must be the rural default of 100 km/h, due to the abutting land use being undeveloped.

For vehicles travelling southbound, approaching the junction with Meander Valley Road, there is a 60 km/h speed limit sign posted, approximately 100 metres before the junction.

With no defined speed limit along the majority of Porters Bridge Road, the sealed rural default 100 km/h speed limit would apply. However, due to the function and nature of the road, lower operating speeds would be expected, with vehicles more likely to be travelling at 80 km/h.

## 6. Impact from traffic generated by this development

As discussed earlier, the quarry has limitations on the volume of material that can be processed and transported within any one hour period. Table 4.3 determined that when the quarry is operating at maximum processing capacity, an additional 36 daily trips are predicted, increasing the number of daily trips from 68 to 104, with 25 of these trips operating within a peak hour.

Based on an average production day, the quarry is predicted to increase the number of daily trips from 24 to 102, with the number of trips increasing from 8 to 25 in a peak hour.

For the purpose of this traffic assessment, the most important consideration is the increase in peak hour trips, when Meander Valley Road is at its busiest periods, which is the weekday morning and evening peak hours. The largest increase in the peak hour trips, will occur on an average day, increasing from 8 to 25 trips, as shown in the table below, and this also represents the worst case scenario, which will be used to assess the traffic impact on the surrounding roads.

Table 6.0 – Prediction in vehicle trips

Existing vehicle trips				Predicted increase in trips (existing and new)	
Daily (average) Peak Hours (average)		Quarry operating a maximum processing capacity		Daily (maximum processing capacity)	Peak hours (maximum processing capacity)
Daily	Peak hours	Daily	Peak hours		
24	8	68	16	104	25

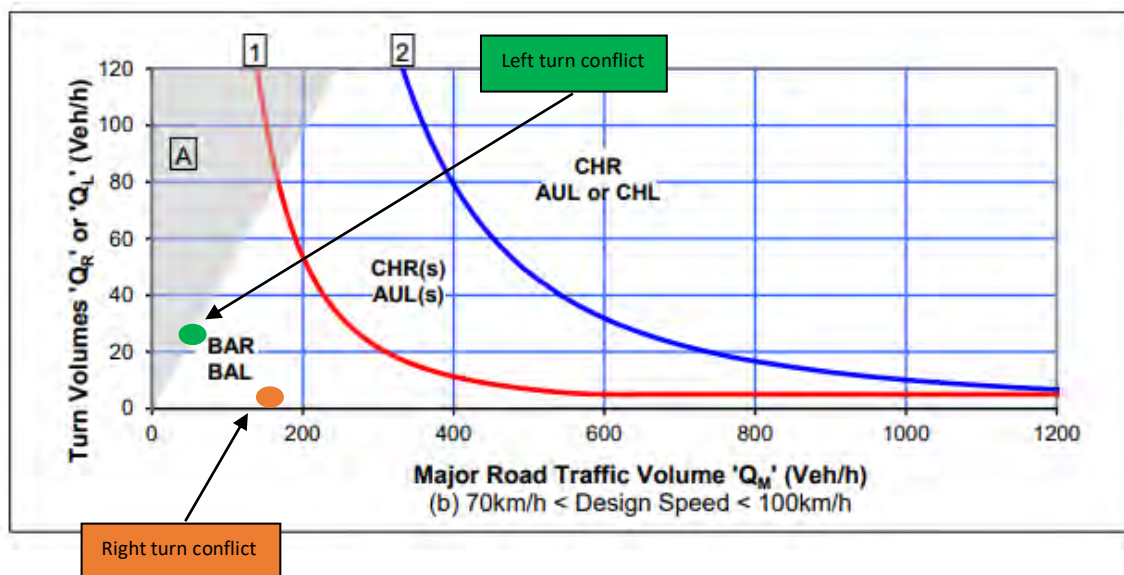
### 6.1. Consideration of turning treatments on Meander Valley Road

The need for dedicated turning treatments at the junction of Porters Bridge Road and Meander Valley Road is considered unwarranted, as the number of vehicles turning right into Porters Bridge Road is predicted to be low, with a maximum of five vehicles within the peak hour periods. With the junction lightly trafficked, there is a low risk that a stationary right turning vehicle will adversely impact the traffic flow.

Given the proximity of the grade separated interchange to the highway located west of the junction, it is predicted the additional vehicles generated by the quarry are likely to generate right turn movements out of Porters Bridge Road, and left turn movements in.

Austrroads Guide to Traffic Management (part 6) has been used, to demonstrate there is little justification to warrant dedicated turn lanes at the junction.

Diagram 6.1 – Austrroads Guide for turning treatments



## 6.2. Lane capacity and level of service for Meander Valley Road users

In evaluating the impact of additional vehicle movements on Meander Valley Road users, it is important to understand the Level of Service (LOS) motorists are currently receiving. The RTA Guide provides guidance for rural roads, based on peak hour directional traffic flows, the terrain of the road, and the percentage of heavy vehicles.

Based on the existing directional traffic flows from the Department’s traffic station, the road having a level alignment, and assuming 15 percent of vehicles being heavy vehicles, Meander Valley Road users are currently receiving the highest traffic efficiency of LOS B for a rural road, as shown in the table below.

While additional vehicle movements generated by the quarry will increase the two-way traffic flow on Meander Valley Road (highlighted in the green columns), it will not deteriorate traffic efficiency, with motorists continuing to receive LOS B. This demonstrates that the development is not predicted to cause adverse traffic impact to Meander Valley Road users.

Level of service B means the traffic flow is stable, motorists can generally choose their operating speed, without being influence by other motorists, there is sufficient gaps in the traffic stream to allow for vehicles to enter and leave without impacting other vehicles. Motorists are provided with comfortable driving conditions.

Table 6.2 – Comparison of level of service for Meander Valley Road users

Criteria	Existing traffic conditions			Predicted traffic conditions		
	Eastbound	Westbound	Two-way	Eastbound	Westbound	Two-way
Morning peak hour	76	78	154	86	85	171
<b>Level of service</b>	<b>B</b>			<b>B</b>		
Evening peak hour	87	112	199	94	122	216
<b>Level of service</b>	<b>B</b>			<b>B</b>		

Extract 6.2 – RTA Guide for level of service for rural roads

Terrain	Level of Service	Percent of Heavy Vehicles			
		0	5	10	15
Level	B	630	590	560	530
	C	1030	970	920	870
	D	1630	1550	1480	1410
	E	2630	2500	2390	2290
Rolling	B	500	420	360	310
	C	920	760	650	570
	D	1370	1140	970	700
	E	2420	2000	1720	1510
Mountainous	B	340	230	180	150
	C	600	410	320	260
	D	1050	680	500	400
	E	2160	1400	1040	820

### 6.3. Traffic impact on Porters Bridge Road

The same methodology for assessing traffic efficiency has been used on Porters Bridge Road. The RTA Guide specifies for a rural road with less than 530 two-way vehicles per peak hour, motorists will be provided with the highest level of traffic efficiency.

As estimated, the current two-way traffic flow is between 17 and 33 vehicles in the peak hour periods, and this may slightly increase to 34 vehicles when the quarry is operating at maximum processing capacity. This demonstrates no deterioration in traffic efficiency is expected in the peak hour periods.

Although the increase in vehicular trips will occur outside of the peak hour periods, the two-way traffic flow is not expected to exceed 34 vehicles in any one hour period, demonstrating no adverse traffic impact is expected. This number of two-way vehicles operating within an hour period, represents on average, one vehicle using the road every two minutes.

This assessment determined the road standard of Porters Bridge Road is sufficient to accommodate a slight increase in traffic flow, without causing adverse traffic impact to other road users.

### 6.4. Suitability of Porters Bridge Road

This section evaluates Porters Bridge Road between the Meander Valley Road and quarry access, and excludes the single lane bridge spanning the Meander River, which will be evaluated in section 6.5.

With the current and expected Average Annual Daily Traffic (ADDT) flow is expected to be less than 300 vehicles per day, according to LGAT standard drawing TSD-RO2-v1, the road falls under the S3 classification as per table 2. This road classification specifies for existing road infrastructure the sealed pavement width should be 5.5 metres to accommodate two-way flow.

As previously demonstrated, despite variations in the sealed width of Porters Bridge Road, the width is consistently at least 5.5 metres, complying with LGAT S3 road standard for road width.

The straight road alignment with gentle grades offers excellent sight distance. The quarry's proximity to Meander Valley Road is short, and despite increased traffic due to the quarry expansion, upgrading the road isn't necessary as the current road standards provides for safe and efficient performance.

This road standard is comparable to numerous sections of the State Road network, which handle significantly higher traffic volumes. These State Road sections successfully operate with a 5.5-meter wide road pavement that accommodates two-way traffic flow without sealed shoulders.

## 6.5. Single-lane bridge

As previously stated, the Meander River bridge operates as a single lane, providing for one-way traffic movements. This bridge requires motorists to slow down on approach and give way to vehicles already travelling through the bridge, with the appropriate signs erected on both sides of the road in accordance to AS 1742.2, warning motorists of the approaching bridge.

The most recent site inspection found there has been road side vegetation management to the south of Meander River Bridge, this provides motorists with excellent sight distance approaching the single lane bridge. Motorists will be able to see oncoming traffic and appropriately give way to vehicles using the bridge. One-lane bridge on a two-way roadway is an appropriate traffic management treatment.

Overall, no operational traffic issues were identified and there is expected to be no adverse impact to motorists using Meander River Bridge, from the increase in movements generated by the development site.

Photograph 6.5 – Sight lines over the single lane bridge



## 7. Access arrangement to and from the development site

### 7.1. Existing vehicular access into and out of the development

The development will retain the existing vehicular access with Porters Bridge Road, which has been widened to accommodate vehicles generated by the quarry turning into and out of the access. The access has recently been sealed extending back at least 30 metres from Porters Bridge Road, with the edge of sealed delineated with guide posts as illustrated in the photograph below.

Overall, the existing vehicular access is considered fit for purpose.

Photograph 7.1 – Existing quarry access



## 7.2. Sight distance at existing quarry access

It is important that motorists leaving the access have suitable sight distance to enter Porters Bridge Road in a safe manner, without impacting other motorists.

Available sight distance was measured on-site, based on a driver positioned 1.05 metres above the road surface, with an approaching vehicle being 1.2 metres high, and was found to be around 220 metres in both directions.

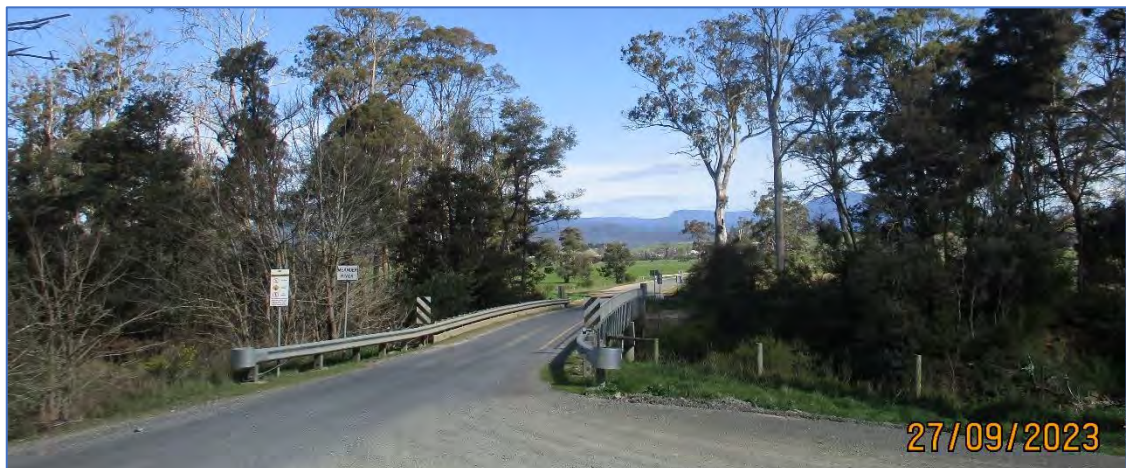
Austrroads Guide to Road Design provides guidance on sight distance, based on the operating speed of approaching vehicles. Although this junction is located within a 100 km/h speed limit, the operating speed of approaching vehicles is considered to be lower, as vehicles approaching from the north are required to negotiating a right hand bend. Vehicles approaching from a southerly direction need to negotiate a one-lane bridge, which also lowers the operating speed.

In summary, it is estimated the operating speed of vehicles approaching the junction is likely to be around 80 km/h, with table 7.2 detailing that sufficient sight distance is available. There is also sufficient sight distance to accommodate vehicles operating higher than 80 km/h, being 94 percent of the recommended SISD for 100 km/h.

Table 7.2 – Sight distance at the quarry access point

Operating speed of vehicles	Recommended SISD	Available sight distance
80 km/h	170 metres	220 metres
100 km/h	234 metres	

Photograph 7.2A – Available sight distance to the right



Photograph 7.2B – Available sight distance to the left



## 8. Feedback from Meander Valley Council

From a previous traffic assessment, Meander Valley Council requires the following measures to be completed prior to the commencement of any intensification of this quarry.

- The existing driveway access onto Porters Bridge Road must be constructed and sealed in accordance with Tasmanian Standard drawings TSD-R04 and TSD-R05,
- Truck entering (W5-22B) warning signs to be erected on both Porters Bridge Road approaches, 300 metres in advance of the quarry access, and
- The vegetation in the vicinity of the bridge obscuring the site distance to the south of the existing access must be cleared.

While the access has been constructed to comply with the above two standard drawings, and sealing of the access has occurred.

Sight benching has already been completed, with the vegetation management occurring, increasing the visibility to the south, maximising available sight distance for motorists.

Truck entering signs will be erected at both approaches along Porters Bridge Road 300 metres in each direction of the quarry access.

## 9. Response to Councils RFU

The following table provides a condense response to Council RFI.

Item	Additional information	Traffic response
5(a)	suitability of the road standard of Porters Bridge Road to absorb the increase in traffic flow generated by the quarry expansion.	Section 6.4 determined the current standard of Porters Bridge Road complies with LGAT standard for existing infrastructure, and suitable to absorb the increase in traffic generated by the development without adversely impact traffic safety or efficiency.
5(b)	the percent of heavy vehicles turning at the junction of Meander Valley Road and Porters Bridge Road.	Manual traffic surveys conducted during morning and evening peak hours indicated that the junction experiences light traffic. About 30% of the vehicles using Porters Bridge Road are heavy vehicles. Given these conditions, the junction would function adequately and ensure a high level of safety and traffic efficiency for motorists.
5(c)	Updated traffic flow data for Porters Bridge Road.	A METRO traffic counter was installed on Porters Bridge Road, approximately one kilometre north of Meander Valley Road. The seven-day traffic data confirms that the road experiences light traffic, with less than 200 vehicles daily and no more than 20 vehicles during any given hour. Of these vehicles, 72% are classified as light vehicles, measuring less than 5.5 metres in length.
59(d)	traffic management at the single lane bridge located near the development site access	The single-lane bridge is well-marked with adequate warning signs. The recent removal of vegetation has improved sight lines for approaching drivers. Overall, the single-lane bridge is an appropriate treatment, and no deficiencies have been identified.

## 10. Planning scheme

### 10.1. C2.0 Parking and Sustainable Transport Code

As per table 6.2 in the planning scheme the use will be Extractive Industry, which is the use of land for extracting or removing material from the ground, other than Resource Development, and includes the treatment or processing of those materials by crushing, grinding, milling, or screening on, or adjoining the land from which it is extracted. Examples include mining, quarrying, and sand mining.

#### C2.5.1 Car parking numbers

Planning scheme table C2.1 specifies the minimum number of parking spaces for various user class, and for extractive industry the requirement is one space per two employees.

With the development increasing employees, it is desirable to provide seven on-site car parking spaces to meet the expected demand generated by staff and visitors, which meets the acceptable solution. The development property is of sufficient size to accommodate parking of vehicles and will not cause any parking overflow outside of the property.

Photograph 9.1 – Quarry site office



#### C2.5.2 Bicycle parking numbers

Table C2.1 specifies that for extractive industry there is no requirement for bicycle parking.

C2.5.3 Motorcycle parking numbers

Dedicated motorcycle parking spaces are not required where the use generates a car parking demand of less than 20 vehicles. The development is providing sufficient parking spaces to meet the reasonable demand, and a motorcycle may occupy a car parking space.

C2.5.4 Loading bays

The development site is a large parcel of land, allowing for loading of vehicles to be accommodated within the site.

C2.6 Development standards for the parking area

C2.6.1 Construction of parking area.	The on-site parking spaces will be situated close to the existing office, and will be an all-weather gravel surface, with suitable grade to enable surface water to drain naturally, complying with the acceptable solution.
C2.6.2 Design and layout of parking areas.	The parking spaces will be a minimum 2.6 metres wide, 5.4 metres long, with sufficient roadway beyond the space, to ensure a vehicle can manoeuvre easily into and out of the space. The parking spaces will be designated by wheel stops. Overall, the parking areas will comply with the acceptable solution.
C2.6.3 Number of accesses for vehicles	The development will use the existing single vehicular access connecting onto Porters Bridge, complying with the acceptable solution.
C2.6.4 Lighting of parking areas within the General Business Zone and Central Business Zone.	The mine operation times are 6:00am to 6:00pm, with works not occurring outside of these time frames, and security and surveillance lighting will be in place to cover the parking spaces, complying with the acceptable solution.
C2.6.5 Pedestrian access.	Not required for developments providing less than 10 on-site car parking spaces, complying with the acceptable solution.
C2.6.6 Loading bays.	Loading bays are not considered necessary for extractive services.
C2.6.7 Bicycle parking and storage facilities.	Not necessary for extractive services.
C2.6.8 Siting of parking and turning areas.	The parking spaces are integrated within the development, located sufficiently remote of the public road network, and not expected to create a visual impact on the streetscape.

## 10.2. C3.0 Road and Railway Assets Code

C3.5.1 Traffic generation at a vehicle crossing, level crossing or new junction

The development is estimated to generate more than 20 percent or five heavy vehicle movements per day and will need to be assessed against the performance criteria P1, to ensure the existing access operates safely and efficiently.

Performance criteria	Assessment
Vehicular traffic to and from the site must minimise any adverse effects on the safety of a junction, vehicle crossing or level crossing or safety or efficiency of the road or rail network, having regard to:	
a) Any increase in traffic caused by the use;	Based on the processing capacity of the quarry, the development has the potential to generate up to an additional 80 daily vehicle trips, with 17 of these trips operating in the peak hour periods. This assessment predicts a maximum of 25 trips within the weekday peak hour periods.
b) The nature of the traffic generated by the use;	The vast majority of the additional trips will be heavy vehicles (truck and dog combination), and this type of vehicle is currently operating on the surrounding road network. Additional employees are expected to generate light vehicles, less than 5.5 metres in length.
c) The nature of the road	The surrounding road network includes Porters Bridge Road, which is a local access road, constructed to a rural standard, with sealed road surface suitable to accommodate two-way traffic flow. The section between the development access and Meander Valley Road is straight and suitable to accommodate both heavy and light vehicles. The high road standard of Meander Valley Road provides vehicles an efficient route to the Bass Highway, there are marked traffic lanes in both directions, the road alignment delineated with marked centreline and edgelines, and is suitable for vehicles to maintain high operating speeds. This traffic assessment found the standard of the surrounding roads between the development site and Bass Highway is sufficient to facilitate safe and efficient vehicle movements for both heavy and light vehicles. There is suitable sight distance at the development access for the prevailing operating speed of approaching vehicles, to allow for vehicles to enter and leave in a safe and efficient manner.
d) The speed limit and traffic flow of the road	The speed limit along Porters Bridge Road is mostly undefined, with the sealed rural default 100 km/h applying. However, due to the nature and conditions of the road, an operating speed of 80 km/h is more likely. Porters Bridge Road is lightly trafficked, with this assessment estimating less than 200 vehicles per day, and between 17 to 33 vehicles operating in the peak hour periods. Based on the Department's traffic database, Meander Valley Road is considered to be moderately trafficked, with an

	average of 154 two-way traffic movements during the morning peak hour and 199 in the evening peak hour. Motorists currently using both roads are receiving the highest level of service possible for a rural road, LOS B. This assessment has demonstrated that additional vehicle movements generated by the development will not deteriorate the current traffic efficiency motorists are receiving. Level of service B means the traffic flow is stable, motorists can generally choose their operating speed, without being influence by other motorists, there is sufficient gaps in the traffic stream to allow for vehicles to enter and leave without impacting other vehicles. Motorists are provided with comfortable driving conditions.
e) Any alternative access to a road	None.
f) The need for the use	There is a high requirement in the mineral extraction and processing sector for ongoing resources.
g) Any traffic impact assessment	A traffic impact assessment has found no reason for this development not to proceed.
h) Any advice received from the rail or road authority	Aware of none.

## 11. Conclusion

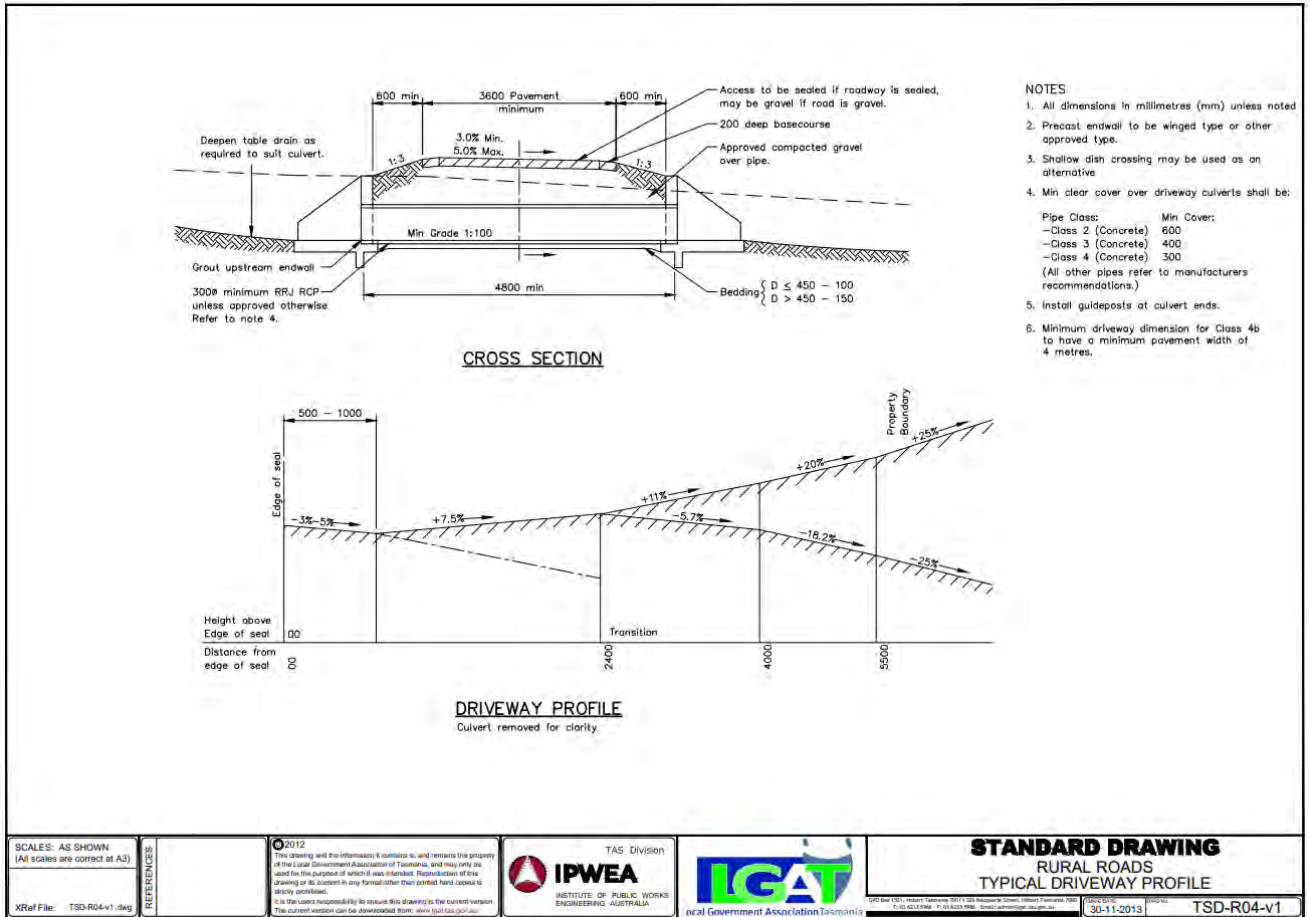
From a traffic engineering and road safety perspective, additional traffic generated from this development is not expected to create any adverse safety, or traffic efficiency problems, as:

- the increase in the amount of traffic generated by the development is considered moderate, and there is sufficient traffic capacity along the surrounding road network to absorb the increase in traffic movements, without causing a deterioration in traffic efficiency,
- reported crash data signifies the surrounding road network is suitable to accommodate the increase in heavy vehicles generated by the development, without causing adverse impact to other users,
- appropriate truck warning signs on Porters Bridge Road will be installed,
- there is sufficient sight distance at the existing access for the prevailing operating speed of approaching vehicles, allowing vehicles to enter and leave the development site in a safe and efficient manner, and
- the private access road to the quarry is considered fit for purpose, with users expected to be familiar with the nature and conditions of the road.

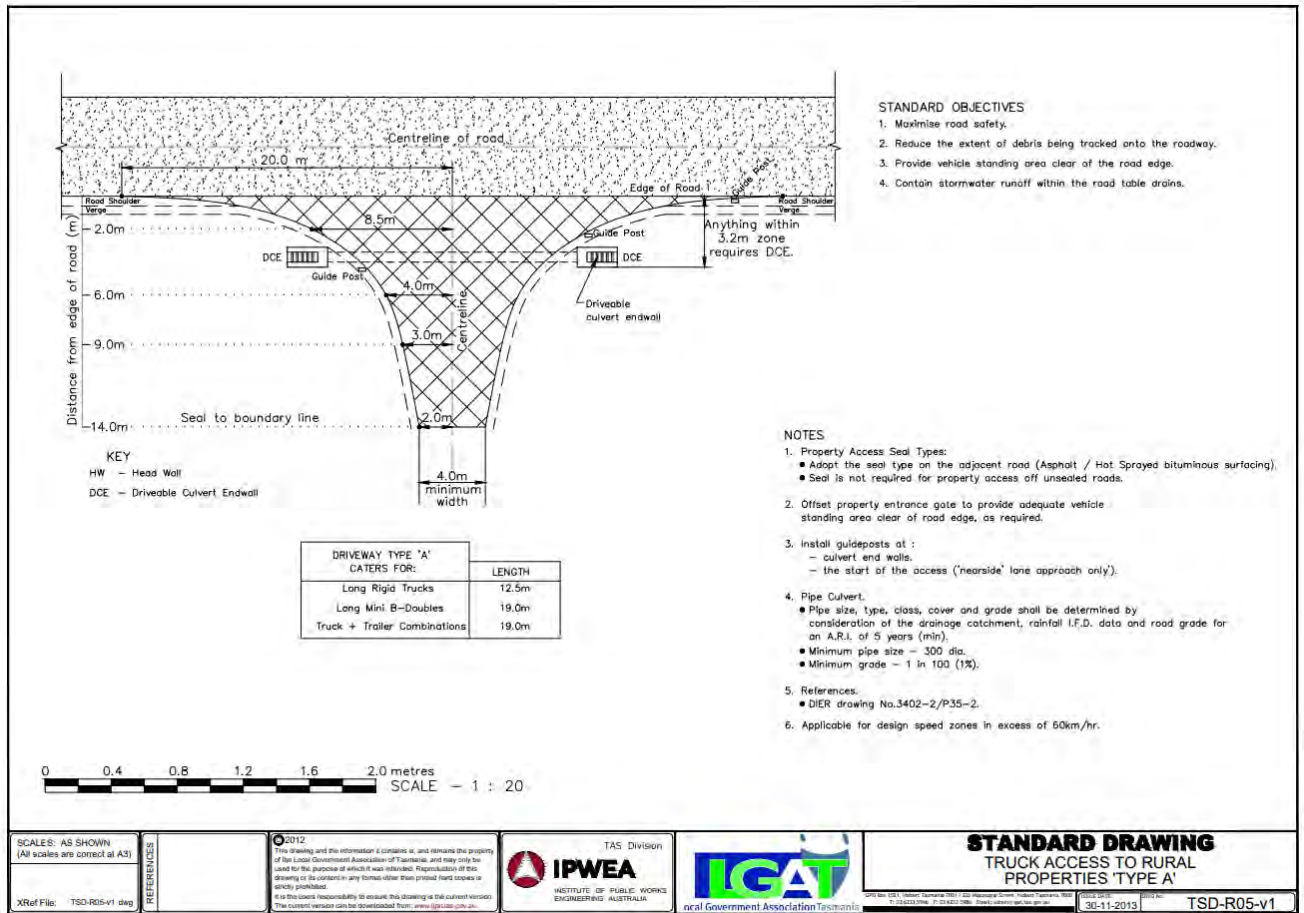
This Traffic Impact Assessment found no reason for this development not to proceed.

## 12. Appendix A– LGAT Standard drawings

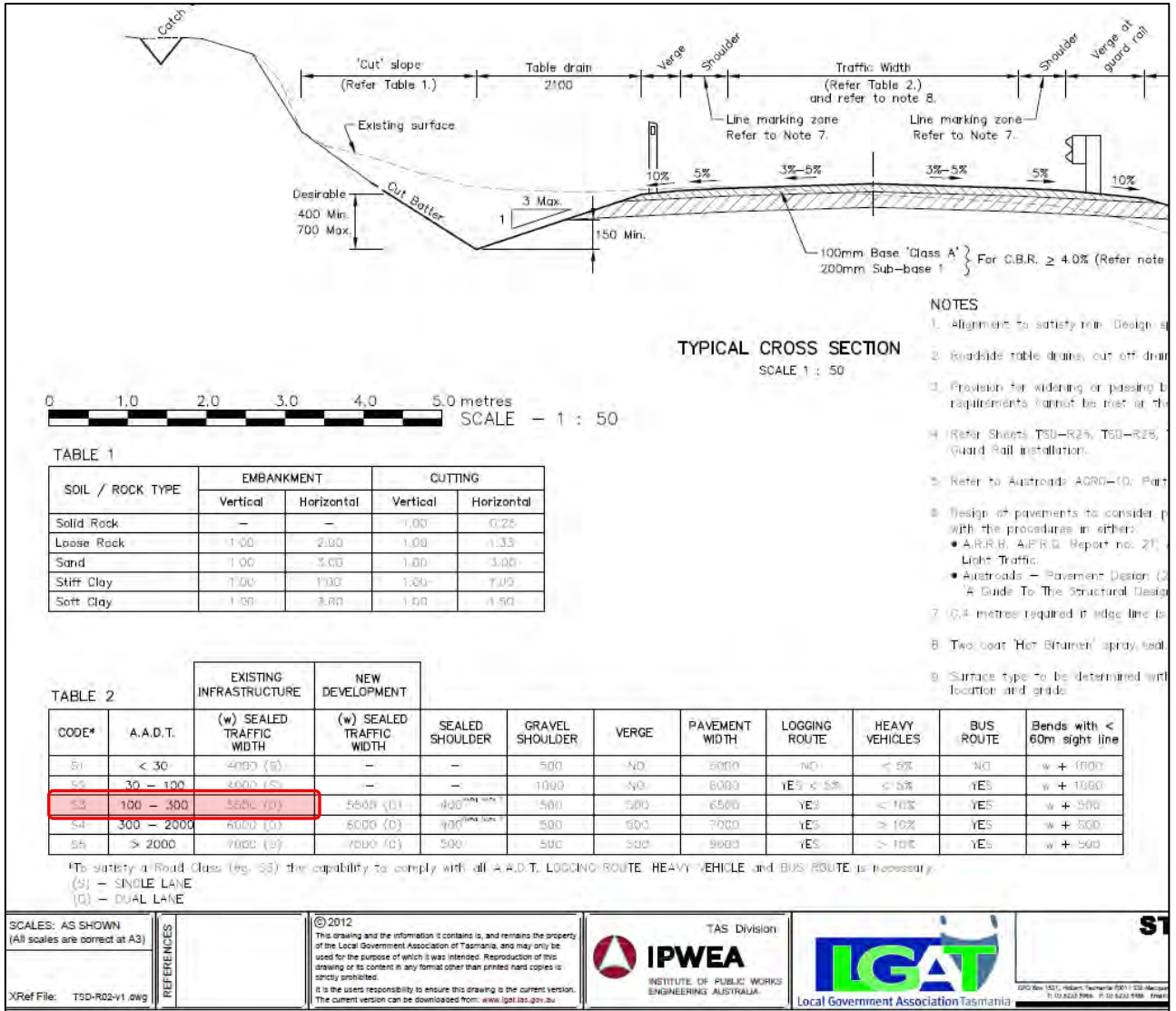
### TSD-R04 – Typical driveway profile for rural roads



TSD-R05 Truck access for rural properties



TSD-R02 Rural road standard



### 13. Appendix B – Metro counter data

Virtual Week

VirtWeeklyVehicle-83  
 Site: porters bridge.1.2SN  
 Description: porters bridge 1 km north meander valley road  
 Filter time: 9:42 Thursday, 17 October 2024 => 11:56 Thursday, 24 October 2024  
 Scheme: Vehicle classification (AustRoads94)  
 Filter: Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages	
								1 - 5	1 - 7
0000-0100	0.0	0.0	0.0	0.0	0.0	1.0	2.0	0.0	0.4
0100-0200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0200-0300	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.1
0300-0400	0.0	1.0	2.0	1.0	0.0	0.0	0.0	0.8	0.6
0400-0500	3.0	4.0	3.0	1.0	2.0	0.0	0.0	2.6	1.9
0500-0600	3.0	3.0	3.0	3.0	4.0	0.0	1.0	3.2	2.4
0600-0700	9.0	8.0	8.0	9.0	9.0	5.0	0.0	8.6	6.9
0700-0800	12.0	17.0	14.0	22.0	15.0	2.0	0.0	16.0	11.7
0800-0900	6.0	10.0	13.0	20.0	15.0	3.0	6.0	12.8	10.4
0900-1000	8.0	7.0	18.0	7.0	19.0	7.0	3.0	11.0	9.5
1000-1100	8.0	6.0	7.0	13.0	12.0	10.0	10.0	9.8	9.9
1100-1200	9.0	9.0	5.0	18.5	9.0	12.0	6.0	11.5	10.9
1200-1300	6.0	10.0	10.0	8.0	8.0	10.0	6.0	8.4	8.3
1300-1400	13.0	10.0	6.0	9.0	14.0	10.0	12.0	10.4	10.6
1400-1500	10.0	19.0	10.0	12.0	14.0	6.0	9.0	13.0	11.4
1500-1600	11.0	18.0	18.0	15.0	7.0	7.0	4.0	13.8	11.4
1600-1700	19.0	14.0	22.0	17.0	9.0	9.0	5.0	16.2	13.6
1700-1800	12.0	15.0	13.0	8.0	9.0	8.0	4.0	11.4	9.9
1800-1900	2.0	9.0	6.0	3.0	0.0	2.0	7.0	4.0	4.1
1900-2000	1.0	4.0	3.0	6.0	5.0	1.0	2.0	3.8	3.1
2000-2100	3.0	3.0	2.0	4.0	0.0	2.0	1.0	2.4	2.1
2100-2200	0.0	1.0	2.0	2.0	3.0	1.0	2.0	1.6	1.6
2200-2300	0.0	0.0	0.0	0.0	1.0	4.0	0.0	0.2	0.7
2300-2400	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Totals</b>									
0700-1900	116.0	144.0	142.0	152.5	131.0	86.0	72.0	138.3	121.7
0600-2200	129.0	160.0	157.0	173.5	148.0	95.0	77.0	154.7	135.4
0600-0000	129.0	160.0	157.0	173.5	149.0	99.0	77.0	154.9	136.1
0000-0000	135.0	168.0	165.0	178.5	155.0	101.0	80.0	161.5	141.5

Vehicle Classification

```

MetroCount Traffic Executive
Class Speed Matrix

ClassMatrix-85 -- English (ENA)

Datasets:
Site: [porters bridge] porters bridge 1 km north meander valley road
Attribute:
Direction: 5 - South bound A>B, North bound B>A. Lane: 1
Survey Duration: 9:41 Thursday, 17 October 2024 => 11:56 Thursday, 24 October 2024,
Zone:
File: porters bridge 0 2024-10-24 1157.EC1 (Plus )
Identifier: A27MJ9S7 MC5900-X13 (c)MetroCount 09Nov16
Algorithm: Factory default axle (v5.08)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:
Filter time: 9:42 Thursday, 17 October 2024 => 11:56 Thursday, 24 October 2024 (7.09374)
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range: 10 - 160 km/h.
Direction: North, East, South, West (bound), P = North, Lane = 0-16
Separation: Headway > 0 sec, Span 0 - 100 metre
Name: Default Profile
Scheme: Vehicle classification (AustRoads94)
Units: Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile: Vehicles = 1021 / 1023 (99.80%)

Class Speed Matrix

ClassMatrix-85
Site: porters bridge.1.2SN
Description: porters bridge 1 km north meander valley road
Filter time: 9:42 Thursday, 17 October 2024 => 11:56 Thursday, 24 October 2024
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)
    
```

km/h	Class												Total	
	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT	TRT		
10-20	3	.	2	.	.	.	.	.	.	.	.	.	5	0.5%
20-30	15	.	1	.	.	.	.	.	.	.	.	.	16	1.6%
30-40	7	.	.	5	.	.	.	.	1	.	.	.	13	1.3%
40-50	15	1	2	1	.	.	.	.	1	.	.	.	20	2.0%
50-60	38	3	5	9	.	.	.	5	12	.	.	.	72	7.1%
60-70	86	5	9	22	.	1	2	2	35	3	1	.	166	16.3%
70-80	160	13	13	16	.	6	.	.	34	2	.	.	244	23.9%
80-90	210	7	15	1	.	.	3	.	8	4	.	.	248	24.3%
90-100	143	2	10	.	.	.	1	.	13	.	.	.	169	16.6%
100-110	39	1	3	.	.	1	.	.	.	.	.	.	44	4.3%
110-120	15	.	1	.	.	.	.	.	.	.	.	.	16	1.6%
120-130	3	.	1	.	.	.	.	.	.	.	.	.	4	0.4%
130-140	2	.	.	.	.	.	.	.	.	.	.	.	2	0.2%
140-150	1	.	.	.	.	.	.	.	.	.	.	.	1	0.1%
150-160	.	.	1	.	.	.	.	.	.	.	.	.	1	0.1%
<b>Total</b>	<b>737</b>	<b>32</b>	<b>63</b>	<b>54</b>	<b>0</b>	<b>8</b>	<b>6</b>	<b>7</b>	<b>104</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>1021</b>	
	72.2%	3.1%	6.2%	5.3%	0.0%	0.8%	0.6%	0.7%	10.2%	0.9%	0.1%	0.0%		



**ATTACHMENT 7. PBRQ - WEED AND PATHOGEN MANAGEMENT PLAN, AUGUST 2022**

# **PORTERS BRIDGE ROAD QUARRY, EXTON**

## **WEED AND PATHOGEN MANAGEMENT PLAN 4 AUGUST 2022**

Van Diemen Consulting Pty Ltd

PO Box 1

New Town, Tasmania

T: 0438 588 695 E: [rwbarnes73@gmail.com](mailto:rwbarnes73@gmail.com)

This document has been prepared in accordance with the scope of services agreed upon between Van Diemen Consulting (VDC) and the Client.

To the best of VDC's knowledge, the report presented herein represents the Client's intentions at the time of completing the document. However, the passage of time, manifestation of latent conditions or impacts of future events may result in changes to matters that are otherwise described in this document. In preparing this document VDC has relied upon data, surveys, analysis, designs, plans and other information provided by the client, and other individuals and organisations referenced herein. Except as otherwise stated in this document, VDC has not verified the accuracy or completeness of such data, surveys, analysis, designs, plans and other information.

No responsibility is accepted for use of any part of this document in any other context or for any other purpose by third parties.

This document does not purport to provide legal advice. Readers should engage professional legal advisers for this purpose.

#### Document Status

Revision	Author	Review	Date
1	R Barnes C McCoull	R Barnes, VDC Pty Ltd	4-8-2022
1	R Barnes C McCoull	D Tangney, Walters Contracting	7-8-2022
1	R Barnes C McCoull	EPA	
2			
2			

## Table of Contents

<b>DEFINITIONS AND ACRONYMS</b> .....	<b>5</b>
<b>PART A – PLANNING AND OBJECTIVES</b> .....	<b>6</b>
A.1 PURPOSE OF PLAN .....	6
A.2 PLANNING FRAMEWORK .....	6
A.2.1 Permit Conditions .....	6
A.2.2 Weed Management Act 1999.....	7
A.2.3 Weed Management Regulations 2000 .....	7
A.2.4 Statutory Weed Management Plans .....	7
A.3 PLAN OBJECTIVES.....	7
<b>PART B - BACKGROUND</b> .....	<b>9</b>
B.1 LOCATION OF QUARRY .....	9
B.2 AREA COVERED BY PLAN .....	9
B.3 QUARRY ACTIVITIES .....	9
B.4 WEEDS IN AND NEAR THE QUARRY AREA .....	12
B.4.1 Significant Weeds in the Mining Lease.....	12
B.4.2 Significant Weeds near the Mining Lease.....	15
B.4.3 Other Weeds in or near the Mining Lease.....	16
B.5 ROOT-ROT FUNGUS ( <i>PHYTOPHTHORA CINNAMOMI</i> ) .....	19
<b>PART C - PLAN IMPLEMENTATION</b> .....	<b>27</b>
C.1 ROLES AND RESPONSIBILITIES .....	27
C.1.1 Quarry Owner .....	27
C.1.2 Staff and Contractors.....	27
C.2 WEED SPRAYING PROGRAM.....	28
C.2.1 Process.....	28
C.2.2 Protected environmental values .....	28
C.3 HEAVY MACHINERY WASHDOWN .....	29
C.3.1 Site Selection .....	29
C.3.2 Washdown prescriptions .....	30
<b>PART D - MONITORING AND REVIEW</b> .....	<b>35</b>
D.1 CONTINUAL IMPROVEMENT .....	35
D.2 MONITORING .....	35
D.3 REVIEW OF WPMP .....	35
<b>PART E - REFERENCES</b> .....	<b>36</b>
<b>APPENDIX A</b> .....	<b>37</b>
‘GUIDELINE FOR SAFE AND EFFECTIVE HERBICIDE USE NEAR WATER’, DPIPWE.....	37

<b>APPENDIX B</b> .....	<b>38</b>	
TEMPLATE - WEED SPRAYING PROGRAM SPREADSHEET – PORTERS BRIDGE ROAD QUARRY, EXTON		38
<b>APPENDIX C</b> .....	<b>39</b>	
HYGIENE PROTOCOLS FOR VEHICLES AND HEAVY MACHINERY.....	39	
<b>APPENDIX D</b> .....	<b>40</b>	
WASHDOWN RECORD SHEETS.....	40	

**FIGURES**

- Figure 1**    Location of Porters Bridge Road Quarry
- Figure 2**    Access to Porters Bridge Road Quarry and Surrounding Roads
- Figure 3**    Mine Plan to Year 3
- Figure 4**    Mine Plan to Year 7.5
- Figure 5**    Mine Plan to Year 15
- Figure 6**    Vegetation communities (TASVEG 3.0) along the Porters Bridge Road Quarry access
- Figure 7**    Known (NVA) and observed threatened flora at the Porters Bridge Road Quarry
- Figure 8a**    Declared weeds (WMA 1999) (observed) in and around the Porters Bridge Road Quarry
- Figure 8b**    Environmental weeds (WMA 1999) (observed) in and around the Porters Bridge Road Quarry

## DEFINITIONS AND ACRONYMS

In this Weed and Pathogen Management Plan, the following definitions and acronyms apply:

Annual weeds	weed species that germinate from seed each year and live for one growing season. Summer annuals germinate in the spring and die back in the autumn. Winter annuals germinate in late summer or early autumn and die the following spring or summer.
Biennial weeds	weeds have a 2-year life cycle. They germinate, emerge, and usually form a rosette (radial cluster of leaves close to the ground, e.g. wild carrot) in the first year. The second year, the plant bolts (produces a flower stalk), flowers, sets seed, matures, then dies.
DNRE	Department of Natural Resources and Environment
EPA	Environment Protection Authority
Equipment	The set of tools needed to achieve a goal is "equipment". Equipment includes for example cranes, generators, ablutions block, site office, compressors etc.
Log book	the book located within each machine/equipment that is to be used to record, as a minimum, (i) the date of entry for the machine/equipment to the Quarry, and from where it was floated.
Machinery	a collection or group of machines.
Machines	an apparatus using mechanical power and having several parts, each with a definite function and together performing a task. Machines include bulldozers, diggers, trenchers, heavy-trucks (with or without trailers), excavators and other earth-moving motorised apparatus.
Perennial weeds	live 3 years or more. Some reproduce by seed, and some reproduce by creeping stems that can be either above-ground (stolons) or below-ground (rhizomes).
vehicle	a motorised thing used for transporting people or goods. This includes 4WD vehicles, light trucks and passenger vans and cars.
Weed	any plant that requires some form of action to reduce its effect on the economy, the environment, human health and amenity. This is further refined to be a plant species that does or has the capacity to invade the habitat of significant flora species such that these species are displaced.
WPMP	Weed and Pathogen Management Plan

## **PART A – PLANNING AND OBJECTIVES**

### **A.1 PURPOSE OF PLAN**

This Weed and Pathogen Management Plan (WPMP) has been developed to manage and control significant and environmental/pasture weeds associated with the immediate working areas and access for Porters Bridge Road Quarry, Exton.

It outlines the objectives of weed and disease management and those measures which will be applied to manage the control of existing weed occurrences as well as respond to new weed occurrences if they arise.

The following documents have been specifically consulted to prepare the WPMP –

- *Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania* prepared by DPIPW (2015); and
- Tasmanian Quarry Code of Practice, Environment Protection Authority (2017).

For the purposes of the WPMP, a weed is any plant that requires some form of action to reduce its effect on the economy, the environment, human health, and amenity. Some weeds have been listed for priority management or in legislation. Weeds typically produce large numbers of seeds, assisting their spread. They are often capable of surviving and reproducing in disturbed environments and are commonly the first species to colonise and dominate in these conditions.

### **A.2 PLANNING FRAMEWORK**

#### **A.2.1 Permit Conditions**

This WPMP complies with the permit conditions OP3 and 4 (Permit Part B – issued by the Environment Protection Authority) issued by the Planning Authority for the activity –

#### **OP3 Machinery washdown**

Prior to entering The Land, machinery must be washed in accordance with the Weed and Disease Guidelines, or any subsequent revisions of that document.

#### **OP4 Weed Management Plan**

- 1 Within 3 months of the date on which these conditions take effect, or by a date otherwise specified in writing by the Director, a Weed & Disease Management Plan must be submitted to the Director for approval. This requirement will be deemed to be satisfied only when the Director indicates in writing that the submitted document adequately addresses the requirements of this condition to his or her satisfaction.
- 2 The plan must be consistent with the Weed and Disease Guidelines, or any subsequent revisions of that document.
- 3 The person responsible must implement and act in accordance with the approved plan.
- 4 In the event that the Director, by notice in writing to the person responsible, either approves a minor variation to the approved plan or approves a new plan in substitution for the plan originally approved, the person responsible must implement and act in accordance with the varied plan or the new plan, as the case may be.

### **A.2.2 Weed Management Act 1999**

The objectives of the Act further the objectives of the Resource Management and Planning System (RMPS) of Tasmania. In particular, the Act provides for the control and eradication of weeds having regard to the need to -

- a) minimise negative effects of weeds on the sustainability of Tasmania's productive capacity and natural ecosystems; and
- b) promote a strategic and sustainable approach to weed management; and
- c) encourage community involvement in weed management; and
- d) promote the sharing of responsibility for weed management between government, natural resource managers, the community and industry in Tasmania.

### **A.2.3 Weed Management Regulations 2000**

The Regulations are the statutory rules that underpin the Act itself. They detail the requirements and measures referred to in the Act, including:

- a) Tolerance Level Requirements (in relation to seed contamination levels within grain imported into the State);
- b) Livestock Importation Prescribed Measures; and
- c) Infringement Notices and Penalties.

### **A.2.4 Statutory Weed Management Plans**

Once a species has been listed as a Declared Weed a Weed Management Plan (WMP) is developed by the State Government for it.

A WMP should include the:

- name of the target weed (including details of how to identify the species and how it is spread through the environment);
- objectives and methods of the Plan;
- comments on the effect on the environment if strategy is implemented;
- cost of strategy and proposed funding method to implement;
- monitoring /Evaluation methods;
- time period within which the Plan operates and milestones for review; and the
- region or area of operation for the Plan.

## **A.3 PLAN OBJECTIVES**

The objectives of this Weed and Pathogen Management Plan are to:

- Provide a mechanism to record and map the occurrence of (i) Declared Weeds and (ii) significant non-Declared Weeds within the quarry area;
- Identify, document and implement management measures within the quarry to –
  - minimise the risk of spreading propagules of (i) Declared Weeds and (ii) significant non-Declared weeds within the quarry;
  - control and/or eradicate (i) Declared Weeds and (ii) significant non-Declared weeds within the quarry where practicable; and
  - ensure that rehabilitation works are not compromised by the occurrence or growth of (i) Declared Weeds and (ii) significant non-Declared weeds.
- Establish a process to monitor the results of on-ground actions and a mechanism to review these actions as required; and
- Establish a process of review for the Plan, including its objectives and implementation.

## **PART B - BACKGROUND**

### **B.1 LOCATION OF QUARRY**

The address for the activity is 190 Porters Bridge Rd Exton TAS 730. Access is from Porters Bridge Road with road connections to the Bass Highway via Meander Valley Road (**Figures 1 and 2**).

### **B.2 AREA COVERED BY PLAN**

This WPMP applies to the Mining Lease depicted in **Figures 1 and 2**.

### **B.3 QUARRY ACTIVITIES**

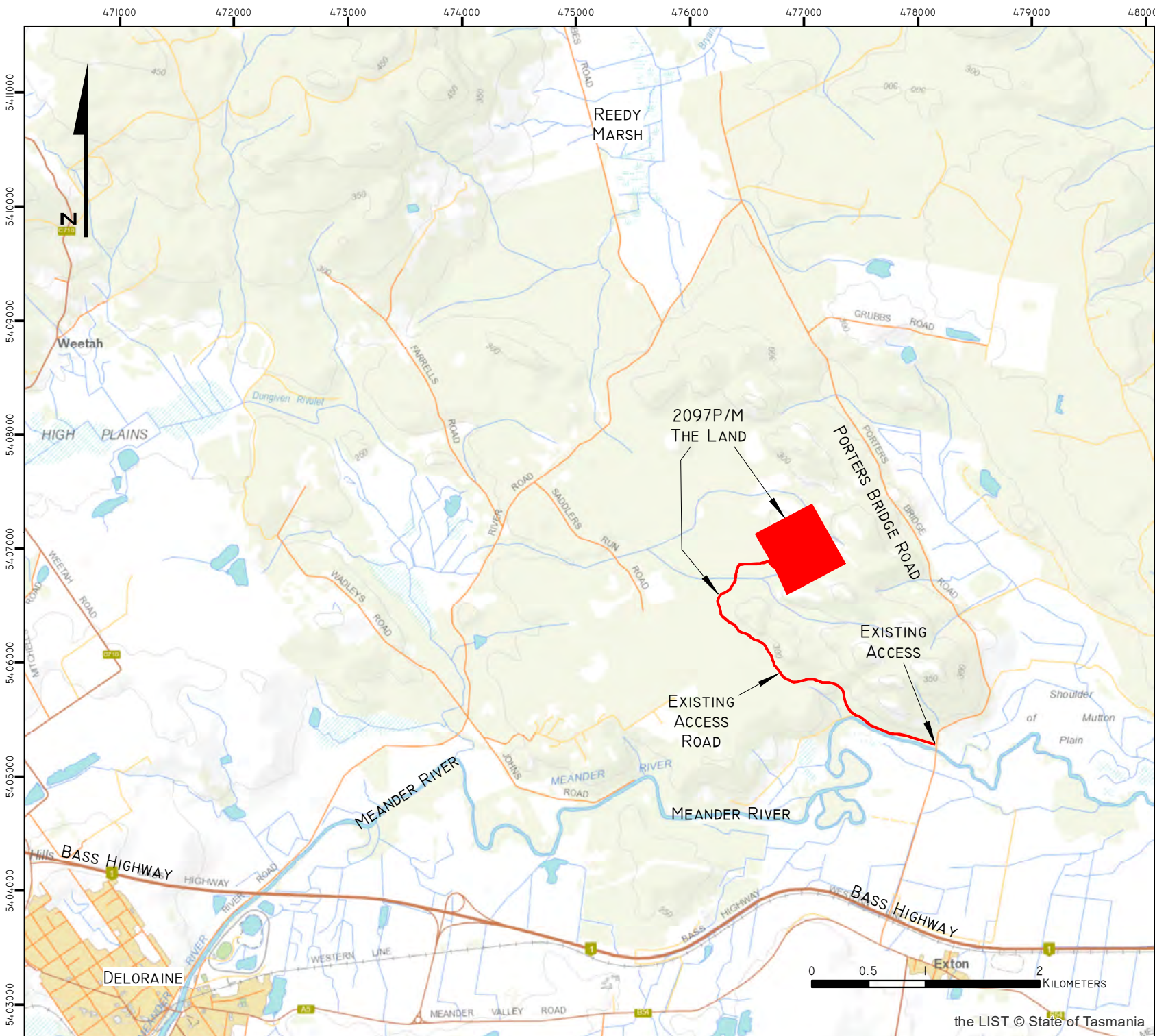
Extraction and processing would be undertaken in the following manner:

- Removal/harvesting of vegetation
- Clearing over burden with an excavator or dozer
- Drill and blast based on a pattern designed by blast contractor (1-3 blasts per annum)
- Crush material using crusher (jaw)
- Screen material (mechanised/vibratory)
- Stockpile material
- Loading into trucks with a wheel loader

Hard rock will be liberated by blasting. Drilling and blasting will be carried out by qualified contractors in consultation with the proponent to ensure the following:

- drilling will be carried out as specified by a blast contractor – the design of the charge pattern and the charge per mass/delay will be determined by the blast contractor in consultation with the quarry operator;
- notifications will be provided to relevant parties in advance of blasting activities;
- blasting activities will be safe and meet all workplace health and safety requirements; and
- blasting will be adequate to achieve rock fragmentation for extraction by excavator and crushing.

The blast fractured rock will be removed using an excavator and loaded into the hopper of a crusher (impact and/or jaw, and possibly a cone crusher). The crushed and screened (using a vibrating screen adjacent to the crushing unit) material will be stockpiled. After enough material has been crushed and screened, haulage will occur on a need basis with trucks loaded using a front loader with scales fitted (standard practice for most quarries).



# PORTERS BRIDGE ROAD QUARRY

## WEED AND PATHOGEN MANAGEMENT PLAN

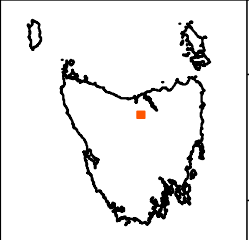
FIGURE I: LOCATION OF PORTERS BRIDGE ROAD QUARRY

TASMAP:  
DELORAINE  
4640

LGA:  
MEANDER  
VALLEY

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH

**an Diemen CONSULTING**  
PO Box 1 NEW TOWN TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 6 AUG 2022

476000

477000

478000



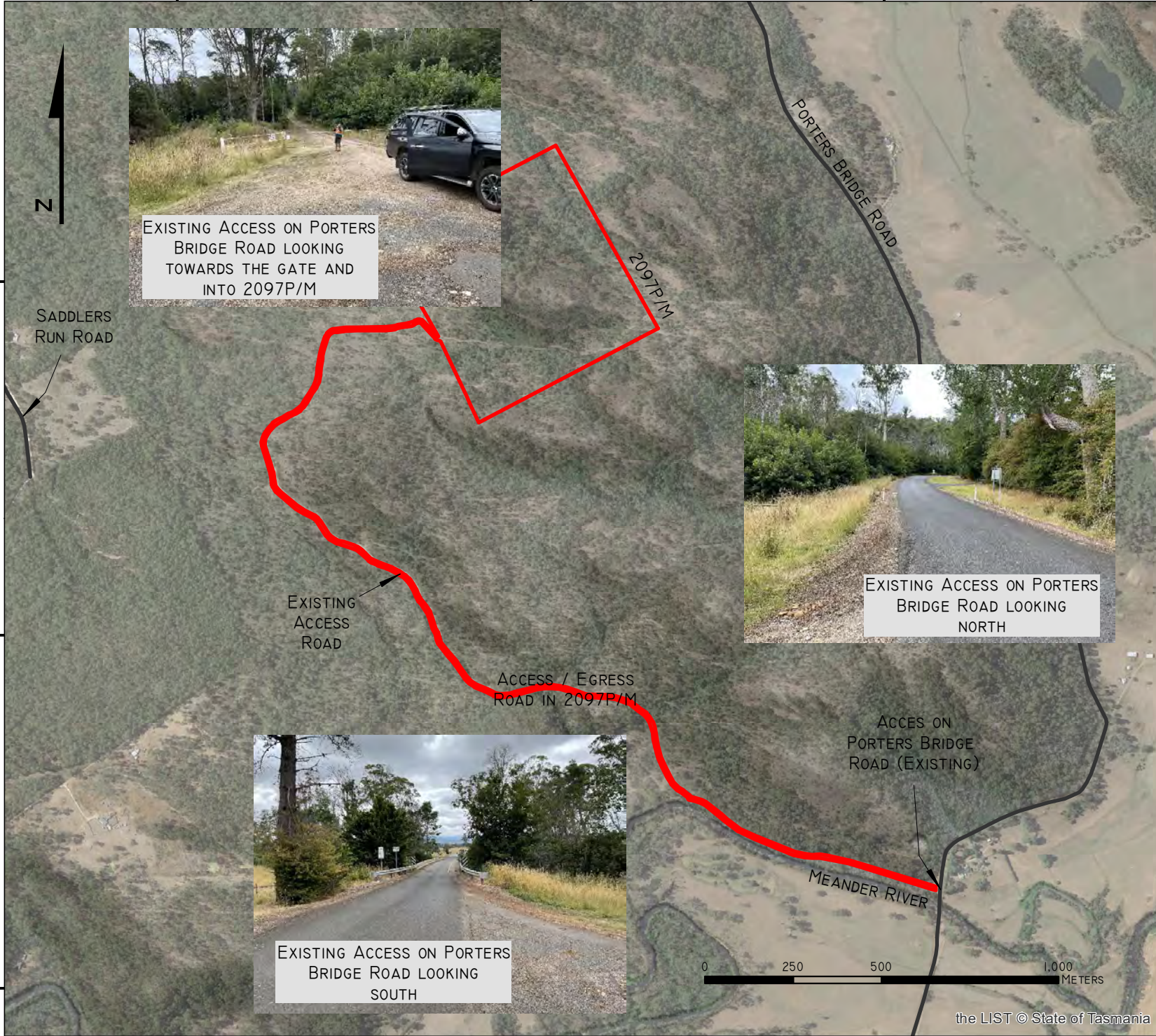
EXISTING ACCESS ON PORTERS BRIDGE ROAD LOOKING TOWARDS THE GATE AND INTO 2097P/M



EXISTING ACCESS ON PORTERS BRIDGE ROAD LOOKING NORTH



EXISTING ACCESS ON PORTERS BRIDGE ROAD LOOKING SOUTH



# PORTERS BRIDGE ROAD QUARRY

## WEED AND PATHOGEN MANAGEMENT PLAN

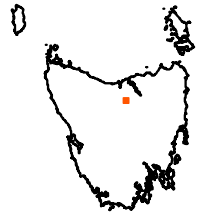
FIGURE 2: ACCESS TO PORTERS BRIDGE ROAD QUARRY AND SURROUNDING ROADS

TASMAP:  
DELORAINE  
4640

LGA:  
MEANDER  
VALLEY

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH

**an Diemen CONSULTING**  
PO Box 1 NEW TOWN TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 6 AUG 2022

## B.4 WEEDS IN AND NEAR THE QUARRY AREA

### B.4.1 Significant Weeds in the Mining Lease

Several **significant weed species** (those listed as Declared Weeds on the *Weed Management Act 1999*) has been recorded on the Mining Lease during surveys.

The location of observed weeds are presented in **Figures 8A and 8B**.

A description of this weed species is provided below.

Declared Weed – Very prickly leaves in rosette (left image), spreads by underground rhizome, purple daisy flowers (right image) followed by clusters of woolly seeds

#### Californian Thistle

*Cirsium arvense*



Declared weed – Ragwort lives for two years if left undisturbed. Most seed germination occurs in autumn, and the plant forms a rosette (in its first year a cluster of leaves close to the ground), and in its second year an erect plant up to 1.5 m in height with convoluted dark green leaves and bright yellow flowers. The flowers are formed at the end of small branchlets resulting in a characteristic flat-topped flower arrangement.

#### Ragwort

*Senecio jacobea*



#### Spanish heath

Declared weed – soft green needle-shaped leaves on wiry woody stems (right image), with small bell-shaped white flowers that when mature become brown

*Erica lusitanica*

and shed hundreds of seeds (right image). Can be confused with some Tasmanian native heath species, such as common heath and ants delight.



**Confusing native species:**

Ants delight (left) and Common heath (right)



Declared Weed – scrambling woody vine – thicket that has compound dark green leaves with thorns and white rose-like flowers (left image), followed by clusters of blackberries (right image).

**blackberry**

*Rubus fruticosus*  
agg.



A mainly leafless thistle with light green stems and sharp prickles (left image). The daisy flowers are bright pink (right image) at the top of the stems.

**Slender thistle**

*Carduus pycnocephalus*



Declared Weed – Horehound has square stems (often woody near the base) densely covered with white hairs with leaves opposite each other. Leaves are hairy above, very hairy to woolly underneath, rounded with a crinkled surface and sharply aromatic when crushed. It has small white flowers in dense clusters above the nodes (where the leaves join the stem) around the upper sections of the stems. Clusters of flowers dry to form brown burrs with small hooked spines. Each burr contains up to 4 small (1-2 mm long) spear-shaped seeds.

**Horehound**

*Marrubium vulgare*



**gorse**

*Ulex europaeus*

Declared Weed – Shrub with very prickly green stems (left image), bright yellow pea flowers (right image)



Declared weed – a mainly leafless shrub with dark green strappy stems. Flowers are bright yellow and pea-like (left image), while the fruits are dark brown pea-like pods (right image).

**Scotch broom**  
*Cytisus scoparius*



#### B.4.2 Significant Weeds near the Mining Lease

Several other **significant weed species** (those listed as Declared Weeds on the *Weed Management Act 1999*) have been recorded near the Land and/or surrounding landscape. The images and text below are provided to aid the identification of significant weed species during surveys of the Mining Lease – early detection of these weeds in the Land may enable them to be eradicated before they become abundant.

**Fennel**  
*Foeniculum vulgare*

Declared weed – light green feathery soft leaves (left image) with a liquorice smell, and tall flower stems with small yellow flowers (right image).



### B.4.3 Other Weeds in or near the Mining Lease

There are annual, biennial and perennial weeds present (eg spear thistle, hawkbit, dandelion, etc) throughout the Land with most being of an agricultural origin – the current land use of pasture means that weeds are more likely to be present or to colonise the area.

Some weeds (pasture and environmental) known to occur in the area around the Land are documented below to aid their identification during weed surveys of the Land.

Pasture weed – green prickly-hairy leaves (left image), tall leafy flower stem with bright purple flowers (right image). Dead stems usually persist standing up in their growing location for many years after shedding seeds.

#### **Spear Thistle**

*Cirsium vulgare*



#### **Variiegated thistle**

*Silybum marianum*

Environmental weed – smooth almost succulent leaves with variegated green-yellow colouration and sharp prickly edges (left image). Flowers deep purple surrounded by sharp prickles (right image).



**Sycamore**

*Acer  
pseudoplatanus*

Environmental weed – A deciduous tree with smooth, grey bark turning reddish, and maple leaves. Flowers small and greenish, followed by wing shaped seeds.



**Hemlock**

*Conium maculatum*

Environmental weed – Hemlock is an upright herb with hollow stems, fern-like leaves and white flowers. It is highly toxic to people and animals.



**Cut-leaved  
mignonette**

*Reseda luteola*

Environmental weed – green shiny leaves in rosette and up flower stem (left image) with a tall flower stem with small yellow-green flowers (right image). Dead stems usually persist standing up in their growing location for many years after shedding seeds.



**Great Mullein**

*Verbascum thapsus*

Environmental weed – grey soft leaves in rosette (left image), tall flower stem with bright yellow flowers (right image). Dead stems usually persist standing up in their growing location for many years after shedding seeds.



**Twiggy Mullein**

*Verbascum  
virgatum*

Environmental weed – green soft leaves in rosette (left image), tall flower stem with bright yellow flowers (right image). Dead stems usually persist standing up in their growing location for many years after shedding seeds.



### **B.5 ROOT-ROT FUNGUS (*PHYTOPHTHORA CINNAMOMI*)**

Phytophthora dieback is an introduced pathogenic water mould. Water moulds were once included in the fungi kingdom and, as a result, *Phytophthora* dieback has been called a fungus in earlier interpretation literature. Its scientific name is *Phytophthora cinnamomi*, but it is also known by the names root rot, cinnamon fungus, jarrah dieback (Western Australia) and wildflower dieback.

It is one of the worst invasive plant pathogens in the world, and in Australia is recognised as a Key Threatening Process that severely degrades susceptible vegetation communities and kills susceptible plants. It is believed to have been introduced to Tasmania during early European settlement and is now well established in many areas of moorland, heathland, and dry Eucalypt forest in Tasmania.

Some threatened plant species in Tasmania are known to be declining as a result of *Phytophthora* dieback and more threatened species could also be affected should the fungus be introduced to their populations. People can transport the pathogen into new areas on dirt adhering to vehicles, items they are carrying or footwear.

#### Biology and Identification

PC belongs to a group of micro-organisms known as water moulds – these have a motile or animal-like stage which fungi do not. Water moulds require moist conditions to thrive. Its food source is the root and basal stem tissue of living plants where PC grows as microscopic sized filaments (mycelium) in susceptible host plants. It consumes the host plant causing lesions (areas that appear rotten) which weaken or kill the plants by reducing or stopping the movement of water and nutrients within the plant. Infected plants often have dead new growth, or wilting tips of new foliage.

PC may reproduce through production of microscopic spores. Two types of spores, zoospores and chlamydozoospores, are most likely to be formed in Tasmanian habitats:

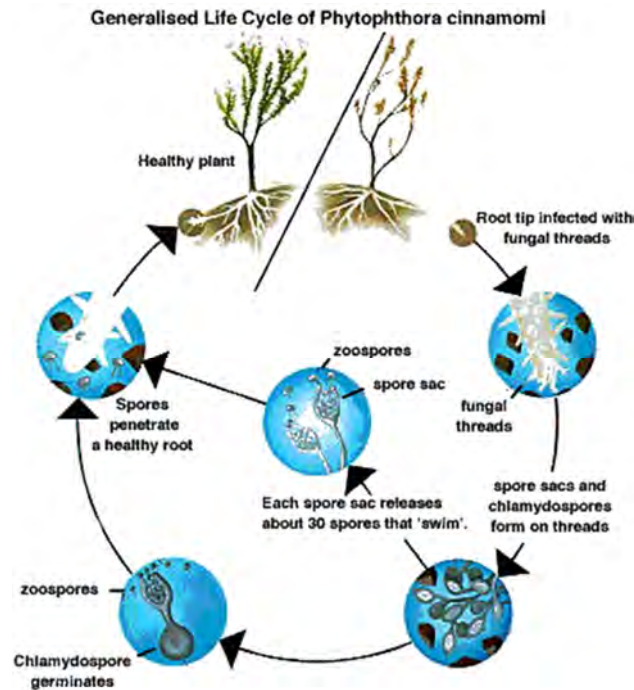
1. Zoospores are released in very large numbers under moist soil conditions. They have flagella (tails), which are used to propel the spore through the soil water towards other plant roots. The movement of water down slope, through or over the soil, can also passively disperse these spores over

considerable distances. Zoospores are attracted by the root secretions of some plants. They then penetrate the root, germinate and the cycle repeats itself.

2. Chlamydozoospores are larger, long-lived spores with thick protective walls. These spores can withstand dry conditions for months, germinating when warm moist soil conditions re-occur. They are one of the mechanisms the fungus has developed to help it survive adverse conditions. These spores may survive being transported long distances in dry soil.

PC may also spread through mycelial growth along roots and spread between closely connecting plant roots within the soil.

There are many diseases which occur in native vegetation and the majority of these are natural events which play an important ecological role. The patterns of disease expression in time and space as well as the species affected, and dieback symptoms need to be assessed to identify potential PC infestations. Conclusive identification of PC as the cause of disease requires analysis of soil or root samples in a laboratory, but soil/root samples are pointless to have assessed if there are no plant host species present.



Source: DPIPWE.

Good indicators for recent or active PC are:

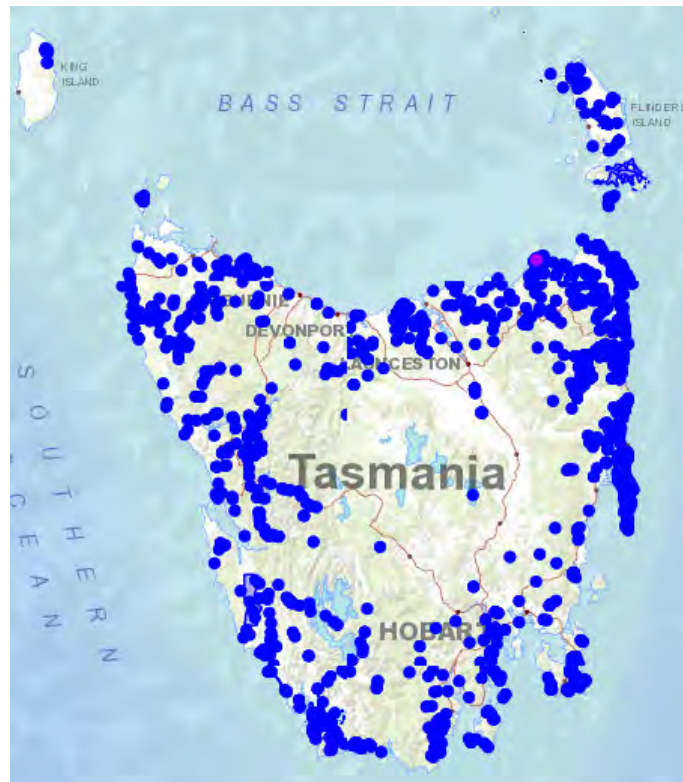
- Death or disease in known susceptible species (note: not all individual plants will be attacked simultaneously in a diseased area),
- Diseased plants show discolouration of the foliage (especially new foliage), most commonly reds and yellows,
- Known resistant species remain healthy,

- There is a temporal sequence of disease across a site (e.g., the oldest death in the centre or towards the uphill end of infections on slopes), and
- Sharp disease fronts or boundaries between healthy and diseased vegetation may be present.

In the absence of plant host species (especially resistant species) it is likely that PC can disappear or become inactive at a site until a suitable host plant recolonises the PC affected area.

#### Distribution and impact

PC requires warm moist soils if it is to reproduce and spread which its distribution in Tasmania to areas that are generally below about 700 m in altitude and prevents it affecting low rainfall areas such as the Tasmanian midlands. The figure below provides an indication of the occurrence of PC in Tasmania (NVA held data). Cold soil conditions can also occur at altitudes below 700 metres where a dense forest canopy shades the ground. For this reason, wet forest and rainforest communities are not susceptible to PC in their undisturbed state.



The vegetation types most affected in Tasmania are heathland, moorland, dry sclerophyll forest. These vegetation types occur within the climatically susceptible areas and contain susceptible plant species. Moorland and heathland communities are perhaps the most severely affected as many of the shrub species present in these communities are susceptible to *P. cinnamomi*.

As a consequence of this management environment, the approach taken has been to focus on protecting plant species and communities that are most at risk, where goals are considered to be practicable and achievable in the long term. It is accepted that the disease epidemic will inevitably run its course in many areas through wildlife and water mediated spread. Preventing infestation of disease-free areas is the primary goal for managing biodiversity assets. The assets identified for management are threatened species that are

susceptible to disease, large disease-free areas of susceptible native vegetation and highly susceptible communities.

The report *Conservation of Tasmanian Plant Species & Communities Threatened by Phytophthora cinnamomi* (Schahinger *et al.* 2003) identifies all the priority areas for management of the biodiversity assets at risk in Tasmania. These sites capture the large disease-free areas and biographically representative sites for the highly susceptible communities and at least three populations where possible for each PC susceptible threatened species.

Prescriptions that apply to prevent the introduction of Phytophthora root rot to uninfected areas include:

- managing developments and works that increase the risk of introduction e.g., roads and walking tracks,
- track rerouting, track hardening and drainage management, one-way tracks and access management sourcing materials to be used in management works from PC-free stock,
- sequencing and timing operations to reduce risk of introduction, and
- hygiene prescriptions such as washdown requirements.

### **Previous Information**

The Natural Values Atlas holds data (observed symptoms and confirmed locations) which indicates PC is very sparse in the Exton region. Porters Bridge Road Quarry is not within a ***P. cinnamomi* Management Area**<sup>1</sup> hence, the recommendations and management requirements stipulated in Schahinger *et al.* (2003) are not relevant to the Quarry or the receiving environment.

### **Vegetation**

There is native forest vegetation adjacent to the pit and working areas and along the access road into the Quarry. The vegetation is tall eucalypt dominated forest with a grassy, shrubby, or wet forest understorey which are generally not highly susceptible to PC in an undisturbed state<sup>2</sup>. Very few of the shrub species present are susceptible to PC, with the primary species like *Banksia marginata*, *Lomatia tinctoria* and *Hibbertia* species being absent. No symptoms of PC were observed in any of the species present in the adjacent and surrounding vegetation.

The pit has been designed with intermittent bunds to direct surface water external to the pit away from the quarry (**Figures 3 to 5**).

The vegetation in the area is not particularly conducive to the establishment and proliferation of PC, nor is there any evidence that PC is present (currently active) or has been present (i.e., a historical infection). No species were observed with any potential signs of infection; hence soil/plant root material samples were not collected.

---

<sup>1</sup> Report on Conservation of Tasmanian Plant Species & Communities Threatened by *Phytophthora cinnamomi*. Copyright Government of Tasmania 2003. Written by Schahinger, R., Rudman T., and Wardlaw, T. J. (DPIWE). ISSN 1441-0680.

<sup>2</sup> Flora Technical Note No. 8: Management of *Phytophthora cinnamomi* in production forest. Version 2.4 August 2019

### ***Soil and Water***

The pit generally will have bunds (made from rock and/or topsoil that have become vegetated with pasture grasses and some native trees) to direct surface water external to the pit away from the Quarry. Some areas do not need bunds because the occurrence of the quarry at the top of a hill naturally drains surface water flows away from the pit (e.g., the slope to the north drains water naturally away from the pit). Water that falls from natural rainfall external to the pit and that associated with surface drainage are excluded from the pit. Hence, any PC potentially contaminated water is prevented from entering the pit. Water from natural rainfall that lands in the pit collects in the base of the void and is then pumped out to discharge ponds.

The crushing/screening pad is to be a hardstand surface without any soil present – it is a non-susceptible and non-host PC environment. It is very unlikely that PC would be introduced to the pit, or crushing/screening pad, from surface water flows given extraneous water sources are mainly kept away from the pit and crushing/screening pad.

### ***Aggregate generating processes***

Rudman (2005) notes that crushed rock products from quarries are considered free of PC provided they are not contaminated with topsoil or gravel (in situ gravels). The Quarry accesses a dolerite bedrock to produce aggregate by crushing and screening blast liberated material. Trucks collect aggregate from the crushing/screening pad rather than enter the pit itself.

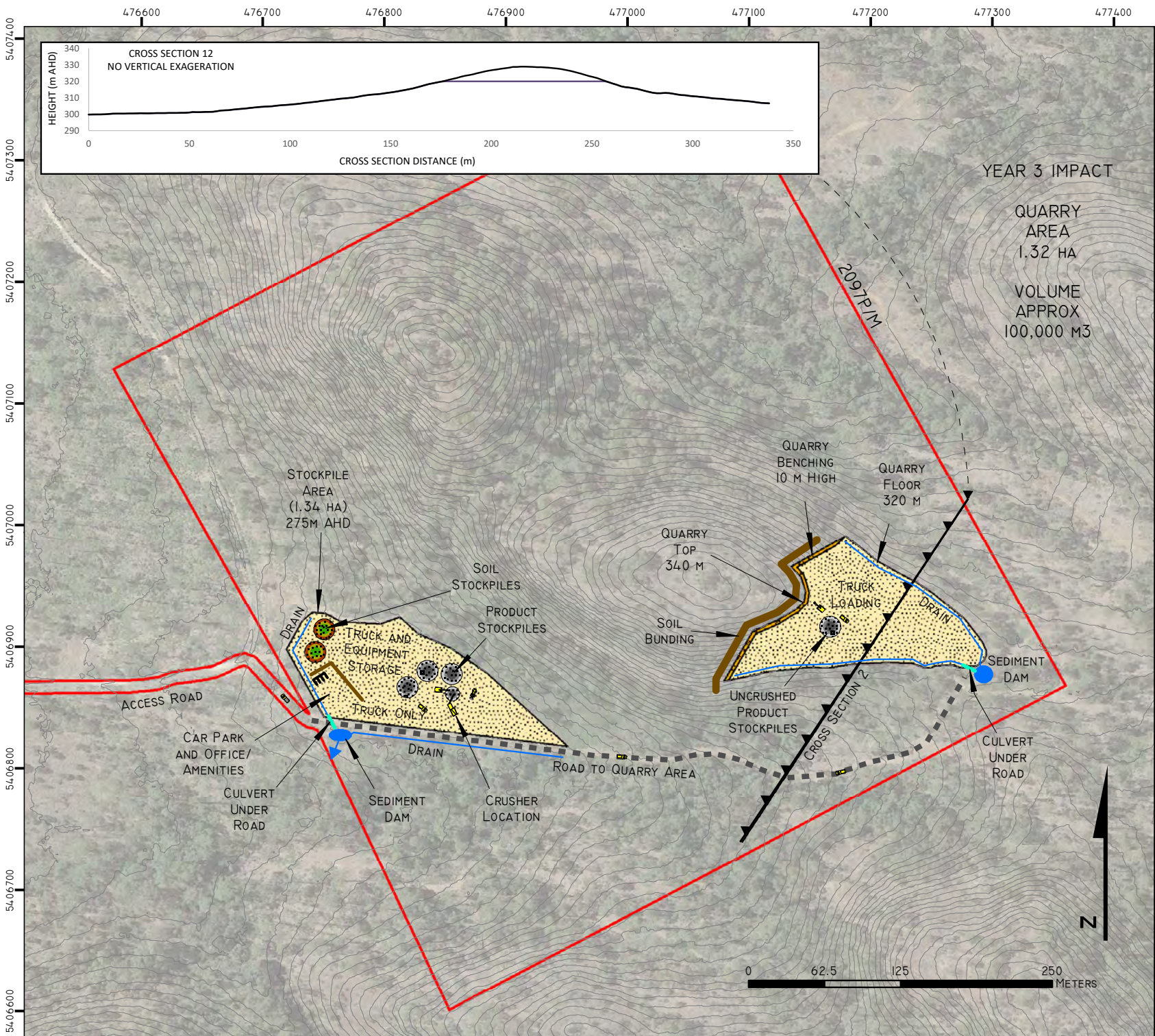
The crushing/screening pad is a hardstand surface, as too is the road network that accesses the Quarry from Porters Bridge Road – hard road surfaces limit the risk of mud collecting on trucks and also provides opportunity for any clods of mud to fall from the trucks which may have been collected at the drop-off point. If trucks do become dirty, they are to be washed prior to re-entering the crushing/screening pad where they collect their next load of material. Equipment such as blasting equipment is brought to the site in a clean state.

It is very unlikely that PC would be introduced to the pit, or crushing/screening pad, from vehicles and machinery.

### ***Conclusion***

The risk assessment conducted indicates that the potential for PC to be present and/or active at the Porters Bridge Road Quarry is negligible, and when considering the general paucity or complete lack of host and susceptible plant species in the vicinity of the quarry, the likelihood reduces further to ‘practically nil’.

No specific recommendations are made for the management of PC because Quarry management measures such as drainage control to the pit and crushing/screening pad, and vehicle/hygiene measures, are adequate to keep the risk to ‘practically nil’ levels.



# PORTERS BRIDGE ROAD QUARRY

## WEED AND PATHOGEN MANAGEMENT PLAN

FIGURE 3: MINE PLAN TO YEAR 3

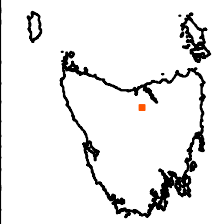
TASMAP:  
DELORAINÉ  
4640

LGA:  
MEANDER VALLEY

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH



**an Diemen CONSULTING**  
PO Box 1 NEW TOWN TAS 7008

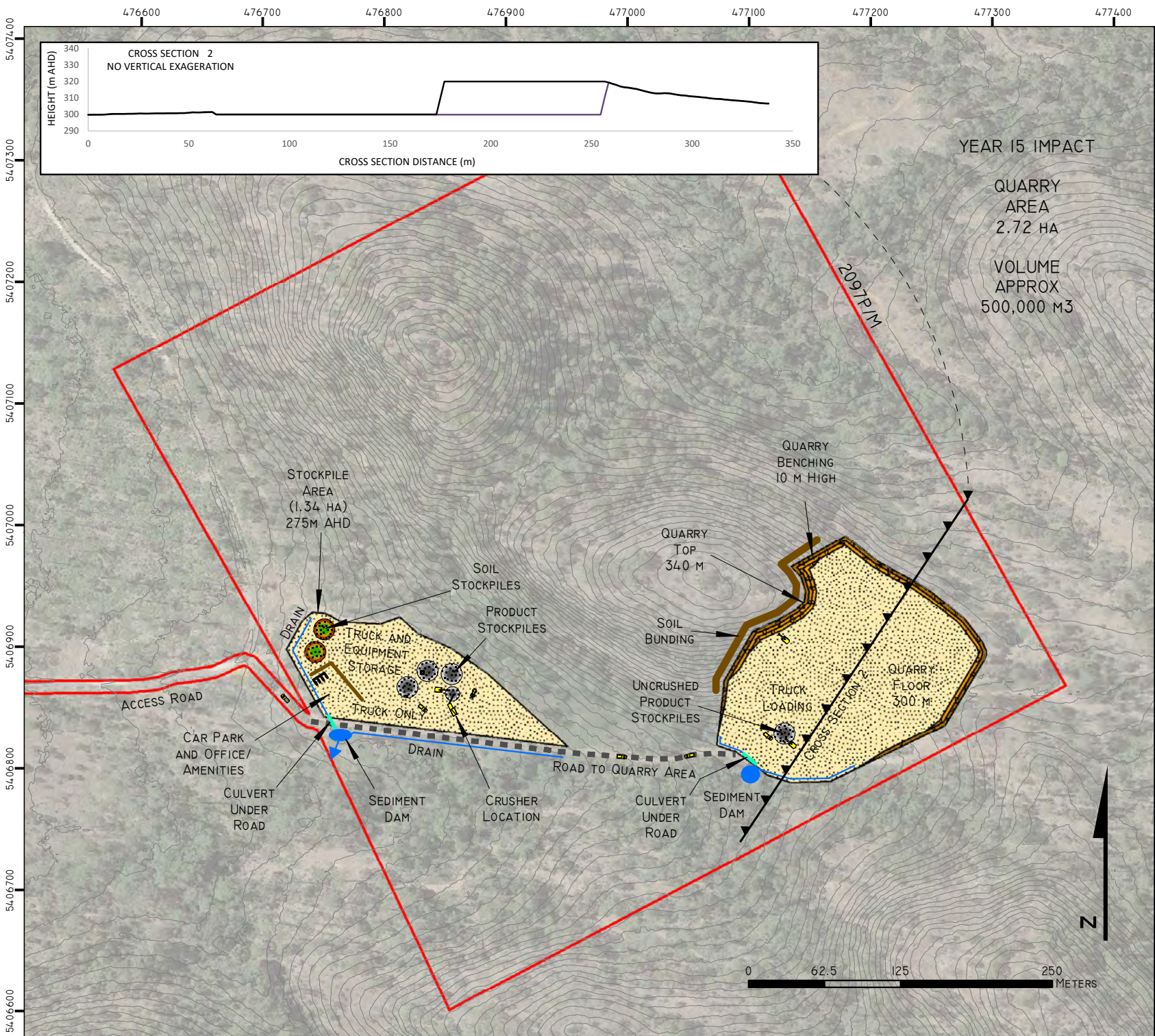


DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 6 AUG 2022





# PORTERS BRIDGE ROAD QUARRY

## WEED AND PATHOGEN MANAGEMENT PLAN

FIGURE 5: MINE PLAN TO YEAR 15

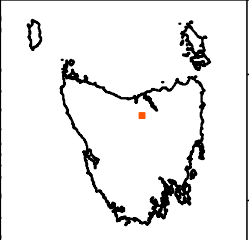
TASMAP:  
DELORAINÉ  
4640

LGA:  
MEANDER VALLEY

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH



**an Diemen CONSULTING**  
PO Box 1 NEW TOWN TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 6 AUG 2022

## **PART C - PLAN IMPLEMENTATION**

### **C.1 ROLES AND RESPONSIBILITIES**

#### **C.1.1 Quarry Owner**

The contact details for the Quarry Owner are –

<b>Name</b>	Walters Contracting Pty Ltd
<b>Registered address</b>	11 East Goderich Street Deloraine TAS 7304
<b>Postal address</b>	PO Box 257 Deloraine TAS 7304
<b>ACN Number</b>	131 840 652
<b>Contact person's details</b>	Mr Doug Tangney Project Manager, Walters Contracting Pty Ltd 03 6362 3782, 0458 710 098 <a href="mailto:admin@walterscontracting.net">admin@walterscontracting.net</a> <a href="mailto:doug@walterscontracting.net">doug@walterscontracting.net</a>

The Quarry Operator is responsible for ensuring that:

- staff and contractors are briefed on the requirements of the WPMP and its importance to the overall success of mine operation;
- the WPMP is applied, and implementation monitored through regular assessments of the Land and liaison with staff and contractors; and
- variations to the WPMP are developed and approved prior to their implementation.

#### **C.1.2 Staff and Contractors**

All staff and contractors that work within the mine are responsible for:

- applying weed hygiene measures for which they have received training;
- reporting breaches of the WPMP to the Quarry Owner as soon as practical, providing written details of the breach, and any measures that were immediately taken to reduce the likelihood of any environmental harm; and
- reporting new occurrences of weeds to the Quarry Owner within a reasonable timeframe of detection.

## C.2 WEED SPRAYING PROGRAM

The Quarry Owner or their nominated qualified weed spraying contractor/employee will implement a Weed Spraying Program (WSP).

### C.2.1 Process

The WSP will be reviewed each year and updated as new information about the occurrence of weeds within the Mining Lease become available.

The Weed Spraying Program will form part of this WPMP and carry with it the same responsibilities of implementation outlined in 'Role and responsibilities'.

The Plan each year will take the form of a Works Plan which will comprise the following –

1. A **map** showing the areas where weeds occur, what species they are and a works area number (to reference to the associated spreadsheet); and
2. A **spreadsheet** similar to that contained in Appendix B which will identify the works area, weed of concern and the management of that weed or group of weeds.

The spreadsheet will be updated electronically with a new worksheet for each Work Plan, thus maintaining a record of the works recorded and completed. The printed version of the Works Plan once implemented will be signed by the officer responsible for the works and filed at the quarry office for future reference.

The weed spraying program will be in accordance with the Rivercare 'Guideline for Safe and Effective Herbicide Use near Water' (Appendix A).

The Plan commences immediately with the first WSP scheduled for September - October 2022 when growing and weather conditions are suitable for weed spraying/control works.

### C.2.2 Protected environmental values

There are at the Quarry and the access into the Quarry natural values that are protected by State legislation and need to be considered when implementing the weed spraying program.

The access road has along it in several section threatened forest vegetation types – see **Figure 6**. The spraying of weeds in the sections of threatened forest should be localised to the weed plants themselves, rather than broad spraying. Spray drift should also be avoided by being careful to select the appropriate weather conditions to conduct the spraying.

The rare species curved riceflower (*Pimelea curviflora* var. *gracilis*) occurs in locations in the Quarry and the access road (See **Figure 7**). The species is protected by the Threatened Species protection Act 1995 and unless authorised by a permit granted by DNRE cannot be taken or disturbed, including the spraying of plants with herbicide.



### **C.3 HEAVY MACHINERY WASHDOWN**

The highest risk of transporting propagules is from heavy machinery, such as excavators, as these have the ability to carry large clods of dirt and mud in which seed propagules can be lodged. Transport trucks pose little risk to the transportation of weed propagules if they remain on the hard surface of the roads (even if they are unsealed) and loading area **and** that these areas are managed to exclude weeds.

**Wherever possible machinery will be brought into the Quarry in a clean condition; free of weed propagules, clods of dirt and vegetative matter.**

The vehicle washdown guidelines in Appendix C will be applied with vehicle and machinery washdown records kept using the sheets in Appendix D or similar.

#### **C.3.1 Site Selection**

The exact location of any required washdown site in the Quarry should be decided by the Quarry Owner, or their supervisor, on the following criteria:

- Ensure run-off does not directly enter a watercourse or waterbody, a 30m buffer from any waterway or waterbody is desirable;
- Select a mud-free location (e.g., well grassed, gravel) which is gently sloped to drain effluent away from the washdown area;
- Allow adequate space to safely move tracked vehicles and allow safe vehicle access around the heavy machinery; and
- Pay particular attention to potential hazards near or at the washdown site (e.g., overhead powerlines, powerpoles and fences).

If there will be large quantities of effluent or there is a risk of extensive run-off, the washdown area should be bunded and a sump constructed to safely dispose of the effluent. Take particular care where the effluent is likely to be contaminated with oil or fuel.

### C.3.2 Washdown prescriptions

For each of the washdown sites the following prescriptions will be applied: Note: Do NOT apply water to vehicles or equipment that may be damaged by water.

1. Locate washdown site as close as possible to the source of the materials being removed, and prepare the surface or construct bunding as required.
2. Safely park the vehicle free of any hazards (e.g. electrical), ensure the engine is off and the vehicle is immobilised.
3. Look over the vehicle, inside and out, for where dirt, plant material including seeds are lodged. Pay attention to the underside of the vehicle, radiators, spare tyres, foot wells and bumper bars.
4. Remove any guards, covers or plates if required, being careful of any parts that may cause injury.
5. Knock off large clods of mud, use a crow bar if required and sweep out the cabin.
6. Brush off dried plant material like weed seeds and chaff in radiators and other small spaces where this material lodges.
7. Clean down with a high pressure hose (using potable drinking water) and stiff brush/crowbar.
8. Start with the underside of the vehicle, wheel arches, wheels (including spare). Next do the sides, radiator, tray, bumper bars etc and finally upper body.
9. Clean associated implements, e.g. buckets.
10. Check there is no loose soil or plant material that could be readily dislodged or removed.
11. Wash effluent away from the machinery; do not drive through wash effluent.

A **Machine Log Book** for each machine/equipment is to be in place and maintained for the life of the Quarry.

The use of the Log Book system will be included in the Quarry staff induction process.

The Log Book is to be used for recording, as a minimum, for machinery not brought to the Quarry in a clean condition the date of entry for the machine/equipment to the Quarry, and from where it has been floated.

476000

477000

478000

# PORTERS BRIDGE ROAD QUARRY

## WEED AND PATHOGEN MANAGEMENT PLAN

### FIGURE 6: VEGETATION COMMUNITIES (TASVEG 3.0) ALONG THE PORTERS BRIDGE ROAD QUARRY ACCESS

TASMAP:  
DELORAINÉ  
4640

LGA:  
MEANDER  
VALLEY

**NOTE**

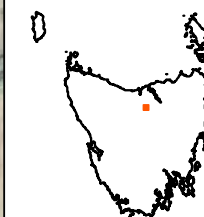
- WVI - E. VIMINALIS WET FOREST (E/-)
- DOV - E. OVATA FOREST AND WOODLAND (E/CR)
- DAD - E. AMYGDALINA FOREST (-/-)
- DVG - E. VIMINALIS GRASSY FOREST (-/-)

 SECTION OF EXISTING ROAD GOING THROUGH THREATENED NATIVE FOREST

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH



**an Diemen CONSULTING**  
PO Box 1 NEW TOWN TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 6 AUG 2022



5407000

5406000

5405000

(DOV) EUCALYPTUS OVATA FOREST AND WOODLAND

EXISTING ROAD END

SEE FIGURE B-16A

2097P/M

EXISTING ACCESS ROAD

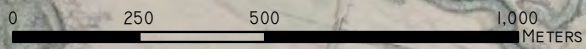
REMAINDER OF ACCESS ROAD IS (DAD) EUCALYPTUS AMYGDALINA FOREST AND WOODLAND ON DOLERITE

(DVG) EUCALYPTUS VIMINALIS GRASSY FOREST AND WOODLAND

(WVI) EUCALYPTUS VIMINALIS WET FOREST

EXISTING ROAD START

(WVI) EUCALYPTUS VIMINALIS WET FOREST



476000

477000

478000

# PORTERS BRIDGE ROAD QUARRY

## WEED AND PATHOGEN MANAGEMENT PLAN

FIGURE 7: KNOWN (NVA) AND OBSERVED THREATENED FLORA AT THE PORTERS BRIDGE ROAD QUARRY

TASMAP:  
DELORAINÉ  
4640

LGA:  
MEANDER  
VALLEY

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 6 AUG 2022

PIMELEA CURVIFLORA VAR. GRACILIS (R/-)  
(OBSERVED)

2097P/M

PIMELEA CURVIFLORA VAR. GRACILIS (R/-) (NVA RECORDS)

0 250 500 1,000 METERS

the LIST © State of Tasmania



54,07,000

54,06,000

54,05,000

476000

477000

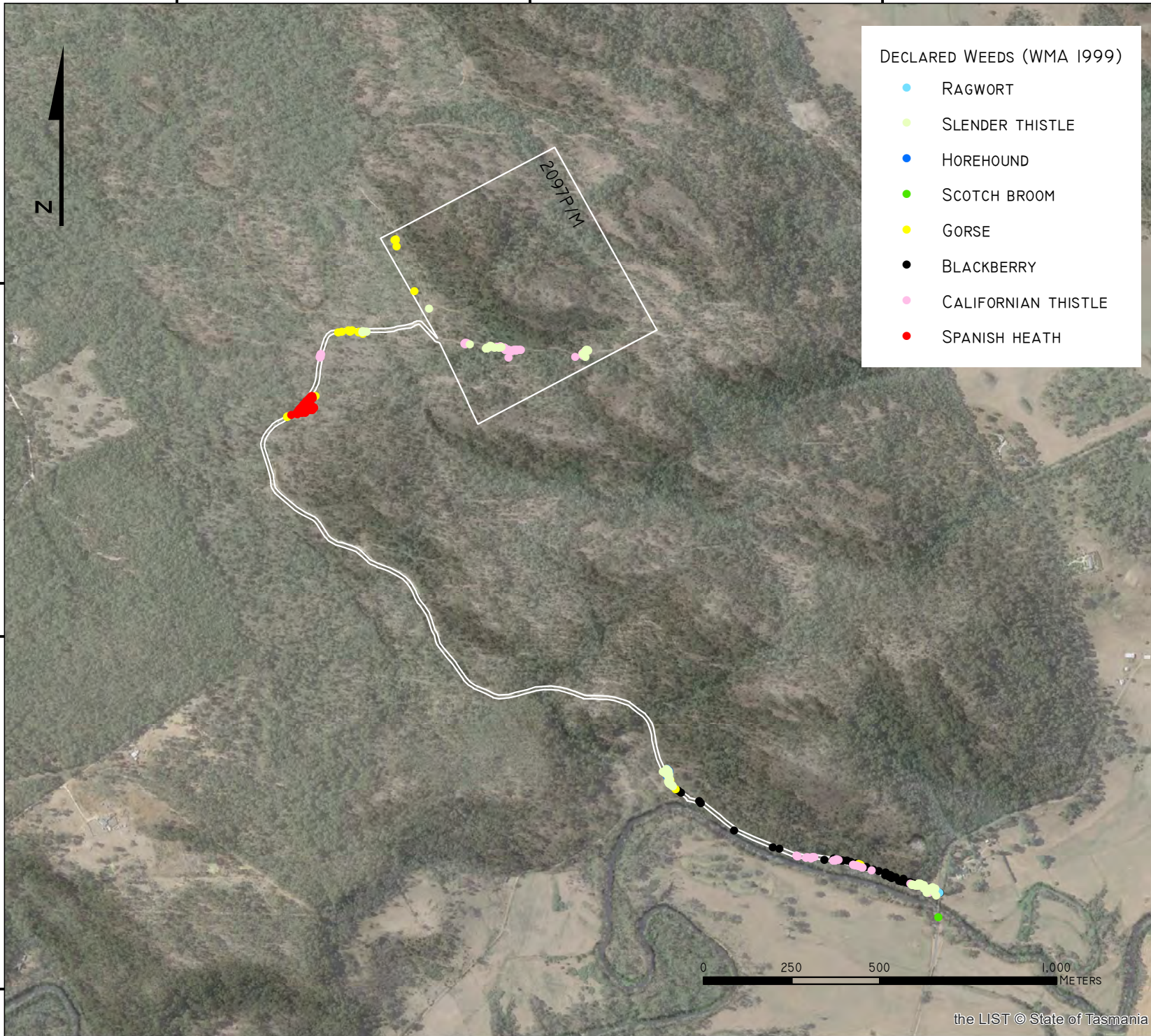
478000



54,070,000

54,060,000

54,050,000



- DECLARED WEEDS (WMA 1999)
- RAGWORT
  - SLENDER THISTLE
  - HOREHOUND
  - SCOTCH BROOM
  - GORSE
  - BLACKBERRY
  - CALIFORNIAN THISTLE
  - SPANISH HEATH

# PORTERS BRIDGE ROAD QUARRY

## WEED AND PATHOGEN MANAGEMENT PLAN

FIGURE 8A: DECLARED WEEDS (WMA 1999) (OBSERVED) IN AND AROUND THE PORTERS BRIDGE ROAD QUARRY

TASMAP:  
DELORAINE  
4640

LGA:  
MEANDER  
VALLEY

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH



**an Diemen CONSULTING**  
PO Box 1 NEW TOWN TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 6 AUG 2022

0 250 500 1,000 METERS

476000

477000

478000

5407000

5406000

5405000



ENVIRONMENTAL WEEDS

- FRANCHET'S COTONEASTER
- EUPHORBIA
- GREAT MULLEIN
- HEMLOCK
- WILD TEASEL
- BLUE PERIWINKLE
- SYCAMORE

# PORTERS BRIDGE ROAD QUARRY

## WEED AND PATHOGEN MANAGEMENT PLAN

FIGURE 8B: ENVIRONMENTAL WEEDS (WMA 1999) (OBSERVED) IN AND AROUND THE PORTERS BRIDGE ROAD QUARRY

TASMAP:  
DELORAINÉ  
4640

LGA:  
MEANDER  
VALLEY

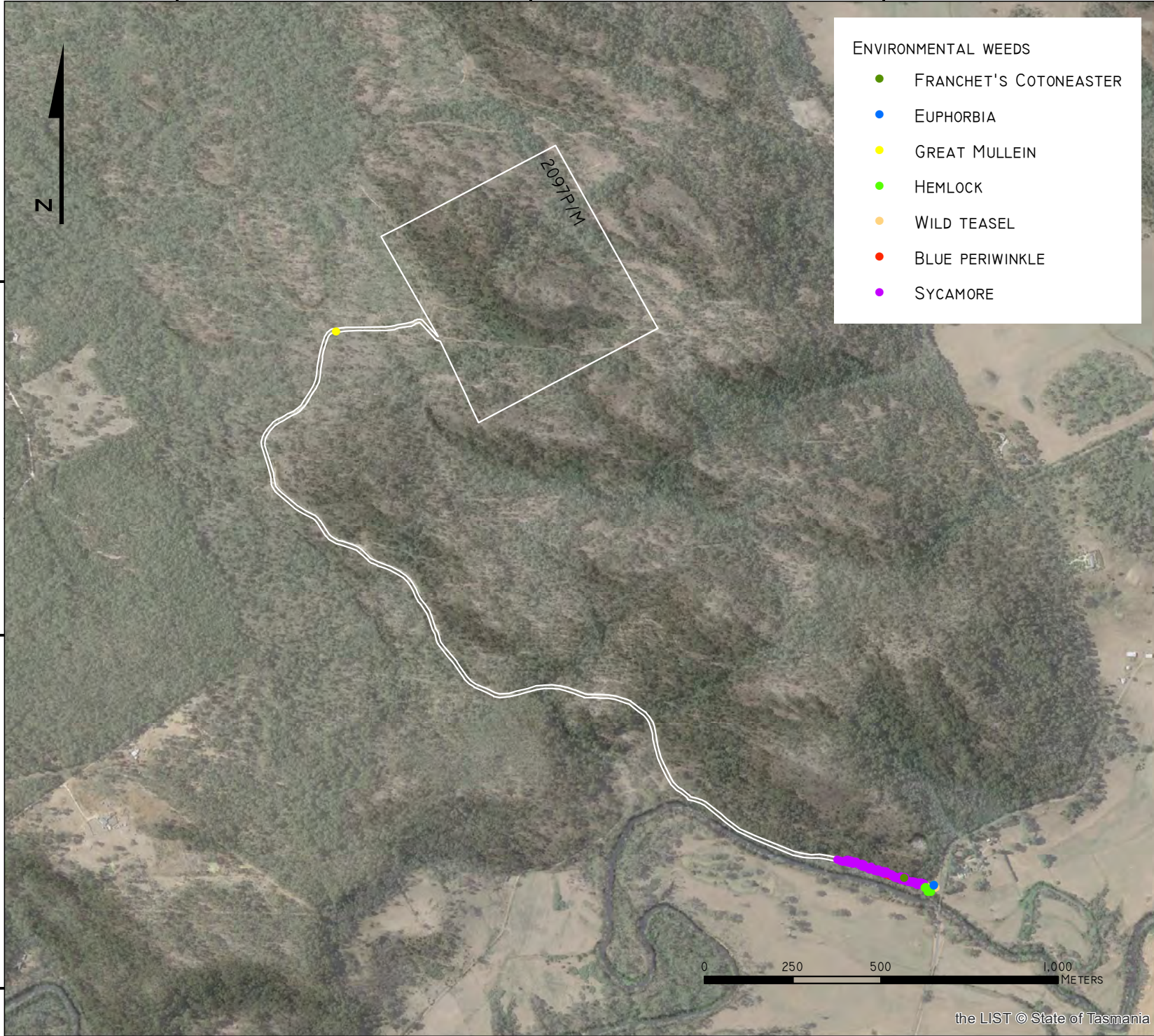
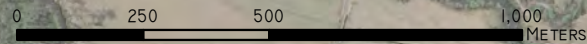
BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE © GOOGLE EARTH



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 6 AUG 2022



## **PART D - MONITORING AND REVIEW**

This WPMP is intended to be flexible and allow changes to the focus of management actions, especially the weed spraying program, as the occurrence, extent, and severity of weed infestations change across the Land.

### **D.1 CONTINUAL IMPROVEMENT**

The weed occurrence map developed through the implementation of this WPMP may be reviewed and modified from time to time as new data become available, especially following field surveys to identify, record and map new and current weed occurrences on the Mining Lease.

### **D.2 MONITORING**

The early detection of any weeds that enter the Mining Lease is important to ensure that any control or eradication program has the highest likelihood of success.

A survey to identify new weed species within the Mining Lease should be conducted at regular intervals which coincide with the commencement of peak weed growth periods and/or the weed spraying season. This approach should enable early detection of weed species before they reach an extent where control and eradication is very costly and/or difficult to achieve.

The following survey regime will be applied during the life of the quarry operation:

1. Surveys and assessments by a suitably qualified person are to –
  - a. identify, record, and map any new weed species not previously recorded;
  - b. assess and map the extent of known weed infestations to determine if they are becoming larger and/or more significant such that control measures can be modified; and
  - c. review/assess the weed control works that have been conducted and to provide advice, where necessary, on the management of weeds.
2. Areas where weed control/eradication works have occurred (eg spraying) will be assessed no more 12 months after the treatment occurred to determine if the measures implemented were successful. Where measures have proved unsuccessful, repetition and/or modification of the weed control technique(s) will be employed.

### **D.3 REVIEW OF WPMP**

The objectives, responsibilities, and management actions within this WPMP will need to adapt to new information about the site as it becomes available.

The WPMP will be reviewed each year in or as needed (eg. when a significant infestation of a weed on the site is detected).

## **PART E - REFERENCES**

Department of Primary Industries, Parks, Water and Environment (2015). Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania. (Eds.) Karen Stewart and Michael Askey-Doran. Department of Primary Industries, Parks, Water and Environment, Hobart, Tasmania.

Environment Protection Authority (2017) Quarry Code of Practice 3rd Edition, EPA Tasmania, Hobart, Tasmania.

Podger F, Mummery DC, Palzer CR and Brown MJ (1990) Bioclimatic analysis of the distribution of damage to native plants in Tasmania by *Phytophthora cinnamomi*. *Australian Journal of Botany* **15**, 281-289.

Rudman T (2005). Interim *Phytophthora cinnamomi* Management Guidelines. Nature Conservation Report 05/7, Biodiversity Conservation Branch, Department of Primary Industries, Water and Environment, Hobart

**APPENDIX A**

**'GUIDELINE FOR SAFE AND EFFECTIVE HERBICIDE USE NEAR WATER', DPIPWE**



Photograph: Lynn Broos

# Guidelines for Safe and Effective Herbicide Use Near Waterways

The control and management of weeds near waterbodies is a challenge faced by many landholders across Tasmania. Waterbodies are particularly sensitive to herbicide contamination, so the decision to apply herbicides in the vicinity must be taken with great care.

Weed control near waterbodies requires a long-term commitment to eradication, perhaps 5–10 years or more, as the seed banks of many 'woody' weed species (eg blackberries, gorse) may remain viable for decades. Weeds can also spread along watercourses, making their control difficult. A staged, planned approach to weed control, alongside a program to re-establish native riparian species, is necessary to ensure the safe restoration of riparian areas. Restoring native vegetation helps to reduce the presence of weed species, ensures the stability of banks, shades the waterway (which helps prevent future weed invasion), and provides habitat for local fauna.

## Definitions

For the purposes of this guideline, the following definitions apply:

<b>Riparian land</b>	Any land that adjoins, directly influences, or is influenced by a body of water at any time of the year.
<b>Waterbody</b>	Includes natural watercourses (streams, creeks, rivers), natural wetlands, ponds, lagoons, constructed drainage channels, dams and ponds, reservoirs and lakes.
<b>Permanently inundated/perennial</b>	These areas have water all year round.
<b>Occasionally inundated/intermittent</b>	These areas have water some time of the year.
<b>Rarely inundated/ephemeral</b>	These are areas that rarely contain water (eg areas that flood on rare occasions).
<b>Toxicity</b>	The inherent poisonous quality/qualities of a substance, measured by what size dose is likely to cause harm (acute toxicity is measured by the amount of active ingredient - mg/kg live body weight - required to kill 50% of a test group of animals - this is called LD50).

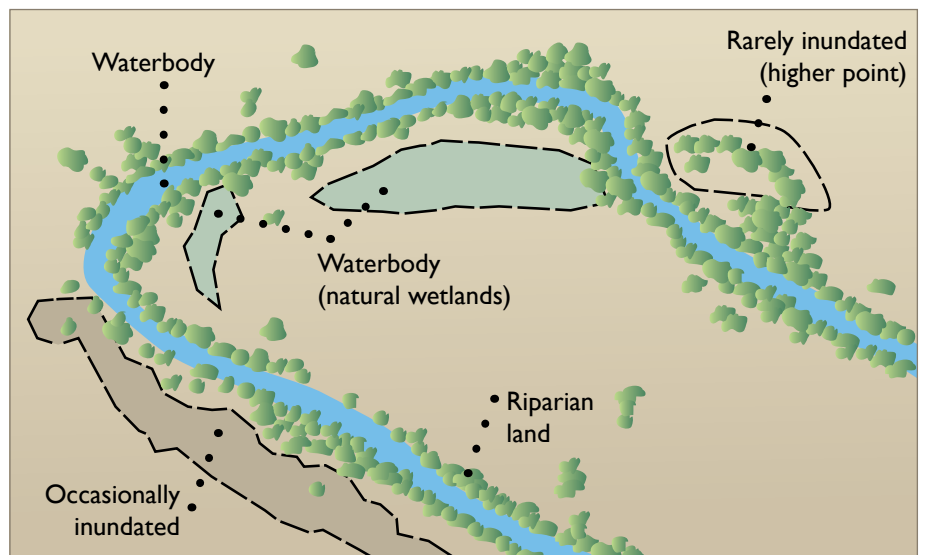


Figure 1: Appropriate and effective herbicide usage near water requires consideration of specific situations

## A Planned Approach

### Assess your site

#### What type of waterbody is it?

If your site is permanently inundated, you need to consider very carefully the choice of herbicide, recognising the risk to your aquatic ecosystem and the danger that the herbicide may pose to the surrounding environment. You also need to identify points of access to the site.

If your site is occasionally or rarely inundated, choose a time when the chance of rainfall is low and therefore the risk of runoff contaminated with herbicide is likely to be low. Figure 1 illustrates the different zones found in aquatic situations which may affect herbicide use.

#### What types of weeds are present?

Identify the species of weed and the extent of the infestation. Table 2 details the recommended herbicide control for a number of riparian weeds, the method and time of year for application. It also suggests alternatives to the use of chemicals.

#### Do the weeds have value at the site?

Consider whether the weeds are serving a useful purpose at the site. They may be acting as a buffer to control erosion, or as a filter to promote water quality. They may have a value to animal species as a source of food or shelter.

If you believe that you have native plants or animals that might be adversely affected by your proposed weed control, seek professional advice.

You may be able to stage the removal of weeds to minimise any impact on erosion or on animal life. You will almost certainly need to restore the habitat once weeds have been eradicated.

#### Are native species present at the site?

Identify any native plant species at your site. You may need to protect these species from overspray or mark them to prevent accidental spraying. These native plants will be the starting point to restoring the riparian zone.

### Choose your control method

Landholders should always consider non-chemical solutions as a preferred option before deciding to use herbicides. These include biological control (eg by introduction of gorse mite, see photo below), slashing, mulching, controlled grazing (controlling timing, intensity and frequency), or hand removal. Often a combination of chemical and non-chemical methods is most appropriate. Whichever method or combination of methods is used, it is important to consider the potential negative impacts on the environment and limit these as much as possible.



*Biological agents such as Gorse spider mite may be options for use near waterways, courtesy of Tasmanian Institute of Agriculture.*

### Understanding herbicides

Herbicides are designed to control and eradicate pest plants ('weeds'). However, it is important to realise that many herbicides have toxic effects in aquatic ecosystems. Native plants, invertebrates, frogs and fish may be harmed by herbicides. The inappropriate use of herbicides may also cause significant risks to human health where water is pumped from a bore for domestic use, or flows to reservoirs.

Herbicides can enter waterbodies either directly through spray or spray drift, or they can move into waterbodies via surface water run-off or leaching and sub-surface draining.

Herbicides can be broadly classified according to their chemical structures and modes of action. Table 1 shows the three major types of herbicide.

*Table 1: Herbicide classification*

<b>Pre-emergent (residual)</b>	These herbicides are designed to inhibit the germination of pest plants. They are therefore applied before the pest plant germinates and are often residual in the soil for long periods. They are generally not considered to be safe for use near waterbodies and are not recommended for use due to their persistence in the environment.
<b>Knockdown non-selective</b>	These herbicides are designed to be applied directly to the target pest plant, either through being sprayed onto foliage or applied directly to the cambium layer using any of the direct application methods described in Table 3. They may vary in mode of action and some may persist as residues in the environment.
<b>Selective</b>	Selective herbicides are designed to act on only one type of pest plant. Generally, selective herbicides will control either broadleaf (eg capeweed), grasses (eg phalaris) or woody weeds (eg broom). These herbicides are useful when the focus may be on controlling a particular weed species (eg phalaris amongst native shrubs). These herbicides may persist as residues in the environment.

Herbicides applied to the edge of a waterbody, or in wetted areas around its edge, must be registered for use in aquatic environments by the Australian Pesticides & Veterinary Medicines Authority (APVMA).

## Consider the tools available to mitigate against offsite movement of your pesticide

### *PIRI-Tas*

PIRI-Tas is a simple screen tool that predicts the off-site migration potential of pesticides into surface or ground-water. PIRI-Tas assesses both the likelihood of off-site-migration and the risk to different species based on the toxicity of the pesticide to a range of aquatic organisms.

PIRI-Tas is a risk indicator and uses a risk-based approach to decision making by taking into consideration a range of factors associated with site conditions, soil and environmental scenarios, pesticide properties, application rates and time of spraying as well as considering impacts on target species being protected by receiving environments. PIRI-Tas outputs can also be used to construct annual spray schedules to assist with future planning.

PIRI was first developed by CSIRO and is being used both nationally and internationally by a number of organisations. PIRI-Tas CD's and onsite training are available for free through the DPIPWE to key users of chemical pesticides, including those in the agriculture, forestry, amenity, glasshouse and municipal sectors.

Further information is available at <http://www.dpipwe.tas.gov.au/inter.nsf/WebPages/SSKA-7JA3N4?open>

### *Consider integrated pest management (IPM)*

Integrated pest management (IPM) is a planned approach that coordinates environmentally acceptable methods of pest control with careful and minimal use of toxic pesticides. IPM programs are based on a comprehensive assessment of local conditions, including factors such as climate, season, the biology of the pest species, and government regulations.

Strategies employed may include the staged removal of weeds, biological control and re-planting of riparian areas with native species to discourage the regeneration of weeds.

## Consult and plan

Draw up a calendar for action. The time of year when herbicides will be most effective on the weed should be a major influence on the make-up of this calendar. Herbicides are generally most effective during the growing season of the weed rather than when it is dormant or approaching dormancy. The staged removal of weeds over several seasons may be less disturbing to your aquatic environment and minimise any adverse impact on fauna.

Consult with neighbours who may be affected by your weed control operation, especially if you think there is any risk of spray drift to adjoining properties or downstream. You may also decide to seek advice from experts before taking further action, or approach commercial spray contractors to assess your particular situation.

If the work involves a significant length of river or multiple properties it is advisable to develop a plan that covers all aspects of the weed control work and restoration, including potential risks. You should also be mindful of:

- feasibility/practicability of the work
- physical characteristics of the job site
- optimal pest control method, including alternatives to herbicides
- characteristics of the herbicide (physical, chemical and environmental)
- buffer zones
- the possibility of spray drift and other off-target migration
- weather conditions.

## Do you need to spray?

It is recommended that only trained, licensed contractors carry out spraying operations near waterbodies because of the sensitivity of these environments. Check that they have experience and an understanding of the issues around using herbicides near aquatic environments.

The following points are critical to the application of herbicides near waterbodies:

- Always follow the label
- When you are working near the edge of a waterbody, direct the spray away from the waterbody where possible.
- Spray only to the extent of covering foliage with droplets.
- Spray when weather is calm; strong winds may carry herbicide drift into waterbodies.
- Use a flat fan nozzle and a low pump/spray pressure to reduce the likelihood of spray drift.
- Do not spray when rainfall is forecast within four hours as herbicide can be washed off the pest plant and run off into aquatic ecosystems.

## Appropriate herbicides and application

The type of weed problem will determine both the type of herbicide and its application method. Table 2 shows recommended herbicide and application methods for some common weeds, along with alternatives to herbicide use. Table 3 illustrates application techniques and equipment need to undertake control works.

Uses described in this table are either covered by the respective product label or Off-label Permit No. 13160 issued by the Australian Pesticides and Veterinary Medicines Authority.

Table 2. Common weeds and recommended treatment and herbicides

Area	Weed	Permitted Herbicide (active ingredient)	Example of commercial product (concentration of active ingredient)	Recommended Herbicide Control Technique	Non-chemical Alternatives
Permanently inundated/ perennial	<b>Submerged and partially submerged plants</b>				
	Parrot's feather ( <i>Myriophyllum aquaticum</i> )	Glyphosate (registered for aquatic use only) <b>Don't add surfactants!</b>	Roundup Biactive® or Weedmaster Duo®	Foliar spray	Hand removal and excavation (with roots/rhizomes) can be used as part of a well planned approach. Care must be taken to avoid losing fragments
	Egeria ( <i>Egeria densa</i> )				
	Canadian Pondweed ( <i>Elodea canadensis</i> )				
	Cumbungi ( <i>Typha</i> spp)				
	Glyceria (syn. Poa aquatica or reed sweet grass) ( <i>Glyceria maxima</i> ) NB Take extreme caution not to spread Glyceria seed through soil transport (eg on machinery)			Foliar spray (combine with dense local native species revegetation for long-term results through stream shading) Wiper	Clearance or drainage of growth area (combine with dense re-vegetation of local native species for long-term results through stream shading)
	<b>Woody weeds</b>				
	Blackberry ( <i>Rubus fruticosus</i> )	Glyphosate (registered for aquatic use only) <b>Don't add surfactants!</b>	Roundup Biactive® or Weedmaster Duo®	Cut and paint with Roundup Biactive® or Weedmaster Duo®	Hand removal (small plants) Controlled grazing (goats or sheep only) can be effective Bio-control (eg gorse mite, blackberry rust) where other techniques are not suitable Gorse mulching combined with follow-up grazing and revegetation on mulched sites
	Gorse ( <i>Ulex europaeus</i> )				
	<b>Trees</b>				
Hawthorn ( <i>Crataegus monogyna</i> )	Glyphosate (registered for aquatic use only) <b>Don't add surfactants!</b>	Roundup Biactive® or Weedmaster Duo®	Cut and paint Drill or stem injection Axe or frill and paint Foliar spray hawthorn and crack willow (only spray to a height of 2m)	Hand removal (small plants) Controlled grazing can assist in limiting Hawthorn regrowth and thicket density	
Crack Willow ( <i>Salix fragilis</i> )					
Sycamore ( <i>Acer pseudoplatanus</i> )					


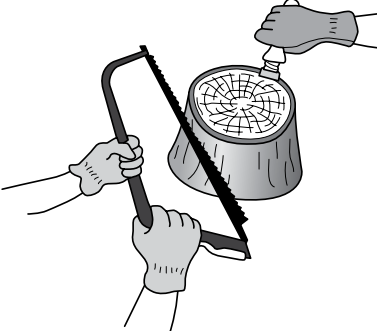
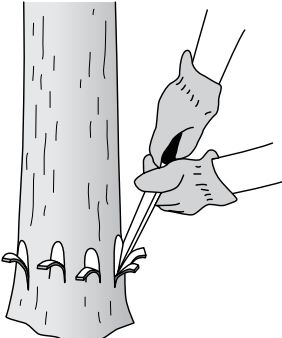
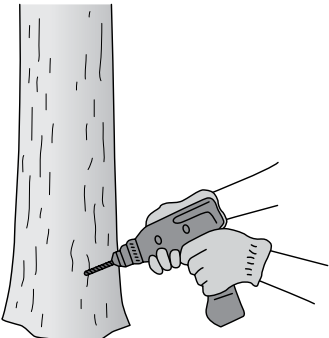
The product trade names in this publication are supplied on the understanding that no preference between equivalent products is intended and that the inclusion of a product does not imply endorsement by DPIPWE over any other equivalent product from another manufacturer.

Table 2. Common weeds and recommended treatment and herbicides continued

Area	Weed	Permitted Herbicide (active ingredient)	Example of commercial product (concentration of active ingredient)	Recommended Herbicide Control Technique	Non-chemical Alternatives
Occasionally or rarely inundated sites	<b>Woody weeds</b>				
	Blackberry ( <i>Rubus fruticosus</i> )	Metsulfuron-methyl Triclopyr Triclopyr + Picloram	eg Associate or Brush-Off® eg Garlon 600® eg Grass-up™ or Grazon Extra®)	Foliar spray	Hand removal (small infestations) Controlled grazing by goats can be effective Bulldoze and deep cultivate (in suitable circumstances) Bio-control (a rust with limited impact)
	Gorse ( <i>Ulex europaeus</i> )	Glyphosate (registered for aquatic use only) Triclopyr Triclopyr + Picloram	eg Roundup Biactive® or Weedmaster Duo® eg Garlon 600® eg Grass-up™ or Grazon Extra®)	Cut and paint Foliar spray, preferably Garlon 600®	Mulching/bulldozing/slashing combined with follow-up grazing and revegetate on mulched sites Bio-control (e.g gorse mite) where other techniques are not suitable
	English Broom ( <i>Cytisus scoparius</i> )	Glyphosate (registered for aquatic use only). Metsulfuron-methyl Triclopyr herbicide Triclopyr + Picloram	eg Roundup Biactive® or Weedmaster Duo® eg Associate or Brush-Off® eg Garlon 600® eg Grass-up™ or Grazon Extra®)	Cut and paint. Foliar spray, preferably Garlon 600® (only if under 2m in height)	Hand removal. Mechanical removal (eg rip or bulldoze) Mulching/bulldozing/slashing of hawthorn combined with follow-up grazing and revegetate on mulched sites
	Montpellier Broom ( <i>Genista monspessulana</i> )				
	<b>Trees</b>				
	Hawthorn ( <i>Crataegus monogyna</i> )	Glyphosate (registered for aquatic use only). Metsulfuron-methyl Triclopyr herbicide Triclopyr + Picloram	eg Roundup Biactive® or Weedmaster Duo® eg Associate or Brush-Off® eg Garlon 600® eg Grass-up™ or Grazon Extra®)	Cut and paint Foliar spray, preferably Garlon 600® (only if under 2m in height)	Hand removal Mechanical removal (eg rip or bulldoze) Mulching/bulldozing/slashing of hawthorn combined with follow-up grazing and revegetate on mulched sites
	Sycamore ( <i>Acer pseudoplatanus</i> )	Glyphosate (registered for aquatic use only)	eg Roundup Biactive® or Weedmaster Duo®	Stem injection, cut and paint (plus foliar spray for young plants)	Hand removal Bulldoze and revegetate Plough-in small plants
	<b>Herbaceous plants</b>				
	Ragwort ( <i>Senecio jacobaea</i> )	MCPA Metsulfuron-methyl	eg MCPA 500 or L.V.E Agritone eg Associate or Brush-Off®	Foliar spray	Hand removal Controlled grazing (sheep) Ploughing/cultivation (combine with dense revegetation of local native plants for long-term results through shading)
Paterson's curse ( <i>Echium plantagineum</i> )					
Thistles (eg <i>Cirsium arvense</i> )					

More information on weed identification and weed control can be found at [www.dpipwe.tas.gov.au/weeds](http://www.dpipwe.tas.gov.au/weeds)

Table 3. Herbicide application techniques

Illustration	Method	Type of weed	Equipment Required	Notes
	Foliar Spray	Herbaceous plants, Woody weeds	Knapsack Vehicle mounted tank Herbicide mix Personal protective equipment (see product label)	Ensure herbicide is being applied at right concentration and rate to cover the foliage of the pest plant with fine droplets and avoid run-off. A flat fan nozzle and low pump pressure will assist in reducing spray drift
	Cut and paint	Woody weeds, shrubs and trees	Saw, chainsaw, loppers Herbicide mix Personal protective equipment (goggles and gloves as a minimum) Brush/sponge for herbicide application	Ensure herbicide is applied quickly to cut stump (within 15 seconds in most cases) Apply during active growth period of plant for best results Do not apply herbicide to the point of run-off
	Frilling	Shrubs and trees	Axe, hatchet Herbicide mix Personal protective equipment (goggles and gloves as a minimum) Brush for herbicide application	Frill trunk thoroughly, also treat major surface roots where visible Expose sapwood and apply herbicide to it immediately For deciduous species, apply during active growth period
	Drill and poison	Shrubs and trees	Drill Application bottle, injection gun Herbicide Personal protective equipment (goggles and gloves as a minimum)	Drill to sapwood only and apply herbicide to drill hole immediately Drill and fill major surface roots where appropriate For deciduous species, apply during active growth period

Illustrations: Brett Littleton ILS Design Unit

## After Spraying

### Clean up

Equipment should always be cleaned in a safe location where spills can be contained and will not result in environmental harm. Using water to clean equipment will further dilute any residual herbicide to low levels, and the resulting solution is best sprayed onto a lawned area or bare ground taking the following precautions:

- Do not apply wash-water to the point of saturation so that run-off occurs.
- Do not apply wash-water along boundary fence lines as this will increase the chance of herbicides escaping from your property.
- Do not dispose of wastewater into areas where children play, or pets have access, as low levels of herbicide are still likely to be present.
- Do not deposit wastewater where it will run into waterways, drainage lines or stormwater systems.

### Disposal

If you do happen to have surplus spray mix or herbicide waste, label it with the herbicide name, including any risk and safety information displayed on the original label. Store it safely until it can be disposed of appropriately. Contact a chemical collection organisation eg Chem Clear.

You must follow label directions for the disposal of wastes and herbicide containers. Only dispose of waste herbicides at authorised collection centres, such as licensed waste disposal centres.

Do not dispose herbicide waste:

- through sewerage systems, where it can interfere with the sewage treatment process
- down the drain or gutter; where it can pass through the stormwater system and into waterways
- to landfill via dumping or domestic waste, as it can contaminate soil and leach into groundwater and stormwater.

## Monitor, evaluate and follow up

### Monitor

Observe and keep records of your weed problems and the impact of any measures you take to control them. This could involve:

- the use of visual records, including property maps, aerial and other photography
- the use of a calendar or diary to record when actions were taken.

### Evaluate

Evaluate the success of any weed control program by considering the current extent of the weed problem and reviewing your control measures. Important questions might include:

- Is my weed control work going to plan, or do my goals need reviewing?
- What is the appropriate weed control measure now?
- Is there a need for external (expert) assistance?

### Follow up

Re-implement weed control actions following the results of your monitoring and evaluation. Continue to monitor this follow-up work, and so begin an ongoing cycle of weed management.

These guidelines have been updated by Kiowa Fenner and are based on guidelines prepared by Michael Noble and Janice Miller.

### Important disclaimer

To the extent permitted by law, the Tasmanian Department of Primary Industries, Parks, Water and Environment (including its employees and consultants) excludes all liability to any person for any consequences, including but not limited to all losses, damages, costs, expenses and any other compensation, arising directly or indirectly from using this material (in part or in whole) contained in this publication



Tasmania  
Explore the possibilities

#### CONTACT DETAILS

Invasive Species Branch

1300 668 550

[www.dpipwe.tas.gov.au/weeds](http://www.dpipwe.tas.gov.au/weeds)

**APPENDIX B**

**TEMPLATE - WEED SPRAYING PROGRAM SPREADSHEET – PORTERS BRIDGE ROAD QUARRY, EXTON**

Date -

Porters Bridge Road Quarry, Exton  
Weed Spraying Program Work Plan

Zones on Maps	Weeds Present	Actions required	Responsible person	Estimated start date	Estimated completion date	Tasks conducted	Date Completed	Signed

NOTES

Issued by -

Porters Bridge Road Quarry, Exton  
Weed Spraying Program Work Plan

Checked by -

**APPENDIX C**

**HYGIENE PROTOCOLS FOR VEHICLES AND HEAVY MACHINERY**

# HYGIENE PROTOCOLS FOR VEHICLES AND HEAVY MACHINERY

The following protocols have been adapted from the *Tasmanian Washdown Guidelines for Weed and Disease Control: Machinery, Vehicles and Equipment* (DPIPWE, Edition 1, 2004) and *Flora Technical Note No. 8: Management of *Phytophthora cinnamomi* in production forests* (FPA 2006). For more information refer to the full guidelines at:

- DPIPWE website - [www.dpipwe.tas.gov.au](http://www.dpipwe.tas.gov.au) (then follow links to Weeds Pests and Diseases, Plant Diseases, Phytophthora, Phytophthora Publications, Washdown Procedures).
- Forest Practices Authority website - [www.fpa.tas.gov.au](http://www.fpa.tas.gov.au) (then search for Flora Technical Notes).

## BACKGROUND

Passenger vehicles and heavy machinery (including trucks, tractors, mowers, slashers, trailers, backhoes, graders, dozers, excavators, skidders and loaders) are major vectors for the spread of soil borne fungal diseases such as *Phytophthora cinnamomi* (root rot) and terrestrial weeds.

As a minimum, apply the standard **Check Clean Dry** protocols (page 14) to all your clothing, footwear, equipment, vehicles and heavy machinery **before** going into the field.

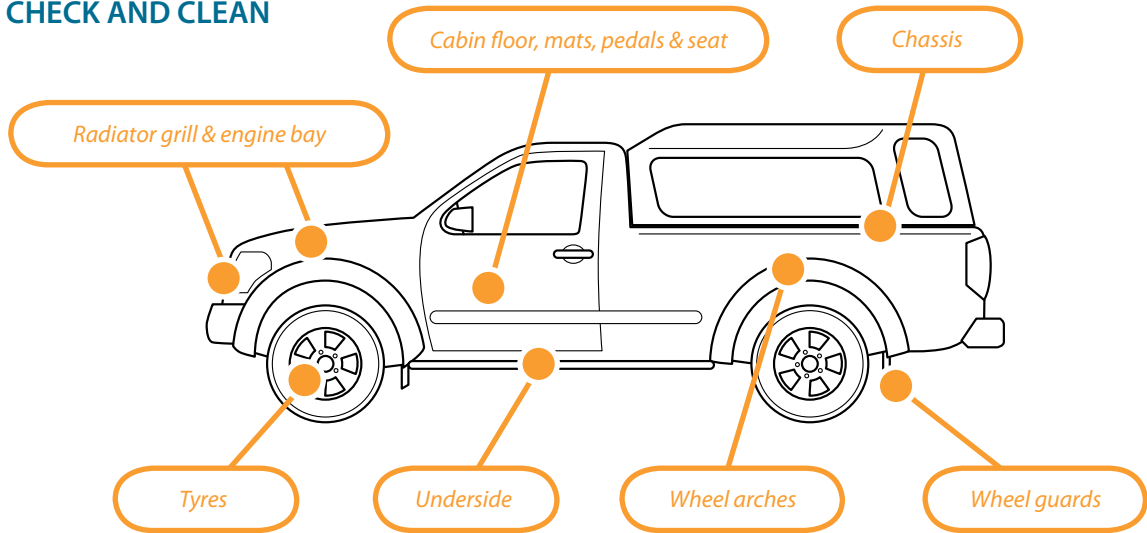
Vehicles and heavy machinery that stay on formed and sealed roads have a low risk of spreading disease and weeds and on-site cleaning is not essential. However on-site vehicle washdown is particularly important when using vehicles and machinery off (sealed) roads.

Apply rigorous planning and hygiene protocols that include **Disinfection** when working in Phytophthora Management Areas (refer to Appendix B), areas with endemic or threatened frog species (refer to Appendix D) or remote areas and where it is not possible to *thoroughly* dry vehicles, heavy machinery and equipment between sites. Ensure you **Check Clean and Disinfect before you arrive and between sites.**

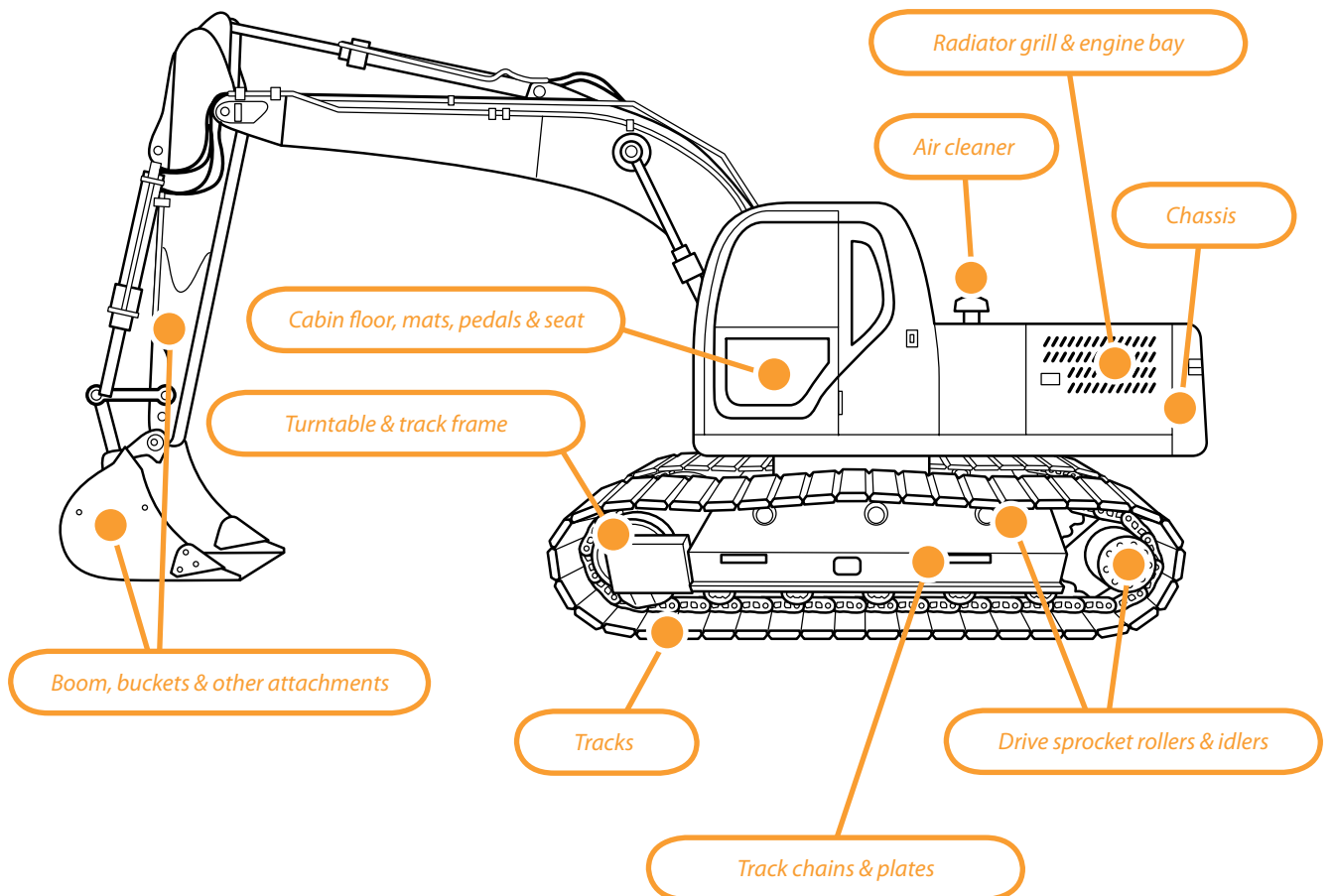
## BEFORE GOING INTO THE FIELD

- Consult with the relevant land manager to identify any specific hygiene protocols that apply to vehicles and machinery.
- Inspect vehicles and heavy machinery for mud, soil, plant material and debris and ensure they are clean and dry. Pay particular attention to the underside, tracks, rollers, tyres, wheel arches, guards, blades, bucket, other attachments, spare tyres, chassis, engine bay, radiator and grill, tray, cabin, foot wells, pedals, mats and seats.

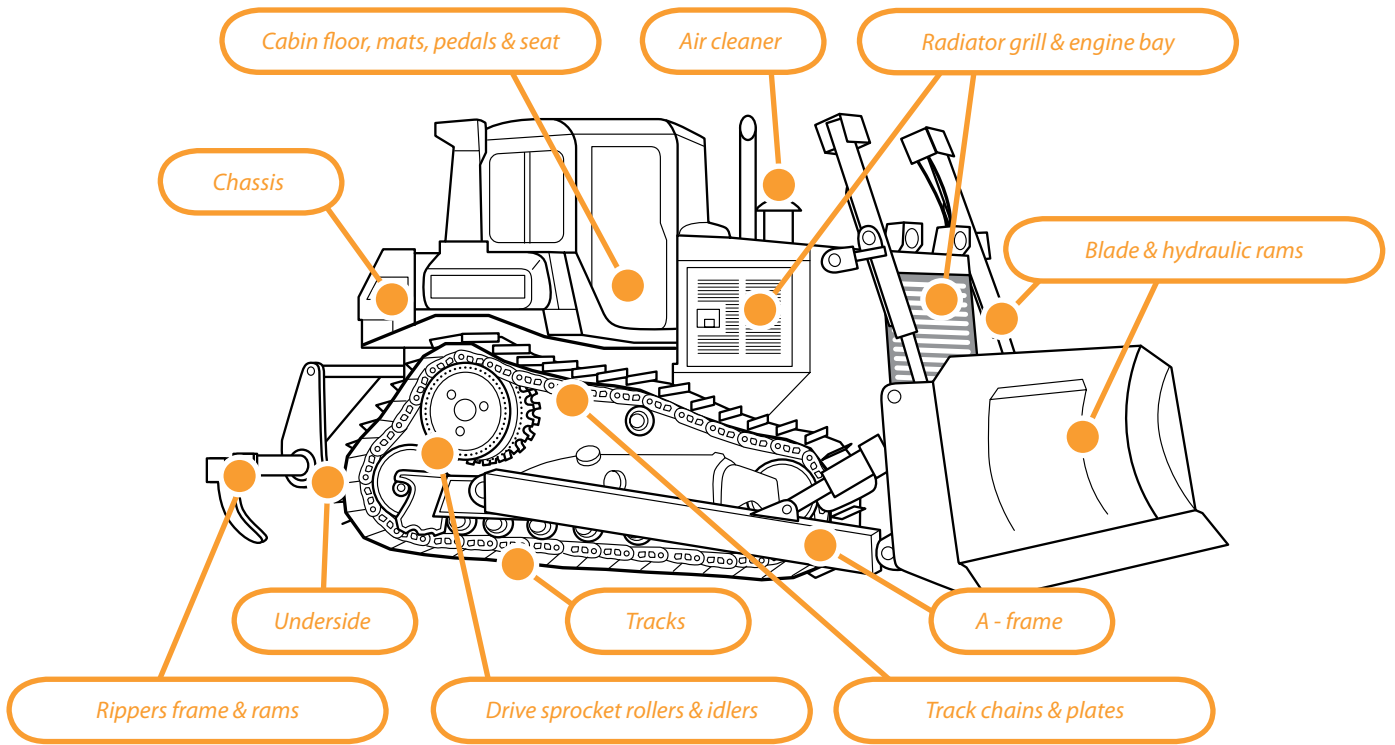
## 4WD VEHICLE WITH KEY SPOTS TO CHECK AND CLEAN



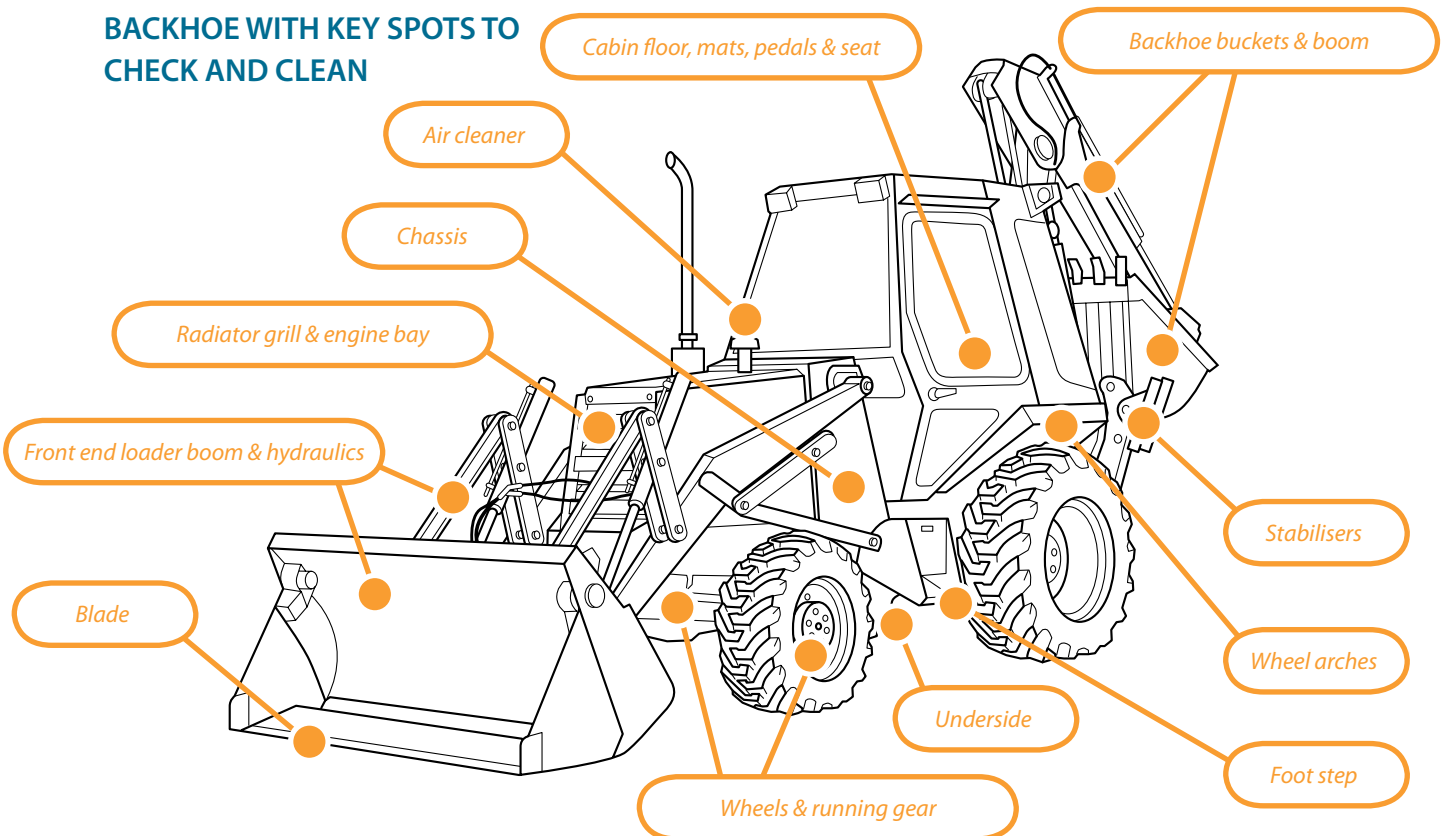
## EXCAVATOR WITH KEY SPOTS TO CHECK AND CLEAN



## BULLDOZER WITH KEY SPOTS TO CHECK AND CLEAN



## BACKHOE WITH KEY SPOTS TO CHECK AND CLEAN



## SELECTING A FIELD WASHDOWN SITE FOR VEHICLES AND MACHINERY

Vehicle/heavy machinery washdown is most effective where access can be controlled and entry points, roads or tracks are not open to general use. When selecting a washdown site, consider the following:

- Washdown should be done at the point of departure from a previous operation, preferably at a designated washdown facility with a well-drained hard surface.
- Where there are large quantities of effluent or there is a risk of extensive run-off (e.g. during road construction), the washdown area should be bunded i.e. an impervious spill area constructed.
- Washdown at the edge of (or near) any areas where pests, weeds or pathogens need to be contained. Ideally choose a site where the land slopes gently away from the washdown area and back into the potentially infected area, or into an adjacent area not susceptible to the problem (e.g. a paddock).
- Select a site where the run-off will not enter a watercourse, waterbody or roadside drain: A buffer of at least 30m is required.
- Select a mud-free site (e.g. well grassed, rocky, gravel, bark or timber corded).
- Avoid sensitive vegetation or wildlife habitat e.g. remnant native vegetation and areas with threatened species.
- Mark or record washdown sites for the land manager to enable subsequent monitoring and weed control.

## GENERAL HYGIENE PROCEDURE

For general vehicle/machinery cleaning, the following standards apply.

- Elevate heavy machinery with boom arm to enable underside to be accessed. Tyres can be placed under equipment to allow underside to dry.
- Remove any guards, covers or plates that can quickly and easily be removed and replaced.
- Check the vehicle inside and out for any lodged mud, soil, seeds, algae, plant and other debris or substrate material.
- Knock off large clods of dirt with a crowbar or stiff brush.
- Clean with a high pressure hose and stiff brush or crowbar to further remove clods, starting from the top of the vehicle and working down to the bottom. Remember to clean undersides, tracks, rollers, tyres, wheel arches, guards, blades and buckets, chassis, engine bays, radiator and grill, tray, spare tyres and other attachments.
- When spraying with disinfectant solution be sure to only use the minimum amount of water needed to adequately disinfect all equipment and only add the amount of disinfectant required (see Appendix A). Before adding disinfectant to tank release any surplus water (present in tank).
- Allow the disinfectant solution to remain in contact with surfaces for at least 1 minute and wherever possible allow vehicles and equipment to drip dry.
- Avoid driving through any cleaning water/waste.

- Clean the interior (including floor, foot wells, mats, pedals, seats, under seats), air cleaners, radiator grills and engine bays with vacuum, compressed air device or brush off.

No clods of dirt or debris should be present after washdown. If smeared soil stains or soil lodged in difficult-to-access areas remain then ensure these areas have been thoroughly treated with disinfectant solution and allowed to drip dry.



*After physical removal of soil and dirt a high pressure hose is used to further remove clods. Machinery has been elevated with boom arm to enable cleaning underside. Photo courtesy of Forestry Tasmania.*



*Removal of soil and dirt from bulldozer treads using crow bar. Photo courtesy of Forestry Tasmania.*



*Portable vehicle washdown unit is used to provide water with disinfectant. Note any surplus water present in the tank should be drained to limit the amount of disinfectant released into the environment. Photo courtesy of Forestry Tasmania.*



*After cleaning and disinfecting, bulldozer is left to dry. Maintaining elevation with tyres allows the underside to dry. Photo courtesy of Forestry Tasmania.*

### PORTABLE VEHICLE/MACHINERY WASHDOWN UNITS

Mobile washdown units and/or small self-assembled systems are one option. A pump and high pressure hose is the best means to remove all dirt and debris, particularly from places that are difficult to access. A shovel, crowbar and stiff brush are also needed to remove stubborn dirt. A blowdown device, compressor or portable blower can also be used along with a small brush to remove dry dirt (e.g. from air cleaner and radiators).

Refer to Appendix J for the prototype and specifications required for a mobile washdown unit.



*Mobile washdown units with high pressure pump, hose and compressed air unit (for blow down of slasher decks, interior, air cleaners, radiator grills etc). Photo courtesy of NRM South/Southern Tasmanian Councils Authority.*



### DESIGNATED WASHDOWN FACILITY

Purpose built wash bays are the best option for cleaning large vehicles or machinery. These washdown facilities should have a well drained hard surface and include effective effluent management systems to protect the environment. Commercial washdown facilities are available for vehicles and small trucks at most large towns. However on-site checking and cleaning of vehicles should be undertaken first, especially after working in contaminated areas (areas with known Phytophthora or Chytrid – refer to Appendices B and C).

**APPENDIX D**

**WASHDOWN RECORD SHEETS**

## CLEANING/INSPECTION LIST FOR UTILITY/4WD

<b>Date:</b>		<b>Site:</b>		
<b>Vehicle:</b>		<b>Registration/ID:</b>		
<b>Area</b>	<b>Contamination point</b>	<b>Inspected</b>	<b>Cleaned</b>	<b>Method</b>
Engine bay	Front grill			
	Radiator and other cooling cores or fins			
	Grill or recess under wipers			
	Engine mounts			
	Top of gearbox			
	Battery recess/tray			
	Any recesses on engine or manifold			
	Air cleaner (including element)			
Cabin	Footwells			
	Carpets and mats			
	Seats			
	Tool boxes			
	Air vents			
Wheels and arches	Tyre treads			
	Rims and wheel caps			
	Wheel arches			
	Mud flaps and brackets			
	Brakes			
Tray	Body of tray (especially any recesses)			
	Mats and toolboxes			
	Around fuel tank caps			
Under carriage	Chassis rails			
	Struts and stabilisers			
	Steering components			
	Axels and differentials			
	Spare tyre and mounts			
	Guards			
	Fuel Tank			
Attachments	Bull bar			
Cleaning method: Mechanical (M), Compressed Air (CA), Vacuum (V), High Pressure Water (HPW), Low Pressure Water (LPW)				
<b>Inspected by:</b>		<b>Signature:</b>		
<b>Cleaned by:</b>		<b>Signature:</b>		

## CLEANING/INSPECTION LIST FOR AN EXCAVATOR

<b>Date:</b>		<b>Site:</b>		
<b>Vehicle:</b>		<b>Registration/ID:</b>		
<b>Area</b>	<b>Contamination point</b>	<b>Inspected</b>	<b>Cleaned</b>	<b>Method</b>
Engine bay	Engine bay floor			
	Fan shroud and radiator cores			
	Air filters (shake/tap filters to determine if clean)			
	Glacier plate (near radiator)			
Cabin	Footwells			
	Carpets and mats			
	Seats			
	Tool boxes			
	Air vents			
Excavation body	Hollow section chassis channels			
	Channels for hydraulic hoses from driven motor			
	Counterweight void spaces			
	Removable track adjuster guards and lubrication points			
	Turret pivot area			
	Arms/booms - pivot points			
Bucket/Blade	Between teeth of adapters			
	Wear plates			
Rear blade (Stabiliser)	Wear plates			
	Hollow section arms			
	Hollow section blade			
Cleaning method: Mechanical (M), Compressed Air (CA), Vacuum (V), High Pressure Water (HPW), Low Pressure Water (LPW)				
<b>Inspected by:</b>		<b>Signature:</b>		
<b>Cleaned by:</b>		<b>Signature:</b>		

## CLEANING/INSPECTION LIST FOR TRACK TYPE DOZERS

CLEANING/INSPECTION LIST FOR TRACK TYPE DOZERS				
Date:		Site:		
Vehicle:		Registration/ID:		
Area	Contamination point	Inspected	Cleaned	Method
Engine	Check radiator core and engine area for residues.			
	Remove and check the air filter/cleaner (these often require destruction where they are clogged with QRM).			
	Check carefully the void space between the oil and radiator cores.			
	Battery Box - Lift/remove the battery to check for contamination (battery box may be at side/rear or under seat).			
Drivers cab	Check externally under and around driver's cab.			
	Check under mats in cab.			
	Remove/lift seat; remove/lift floor pans to allow checking to top of transmission.			
	Check air conditioner filter (if fitted) – shake/tap filter to check if clean			
	Check externally under and around driver's cab.			
	Check under mats in cab.			
Body	Belly plates should be removed to allow inspection and cleaning			
	Rear plates at back of dozer should be removed to allow inspection and cleaning.			
	Hydraulic cover plates should be removed to allow inspection and cleaning.			
Tracks/track frame	Examine tracks carefully.			
	Ensure inspection/cover plates are removed to allow inside track area.			
	Check idler wheels (these support the tracks).			
Fuel cells	Are removable therefore dirt etc can pack between the tank and the frame.			
Blade	Ensure that edge of blade top/bottom is not split – this allows soil to be packed very tightly in the hollow.			
	Check cutter points/wear blades.			
	Check carefully the pivot points and adaptors at the rear of the front blade – these allow the blade to change height and angle. Sometimes soil has compacted and is difficult to dislodge.			

Area	Contamination point	Inspected	Cleaned	Method
	Check trunction arms			
	Check all hollow sections			
Ripper support frame is usually hollow	Check carefully if any contaminants have entered this section. The tynes may need to be removed.			
Tynes	Tynes need careful inspection. Contamination may often be removed by water blasting, but tynes may need to be removed in some cases.			
Ripper points	A pin holds on the ripper points. Dirt can compact under the ripper points.			
All areas	Check if any sections or channels are hollow and determine if there is a possible entry point for contamination. Check if plates are covering a compartment or space that may have collected dirt/trash.			
Cleaning method: Mechanical (M), Compressed Air (CA), Vacuum (V), High Pressure Water (HPW), Low Pressure Water (LPW)				
<b>Inspected by:</b>		<b>Signature:</b>		
<b>Cleaned by:</b>		<b>Signature:</b>		





**ATTACHMENT 8. PLANNING PERMIT - PRECOAT MACHINE PORTERS BRIDGE ROAD QUARRY**

22 October 2024

Walters Contracting Pty Ltd  
11 East Goderich Street  
DELORAINES TAS 7304

Dear Sir/Madam

**RE: Planning Permit - PA\25\0032 – 190 Porters Bridge Road REEDY MARSH – Extractive Industry (Pre-Coat Machine).**

Thank you for your application for the above development. I wish to advise that your application has been approved under delegated authority from Council on Tuesday, 15 October 2024, subject to the conditions and notes contained in the attached permit.

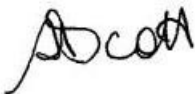
**PLEASE NOTE THIS IS NOT A BUILDING PERMIT.**

The Permit becomes valid 14 days from the date of this letter. This 14 day period is the time frame whereby you may make an appeal against Council's decision. However, if you do not wish to make an appeal and would like to commence the use or development prior to the expiration of the 14 day period, the permit will become valid by notifying the planning authority in writing of your intention to commence and that you do not intend to make an appeal. To assist you in this, I have included the attached from "Notification to Waiver Appeal Rights" which may be completed and returned to Council.

If you wish to make an appeal against Council's decision, a Notice of Appeal must be lodged with the Resource Management and Planning Appeal Tribunal, GPO Box 2036, Hobart, within 14 days from the date of this letter. For information on how to lodge an appeal please contact the Tribunal on 6233 6464 or visit [www.rmpat.tas.gov.au](http://www.rmpat.tas.gov.au).

If you have any queries regarding the Planning Permit, please contact Council's Planning Department on 6393 5320.

Yours sincerely



Sandi Scott  
**Development Administration Officer**

## **PLANNING PERMIT**

<b><u>PLANNING APPLICATION NO:</u></b>	PA\25\0032
<b><u>LOCATION:</u></b>	190 Porters Bridge Road REEDY MARSH (CT's: 157328/1, 157328/2, 157328/4 & 157328/5)
<b><u>APPLICANT:</u></b>	Walters Contracting Pty Ltd
<b><u>DEVELOPMENT:</u></b>	Extractive Industry (Pre-Coat Machine)

In accordance with Section 58 of the *Land Use Planning and Approvals Act 1993*, you are advised that the application for Extractive Industry (Pre-Coat Machine), by Walters Contracting Pty Ltd, for land located at 190 Porters Bridge Road REEDY MARSH (CT's: 157328/1, 157328/2, 157328/4 & 157328/5), is **APPROVED**, generally in accordance with the endorsed plans:

- a) **Van Diemen Consulting; Dated: 24 August 2024; Porters Bridge Quarry pre-coat machine introduction; and**
- b) **Van Diemen Consulting; Dated: 26 July 2024; Development Application for a permit to introduce the use of pre-coat machine at Porters Bridge Road Quarry, Exton (Email)**

and subject to the following conditions:

1. **The use approved by this permit may only operate within the approved quarry operating hours of 7am to 7pm Monday to Fridays and 8am to 4pm Saturdays.**
2. **No hazardous materials are to be stored in manifest quantities as defined by the Work Health and Safety Regulations 2022.**

### **Notes:**

1. **The use and development approved by this permit must not cause any nuisance or be detrimental to the amenity of neighbouring properties caused by emissions. Emissions must comply with the provisions of the Environmental Management and Pollution Control Act 1994.**
2. **Any other proposed development and/or use, including amendments to this proposal, may require a separate planning application and assessment against the Planning Scheme by Council. All enquiries can be directed to Council's Development & Regulatory Services on 6393 5320 or via email: [mail@mvc.tas.gov.au](mailto:mail@mvc.tas.gov.au)**
3. **This permit does not imply that any other approval required under any other by-law or legislation has been granted. The following additional approvals may be required before construction commences:**
  - a) **Building approval**
  - b) **Plumbing approval**

**All enquiries should be directed to Council's Permit Authority on (03) 6393 5320 or Council's Plumbing Surveyor on 0419 510 770.**

4. **This permit takes effect after:**
  - a) **The 14 day appeal period expires; or**
  - b) **Any appeal to the Resource Management and Planning Appeal Tribunal is abandoned or determined; or.**
  - c) **Any other required approvals under this or any other Act are granted.**
5. A planning appeal may be instituted by lodging a Notice of Appeal with the Registry of the Tasmanian Civil and Administrative Tribunal. An appeal may be instituted within 14 days of the date the Corporation serves notice of the decision on the applicant. For more information see the Resource and Planning Stream of Tasmanian Civil and Administrative Tribunal website [www.tascat.tas.gov.au/resource-and-planning/home](http://www.tascat.tas.gov.au/resource-and-planning/home).
6. If an applicant is the only person with a right of appeal pursuant to section 61 of the *Land Use Planning and Approvals Act 1993* and wishes to commence the use or development for which the permit has been granted within that 14 day period, the Council must be so notified in writing. A copy of Council's Notice to Waive Right of Appeal is attached.
7. This permit is valid for two (2) years only from the date of approval and will thereafter lapse if the development is not substantially commenced. An extension may be granted if a request is received.
8. In accordance with the legislation, all permits issued by the permit authority are public documents. Members of the public will be able to view this permit (which includes the endorsed documents) on request, at the Council Office.
9. If any Aboriginal relics are uncovered during works:
  - a) All works are to cease within a delineated area sufficient to protect the unearthed and other possible relics from destruction,
  - b) The presence of a relic is to be reported to Aboriginal Heritage Tasmania Phone: (03) 6233 6613 or 1300 135 513 (ask for Aboriginal Heritage Tasmania) Fax: (03) 6233 5555 Email: [aboriginal@heritage.tas.gov.au](mailto:aboriginal@heritage.tas.gov.au); and
  - c) The relevant approval processes will apply with state and federal government agencies.

**DATED AT WESTBURY ON 15 OCTOBER 2024.**

  
**Jana Rockliff**  
**TOWN PLANNER**

*I certify that I have checked that the permit conditions for the application referred to as PA\25\0032, for 190 Porters Bridge Road REEDY MARSH (CT's: 157328/1, 157328/2, 157328/4 & 157328/5), corresponds with the decision of the Delegated Officer.*

476800

476900

Meander Valley Council  
This is the plan referred to in the attached  
Permit No: PA\25\0032

*[Signature]*  
TOWN PLANNER

15 October 2024  
Date

Pages 1 to 4 inclusive  
THIS IS NOT A BUILDING PERMIT

# PORTERS BRIDGE QUARRY

## DEVELOPMENT APPLICATION

### FIGURE 1: PORTERS BRIDGE QUARRY PRE-COAT MACHINE INTRODUCTION

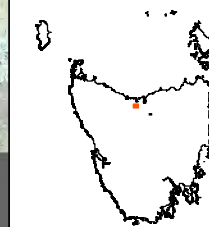
TASMAP:  
DELORAINÉ  
4640

LGA:  
MEANDER  
VALLEY

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE BY VAN DIEMEN CONSULTING



**an Diemen CONSULTING**  
PO Box 1 NEW TOWN TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY. LTD.

DATE: 24 AUG 2024

STOCKPILE  
AREA

LOCATION OF  
PROPOSED  
PRECOAT MACHINE

TITLE  
BOUNDARY

SETBACK TO  
BOUNDARY  
85M

MINING  
LEASE

MVC Planning Permit - PA\25\0032 - Page 1 of 4

0 25 50 100 METERS

5406975

5406800



**From:** Richard Barnes <rwbarnes73@gmail.com>  
**Sent:** Tuesday, 27 August 2024 1:33 PM  
**To:** Meander Valley Council Email  
**Cc:** Simon Rootes; Joseph Walters; Planning @ Meander Valley Council; EPA Enquiries (EPA); Chris Walters  
**Subject:** Development Application for a permit to introduce the use of pre-coat machine at Porters Bridge Road Quarry, Exton  
**Attachments:** Gmail - Request under Condition G3 (PCE10885) to operate a pre-coater at Porters Bridge Road Quarry.pdf; Land Titles.pdf; Fig1\_PB\_DA.pdf; Additional planning application information Land Titles.pdf; Saftey data Sheet Pre Coat Product.pdf; Planning-Application-Form\_PortersBridgeRoadQuarry\_Pre\_Coat\_Machine\_signed.pdf

Dear Sir/Madam

I am writing on behalf of Walters Contracting Pty Ltd to submit a development application to the Meander Valley Council for a permit to enable the introduction of a pre-coat machine into the Porters Bridge Road Quarry (PBRQ).

The existing Extractive Industry (PBRQ) operates under the permit PA\21\0267 which includes Permit Conditions Environmental No. 10885/1.

The introduction of the pre-coat machine does not alter the fundamental use of the activity, rather it simply introduces a machine to pre-coat aggregate produced at the Extractive Industry.

Importantly, there is no intensification of use, nor change in the volume of material to be extracted or processed. There is also no additional truck movements of consequence because the volume extracted and processed is not to change. The machine would be floated to site and then floated from the site using a truck (as now occurs for other machinery such as crushers and screens).

The pre-coat process does not involve the application of heat (i.e. it is a cold pre-coat process). I attach the SDS for the pre-coat product to be used.

The use of the machine is within a Level 2 regulated premises (being Porters Bridge Road Quarry). I attach correspondence from Mr Michael Gartrell, the EPA Regulatory Officer for the Level 2 Regulated Premises, which advises that the EPA does not need to be referred to the application for assessment. That said, I will leave it to Council to decide if it will refer the application, and what response may be given by the EPA to any referral made.

I provide further particulars of the activity below to aid the assessment process by Council.

### **Machine and Hardstand Description**

The machine is 4.5m at its highest point from ground level.

The machine would be set up on a hardstand of compacted aggregate located 85 m from the nearest Title boundary (see **Figure 1** attached) and remain there while it is being used. Aggregate is fed into the machine, where it is coated and then conveyed up the conveyor to drop into a stockpile where it is collected by trucks for haulage to road work sites.

The machine is to be housed and used in an already established and approved (existing Extractive Industry) stockpile area where there is processing and storage of rock into aggregates. The stockpile area is already managed for drainage and sediment basin systems that have been approved by the EPA as part of the existing Extractive Industry.

## Period of time and use of the pre-coat machine in the Quarry

The application seeks to have the machine in the Quarry, and to be able to use it, at any time of the calendar year. Operating hours would be those for the Quarry (excluding the truck carting only start time of 0600 to 0700hrs) - 0700 to 1900 hrs Monday to Friday, 0800 to 1600 hrs Saturday and not on Sundays and public holidays gazetted statewide.

The machine will not be based in the site full-time; it will be used for up to 9 months per annum, of which it may not be in the quarry for that entire time. October 2024 to April 2025 is the likely period for the initial use of the machine, with the October to April period then applied each year. It would be removed from time to time to go to another quarry to be used there (the time spent in this quarry would be subject to the amount of volume needing to be coated, and the demand for product from other quarries owned and/or operated by the applicant).



In terms of a development application fee, can Council please raise an invoice for the fee and provide it directly to the applicant:

Simon Rootes, General Manager  
Walters Contracting Pty Ltd  
11 East Goderich Street Deloraine TAS 7304  
Email: [admin@walterscontracting.net](mailto:admin@walterscontracting.net)

Please direct correspondence (such as the RFI) to me, with a carbon copy to [joey@walterscontracting.net](mailto:joey@walterscontracting.net) and [simon@walterscontracting.net](mailto:simon@walterscontracting.net)

Thanks and regards  
Dr Richard Barnes  
obo Walters Contracting Pty Ltd

--

Dr Richard Barnes BSc(Hons) PhD GDURP MPIA EIANZ MESA

Principal Environmental, Regional and Urban Planner  
Environmental Specialist and Ecologist  
Director, Van Diemen Consulting Pty Ltd,  
Mobile: 0438 588 695





Meander Valley Council

**NOTIFICATION TO WAIVER APPEAL RIGHTS**

**Notification Pursuant to Section 53 (1)  
*Land Use Planning Approvals Act 1993***

To: Meander Valley Council ("the Council")

1. I am the applicant for the development and/or use land at (address):

.....  
.....

2. I am in receipt of a development permit from the Council reference Number (development application of PA number)

.....

3. I hereby acknowledge that I do not intend to exercise my right pursuant to section 61 of the *Land Use and Approvals Act 1993* to appeal any condition on the aforementioned development granted by Council.

Please also give the following details:-

Owner's name and address:-

.....  
.....  
.....

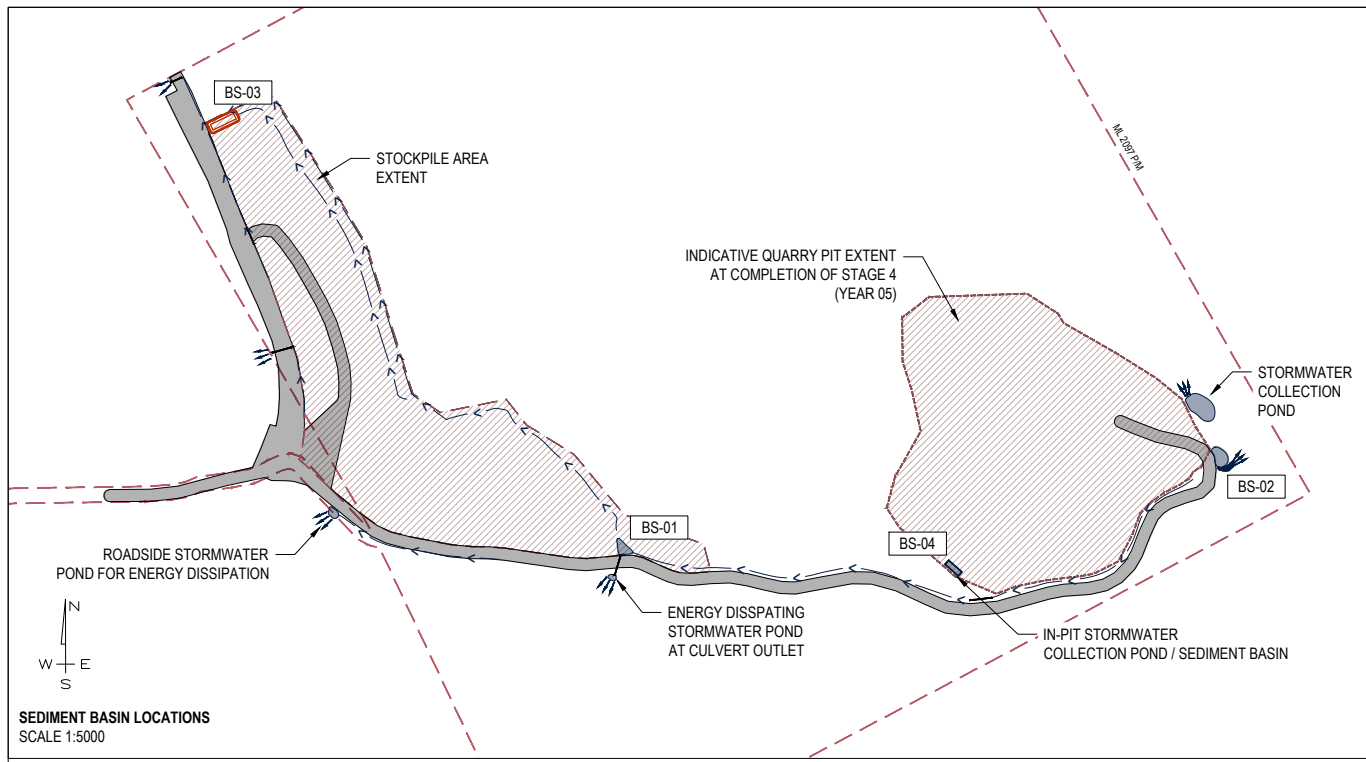
Signed by the applicant:-

.....

Date: .....

*"The Meander Valley Council is committed to upholding the right to privacy of all individuals who have dealings with the Council. Unless required by law or by a Court or tribunal, the Council will take the necessary steps to ensure that the personal information that members of the public share with us remains confidential. How we use this information is explained in our Privacy Policy, which is available at [www.meander.tas.gov.au](http://www.meander.tas.gov.au) or at the Council Office."*

**ATTACHMENT 9. SEDIMENT BASIN LOCATION AND DIMENSION CALCULATIONS**



**NOTES - GENERAL**

- SEDIMENT BASIN TYPE: TYPE 'F' AS PER IECA GUIDELINES.
- TYPE 'F' BASINS ARE DESIGNED FOR A MAXIMUM 5-DAY CYCLE, COMPRISING FILLING, TREATMENT, AND DISCHARGE WITHIN THE 5-DAY PERIOD.
- 80<sup>TH</sup> PERCENTILE 5-DAY RAINFALL DEPTH HAS BEEN USED FOR CALCULATING SETTLING ZONE VOLUMES AS PER IECA GUIDELINES (BOOK 02, TABLE B4).
- 80<sup>TH</sup> PERCENTILE 5-DAY RAINFALL DEPTH: 23.44 mm.
- THE BASINS WERE DESIGNED ASSUMING NO DISPERSIVE SOILS ARE PRESENT ON SITE, BASED ON HISTORICAL DATA. WHERE ANY EVIDENCE OF DISPERSIVE SOIL PRESENCE IS FOUND, FURTHER TREATMENT WITH A SUITABLE FLOCCULANT (E.G. GYPSUM) MAY BE REQUIRED.

**NOTES - SEDIMENT BASIN 04 (BS-04)**

- BS-04 TO BE CONSTRUCTED UPON COMPLETION OF STAGE 01 OF THE EXTRACTION PLAN.
- BS-04 WILL ALSO FUNCTION AS A STORMWATER COLLECTION POND TO INTERCEPT RUNOFF FROM THE QUARRY PIT. THE COLLECTED STORMWATER WILL BE REUSED FOR QUARRY OPERATIONS, WITH EXCESS WATER DIRECTED TO BS-01 FOR FURTHER TREATMENT.
- AS THE PIT PROGRESSES, THE QUARRY OPERATOR MAY CONSTRUCT AN ADDITIONAL IN-PIT BASIN CLOSER TO THE ACTIVE FACE TO REDUCE TRAVEL DISTANCE.

**SUMMARY OF SEDIMENT BASIN DESIGN DETAILS**

	Sediment Basin	Catchment Area (ha)	Catchment Type	Equivalent IECA Soil Classification Group	Rainfall Depth (mm)	Volumetric Runoff Coefficient	Total Rainfall Volume (cu.m)	Minimum Settling Volume Required (cu.m.)	Minimum Storage Volume Required (cu.m.)	Total Volume Required (cu.m.)	Current Volume (cu.m.)
Current	BS-01	3.30	Vegetation	Group A	23.44	0.02	15.47	-	-	-	-
		0.32	Quarry Floor	Group C	23.44	0.27	20.25	35.72	5.00	40.72	12.40
	BS-02	1.30	Quarry Floor	Group C	23.44	0.27	82.27	82.30	5.00	87.30	33.00
	BS-03	3.10	Stockpile Area	Group C	23.44	0.27	196.19	196.19	5.00	201.19	NA
Stage 1 Completion	BS-01	3.00	Vegetation	Group A	23.44	0.02	14.06	14.06	5.00	19.06	12.40
	BS-02	1.90	Quarry Floor	Group C	23.44	0.27	120.25	120.25	5.00	125.25	33.00
	BS-03	3.10	Stockpile Area	Group C	23.44	0.27	196.19	196.19	5.00	201.19	NA
Stage 2 Completion	BS-01	2.00	Vegetation and any excess runoff from BS-04	Group A	23.44	0.02	9.38	9.38	5.00	14.38	12.40
	BS-02	1.90	Quarry Floor	Group C	23.44	0.27	120.25	120.25	5.00	125.25	33.00
	BS-03	3.10	Stockpile Area	Group C	23.44	0.27	196.19	196.19	5.00	201.19	NA
	BS-04	1.00	Quarry Floor	Group C	23.44	0.27	63.29	63.30	5.00	68.30	NA
Stage 3 Completion	BS-01	2.00	Vegetation and any excess runoff from BS-04	Group A	23.44	0.02	9.38	9.38	5.00	14.38	12.40
	BS-02	To be redundant or use as a stormwater collection pond									
	BS-03	3.10	Stockpile Area	Group C	23.44	0.27	196.19	196.19	5.00	201.19	NA
Stage 4 Completion	BS-04	2.90	Quarry Floor	Group C	23.44	0.27	183.54	183.54	5.00	188.54	NA
	BS-01	2.00	Vegetation and any excess runoff from BS-04	Group A	23.44	0.02	9.38	9.38	5.00	14.38	12.40
	BS-02	To be redundant or use as a stormwater collection pond									
	BS-03	3.10	Stockpile Area	Group C	23.44	0.27	196.19	196.19	5.00	201.19	NA
	BS-04	0.90	Rehabilitated Area	Group B	23.44	0.14	29.53	-	-	-	-
		2.00	Quarry Floor	Group C	23.44	0.27	126.58	156.11	5.00	161.11	-

**ESTIMATION OF SEDIMENT GENERATION BY RUSLE EQUATION**

Soil Group	Rainfall Erosivity Factor	Soil Erodibility Factor	Topographic Factor	Cover and Management Factor	Erosion Control Practice Factor	Annual Soil Loss (t/ha/yr)	Annual Soil Loss (cu.m./ha/yr)
Group A	1102.00	0.017	5.89	0.01	1.00	1.1	0.69
Group B	1102.00	0.017	0.24	0.03	0.80	0.1	0.07
Group C	1102.00	0.027	0.27	1.00	1.00	8.0	5.02

**SUMMARY OF SEDIMENT BASIN VOLUMES**

Stage	Sediment Basin	Pervious Catchment Area (ha)	Impervious / Semi pervious Catchment Area (ha)	Total Volume Required (cu.m.)
Current	BS-01	3.30	0.32	40.72
	BS-02	0.00	1.30	87.30
Stage 1 Completion	BS-01	3.00	0.00	19.06
	BS-02	0.00	1.90	125.25
	BS-03	0.00	3.10	201.19
Stage 2 Completion	BS-01	2.00	0.00	14.38
	BS-02	0.00	1.90	125.25
	BS-03	0.00	3.10	201.19
	BS-04	0.00	1.00	68.30
Stage 3 Completion	BS-01	2.00	0.00	14.38
	BS-02	To be redundant or use as a stormwater collection pond		
	BS-03	0.00	3.10	201.19
	BS-04	0.00	2.90	188.54
	BS-01	2.00	0.00	14.38
Stage 4 Completion	BS-02	To be redundant or use as a stormwater collection pond		
	BS-03	0.00	3.10	201.19
	BS-04	0.90	2.00	161.11

**RECOMMENDED MINIMUM CAPACITIES FOR SEDIMENT BASINS**

Sediment Basin	Recommended Minimum Capacity (cu.m.)
BS-01	40
BS-02	125
BS-03	200
BS-04	200

**SOIL CLASSIFICATION GROUP BY IECA**

Catchment Type	Equivalent IECA Soil Classification Group
Vegetation	Group A
Rehabilitated Area	Group B
Quarry Floor	Group C
Stockpile Area	Group C

					CLIENT: WALTERS CONTRACTING PTY LTD
					ADDRESS/LOCATION: 190 PORTERS BRIDGE ROAD, EXTON TAS 5204
					HORIZONTAL/VERTICAL DATUM: MGA ZONE 55 GDA94 / AHD
A	INITIAL PLAN	06/08/2025	S.I.	C.M.	ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED
REV.	DESCRIPTION	DATE	DRAFTED	REVIEWED	DO NOT SCALE FROM THE DRAWING.
REVISION HISTORY					PROJECT NUMBER: 1011

**SEDIMENT BASINS DESIGN DETAILS SUMMARY**

DRAWING NUMBER: 1011/302



SENARIO	STOCKPILE AREA	PIT AREA	ROAD	REHABILITATED AREA	TOTAL DISTURBED AREA	VOLUME TO BE EXTRACTED	VOLUME TO BE EXTRACTED (LOOSE)	OVERBURDEN GENERATED
Current - Mid 2025	1.90	1.50	1.60	0.00	5.00			
Stockpile Area Expansion	3.06	1.50	1.90	0.00	6.46	62500	93750	
Stage 1 Completion	3.06	1.90	1.90	0.00	6.86	62000	93000	
Stage 2 Completion	3.06	2.91	1.90	0.00	7.87	106000	159000	
Stage 3 Completion	3.06	2.91	1.90	0.00	7.87	139000	208500	
Stage 4 Completion	3.06	2.91	1.90	0.46	7.41	115000	172500	
Stage 5 Completion	3.06	5.44	1.90	2.40	8.00	330500	495750	
Stage 6 Completion	3.06	7.92	1.90		12.88	318500	477750	

	Sediment Basin	Catchment Area (ha)	Catchment Type	Equivalent IECA Soil Classification Group	Rainfall Depth (mm)	Volumetric Runoff Coefficient	Total Rainfall Volume (cu.m)	Minimum Settling Volume Required (cu.m.)	Minimum Storage Volume Required (cu.m.)	Total Volume Required (cu.m.)	Current Volume (cu.m.)
Current	BS-01	3.30	Vegetation	Group A	23.44	0.02	15.47	-	-	-	-
		0.32	Quarry Floor	Group C	23.44	0.27	20.25	35.72	5.00	40.72	12.40
	BS-02	1.30	Quarry Floor	Group C	23.44	0.27	82.27	82.30	5.00	87.30	33.00
	BS-03	3.10	Stockpile Area	Group C	23.44	0.27	196.19	196.19	5.00	201.19	NA
Stage 1 Completion	BS-01	3.00	Vegetation	Group A	23.44	0.02	14.06	14.06	5.00	19.06	12.40
	BS-02	1.90	Quarry Floor	Group C	23.44	0.27	120.25	120.25	5.00	125.25	33.00
	BS-03	3.10	Stockpile Area	Group C	23.44	0.27	196.19	196.19	5.00	201.19	NA
Stage 2 Completion	BS-01	2.00	Vegetation and any excess runoff from BS-04	Group A	23.44	0.02	9.38	9.38	5.00	14.38	12.40
	BS-02	1.90	Quarry Floor	Group C	23.44	0.27	120.25	120.25	5.00	125.25	33.00
	BS-03	3.10	Stockpile Area	Group C	23.44	0.27	196.19	196.19	5.00	201.19	NA
	BS-04	1.00	Quarry Floor	Group C	23.44	0.27	63.29	63.30	5.00	68.30	NA
Stage 3 Completion	BS-01	2.00	Vegetation and any excess runoff from BS-04	Group A	23.44	0.02	9.38	9.38	5.00	14.38	12.40
	BS-02	To be redundant or use as a stormwater collection pond									
	BS-03	3.10	Stockpile Area	Group C	23.44	0.27	196.19	196.19	5.00	201.19	NA
	BS-04	2.90	Quarry Floor	Group C	23.44	0.27	183.54	183.54	5.00	188.54	NA
Stage 4 Completion	BS-01	2.00	Vegetation and any excess runoff from BS-04	Group A	23.44	0.02	9.38	9.38	5.00	14.38	12.40
	BS-02	To be redundant or use as a stormwater collection pond									
	BS-03	3.10	Stockpile Area	Group C	23.44	0.27	196.19	196.19	5.00	201.19	NA
	BS-04	0.90	Rehabilitated Area	Group B	23.44	0.14	29.53	-	-	-	-
2.00		Quarry Floor	Group C	23.44	0.27	126.58	156.11	5.00	161.11	-	

	Sediment Basin	Catchment Area (ha)	Catchment Type	Equivalent ICA Soil Classification Group	Rainfall Depth (mm)	Volumetric Runoff Coefficient	Total Rainfall Volume (cu.m)	Minimum Settling Volume Required	Minimum Storage Volume Required	Total Volume Required	Current Volume
Current	BS-01	3.30	Vegetation	Group A	23.44	0.02	15.47	-	-	-	-
		0.32	Quarry Floor	Group C	23.44	0.27	20.25	35.72	5.00	40.72	12.40
	BS-02	1.30	Quarry Floor	Group C	23.44	0.27	82.27	82.30	5.00	87.30	33.00
Stage 1 Completion	BS-03	3.10	Stockpile Area	Group C	23.44	0.27	196.19	196.19	5.00	201.19	NA
		BS-01	3.00	Vegetation	Group A	23.44	0.02	14.06	14.06	5.00	19.06
Stage 1 Completion	BS-02	1.90	Quarry Floor	Group C	23.44	0.27	120.25	120.25	5.00	125.25	33.00
		BS-03	3.10	Stockpile Area	Group C	23.44	0.27	196.19	196.19	5.00	201.19
Stage 2 Completion	BS-01	3.00	Vegetation and any excess runoff from BS-04	Group A	23.44	0.02	9.38	9.38	5.00	14.38	12.40
		BS-02	1.90	Quarry Floor	Group C	23.44	0.27	120.25	120.25	5.00	125.25
	BS-03	3.10	Stockpile Area	Group C	23.44	0.27	196.19	196.19	5.00	201.19	NA
	BS-04	1.00	Quarry Floor	Group C	23.44	0.27	63.3	63.30	5.00	68.30	NA
Stage 3 Completion	BS-01	2.00	Vegetation and any excess runoff from BS-04	Group A	23.44	0.02	9.38	9.38	5.00	14.38	12.40
		To be redundant or use as a stormwater collection pond									
Stage 3 Completion	BS-03	3.10	Stockpile Area	Group C	23.44	0.27	196.19	196.19	5.00	201.19	NA
		BS-04	2.90	Quarry Floor	Group C	23.44	0.27	183.54	183.54	5.00	188.54
Stage 4 Completion	BS-01	2.00	Vegetation and any excess runoff from BS-04	Group A	23.44	0.02	9.38	9.38	5.00	14.38	12.40
		To be redundant or use as a stormwater collection pond									
Stage 4 Completion	BS-03	3.10	Stockpile Area	Group C	23.44	0.27	196.19	196.19	5.00	201.19	NA
		BS-04	0.90	Rehabilitated Area	Group B	23.44	0.14	29.5	-	-	-
Stage 4 Completion	BS-04	2.00	Quarry Floor	Group C	23.44	0.27	126.6	126.6	5.00	131.6	-
		To be redundant or use as a stormwater collection pond									

Stage	Sediment Basin	Previous Catchment Area (ha)	Impervious / Semi pervious Catchment Area (ha)	Total Volume Required (cu.m)
Current	BS-01	3.30	0.32	40.72
	BS-02	0.00	1.30	87.30
Stage 1 Completion	BS-01	3.00	0.00	19.06
	BS-02	0.00	1.90	125.25
	BS-03	0.00	3.10	201.19
Stage 2 Completion	BS-01	2.00	0.00	14.38
	BS-02	0.00	1.90	125.25
	BS-03	0.00	3.10	201.19
	BS-04	0.00	1.00	68.30
Stage 3 Completion	BS-01	2.00	0.00	14.38
	To be redundant or use as a stormwater collection pond			
	BS-03	0.00	3.10	201.19
Stage 4 Completion	BS-04	0.00	2.90	188.54
	BS-01	2.00	0.00	14.38
	To be redundant or use as a stormwater collection pond			
	BS-03	0.00	3.10	201.19
	BS-04	0.90	2.00	161.11

Catchment Type	Equivalent ICA Soil Classification Group
Vegetation	Group A
Rehabilitated Area	Group B
Quarry Floor	Group C
Stockpile Area	Group C

Sediment Basin	Recommended Minimum Capacity
BS-01	40
BS-02	125
BS-03	200
BS-04	200

RUSLE EQUATION							
Soil Group	Rainfall Erosivity Factor	Soil Erodibility Factor	Topographic Factor	Cover and Management Factor	Erosion Control Practice Factor	Annual Soil Loss (t/ha/yr)	Annual Soil Loss (cu.m/ha/yr)
Group A	1102.00	0.017	5.89	0.01	1.00	1.1	0.69
Group B	1102.00	0.017	0.24	0.03	0.80	0.1	0.07
Group C	1102.00	0.027	0.27	1.00	1.00	8.0	5.02

**ATTACHMENT 10. DRAFT NOISE MANAGEMENT PLAN FOR OUT-OF-HOURS OPERATIONS**



PORTERS BRIDGE ROAD QUARRY, EXTON

NOISE MANAGEMENT PLAN  
FOR OUT-OF-HOURS OPERATIONS

DRAFT FOR CONSULTATION

**DOCUMENT CONTROL**

Version	Description	Prepared By / Comments made by	Date
1	V1	Van Diemen Consulting Pty Ltd for AG and BJ Riley and Walters Contracting Pty Ltd	25-8-2025
1		EPA comments sought and received	
2			
2			
3			
3			

**TABLE OF CONTENTS**

Statement by Contractor ..... 4

Section 1 - Introduction ..... 7

    1.1 Purpose ..... 7

    1.2 Objectives and Plan Structure ..... 7

    1.3 Quarry Description ..... 9

    1.4 Plan Management Team ..... 10

Section 2 – Noise Sources for Out-Of-Hours Operations..... 12

    2.1 Operating Hours ..... 12

    2.2 Potential Sources of Nuisance Noise..... 12

Section 3 - Roles and Responsibilities ..... 14

Section 4 – Noise Management Controls for Out-Of-Hours Operations ..... 16

    4.1 Awareness Training ..... 16

    4.2 Operational Controls ..... 16

    4.3 Communication procedures ..... 17

Section 5 – Monitoring ..... 19

    5.1 Introduction ..... 19

    6.2 Noise Monitoring ..... 19

Section 6 – Incident Response ..... 21

    6.1 Introduction ..... 21

    6.2 Dealing with exceedances..... 21

    6.3 Complaint Procedure ..... 22

Section 7 – Records, Reporting and Review ..... 23

    7.1 Records..... 23

    7.2 Reporting..... 23

    7.3 Review..... 23

**TABLES**

Table 1. Structure of the Noise Management Plan..... 8

Table 2. Porters Bridge Road Quarry location and permit information..... 9

Table 3. Quarry Operator information and contact details ..... 10

Table 4. Operating times for activities at the Porters Bridge Road Quarry ..... 12

Table 5. Roles and responsibilities for NMP implementation at the Porters Bridge Road Quarry ..... 14

## STATEMENT BY CONTRACTOR

Walters Contracting Pty Ltd is the Contractor operating the Porters Bridge Road Quarry in accordance with Permit No. PA\21\0267 which contains Permit Part B, Permit Conditions - Environmental (PCE) No. 10885 (the 'Permit').

This Noise Management Plan (NMP) has been prepared for Walters Contracting Pty Ltd by Van Diemen Consulting Pty Ltd (VDC).

The NMP has been developed to –

- comply with Condition N2 of the Permit;
- describe all potential sources of nuisance noise that may arise during out-of-hours operations;
- describe all control measures that will be employed in relation to the activity to minimise nuisance noise during out of hours operations;
- outline the roles and responsibilities relating to noise management for quarry personnel;
- provide a step-by-step process for accessing the quarry outside standard operating hours defined in the Quarry Code of Practice;
- document the communication protocols for managing truck access to the quarry; and
- document procedures for the monitoring and review of noise management measures and practices.

Walters Contracting Pty Ltd acknowledges the contents of this NMP are true and correct to the best of its knowledge.

Signed

Name Mr Will Bryan, General Manager, Walters Contracting Pty Ltd

Date 25 August 2025

ACRONYMS	
<b>DPIPWE (now NRE Tas)</b>	Department of Primary Industries, Parks, Water and Environment
<b>EMPCA</b>	<i>Environmental Management and Pollution Control Act 1994</i>
<b>EPA</b>	Environment Protection Authority
<b>ML</b>	Mining Lease
<b>MRT</b>	Mineral Resources Tasmania
<b>NRE Tas</b>	Department of Natural Resources and Environment Tasmania
<b>NSP</b>	means Noise Sensitive Premises

TERMS	
<b>Heavy Vehicles</b>	means any vehicle or machinery used for the activity to which this document relates that has a gross vehicle mass (GVM) or aggregate trailer mass (ATM) exceeding 4.5 tonnes.
<b>(the) Lessee</b>	means Walters Contracting Pty Ltd.
<b>Mining Lease</b>	means Mining Lease 2097P/M.
<b>Noise Sensitive Premises</b>	means residences and residential zones (whether occupied or not), schools, hospitals, caravan parks and similar land uses involving the presence of individual people for extended periods, except in the course of their employment or for recreation.
<b>Out-of-hours operations</b>	<p>Operations that do not occur within standard Quarry Code of Practice operating hours which are 0700 to 1900 hours, Monday to Friday 0800 to 1600 hours, Saturdays, and no operations on Sundays.</p> <p>For this NMP, Out-of-hours operations are those for loading and carting of product between 0600 and 0700 hrs Monday to Friday</p>

<b>Permit</b>	means Permit No. PA\21\0267 which contains Permit Part B, Permit Conditions - Environmental (PCE) No. 10885.
<b>Permit Conditions</b>	means Permit Part B, Permit Conditions - Environmental (PCE) No. 10885 contained in Permit No. PA\21\0267 (the 'Permit').
<b>Quarry</b>	means Porters Bridge Road Quarry, Exton approved by the Permit.
<b>Quarry Code of Practice</b>	means the document of this title published by the Environment Protection Authority in May 2017 and includes any subsequent versions of this document.
<b>Quarry Operator</b>	means Walters Contracting Pty Ltd.
<b>Record</b>	means to write an observation. All records will be handed to the Site Supervisor and will be kept on file. All records are to be clearly legible.

## SECTION 1 - INTRODUCTION

### 1.1 PURPOSE

The Permit for the Porters Bridge Road Quarry requires the development and on-ground implementation of a Noise Management Plan (the 'NMP') prior to conducting any loading and carting outside standard operating hours defined in the Quarry Code of Practice<sup>1</sup>.

For this NMP, **Out-of-hours operations** are those for the loading and carting of product between 0600 and 0700 hrs Monday to Friday.

Condition N2 of the Permit Conditions requires the development and submission of a Noise Management Plan to the Director, and is reproduced in full below:

#### 'N2 Noise Management Plan

1 Prior to conducting any loading and carting outside standard operating hours defined in the Quarry Code of Practice, a Noise Management Plan must be developed and submitted to the Director for approval.

2 The Noise Management Plan must include:

2.1 a description of all potential sources of nuisance noise that may arise during out of hours operations;

2.2 a description of all control measures that will be employed in relation to the activity to minimise nuisance noise during out of hours operations;

2.3 roles and responsibilities relating to noise management for quarry personnel;

2.4 a step-by-step process for accessing the quarry outside standard operating hours defined in the Quarry Code of Practice;

2.5 communication protocols for managing truck access to the quarry;

2.6 a map with a clearly marked park-up area to be used by trucks when waiting for access to the quarry;

2.7 noise monitoring protocols for residences within 100 m of the junction of the quarry access road and Porters Bridge Rd, to demonstrate compliance with noise limits.

3 The park-up area referenced in clause 2.6 must be located such that noise from waiting trucks is not audible at any residential premises.

4 The person responsible must act in accordance with the approved Noise Management Plan.'

### 1.2 OBJECTIVES AND PLAN STRUCTURE

The NMP provides the framework for the Quarry to operate outside standard operating hours defined in the Quarry Code of Practice in a manner where appropriate control measures are implemented to comply with

---

<sup>1</sup> The standard operating hours defined in the Quarry Code of Practice are: 0700 to 1900 hours, Monday to Friday 0800 to 1600 hours, Saturdays, and No operations on Sundays.

Condition N2. For this NMP, **Out-of-hours operations** are those for the loading and carting of product between 0600 and 0700 hrs Monday to Friday.

---

### 1.2.1 OBJECTIVES

The NMP is a practical tool with its primary audience being Quarry management and site personnel; the latter are directly responsible for implementing this plan as part of day-to-day operations.

The NMP is to provide information on the following:

1. A description of all potential sources of nuisance noise that may arise during out of hours operations;
2. A description of all control measures that will be employed in relation to the activity to minimise nuisance noise during out-of-hour operations;
3. Roles and responsibilities relating to noise management for quarry personnel including awareness training;
4. A step-by-step process for accessing the quarry outside standard operating hours defined in the Quarry Code of Practice;
5. Communication protocols for managing truck access to the quarry;
6. A map with a clearly marked park-up area to be used by trucks when waiting for access to the quarry;
7. Noise monitoring protocols for residences within 100 m of the junction of the quarry access road and Porters Bridge Rd, to demonstrate compliance with noise limits;
8. Incident reporting and compliance management; and
9. Document review procedures.

---

### 1.2.2 AREA COVERED BY THE PLAN

The NMP applies to the Mining Lease (2097P/M) that supports the Quarry.

---

### 1.2.3 PLAN STRUCTURE

The structure of the Noise Management Plan is outlined in **Table 1**.

**Table 1. Structure of the Noise Management Plan**

Section	Content	Relevant section of Permit Condition N2
1	a description of all potential sources of nuisance noise that may arise during out-of-hours operations;	2.2
2	a description of all control measures that will be employed in relation to the activity to minimise nuisance noise during out-of-hours operations;	4

3	roles and responsibilities relating to noise management for quarry personnel;	1.4 and 3
4	a step-by-step process for accessing the quarry outside standard operating hours defined in the Quarry Code of Practice;	4
5	communication protocols for managing truck access to the quarry;	4.3
6	a map with a clearly marked park-up area to be used by trucks when waiting for access to the quarry;	Figure 1
7	noise monitoring protocols for residences within 100 m of the junction of the quarry access road and Porters Bridge Rd, to demonstrate compliance with noise limits.	5

### 1.3 QUARRY DESCRIPTION

The address for the activity is 190 Porters Bridge Rd Exton TAS 7304. Access is from Porters Bridge Road with road connections to the Bass Highway via Meander Valley Road. Location and permit details of the Quarry are provided in **Table 2**.

The Quarry provides a large resource of dolerite bedrock that can be readily accessed from a state highway (Bass Highway) to provide a centralised location for the delivery of material to customers including Local Councils, State Government agencies, private enterprises, and private landowners. The Quarry complements the other quarry assets owned and operated by the Proponent, and with increased demand for the product approval is sought to increase production levels to meet demand.

**Table 2. Porters Bridge Road Quarry location and permit information**

Item	Description
<b>Physical address</b>	The address for the activity is 190 Porters Bridge Rd Exton TAS 7304. Access is from Porters Bridge Road with road connections to the Bass Highway via Meander Valley Road.
<b>Mining Lease</b>	2097P/M (granted and in force) - 33.3 hectares
<b>Land Titles</b>	<p>The Land is private freehold other than Crown Land (land part of Porters Bridge Road owned and maintained by Council, and a section of reserved road covered by a Mining Lease). An informal reserve on other public land occurs to the north of the access from Porters Bridge Road.</p> <p>The following Certificates of Title apply –</p> <ul style="list-style-type: none"> <li>• 39477/1 – Council (Porters Bridge Road);</li> </ul>

Item	Description
	<ul style="list-style-type: none"> <li>157238/1, 157238/2, 157238/3, 157238/4, 157238/5 – private freehold;</li> <li>Reserved Road – The Crown.</li> </ul>
<b>Zoning</b>	Rural Zone
<b>Land Use</b>	The current land use is forestry (native forest silviculture) and some livestock grazing. Large areas of the land on which the ML is located is retained native vegetation and silvicultural regrowth (selectively harvested forest). Surrounding land use is agriculture (mainly livestock grazing, forestry), conservation (private reserves), rural residential and other extractive industries.

#### 1.4 PLAN MANAGEMENT TEAM

The NMP is to be implemented by a team comprised of Quarry management, operational staff, and consultants.

##### 1.4.1 LESSEE AND OPERATOR

Walters Contracting Pty Ltd is the Lessee and Quarry Operator undertaking and organising all operations at the Quarry. The contact details for the representatives of Walters Contracting Pty Ltd are provided in **Table 3**.

**Table 3. Quarry Operator information and contact details**

<b>Trading Name</b>	Walters Contracting Pty Ltd
<b>Entity Name</b>	The Trustee for C & K Walters Family Trust
<b>ABN</b>	76 906 637 567
<b>Registered Address</b>	11 East Goderich Street, Deloraine
<b>Postal Address</b>	11 East Goderich Street, Deloraine
<b>General Manager</b>	Name – Mr Will Bryan Email – <a href="mailto:will@walterscontracting.net.au">will@walterscontracting.net.au</a> , Mobile – 0409 567 369, (03) 6362 3782

<b>Quarry Manager</b>	Name – Mr Joseph (Joey) Walters Email – <a href="mailto:joey@walterscontracting.net">joey@walterscontracting.net</a> , Mobile – 0467 361 626, (03) 6362 3782
<b>Emergency Contact</b>	Name – Mr Chris Walters Email – <a href="mailto:admin@walterscontracting.net">admin@walterscontracting.net</a> , Mobile – 0418 370 646, (03) 6362 3782

---

#### 1.4.2 ENVIRONMENTAL ASSISTANCE AND ADVICE

Van Diemen Consulting Pty Ltd has been engaged to provide on-site assistance and advice with the preparation of the NVMP. Other specific services may time to time be accessed from other consultants such as an acoustic engineer to conduct noise and vibration monitoring.

## SECTION 2 – NOISE SOURCES FOR OUT-OF-HOURS OPERATIONS

### 2.1 OPERATING HOURS

The Quarry comprises several operational activities that each have a time-relevant environmental impact risk profile (e.g., noise generated during Evening and/or Night periods, vibration, traffic).

**Table 4** provides the operating times for the broad activities undertaken at the Quarry. The only **out-of-hour operations** to occur are those associated with loading and carting of product between 0600 and 0700 hrs Monday to Friday.

**Table 4. Operating times for activities at the Porters Bridge Road Quarry**

Clearing vegetation, ripping, stockpiling and associated earthworks	Crushing and/or vibratory screening	Loading and carting of product	Drilling and blasting
0700 to 1900 hrs Monday to Friday 0800 to 1600 hrs Saturday	0700 to 1900 hrs Monday to Friday 0800 to 1600 hrs Saturday	0600 to 1900 hrs Monday to Friday 0800 to 1600 hrs Saturday	Drilling - 0700 to 1900 hrs Monday to Friday 0800 to 1600 hrs Saturday Blasting - 1000 to 1600 hrs Monday to Friday

### 2.2 POTENTIAL SOURCES OF NUISANCE NOISE

#### 2.2.1 EXISTING LANDSCAPE NOISE SOURCES

Noise sources in the landscape surrounding the land where the activity will occur are as follows:

- farm machinery on the property and adjacent properties;
- forestry related activities (native forest and plantation silviculture) including the user of tree felling machinery, chainsaws, trucks and loaders, planting machinery to plough, fertilise and replant tubestock;
- activities undertaken at residential and rural residential properties in the area, such as for example, at Saddlers Run Road;
- vehicles and trucks using nearby roads especially the Bass Highway;
- winds in shelterbelts and remnant trees; and
- bird and insect life.

---

### 2.2.2 OUT-OF-HOURS QUARRY NOISE SOURCES

The Quarry includes activities that have the potential to cause noise emissions beyond the boundaries of the Land and include drilling and blasting, crushing/screening and carting material within and from the Quarry.

The only **Out-of-hour operations** to occur are those associated with loading and carting of product between 0600 and 0700 hrs Monday to Friday.

The machinery and equipment to be operated between **Out-of-hours operations** include –

- Light vehicles entering the Quarry via the Porters Bridge Road access once the access gate is opened and to then drive through to the Expanded Stockpile Area;
- Front end loader for loading product into trucks (within the Expanded Stockpile Area);
- Heavy Vehicles using the access road from Porters Bridge Road through to the Expanded Stockpile Area; and
- Water cart truck within the Expanded Stockpile Area (only if dust suppression is necessary, but it is unlikely for that period of the day, i.e., between 0600 to 0700 hrs).

There is no crushing, screening, drilling, and blasting to occur within the 0600 to 0700 hrs period.

Light vehicles (but not Heavy Vehicles) may access the open pit area and the road connecting the pit and Expanded Stockpile Area.

### SECTION 3 - ROLES AND RESPONSIBILITIES

The NMP is to be implemented by a team comprised of management and personnel from Walters Contracting Pty Ltd, external contractors, and consultant(s). Broadly, the General Manager has responsibility for implementing the NMP with a focus on providing the financial resources to implement it, and to conduct reporting and review functions.

The Quarry Manager has day-to-day responsibility for implementation of the NMP including the provision of training and inductions to Quarry Personnel.

**Table 5** provides a detailed list of tasks and responsibilities for key staff who perform a role in the management and operation of the Quarry.

A suitably qualified and experienced person/entity will be engaged on an ad hoc basis to provide advice and information to support the General Manager and Quarry Manager with NMP implementation and review.

**Table 5. Roles and responsibilities for NMP implementation at the Porters Bridge Road Quarry**

Role	Tasks and responsibilities for implementation
<b>General Manager</b>	<ul style="list-style-type: none"> <li>• Ensure financial resources are available to fully implement the NMP.</li> <li>• Review and endorse revisions of the NMP.</li> <li>• Liaise with the Quarry Manager to discuss NMP implementation, and to identify breaches, areas for improvement and/or reviews.</li> <li>• Approve monitoring and compliance reports for submission to regulators (if required).</li> <li>• Notify (in writing) the Environment Protection Authority of any breaches of the NMP.</li> </ul>
<b>Quarry Manager</b>	<ul style="list-style-type: none"> <li>• Coordinate the implementation of, and assure compliance with, the NMP, including the preparation of compliance reports (if required) and the management/resolution of complaints.</li> <li>• Implement training and awareness of noise management measures to Quarry Personnel and External Contractors through site induction and tool-box meetings.</li> <li>• Ensure that all personnel and contractors that conduct work at the Quarry are aware of their obligations under the NMP.</li> <li>• Engage external advice providers/consultant(s) to conduct noise monitoring surveys of out-of-hours operations.</li> <li>• Review risk mitigation and management controls and apply adaptive management techniques to meet compliance with NMP.</li> </ul>
<b>Quarry Personnel</b>	<ul style="list-style-type: none"> <li>• Apply out-of-hours operations noise management measures at the Quarry for which they have received training.</li> <li>• Immediately notify the Quarry Manager when noise mitigation measures for out-of-hours operations are ineffective.</li> </ul>

	<ul style="list-style-type: none"> <li>Report breaches of the NMP to the Quarry Manager as soon as practical, providing written details of the breach, and any measures that were immediately taken to reduce the likelihood of any environmental harm.</li> </ul>
<p><b>External advice providers and/or consultants</b></p>	<p>On an as needs basis at the request of the Quarry Manager, provide expert advice and information including for example –</p> <ul style="list-style-type: none"> <li>Noise survey(s).</li> <li>Notify (in writing) the Quarry Manager or General Manager of any known or likely NMP breaches observed when in the Quarry within 5 business days of detection.</li> </ul>

DRAFT FOR CONSULTATION

## SECTION 4 – NOISE MANAGEMENT CONTROLS FOR OUT-OF-HOURS OPERATIONS

The primary objective of the NMP is to provide direction for the management of noise generated during Out-of-hours operations.

### 4.1 AWARENESS TRAINING

All personnel and contractors and their employees will undergo Quarry specific inductions, incorporating basic noise management awareness training as part of the site induction program. The Quarry Manager is responsible for ensuring the appropriate training for Quarry staff is included in the induction.

The following areas, as a minimum, will be covered in the induction for **Out-of-hours operations**:

- There is to be **no parking or standing** of Heavy Vehicles on Porters Bridge Road;
- Awareness of Out-of-hours operations time periods and constraints on the type of equipment and machinery that can be used in the Quarry in that period;
- Awareness of the potential for noise impacts to neighbours and the location of the nearest Noise Sensitive Premises;
- Use of only approved reversing alarms for equipment and trucks in the Quarry;
- Awareness of prevailing wind directions and their potential to increase noise emissions downwind;
- Awareness of the noise enhancing effects of temperature inversions and the times of day and meteorological conditions under which they may occur; and
- Awareness of noise control measures.

In addition, monthly toolbox meetings are to discuss whole-of-site production, management, safety and environmental issues. Matters relating to noise are to be raised during these meetings, when necessary.

### 4.2 OPERATIONAL CONTROLS

The following noise mitigation and management measures are implemented at the Quarry and would be continued for the life of the Quarry.

A Out-of-hours operations logbook is to be kept at the Office and completed by the Quarry Manager or their representative to record the days when Out-of-hours operations occur.

---

#### 4.2.1 EQUIPMENT AND MACHINERY USE AND MAINTENANCE

- All equipment on site is to be serviced and generally maintained to adhere to existing noise standards and ensure that noise generated by equipment is not exacerbated;
- Utilise low noise emission reversing and other beepers on machinery;
- Minimise drop height into crushers and screens, whilst loading material, etc.; and
- Avoid using engine brakes unless it is an emergency and safety becomes of paramount importance.

---

#### 4.2.2 ACCESS TO THE QUARRY

Only Heavy Vehicles driven by Walters Contracting personnel will access the Quarry for out-of-hours operations.

Heavy Vehicles will only enter the access road after 0600 hrs to ensure that the gate has been opened so vehicles are not needing to wait; communication is to be via mobile phone or radio to ensure the gate has been opened prior to accessing Porters Bridge Road. There is to be no parking or standing of Heavy Vehicles on Porters Bridge Road.

---

#### 4.2.3 PARK-UP AREAS

Heavy Vehicles will only use the authorised park-up areas identified in **Figure 1** during Out-of-hours operations. There is to be no parking or standing of Heavy Vehicles on Porters Bridge Road.

### 4.3 COMMUNICATION PROCEDURES

Heavy Vehicle drivers within the Out-of-hours operations period are to –

- communicate with the quarry personnel via mobile phone or radio to ensure the access gate is open prior to accessing Porters Bridge Road;
- communicate with each other to ensure that when trucks have entered the access they are progressing to the Quarry for loading, or to a park-up area to wait for loading at the Quarry;
- communicate with each other when they are leaving the access and entering Porters Bridge Road.

The procedure will form part of the induction and awareness program outlined in section **4.1**.

476000

477000

478000

- Passing Bays ('park-up areas' to be used for 'out-of-hours operations')
- Passing Bays (Not to be used as 'park-up areas' for 'out-of-hours operations')

# PORTERS BRIDGE ROAD QUARRY

## NOISE MANAGEMENT PLAN

FIGURE I: PARK-UP AREAS FOR 'OUT-OF-HOURS' OPERATIONS

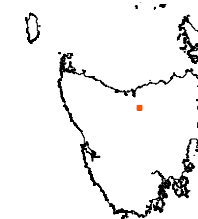
TASMAP:  
DELORAINÉ  
4640

LGA:  
MEANDER  
VALLEY

BASE DATA BY TASMAP. © STATE OF TASMANIA  
BASE IMAGE BY TASMAP. © STATE OF TASMANIA



**an Diemen CONSULTING**  
PO Box 1 New Town TAS 7008



DATUM: GDA94  
GRID: MGA ZONE 55  
SCALE: @A4 - NA

CLIENT:  
WALTERS  
CONTRACTING  
PTY LTD

DATE: 25 AUG 2025

N

5407000

SADDLERS RUN ROAD

5406000

EXISTING ACCESS ROAD

PORTERS BRIDGE ROAD

2097P/M

ACCES ON PORTERS BRIDGE ROAD (EXISTING)

MEANDER RIVER

0 250 500 1,000 METERS

5405000

## SECTION 5 – MONITORING

### 5.1 INTRODUCTION

This section details the noise monitoring program, including the potential methods, equipment, and frequency of informal and formal monitoring.

Any exceedance will be managed as described in **section 6.2**.

### 5.2 INFORMAL NOISE MONITORING

Inspections of audibility are to be regularly conducted by the Quarry Manager or their representative of Heavy Vehicle drivers during their use of the access and park-up bays in Out-of-hours operations.

Inspections should be carried out on a regular basis, and at least twice monthly during periods of Out-of-hours operations. The access should be visited to verify that Heavy Vehicles are not parked or standing there, and that park-up bays are being used correctly.

The Out-of-hours operations logbook kept at the Office can be completed by the Quarry Manager or their representative to record the results of informal monitoring events.

### 5.3 FORMAL NOISE MONITORING

#### 5.3.1 METHODS

Two formal methods are available to monitor compliance with the noise emission levels for Out-of-hours operations;

- 1. Unobserved monitoring method**

The use of static monitoring equipment to record continuous measurements at 10-minute equivalent (Leq) and L1, L10, L50, L90 and L99 A-weighted sound pressure levels.

- 2. Observer monitoring method**

Observer collected 10-minute statistic data.

#### 5.3.2 TIMING AND FREQUENCY

Within the initial 3 months of Out-of-hours operations being conducted a suitably qualified person will conduct an *Observer monitoring method* survey for either two consecutive days or two days within the same operational week.

An *Observer monitoring method* survey will then be conducted in every 12-month period starting from the date of the initial survey.

An *Unobserved monitoring method* survey will be conducted if there is a noise complaint received from a residence within 100 m of the Porters Bridge Road access. The survey is to be completed within 21 days of the complaint having been received, and results referred to the EPA.

---

### 5.3.3 LOCATION

Monitoring is to be conducted as close to a residence as possible that is located within 100 m of the junction of the quarry access road and Porters Bridge Rd.

DRAFT FOR CONSULTATION

## SECTION 6 – INCIDENT RESPONSE

### 6.1 INTRODUCTION

The objective of this section is to provide procedures for responding to impacts identified by the monitoring of noise management systems for out-of-hours operations. Responding to identified impacts is the responsibility of the Quarry Manager.

### 6.2 DEALING WITH EXCEEDANCES

Following exceedance of the noise emission limits for out-of-hours operations the following actions will be completed:

- a) The Quarry Manager will be notified of the potential non-compliance.
- b) The EPA would be notified of the potential non-compliance by email/phone call within 24 hrs from when the Quarry Manager became aware of the potential non-compliance.
- c) An investigation into the potential non-compliance would be instigated, with the objective of identifying the following, where appropriate:
  - I. the date and time of the non-compliance;
  - II. the duration of the non-compliance;
  - III. whether the non-compliance was directly related to operations within the Quarry or if any other factors contributed to the non-compliance;
  - IV. the primary cause of the non-compliance;
  - V. any contributing factors which led to the non-compliance;
  - VI. whether appropriate controls were implemented to prevent the non-compliance; and
  - VII. corrective and preventative measures that may be implemented to prevent a recurrence of the non-compliance.
- b) Within 21 days of the date of identifying the non-compliance Quarry or General Manager will provide a detailed report to the EPA. The report shall (at a minimum):
  - i. be made in writing;
  - ii. set out the condition(s) that the Quarry is non-compliant with ;
  - iii. why it does not comply and the reasons for the non-compliance (if known); and
  - iv. what actions have been, or will be, undertaken to address the non-compliance.

Following completion of the investigation, Quarry or General Manager will:

1. Provide a copy of the completed investigation report to the EPA.
2. Implement the corrective and preventative actions identified in the investigation report.

### 6.3 COMPLAINT PROCEDURE

To respond to a noise complaint, follow the below procedure:

1. **identify the possible or likely source** which may include the taking of pictures, or video on your phone (e.g. of machinery operating that may be causing excessive noise);
2. **fix the cause** of the noise by taking immediate action once the source has been identified;
3. **communicate** with the complainant to keep them informed, where you can; and
4. **record the complaint** including source, action taken and follow up communication.

Keep a record of the complaint to help identify the cause and to improve noise and vibration management controls, and for regulator. Records are to include (where they are provided) the following and recorded in the Complaints Register –

- complainant name, address, contact number;
- approximate wind direction and speed;
- approximate temperature;
- time of day;
- what activities were being conducted; and
- what was conducted to fix the problem.

Complaints received about noise emissions are to be reported to the EPA via the Complaints Register that is required by Condition G6 of the Permit Conditions. Complaint records will be maintained at the Contractor's office for a period of at least 3 years and be made available to an Authorised Officer on request.

## SECTION 7 – RECORDS, REPORTING AND REVIEW

### 7.1 RECORDS

Details of any noise monitoring event will be recorded and records retained for at least 5 years.

The contractor engaged to conduct a noise survey is responsible for the preparation of the report (if any).

### 7.2 REPORTING

Compliance will be managed by appropriate operational management which will be communicated through reporting as required by the Permit Conditions.

The General Manager is responsible for managing the environmental reporting program and arranging specialist consultants to prepare reports, as required.

### 7.3 REVIEW

#### 7.3.1 CONTINUAL IMPROVEMENT

Opportunities for improvement of noise-related impacts will be discussed internally at toolbox meetings, in conjunction with all Quarry personnel. These opportunities would be presented to the Quarry Manager for consideration and any changes to operations reflected in an updated NMP.

Incidents (as defined in **Section 6**) would trigger a brief review of the **Out-of-hours operations** noise management system, where necessary.

#### 7.3.2 PLAN REVIEW

The NMP is to be reviewed within 3 months of:

- the submission of an incident report;
- the approval of any modification of the conditions of this approval (unless the conditions require otherwise);
- the issue of a direction of the EPA which requires a review; or
- at least once every 5 years from the most recent approval date.

A review may be of short duration and not result in any change to the NMP, especially if there are no exceedances, non-compliances, or incidents to report.

If necessary, to either improve the environmental performance of the Quarry, cater for a modification, or comply with a direction, this plan must be revised, to the satisfaction of the EPA and submitted to the Director for approval within six weeks of the review. The Quarry Operator will continue to apply existing management plans, strategies, or monitoring programs prior to the determination of a modification until the approval of a similar plan, strategy, or program.