



Devonport City Council

# PUBLIC NOTICE

## APPLICATION FOR PLANNING PERMIT

*Section 57(3) Land Use Planning Approvals Act 1993*

An application for a planning permit has been made which may affect you.

---

### Application Details

Application Number:	<b>PA2025.0192</b>
Proposed Use or Development:	<b>Resource Processing</b> <b>(trade waste upgrade of existing fish processing facility)</b>
Address of the Land:	<b>11 John Street, East Devonport</b>
Date of Notice:	<b>07/03/2026</b>

---

You are invited to view the application and any documents and plans accompanying it on the ground floor of the parnaple centre at 137 Rooke Street, Devonport or on Council's website [www.devonport.tas.gov.au](http://www.devonport.tas.gov.au)

**Any person may make a representation relating to the application in accordance with section 57(5) of the *Land Use Planning Approvals Act 1993*, during a period of 14 days commencing on the date of this notice.**

Your representation must:

- be received by close of business on **24/03/2026**;
- be in writing; and
- addressed to the Chief Executive Officer, Devonport City Council:
  - P.O. Box 604, Devonport, Tasmania, 7310; or
  - [townplanning@devonport.tas.gov.au](mailto:townplanning@devonport.tas.gov.au)

If you make a representation then Council must consider your submission before making its decision on the application.

---



11/145-149  
 2/151-153  
 3/151-153  
 1/151-153  
 7/151-153  
 6/151-153  
 5/151-153  
 4/151-153

# 11 John Street East Devonport



This map is made available for the purpose of providing access to Devonport City Council information and not as professional advice. The information contained on the map is diagrammatic only. All information should be verified on site, or with the appropriate State Government Department or Council Office, prior to being used for any purpose.

Copyright © Devonport City Council  
 Created: 04-03-2026 08:04:00





Project consulting solutions

CBM Sustainability Pty Ltd

ABN : 89 677 248 547

---

# PLANNING REPORT

## Petuna Aquaculture Processing - Trade Waste Upgrade



Head Office : L3, 51 York Street, Launceston Tas

Postal : PO Box 1971, Launceston Tas

Phone : +61 3 6332 6988

Email : [info@cbmgroup.com.au](mailto:info@cbmgroup.com.au)

Web : [cbmgroup.com.au](http://cbmgroup.com.au)



CLIENT: Petuna Aquaculture Pty Ltd  
PROJECT: East Devonport Trade Waste Upgrade  
JOB NO: P25027

Date	Purpose of Issue/Nature of Revision	Revision No.	Authorised by
03/12/2025	Client review	00	SD
10/12/2025	Planning Application	01	SD

This report is based on data, surveys, analyses, designs, plans, and other information provided by the client and referenced sources, as well as available data and assumptions detailed in the supporting documentation. Unless stated otherwise, CBM has not independently verified the accuracy or completeness of this information. The designs meet current relevant standards as of the date of this report, but future updates to standards, changes in land use, maintenance practices, rainfall patterns, or extreme weather events beyond the design threshold may affect performance. Similarly, the passage of time, latent conditions, or future events may lead to differences from what is described in this report.

The design and assessment considered normal and reasonably anticipated conditions, however, it may not cover extraordinary events like natural disasters, extreme weather, unforeseen environmental changes, or future climate impacts on weather patterns, unless stated otherwise.

No responsibility is accepted for using this report in a different context, for a different purpose, or by third parties. This report does not provide legal advice, and readers should consult professional legal advisers for such guidance. The report should be read alongside all notes, warnings, and cautions in the associated design drawings (if applicable).

## Contents

1	Introduction.....	1
1.1	Stakeholder Engagement .....	1
2	Site information.....	3
2.1	Overview .....	3
2.2	Existing use and development .....	3
2.3	Access and transport.....	3
2.4	Surrounding area.....	3
3	Project description .....	5
4	Planning assessment.....	8
4.1	Zone purpose .....	8
4.2	Use standards .....	8
4.3	Development standards for building and works.....	10
4.4	Code assessment.....	12
4.4.1	Road and Railway Assets Code.....	12
4.4.2	Attenuation Code.....	13
5	Conclusion.....	14
6	Appendices.....	15
6.1	Appendix 1 – Attenuation Code Report (pitt&sherry).....	15

# 1 Introduction

This report has been prepared in support of a planning application for upgrades to the trade waste pre-treatment system at Petuna Aquaculture's (Petuna) existing East Devonport processing facility.

The project involves the installation and operation of a Dissolved Air Flotation (DAF) system and supporting infrastructure to improve wastewater quality prior discharge to the sewerage network and ensure compliance with the site's Trade Waste agreement.

The site is regulated by the EPA as a level 2 activity under the *Environmental Management and Pollution Control Act 1994* (EMPCA). A Notice of Intent was submitted to the EPA in July 2025, and the EPA responded by letter to Petuna Aquaculture on 11 August 2025, with details as follows:

"The Board cannot formally determine whether it needs to assess the proposal until the development application is referred to it by the council. However, I can advise that, based on the information provided, when the referral is received the Board is likely to determine that it does not need to assess this proposal. This is because the proposal appears to come within the ambit of an existing Board approval".

## 1.1 Stakeholder Engagement

Petuna has engaged with a range of stakeholders including TasWater, Devonport City Council, EPA Tasmania, and nearby commercial landowners regarding the upgrade.

Discussions with TasWater have confirmed the need for improved pre-treatment to remain compliant with their trade waste framework beyond 2025. The installation of the equipment proposed is captured in the current trade waste agreement with TasWater for the site and must be installed by 15 June 2026 and commissioned by 30 September 2026. The equipment supplier will provide a commissioning plan in due course.

Petuna has undertaken early and targeted engagement with relevant stakeholders including:

- TasWater – formal trade waste classification and system review (ongoing collaboration).
- EPA Tasmania – regulatory pre-engagement to determine if EPA needs to assess the project (see above).
- Devonport City Council – planning support and land use confirmation.
- Technology suppliers – including wastewater and chemical specialists across Australia and New Zealand.
- Chemical providers and logistics contractors – for bunding, handling, and WHS alignment.

No public objections or complaints have been received to date regarding the existing facility or the proposed upgrade. Petuna will continue to engage the community as part of the development application and public notice process.

Information will be made available via:

- Petuna's website.
- Stakeholder briefings, if required
- On-site community notice.
- Direct communication with local businesses, where relevant.

In addition, members of the public and interested parties will have the opportunity to comment or raise concerns about the proposal during the planning approvals process.

## 2 Site information

### 2.1 Overview

Address	11 John St East Devonport
Property ID	3123639
Title	161873/1
Land area	9,190 m <sup>2</sup>
Planning authority	Devonport City Council
Existing access	Existing vehicle accesses from John St and Wright St
Zone	Light Industrial
Use	Resource Processing
Overlays	Safeguarding of airports code 65m AHD
Existing services	Power Water Sewer (including trade waste)

### 2.2 Existing use and development

The site is developed as a fish processing factory, where salmon and trout harvested from Petuna’s marine farms are processed into fillets, value-added products and gutted and retained as whole (head on gutted {HOG}).

A large central factory building contains the processing facility and cold storage (~3,100 m<sup>2</sup> in area) and is surrounded by concrete and asphalt pavement, which provides access and manoeuvring for truck loading and unloading. There is an asphalt car park to the west of the site with 32 parking spaces.

There is no change to the existing site use of Resource Processing.

### 2.3 Access and transport

The site has two vehicle accesses from John St and one vehicle access from Wright St. All are constructed for truck access in accordance with the LGAT standard drawings. Gated pedestrian access is available from John St.

The site is directly accessed from the Bass Highway via Wright St.

### 2.4 Surrounding area

The site is in an industrial precinct in East Devonport and adjacent to the East Devonport

port facility. John St forms the southern boundary of the site, Peter and Una Seafood is located to the east, and various other commercial and industrial sites are located to the north and west of the site.

Numerous residences within the Light Industrial zone are located between 25 – 50 m to the site. The distance from the site boundary to the residential zone located to the east is 70 m.

### 3 Project description

The proposal is for a significant upgrade of the liquid trade waste pre-treatment system at the site. The driver of the project is to ensure compliance with new TasWater trade waste limits which will take effect in late 2026. It will also supporting future production growth at the site and ensure stakeholder expectations are met in terms of sustainability outcomes.

Trade waste refers to liquid waste generated from commercial or industrial processes that is discharged to the sewerage system under a formal Trade Waste Agreement with TasWater. At this site, the trade waste consists of the following wastewater streams:

- Washdown water from processing areas, floors, and equipment,
- Fish transport tanker discharge (seawater or brine from fish transport tankers), and
- Clean-in-place (CIP) wastewater, including caustic, acid, and rinse cycles from automated equipment cleaning.

The trade waste contains elevated levels of various parameters which require pre-treatment before discharge to the TasWater sewer network. Currently, pre-treatment consists of solids removal above 350 microns via 2 x Salsnes screen SF1000 automatic screen filters, with the screened solids stored in a 20 kL holding tank. This is dosed with formic acid to prevent microbial decomposition of the solids during storage. The material is regularly collected via tanker truck for beneficial reuse, i.e. rendering, land spreading and/or composting.

The proposed equipment will be installed in the north east corner of the site, downstream of the existing screen filters, and consists of the following:

- 250 kL balance tank 8.15 m in diameter and 5.3 m high,
- 50 m<sup>3</sup>/hr DAF unit,
- automated coagulant and flocculant dosing systems,
- 20 kL sludge tank for buffering flow between the DAF and screw press,
- a screw press for dewatering solids, and
- associated control and safety systems.

CBM has produced drawings for the proposed installation, refer P25027 C100 – C102 REV01.

Chemical storages will be installed in a bunded area to be designed to *Bunding and Spill Management Guidelines* (EPA Tas, 2015) requirements. There will be no increase in the volume of stormwater generated.

DAF units are a common wastewater treatment technology which remove suspended

solids, fats, oils, grease, blood, and fine organic matter by:

- Adding a flocculant to bind fine solids into larger particles (flocs),
- Injecting millions of microscopic air bubbles that attach to the flocs and cause them to float, and
- Skimming off the resulting floating layer (sludge) from the surface.

The screw press is installed downstream of the DAF unit to further dewater the floating sludge which reduces the sludge volume. The sludge will be stored onsite in a sealed bin, to be periodically removed by Petuna's licensed contractor for land spreading. Expected sludge volumes are around 6 cubic metres per week, so the sludge bin (approximately 6 cubic metres) will be required to be emptied once per week or more frequently, depending on processing amounts.

The maintenance of the system will be captured in Petuna's existing maintenance program for the Site. Alarms and telemetry are included in the installation to enable rapid response by Petuna in the event of an issue with the system. Designed bypasses are being considered in the detailed design of the process, to protect the different components of the system whilst maintaining the highest level of treatment possible for each bypass scenario. These will be negotiated with TasWater, with all system bypasses reporting to the sewer.

The proposed solution is based on a detailed assessment of Petuna's trade waste quality and current conditions undertaken by Hochman Consulting on Petuna's behalf in September 2024. The selected equipment has been specified through process engineering to meet the acceptance criteria included in the TasWater trade waste agreement and best practice environmental management. The inclusion of a large balancing tank at the inlet of the installation will guard the process against peak flows and surges.

By improving the quality of the wastewater discharged to TasWater's sewer network, there will be a reduction in the pollutant load on TasWater's Pardoe sewage treatment plant (STP).

The proposal represents a \$2 m investment for Petuna, demonstrating the company's commitment to best-practice environmental management.

System performance will be verified as part of the commissioning process to ensure that the installation meets the modelled and required performance standards for odour, noise and trade waste discharge limits. Post commissioning surveys will be considered for these metrics where required. The system will increase electricity consumption at the Site and associated greenhouse gas emissions. This increase will be captured in the annual reporting for the Site.



## 4 Planning assessment

### 4.1 Zone purpose

The purpose of the Light Industrial Zone is:

18.1.1 To provide for manufacturing, processing, repair, storage and distribution of goods and materials where off site impacts are minimal or can be managed to minimise conflict with, or unreasonable loss of amenity to, any other uses.

18.1.2 To provide for use or development that supports and does not adversely impact on industrial activity.

#### Response

The proposed development aligns with the objectives of the Light Industrial Zone. The installation of the DAF unit and screw press is intended to enhance the processing and management of wastewater generated on-site, which is a direct support to the manufacturing and processing activities typical of this zone. The technology being introduced—DAF for suspended solids removal and the screw press for sludge dewatering—ensures that off-site environmental impacts are minimised, with clarified wastewater discharged to the sewer and sludge managed by reuse. This approach demonstrates effective management of potential amenity impacts, in keeping with the zone’s intention to minimise conflict with other uses.

Furthermore, the proposal does not detract from or adversely impact ongoing industrial activity in the area. Instead, it represents a significant investment (\$2 million) by Petuna in environmental best practice, supporting the long-term viability and compliance of industrial operations within the zone. The development therefore supports the continued industrial use of the site, consistent with the purpose of the Light Industrial Zone.

### 4.2 Use standards

#### Use standards

Criteria	Response
A1 Hours of operation of a use, excluding Emergency Services, Natural and Cultural Values Management, Passive Recreation or Utilities, on a site within 50m of a General Residential Zone, Inner Residential Zone, Low Density Residential Zone or Rural Living Zone, must be within the hours of:	Not applicable, the site is not within 50 m of a residential zone.

<p>(a) 7.00am to 9.00pm Monday to Saturday; and                  (b) 8.00am to 9.00pm Sunday and public holidays.</p>	
<p>A2                  External lighting for a use, excluding Natural and Cultural Values Management or Passive Recreation, on a site within 50m of a General Residential Zone, Inner Residential Zone, Low Density Residential Zone or Rural Living Zone, must:</p> <p>(a) not operate within the hours of 11.00pm to 6.00am, excluding any security lighting; and                  (b) if for security lighting, be baffled so that direct light does not extend into the adjoining property in those zones.</p>	<p>Not applicable, the site is not within 50 m of a residential zone.</p>
<p>A3                  Commercial vehicle movements and the unloading and loading of commercial vehicles for a use, excluding Emergency Services, on a site within 50m of a General Residential Zone, Inner Residential Zone, Low Density Residential Zone or Rural Living Zone, must be within the hours of:</p> <p>(a) 7.00am to 9.00pm Monday to Saturday; and                  (b) 8.00am to 9.00pm Sunday and public holidays.</p>	<p>Not applicable, the site is not within 50 m of a residential zone.</p>

**Discretionary uses**

Criteria	Response
<p>P1                  A use listed as Discretionary must not compromise the use or development of the surrounding properties for industrial activities with minimal or managed off site impacts, having regard to:</p> <p>(a) the characteristics of the site;</p>	<p>The site is currently developed and operates as an existing fish processing factory. The proposed additions will maintain and not compromise the established industrial characteristics of both the site itself and the surrounding area.</p> <p>Within the vicinity of the site, there is a</p>

<p>(b) the size and scale of the proposed use; and (c) the function of the industrial area.</p>	<p>diverse range of commercial and industrial activities. These include additional seafood processing facilities, trade workshops, engineering and fabrication businesses, a commercial laundry, and a transport depot.</p> <p>The proposed works associated with this application will not impede the use or development of these neighbouring properties, as it is consistent with the existing land use patterns and industrial functions of the area.</p>
---	---

### 4.3 Development standards for building and works

#### Building height

Criteria	Response
<p>A1 Building height must be not more than 10m.</p>	<p>The highest item to be installed is the balance tank at 5.3 m high.</p>
<p>A2 Building height:</p> <p>(a) within 10m of a General Residential Zone, Low Density Residential Zone or Rural Living Zone must be not more than 8.5m; or (b) within 10m of an Inner Residential Zone must be not more than 9.5m.</p>	<p>Not applicable as site is &gt;10 m from a residential zone.</p>

#### Setbacks

Criteria	Response
<p>A1 Buildings must have a setback from a frontage of:</p> <p>(a) not less than 5.5m; (b) not less than existing buildings on the site; or (c) not more or less than the maximum and minimum setbacks of the buildings on adjoining properties.</p>	<p>Not applicable as no buildings are proposed.</p> <p>If this was to be assessed, all equipment is located at the northern end of the site, while the frontage is taken to be the southern boundary.</p>
<p>A2</p>	<p>Not applicable, the site does not adjoin</p>

<p>Buildings must have a setback from an adjoining property within a General Residential Zone, Inner Residential Zone, Low Density Residential Zone or Rural Living Zone of not less than:</p> <p>(a) 4m; or                  (b) half the wall height of the building, whichever is the greater.</p>	<p>any properties within a residential zone.</p>
<p>A3                  Air extraction, pumping, refrigeration systems, compressors or generators must be separated a distance of not less than 10m from a General Residential Zone, Inner Residential Zone, Low Density Residential Zone or Rural Living Zone.</p>	<p>The nearest residential zone property is approx. 70 m from the site boundary.</p>

**Fencing**

Criteria	Response
<p>Not applicable; there are no adjoining residential zones.</p>	

**Outdoor storage areas**

Criteria	Response
<p>A1                  Outdoor storage areas, excluding for the display of goods for sale, must not be visible from any road or public open space adjoining the site.</p>	<p>The frontage of the site has an existing 1.8 m high Colorbond fence which will mean the installation and storage areas will not be visible from the road.</p>

**Landscaping**

Criteria	Response
<p>A1                  If a building is set back from a road, landscaping treatment must be provided along the frontage of the site:</p> <p>(a) to a depth of not less than 5.5m; or                  (b) not less than the frontage of an existing building if it is a lesser distance.</p>	<p>Not applicable, no new buildings are proposed.</p>

**Development standards for subdivision**

Not applicable.

**4.4 Code assessment**

**4.4.1 Road and Railway Assets Code**

**Use standards**

C3.5.1 Traffic generation at a vehicle crossing, level crossing or new junction	
<p>A1.1 For a category 1 road or a limited access road, vehicular traffic to and from the site will not require:</p> <ul style="list-style-type: none"> <li>(a) a new junction;</li> <li>(b) a new vehicle crossing; or</li> <li>(c) a new level crossing.</li> </ul>	<p>No new site accesses are proposed.</p>
<p>A1.2 For a road, excluding a category 1 road or a limited access road, written consent for a new junction, vehicle crossing, or level crossing to serve the use and development has been issued by the road authority.</p>	<p>Not applicable, no new accesses are proposed.</p>
<p>A1.3 For the rail network, written consent for a new private level crossing to serve the use and development has been issued by the rail authority.</p>	<p>Not applicable.</p>
<p>A1.4 Vehicular traffic to and from the site, using an existing vehicle crossing or private level crossing, will not increase by more than:</p> <ul style="list-style-type: none"> <li>(a) the amounts in Table C3.1; or</li> <li>(b) allowed by a licence issued under Part IVA of the Roads and Jetties Act 1935 in respect to a limited access road.</li> </ul>	<p>There is no change expected to light vehicle movements at the site.</p> <p>Current truck movements at the site range from 0.5 to 2.5 vpd, with the peak expected during peak processing from December to March, and May to July.</p> <p>The proposed increase in truck</p>

<p>A1.5 Vehicular traffic must be able to enter and leave a major road in a forward direction.</p>	<p>movements associated with the proposal relates to additional waste (sludge) disposal and delivery of chemicals and is estimated at up to 2 vpd. As the site is accessed from a non-major road, this increase is within the acceptable limit in reference to Table C3.1.</p> <p>Whilst the site access is not to a major road, the site internal hardstand provides sufficient manoeuvring area to allow light vehicles and trucks to enter and leave in a forward direction.</p>
--	---

**Development Standards for Buildings or Works**

C3.6.1 Habitable buildings for sensitive uses within a road or railway attenuation area  
Not applicable.

**Development Standards for Buildings or Works**

C3.7.1 Subdivision for sensitive uses within a road or railway attenuation area  
Not applicable.

**4.4.2 Attenuation Code**

The attenuation code applies as the site activity of Fish Processing is listed in table C9.1. For a Level 2 Activity, the attenuation distance is 500 m.

A noise and odour modelling report incorporating a response to the attenuation code criteria has been prepared by pitt&sherry and is attached to this report (Appendix 1). Please refer to the report for further details.

In the report, pitt&sherry concluded that:

- Operational noise from the DAF plant is sufficiently low that it would not generally be discernible at nearby residences, and that the very small amount of additional noise would create a negligible increase in existing ambient noise levels.
- The proposed DAF installation will not generate dust emissions.
- Odour from the proposed DAF installation has been modelled and found to be well below the requirements of the *Tasmanian Environmental Protection Policy (Air Quality)*.

On this basis it may be concluded that the proposed new trade waste treatment plant will not adversely affect the amenity of nearby residences or other sensitive receivers, and the requirements of the Planning Scheme, Attenuation Code are met.

## 5 Conclusion

The report has provided a planning assessment for proposed works at Petuna's processing facility at 11 John St East Devonport. These works comprise an upgrade of the trade waste pre-treatment system to improve discharge wastewater quality.

These works are congruent with the purpose of the Light Industrial zone and demonstrate compliance with the acceptable criteria of the zone.

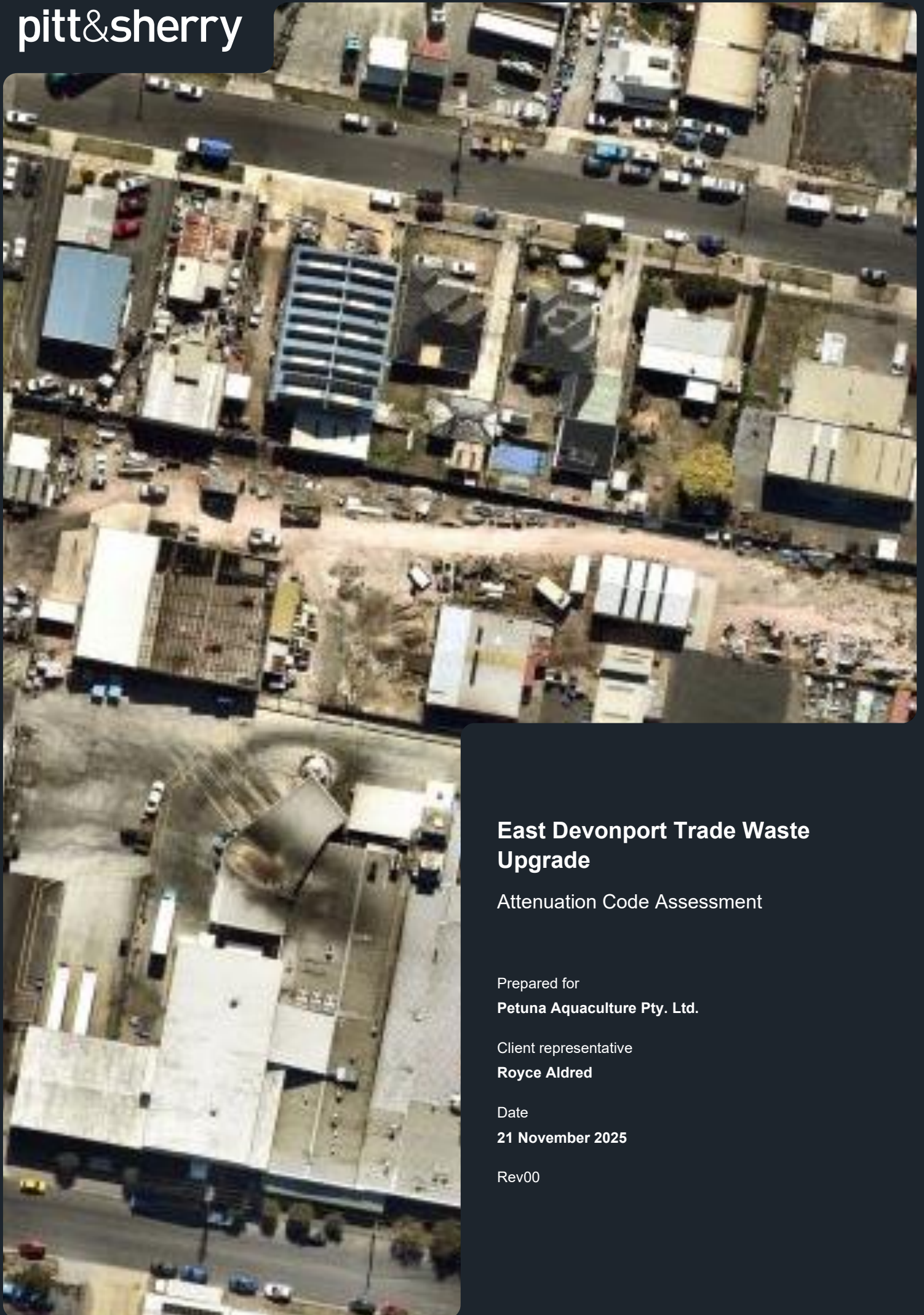
There will be only minor increases in traffic and existing site vehicle accesses will be used, which demonstrate that the requirements of the Road and Railway Assets Code can be met.

A noise and odour modelling report incorporating a response to the attenuation code has been prepared by pitt&sherry and is attached to this report. In the report, pitt&sherry concluded that the proposed new trade waste treatment plant will not adversely affect the amenity of nearby residences or other sensitive receivers, and the requirements of the Planning Scheme, Attenuation Code are met.

Overall, the proposal demonstrates a considered response to both statutory requirements and broader planning objectives. It is concluded that the development is suitable for approval, as it aligns with the intent of the planning scheme and aligns with the existing appropriate use of the site.

## **6 Appendices**

### **6.1 Appendix 1 – Attenuation Code Report (pitt&sherry)**



## East Devonport Trade Waste Upgrade

Attenuation Code Assessment

Prepared for  
**Petuna Aquaculture Pty. Ltd.**




Client representative  
**Royce Aldred**

Date  
**21 November 2025**

Rev00

# Table of Contents

1.	Introduction.....	2
2.	Description of New Plant.....	2
3.	Attenuation Code.....	4
3.1	Existing Site Permit Conditions.....	5
3.2	Other Criteria.....	5
4.	Noise Assessment.....	6
4.1	Approach.....	6
4.2	Existing Noise Environment.....	6
4.3	Noise Sources.....	7
4.4	Noise Modelling Methodology and Assumptions.....	7
4.5	Predicted Noise Levels.....	9
4.6	Noise Mitigation Measures.....	9
5.	Dust.....	10
6.	Odour Assessment.....	10
6.1	Odour Mitigation Measures.....	11
7.	Conclusion.....	12

<b>Prepared by — Alex Seen &amp; Douglas Ford</b>		<b>Date — 18-11-2025</b>
<b>Reviewed by — Douglas Ford</b>		<b>Date — 18-11-2025</b>
<b>Authorised by — Andy Turner</b>		<b>Date — 18-11-2025</b>

### Revision History

Rev No.	Description	Prepared by	Reviewed by	Authorised by	Date
0	Issued	AS & DF	DF	AT	18-11-2025
1	Minor Text Edits	DF	DF	AT	21-11-2025

© 2025 pitt&sherry. This document is and shall remain the property of pitt&sherry. The document may only be used for the purposes for which it was commissioned and in accordance with the Terms of Engagement for the commission. Unauthorised use of this document in any form is prohibited.

## Executive Summary

This attenuation code assessment has been prepared to support an application for the development of a new onsite liquid trade waste treatment system, at Petuna Seafood's fish processing facility, at 11 John Street, East Devonport. The proposed plant will utilise a Dissolved Air Flotation (DAF) unit and associated infrastructure, to pre-treat up to 750kL of liquid trade waste per day, prior to discharge to the TasWater sewer. The upgrade is required to improve the quality of the effluent discharged to sewer, in line with TasWater's long term requirements.

The attenuation code assessment is required as there are several residences within the 500m attenuation distance of the Petuna site.

Noise logging was undertaken between October 23<sup>rd</sup> and November 4<sup>th</sup>, 2025, to establish existing ambient noise levels in the area.

The level of noise emissions from the proposed DAF plant, was predicted at nearby residences, using manufacturers' equipment data and SoundPLAN environmental noise modelling software. It was concluded that noise from the DAF plant is sufficiently low that it would not generally be discernible at nearby residences, and that the very small amount of additional noise would create a negligible increase in existing ambient noise levels.

The proposed DAF installation will not generate dust emissions.

Odour from the proposed DAF installation has been modelled using CALPUFF air dispersion modelling software, and found to be well below the requirements of the *Tasmanian Environmental Protection Policy (Air Quality)*. The modelling methodology used follows the Tasmanian EPA's *Atmospheric Dispersion Modelling Guidelines*, October 2020.

On this basis it may be concluded that the proposed new trade waste treatment plant will not adversely affect the amenity of nearby residences or other sensitive receivers, and the requirements of the Planning Scheme, Attenuation Code are met.

## Authors' Qualifications and Experience

### ***Douglas Ford***

(Bachelor of Engineering (Mechanical), University of Queensland, MIEAust, CPEng, RPEQ)

Doug has over 37 years' mechanical engineering experience working in design, technical support, research, maintenance and project management roles. He has 15 years' experience in the area of writing noise assessments in support of planning permit applications in Tasmania, industrial and traffic noise modelling and the design of noise attenuation measures for industrial and commercial building applications. He has appeared as an expert witness before the Tasmanian Civil and Administrative Tribunal on a number of occasions and submitted numerous assessment reports to the Tasmanian EPA. He also has significant experience modelling and assessing other emissions including dust, odour, airborne chemical pollutants, and nuisance lighting.

### ***Alexander Seen***

(Bachelor of Engineering (Marine and Offshore Engineering), Australian Maritime College)

Alex has 4 years' experience undertaking noise measurements, noise modelling and writing noise assessments. Under the supervision of Douglas Ford, he has completed a wide range of projects including assessments of industrial and commercial developments, residential subdivisions and road upgrades.

## 1. Introduction

This attenuation code assessment has been prepared to support an application for the development of a new onsite liquid trade waste treatment system, at Petuna Seafood's fish processing facility at 11 John Street, East Devonport. The proposed plant will utilise a Dissolved Air Flotation (DAF) unit and associated infrastructure, to pre-treat up to 750kL of liquid trade waste per day, prior to discharge to the TasWater sewer. The upgrade is required to improve the quality of the effluent discharged to sewer, in line with TasWater's long term requirements.

The fish processing facility is classified as a Level 2 activity, which operates under permit PCE No. 8007, issued November 2010.

The site is located within a commercial / industrial area zoned "Light Industrial", under the *Tasmanian Planning Scheme – Devonport*. The area includes the Spirit of Tasmania ferry terminal, other port facilities, and various logistics, transport, wholesaling and contracting businesses. The area has gradually been transitioning from residential to commercial use. While the edge of the nearby General Residential area is approximately 70m to the east, the closest remaining residences within the Light Industrial Zone, are about 25 to 50 metres to the north, northwest and the south. The site and surrounding area are shown in Figure 1 and 2, below.

As a result of the proximity of the site to the General Residential zone the development application must address the Attenuation Code.



Figure 1: Aerial view of Petuna site and surrounding area (Source Listmap). Residential areas shaded red.

## 2. Description of New Plant

The Petuna East Devonport fish processing facility currently produces around 9,000 tonnes of seafood annually, originating from fish farms that Petuna operates at Rowella and Macquarie Harbour. The plant generates around 750 kL of liquid trade waste per day. It is mostly wash-water from cleaning processes associated with cleaning bins, containers, floors, and processing equipment, but also includes the iced water used to transport the incoming fish in tankers from the fish farms and "clean in place" (CIP) chemical washdown water.

The current trade waste treatment system includes a primary filter, which removes coarse solids from the wastewater stream. The solids are temporarily stored in a 20,000L acid stabilised holding tank. The stabilised material is collected regularly by tanker truck, for off-site processing and re-use as an agricultural input. The filtered wastewater is discharged

to sewer.

The new trade waste treatment plant will be constructed in the northeast corner of the site, as shown in Figure 2, below. It is designed to achieve effluent quality specifications that have been agreed with TasWater. The basic plant layout is shown in Figure 3 below. It consists of:

- A 250kL balance tank to buffer incoming flows,
- A 50 m<sup>3</sup>/hr capacity DAF unit,
- Coagulant and flocculant dosing systems
- A screw press to dewater solids sludge, that has been separated out of the effluent in the DAF,
- A 20 kL sludge/buffer tank between the DAF and the Screw Press,
- Associated control systems and safety systems.

It will be installed in the open, in a concrete spill containment bund as shown in Figure 3 below. The dewatered sludge will be discharged into closed bins, which will be collected regularly for offsite processing and appropriate re-use. It has been sized for a peak load of 1,200 L/day to allow for future expansion or short periods of unusually high demand.



Figure 2 - Petuna site and proposed DAF installation location

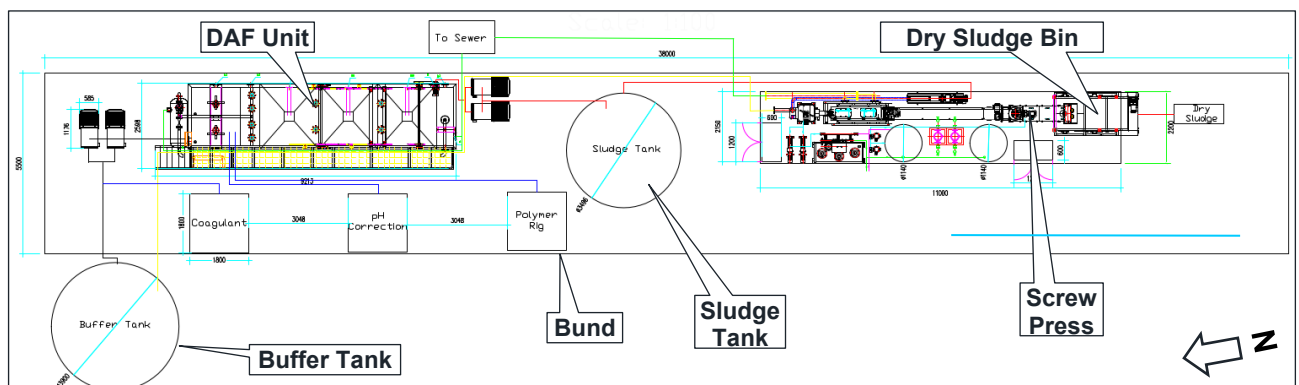


Figure 3 - Preliminary Treatment Plant Layout (Extract from project design drawings)



Figure 4 – Close Up of Installation Site (Base image from theList)

### 3. Attenuation Code

The purpose of the Attenuation Code, Clause C9 of the *Tasmanian Planning Scheme – Devonport* is to minimise adverse impacts on the health, safety and amenity of existing sensitive uses (such as residences) from new activities which have the potential to cause emissions, and to minimise the likelihood for new sensitive uses, to constrain the operation of existing activities which need to cause emissions to operate.

Table C9.1 of the Code outlines attenuation distances for a number of activities that may impact on sensitive uses and descriptions of relevant emissions. It provides an attenuation distance of 500 metres for Level 2 Fish Processing facilities due to the potential to cause noise and odour emissions.

Clause C9.5.1 (reproduced below) provides an acceptable solution and performance criteria for an activity with the potential to cause emissions. As a number of sensitive uses (residences) are within the attenuation area the Acceptable Solution A1 is not met and the Performance Criteria P1 must be addressed.

<b>Objective:</b> That an activity with potential to cause emissions is located so that it does not cause an unreasonable impact on an existing sensitive use.	
<b>Acceptable Solution</b>	<b>Performance Criteria</b>
<b>A1</b>	<b>P1</b>
The attenuation area of an activity listed in Tables C9.1 or C9.2 must not include: <ul style="list-style-type: none"> <li>a) a site used for a sensitive use which is existing;</li> <li>b) a site that has a planning permit for a sensitive use; or</li> <li>c) land within the General Residential Zone, Inner Residential</li> </ul>	An activity listed in Tables C9.1 or C9.2 must not cause: <ul style="list-style-type: none"> <li>a) an unreasonable loss of amenity or unreasonable impacts on health and safety of a sensitive use which is existing, or has a planning permit; or</li> <li>b) unreasonable impacts on land within the relevant attenuation area that is in the General Residential Zone, Inner Residential Zone, Low Density Residential Zone, Rural Living Zone A, Rural Living Zone B, Village Zone</li> </ul>

<p>Zone, Low Density Residential Zone, Rural Living Zone A, Rural Living Zone B, Village Zone or Urban Mixed Use Zone.</p>	<p>or Urban Mixed Use Zone, having regard to:</p> <ul style="list-style-type: none"> <li>(i) operational characteristics of the activity;</li> <li>(ii) scale and intensity of the activity;</li> <li>(iii) degree of hazard or pollution that may be emitted from the activity;</li> <li>(iv) hours of operation of the activity;</li> <li>(v) nature of likely emissions such as noise, odour, gases, dust, particulates, radiation, vibrations or waste;</li> <li>(vi) existing emissions such as noise, odour, gases, dust, particulates, radiation, vibrations or waste; and</li> <li>(vii) measures to eliminate, mitigate or manage emissions from the activity.</li> </ul>
--	--

The planning scheme does not provide quantitative criteria for noise or air emissions, so reference is made to the Environmental Protection Policies (EPP) for noise and air quality, as well as the site permit, which contains site specific conditions relating to noise, dust and odour.

### 3.1 Existing Site Permit Conditions

#### Noise

The existing permit for the site, PCE No. 8007, Condition N2 specifies the following conditions relating to noise emissions from the site.

Noise emissions from the activity, when measured at any noise sensitive premises in other ownership, must not exceed:

- $L_{Aeq,10 \text{ min}}$  of 50 dB(A) between 7 AM and 6 PM
- $L_{Aeq,10 \text{ min}}$  of 45 dB(A) between 6 PM and 7 AM.

Where the level of combined noise from the activity and normal ambient noise exceeds the above limits, the conditions will not be considered breached unless the activity is audible and exceeds the ambient noise level by at least 5 dB(A). An  $L_{Aeq,10 \text{ min}}$  is the average noise level over a 10 minute measuring period. Noise levels expressed in decibels are averaged logarithmically.

#### Air Quality (Odour & Dust)

Condition A1 and A2 specify that dust and odorous gas emissions from the site must be controlled to the extent necessary to prevent nuisance beyond the boundary of the site.

### 3.2 Other Criteria

#### EPP

The Tasmanian *Environmental Protection Policy (Noise) 2009 (EPP)* has general provisions for the regulation of proposed commercial / industrial noise sources with the objective of protecting environmental values. It also provides acoustic indicator levels for various noise sensitive activities, based on World Health Organisation research. These indicators relate to the total ambient noise levels at a sensitive receiver – not just the noise from the industrial source being assessed. Indicators relevant to this noise assessment include:

- |  |  |
|--|--|
| • Outdoor Living Areas (Serious annoyance, daytime and evening)  | 55 dB(A) $L_{eq,16\text{hours}}$                     |
| • Outdoor Living Areas (Moderate annoyance, daytime and evening) | 50 dB(A) $L_{eq,16\text{hours}}$                     |
| • Outside Bedrooms (Sleep disturbance, windows open, night-time) | 45 dB(A) $L_{eq,8\text{hours}}$ , 60 dB(A) $L_{max}$ |
| • Inside Bedrooms (Sleep disturbance, night-time)                | 30 dB(A) $L_{eq,8\text{hours}}$ , 45 dB(A) $L_{max}$ |

$L_{max}$  is the maximum noise level recorded in a specific period of time.

The Tasmanian *Environmental Protection Policy (Air Quality)* provides further guidance on standards for air emissions including dust and odour.

#### Intrusiveness

The background noise level ( $L_{90}$ ) which is the noise level that is exceeded 90% of the time, plus 5 dB(A) is often used as a measure of the "Intrusiveness" of a noise source. This measure is not included in any Tasmanian noise guidelines but is used in the NSW *Noise Policy for Industry*, and as a condition in many site specific environmental permits in Tasmania.

## 4. Noise Assessment

### 4.1 Approach

Noise from existing site activities combined with noise from other sources in the area has been assessed by extended unattended noise logging at a location representative of the nearest residences.

Noise emissions from the new DAF plant equipment have been predicted by use of manufacturer’s equipment data and noise modelling software.

In order to ensure that the new DAF plant does not cause a significant impact on existing ambient noise levels, the predicted noise from the new plant is compared with the background noise ( $L_{90}$ ) + 5 dB(A) “intrusiveness” criteria.

### 4.2 Existing Noise Environment

Existing onsite noise sources includes equipment in the tanker bay used for unloading fish for processing, various pumps, several HVAC and chiller units and an air compressor within a small building on the eastern side of the site. A number of truck and forklift movements occur throughout the day.

Offsite noise sources include:

- Traffic on surrounding roads including significant heavy vehicle traffic movements,
- Activities at various light industrial sites, warehouses, contractors’ depots and freight depots,
- Construction activities and commercial freight and passenger ships berthing at the port,
- Environmental noise (i.e. wind blowing through vegetation, birds and insects), and
- Noise from general residential activities and the youth centre adjacent to the noise logging location.

Unattended noise monitoring was undertaken at 124 Tarleton Street (as shown in Figure 1 above) between October 23<sup>rd</sup> and November 4<sup>th</sup>, 2025, to establish existing noise levels. The noise monitoring shows typically high noise levels across all time periods of the day, consistent with high levels of activities light industrial and heavy vehicle transport activity in the surrounding area.

Weather during the monitoring period was typically fine. Weather observations were obtained from the Bureau of Meteorology weather station at Devonport Airport, approximately five kilometres northeast of the site. Several periods of wind speeds above 20 km/h were recorded along with 12.2 mm of rainfall on the 2<sup>nd</sup> and 3<sup>rd</sup> of November (Temperature data was not available during the noise logging period). Aggregated results from the monitoring are given in Table 1, below and recorded noise levels are shown in Figure 5. These results exclude periods of high wind or rainfall.

Table 1: Aggregated Noise Logging Results

Time Period	Ambient $L_{eq, 10 \text{ min}}$	Maximum $L_{max, fast}$	Background $L_{90, 10 \text{ min}}$
Day (7am – 6pm)	54.0	95.2	43.4
Evening (6pm – 10pm)	47.9	83.0	40.4
Night (10pm – 6am)	49.3	81.8	38.9

The existing  $L_{eq}$  and  $L_{max}$  levels from the noise logging exceed the EPP acoustic indicator levels for sleep disturbance and outdoor living (moderate annoyance) for all time periods. Noise from Petuna was not audible during the deployment or collection of the noise logger.

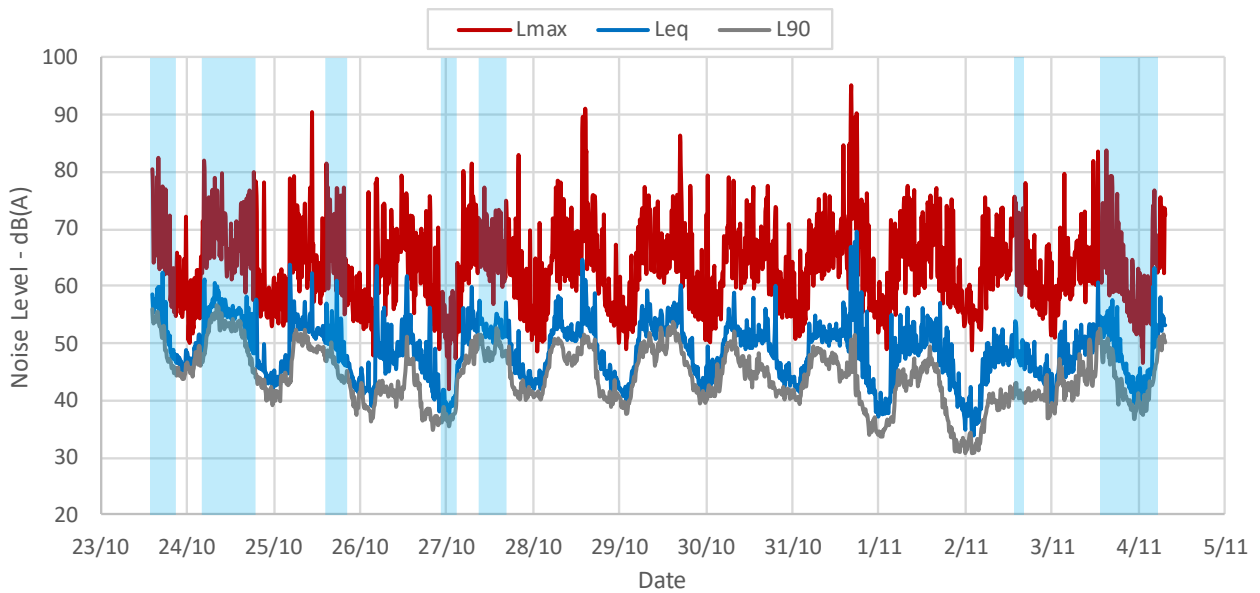


Figure 5: Recorded noise levels at 124 Tarleton St. Periods of inclement weather shaded blue.

### 4.3 Noise Sources

The new DAF unit includes several items of equipment that generate noise, including a number of agitators and pumps, a screw press and a conveyor. All equipment is electrically or pneumatically driven. The primary noise generating equipment includes several centrifugal effluent transfer pumps and sludge pumps, an air-water recirculation pump, freshwater flush pump and air diaphragm pump, with other items of equipment having a power output less than 1 kW.

Noise sources for the new DAF plant were established from manufacturers' data along with available reference spectra from pitt&sherry and SoundPLAN reference libraries. For simplicity, several items within close proximity have been combined into single noise sources. Details of the noise sources are given in Table 2, below. In the modelling, all noise sources are conservatively assumed to be operating at full capacity.

Table 2: DAF Plant Equipment Noise Sources

#	Item	Qty	Height Above Ground m	Sound Power Level dB(A)
S01	3kW Feed & Sludge Pumps	5	1.0	60.7
S02	Combined DAF Unit pumps & motors	1	1.0	76.3
S03	Sludge Tank Mixer	1	1.0	73.1
S04	Polymer make-up & dosing system	1	1.0	70.1
S05	Screw Press mixer & polymer pump	1	1.0	70.4
S06	Screw press motor	1	1.0	70.3
S07	Screw conveyor	1	1.0	73.1
S08	Stabiliser Mixer	2	1.0	76.1
S09	Sludge dewatering press	1	1.0	76.5
S10	Feeding Pump	1	1.0	49.9
S11	Freshwater Flush Pump	1	1.0	59.4
S12	Air Diaphragm pump	1	1.0	85.0

### 4.4 Noise Modelling Methodology and Assumptions

Noise modelling was carried out in accordance with the Tasmanian DEPHA *Noise Measurement Procedures Manual*, 2008. Noise level calculations were implemented using *SoundPLAN 9.1* environmental noise modelling software. Modelling assumptions and settings include:

- The ISO 9613-2 noise calculation standard was used within SoundPLAN

- Existing buildings, roads and other permanent structures and features were included within the model. All building footprints were sourced from *theList*.
- Existing terrain topography was obtained from 2 metre LIDAR data sourced from the ELVIS online elevation database.
- A ground absorption factor of 80% soft (i.e. 80% absorptive and 20% hard) was used for blocks of land containing both houses and grass / garden surfaces, a factor of 100% hard was used throughout the remainder of the model for all roads and industrial sites and the Mersey River.

One scenario was modelled for normal operation of the proposed DAF unit. Scenarios with higher levels of noise would only occur during very unusual fault conditions. The layout of the SoundPLAN noise model is shown in Figure 6, below.

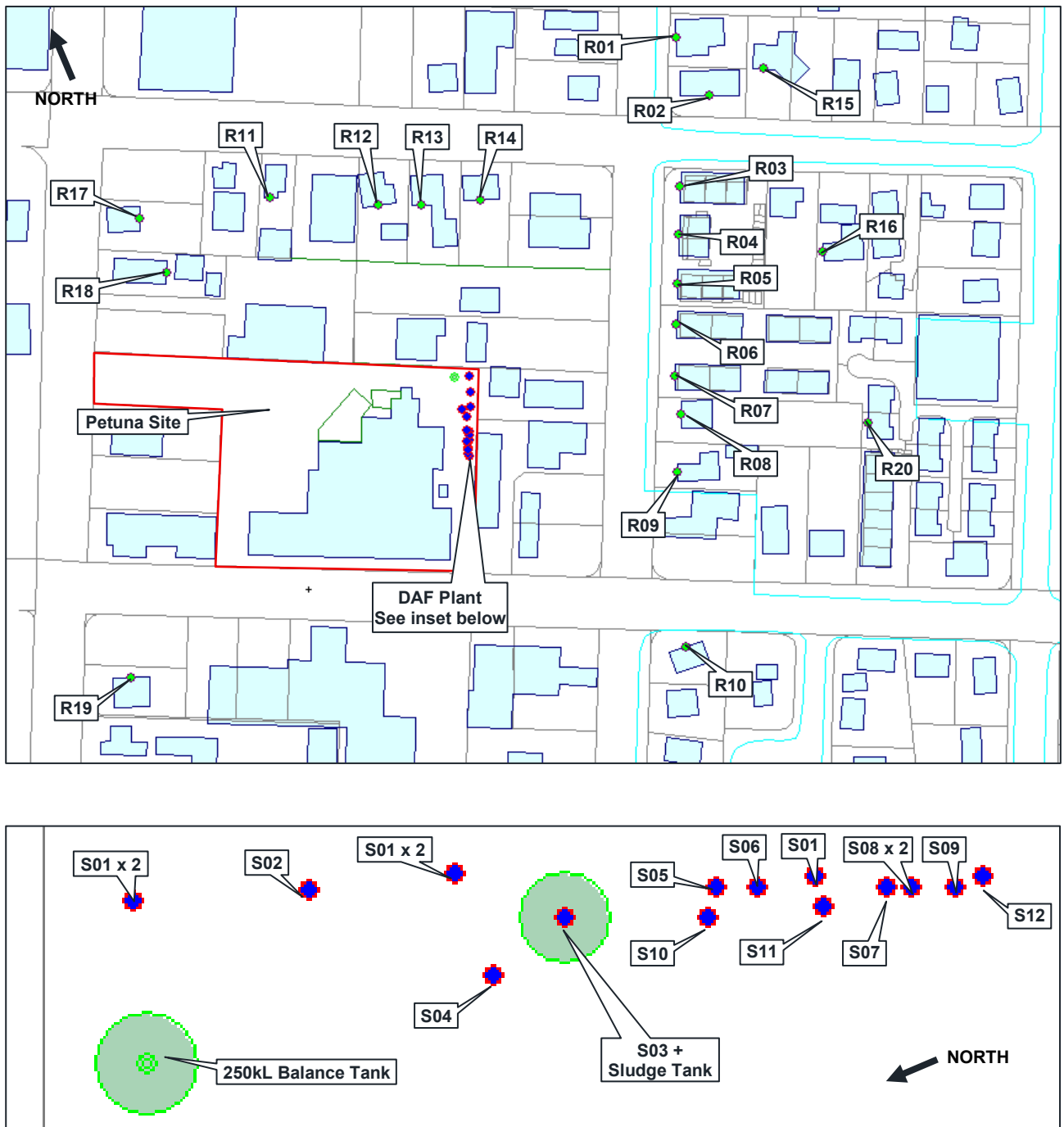


Figure 6: SoundPLAN noise model layout. Top: Petuna Site and modelled area. Bottom: Layout of DAF Plant noise sources.

## 4.5 Predicted Noise Levels

Noise levels predicted by the SoundPLAN noise model at the nearest sensitive receivers are given in Table 3, below. A noise grid map showing the predicted noise levels from the site in the surrounding area is shown in Figure 7.

Tonality corrections varying between 2.0 and 4.6 dB(A) are included in the results, as required. No corrections were required for low frequency noise. All predicted noise levels were below the night-time background noise level + 5 dB(A) and were below the background noise level + 0 dB(A) by three or more decibels. As such noise from the DAF plant will generally be unable to be discerned at nearby residences.

When added to the existing ambient noise levels for the evening time period (the time period with the minimum ambient noise level.) the DAF unit results in negligible increases of 0 to 0.3 dB(A) at the nearest receivers.

Table 3: SoundPLAN predicted noise levels.

Receiver		DAF Unit Noise Level
<i>Night-time L<sub>90</sub> + 5 dB(A)</i>		<i>43.9</i>
R01	139 Tarleton St	20.9
R02	141 Tarleton St	24.0
R03	4/145-149 Tarleton St	28.8
R04	10/145-149 Tarleton St	30.7
R05	14/145-149 Tarleton St	31.9
R06	1/151-153 Tarleton St	31.5
R07	8/151-153 Tarleton St	32.3
R08	155 Tarleton St	30.3
R09	157 Tarleton St	28.6
R10	16 John St	27.2
R11	4 Douglas St	35.7
R12	8 Douglas St	32.5
R13	10 Douglas St	35.1
R14	12 Douglas St	29.4
R15	13 Douglas St	18.7
R16	16 Douglas St	23.4
R17	109 Wright St	24.4
R18	111 Wright St	21.6
R19	127 Wright St	24.3
R20	9/126-132 David St	24.0

## 4.6 Noise Mitigation Measures

As the predicted noise levels are substantially below the relevant noise criteria, no specific additional noise mitigation measures are required. "Good practise" measures such as keeping up routine preventative equipment maintenance and prompt attention to any faults that develop should be followed to ensure that higher than usual noise levels do not develop.

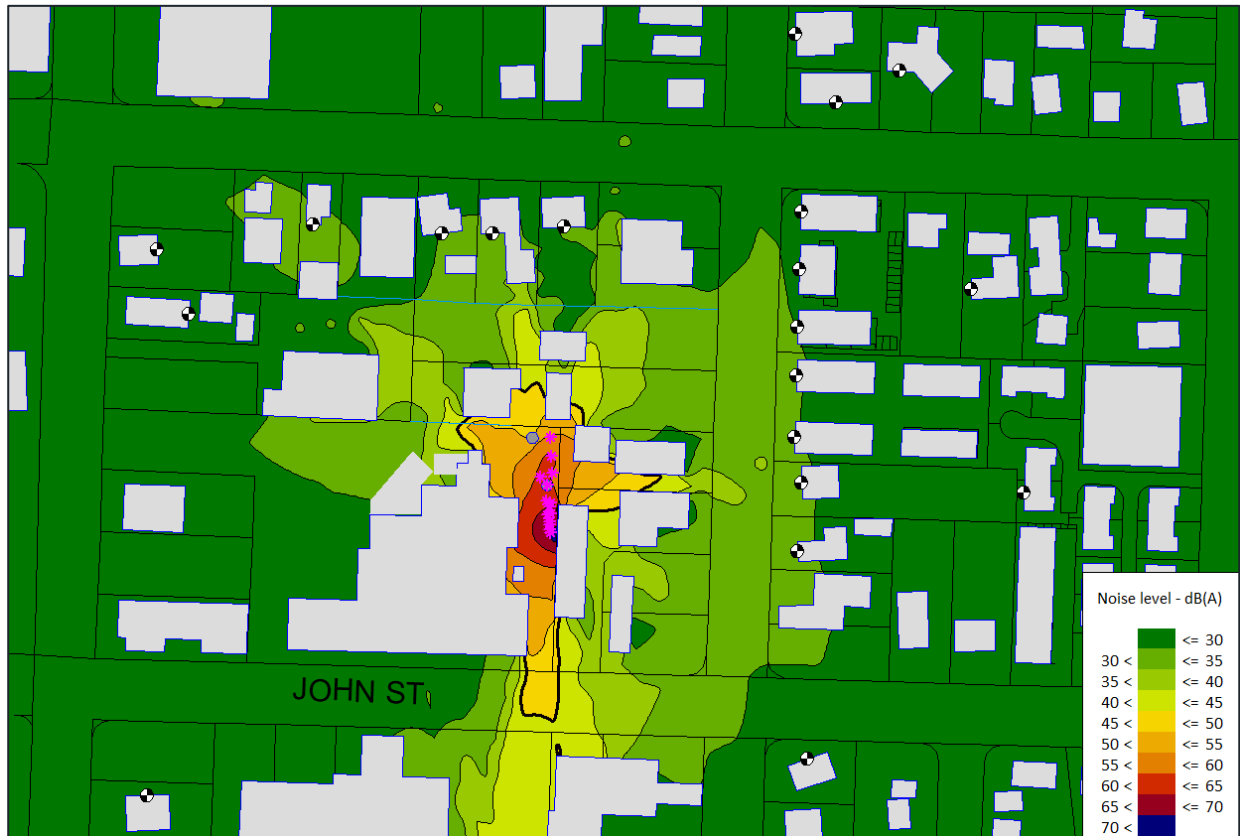


Figure 7: SoundPLAN noise contour map. 45 dB(A) contour shown in bold.

#### 4.7 Conclusion – Noise Assessment

The predicted noise level of noise emissions from the DAF installation, at nearby residences is below the existing background noise level, so this noise will not be audible.

Existing ambient noise levels at nearby residences already exceed the EPP acoustic indicator levels. The predicted noise from the DAF installation is sufficiently low, that the existing ambient noise level would rise by much less than a decibel, as a result of the additional noise This would not be sufficient to make any material difference to the amenity of the residences.

### 5. Dust

Dust is not a significant issue at the Petuna site. The site is fully paved. Incoming and outgoing goods and materials are fully contained in tankers or enclosed trucks. Dewatered sludge from the DAF will be accumulated in an enclosed bin, which is filled directly from the screw press. Sludge bins will be collected regularly and emptied off site.

### 6. Odour Assessment

The new DAF and associated wastewater treatment equipment are expected to generate a small amount of moderately intense, objectionable odour. The odour released into the atmosphere is limited by the small area of effluent, in the process equipment, that is exposed to the outside air. Most of the process is fully enclosed in tanks, piping or other enclosures. The DAF itself has an open top with an exposed surface area of around 16 m<sup>2</sup>. The dewatered sludge will be discharged into a bin with a plan area of about 4 m<sup>2</sup>, although this will nearly always be covered with a closable lid. The various tanks are fully enclosed except for very small air vents. The odour emissions are not expected to significantly change at different plant loadings.

To demonstrate that worst case odour emissions from the new treatment plant will not cause an adverse impact on nearby residents, odour emissions have been assessed using air dispersion modelling, carried out generally in accordance with the Tasmanian EPA's *Atmospheric Dispersion Modelling Guidelines*, October 2020. Air dispersion modelling allows the concentration of odour in the area surrounding the odour emissions source to be predicted taking into account local weather conditions and topography. The specific odour emissions rates (SOERs) or odour emissions rate per square metre of exposed surface area from the equipment, during normal operations, have been characterised using reference SOER data collected by Air Environment Consulting in 2015, from a similar trade wastewater treatment plant, at a cattle abattoir in the Northern Territory<sup>1</sup>.

The results of this modelling are shown in Figure 8 below. The ground level odour concentration at or beyond the boundary of the facility, is well below the limit of 2 odour units, required by the *Tasmanian Environmental Protection Policy (Air Quality)*. These results are sufficiently low, that normally odour would not be detectable. In the event of process malfunctions or other upset conditions occurring, the emissions rates could increase by a factor of more than ten times, without exceeding the EPP limit.

On this basis it may be concluded that odour emissions from the proposed DAF plant, will not adversely impact on the amenity of nearby residents. Full details of the odour modelling are provided in Appendix A.



Figure 8 - Predicted Ground Level Odour Concentrations (normal operations, 99.5th percentile, 1 hour averaged results in ou)

## 6.1 Odour Mitigation Measures

As the predicted odour levels are substantially below the relevant criteria, no additional specific mitigation measures are required. “Good practise” measures such as keeping up routine preventative equipment maintenance and prompt attention to any faults that develop should be followed to ensure that higher than usual odour levels do not develop.

<sup>1</sup> Vipac Engineers & Scientists, *Northern Australian Beef Pty. Ltd., Livingstone Beef – Odour Audit*, December 2015.

## 7. Conclusion

SoundPLAN noise modelling of the proposed DAF plant predicted noise levels below existing background noise levels for all residences in the adjacent area. As such noise from the DAF plant is not expected to be generally discernible and creates a negligible increase in existing ambient noise levels and is unlikely to cause a loss of amenity to the adjacent residences.

The proposed DAF installation will not generate dust emissions. Odour from the proposed DAF installation has been modelled and found to be well below the requirements of the EPP (Air Quality).

On this basis it may be concluded that the proposed new trade waste treatment plant will not adversely affect the amenity of nearby residences or other sensitive receivers, and the requirements of the Planning Scheme, Attenuation Code are met.

# Odour Emissions Assessment Criteria and Methodology

Appendix A

## Assessment criteria and methodology

Criteria for the assessment of odour emissions are specified under Schedule 3 of the Tasmanian Environmental Protection Policy (Air Quality). Table 1 of Schedule 3 specifies a maximum ground level concentration of 2 Odour Units (ou) evaluated at or beyond the boundary of a facility. The odour concentration is required to be calculated by atmospheric dispersion modelling and the criteria assessed using a 1-hour averaging period and the 99.5th percentile result where local high quality meteorological and emissions data are available.

An odour unit is a unit of measurement for odour concentration, defined under AS/NZS 4323.3 Stationary source emissions – Determination of odour concentration by dynamic olfactometry. One ou corresponds to the typical human threshold of odour detection. Dynamic olfactometry involves establishing the threshold of detection by carrying out dilution trials. For example, a one cubic metre sample of odorous air with an odour concentration of 100,000ou would require 99,999 m<sup>3</sup> of odour free air (increasing the total volume of the sample to 100,000 m<sup>3</sup>) to dilute the odour concentration to the 1 ou odour threshold.

This study uses TAPM, CALMET and CALPUFF environmental air dispersion modelling software to predict the dispersion of odour emitted from the DAF plant. This software is widely used in Australia and internationally, for the prediction of the ground level concentration of air pollutants emitted from industrial sources. The modelling methodology used follows the Tasmanian EPA's *Atmospheric Dispersion Modelling Guidelines*, October 2020.

## Meteorology

The distribution of wind speeds and directions experienced in the area of the plant greatly affects how emissions to air are diluted and distributed. As there is no weather station close to the site, site specific meteorological data was modelled using TAPM and further refined for use in CALPUFF using CALMET. The year 2020 was selected for the assessment as the calendar year 2020 had a preponderance of “calms” and periods of very low wind speeds. Low wind speed conditions tend to result in higher ground level concentrations of odour, as odour dispersion and dilution does not occur as rapidly as it does in higher wind conditions. Selecting a year with lower than typical wind speeds enables a conservative assessment of the impact of emissions to air.

The predicted wind speed and direction distribution for the year 2020 at the site is shown in the wind rose in Figure 9 below.

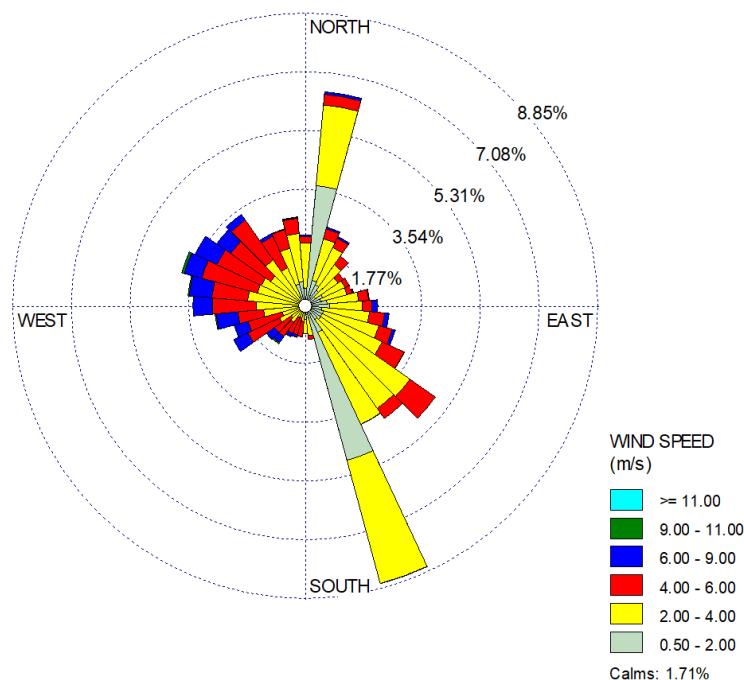


Figure 9: Wind Rose from the CALMET Weather data generated for the site

A wind rose graphs the percentage of the year that the winds blow from each sector (i.e. N, NNE, NE, ENE etc.) As a result of the site's position on the Northwest Coast and the proximity to the Mersey River, wind conditions on site are widely distributed in both strength and direction. The prevailing direction for stronger winds is generally from the west to northwest. The wind rose highlights the frequent south-south-westerly, night-time / morning, breezes flowing "down river" and similarly frequent afternoon light "sea breezes" from the north. The wind rose compares well with the long term, 9am and 3pm wind roses from the Bureau of Meteorology (BOM) Devonport Airport weather station, shown in Figure 10 below. While this is the nearest BOM weather station to the site that records wind observations, its location closer to the coast and further away from the river, causes some differences in wind patterns.

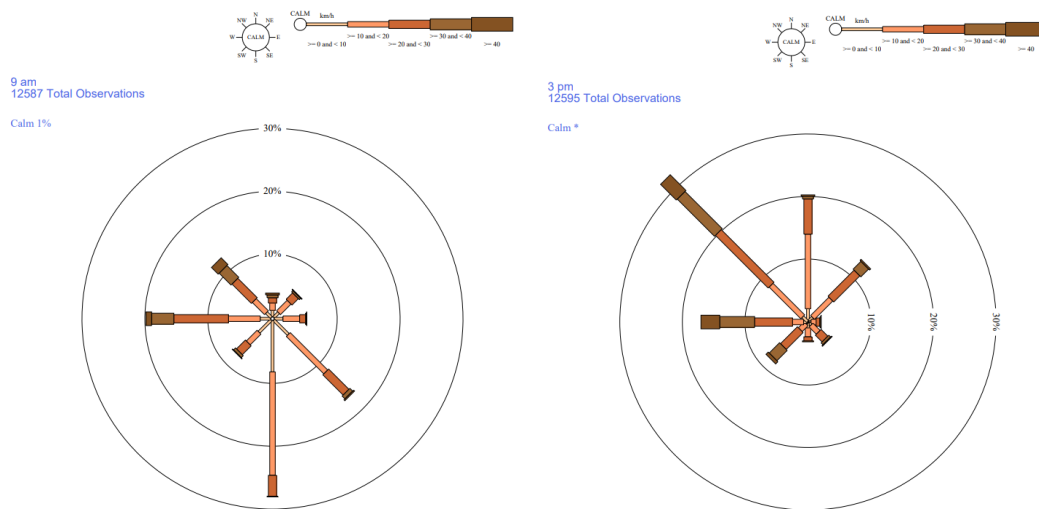


Figure 10: BOM Long Term Wind Roses for 9am and 3pm at Devonport Airport

## Odour source details

The CALPUFF model was set up to include two area sources representing the exposed area of the top of the DAF and the tops of the dewatered sludge bin, conservatively assuming that the lid is open. These areas are sufficient to also cover the very small emissions from the tank vents. The reference SOERs correspond to odour emissions rates expected to be generated by the trade waste plant under normal operating conditions.

Odour source details are listed in Table 4 below.

Table 4: Odour Emissions Rates

Source	Nominal Area (m <sup>2</sup> )	SOER ou/s/m <sup>2</sup>	OER ou/s	Source Coordinates	Base Elevation (m)	Release Height Above Ground (m)
DAF	18	1.9	33.8	447256E 5440564N	16	0.6
Sludge Bin	3.8	1.5	5.8	4472500E 5440542N	16	0.5

## Model Setup Details

The CALMET modelling domain is shown in Figure 11 below. The DAF and Sludge Bin odour sources are shown as red rectangles in the inset. Odour dispersion was calculated over a 2km x 2km domain at a resolution of 200m. Also indicated is the terrain elevation and the Petuna site boundary. Additional modelling details are shown in Table 5.

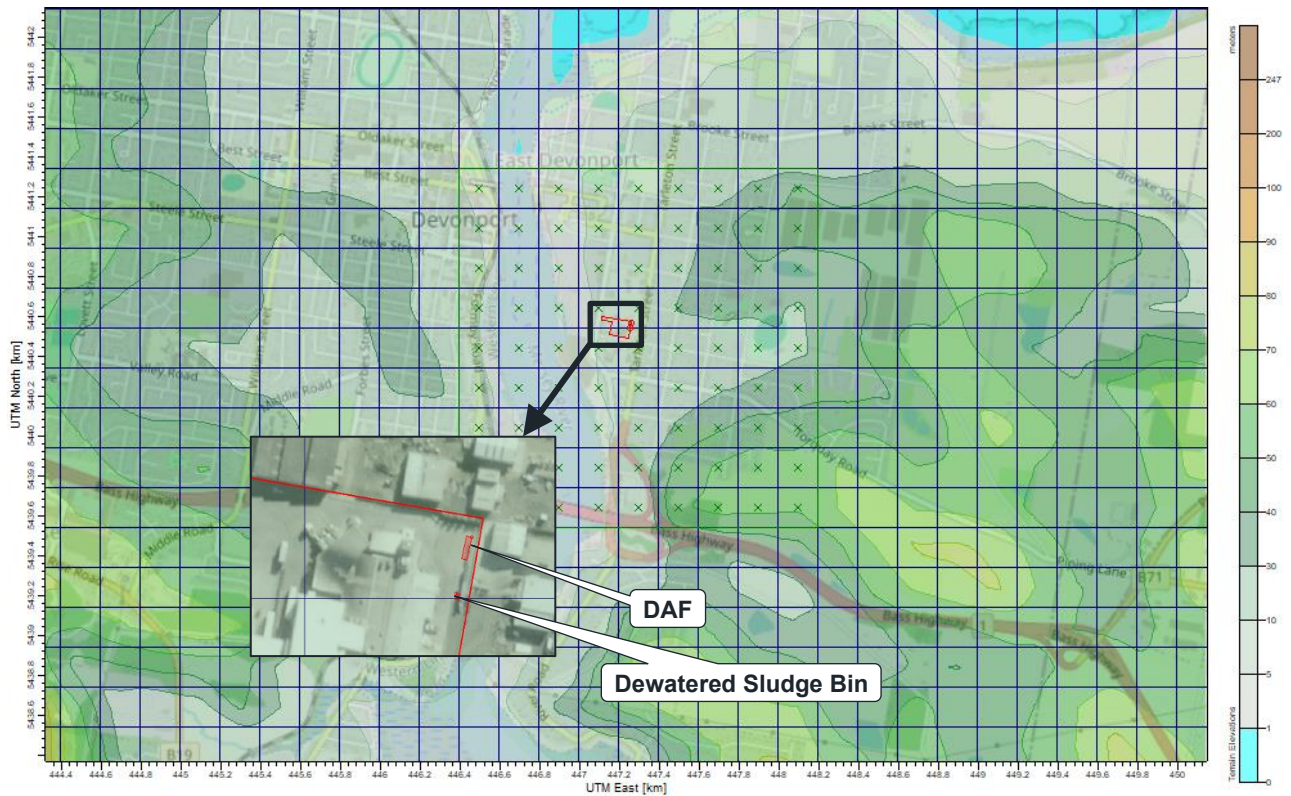


Figure 11: CALPUFF Modelling Domain showing Elevation, the Facility Boundary and Emission Sources.

Table 5: Additional Modelling Details

Parameter	Value
<b>TAPM</b>	
TAPM Version	4
Meteorological Data Period	1 January 2020 - 31 December 2020
Domain Centre	Latitude = S 41°11' Longitude = E 146°22'
Terrain Height	NASA STRM 9-Second (250 m)
Land use	RPDC 2003 TasSVLU (250m)
Sea surface temperature	Default database
Advance/experimental settings	Default
Number of Vertical Locations	30
Number of Easting Points	31
Number of Northing Points	31
Outer Grid Spacing	30,000 m × 30,000 m
Grids	5
Grid Resolutions	30km, 10km, 3 km, 1km, 300m
<b>CALMET</b>	
CALMET Version	6.5.0
Mode	No Observations
Domain Origin (SW Corner)	Easting: 440.19km Northing: 5,433.54km
Grid Resolution	200m x 200m
Domain Size	14km × 14km
Number of Vertical Levels	12
Vertical Levels (m)	20, 40, 60, 80, 100, 160, 320, 640, 1200, 2000, 3000, 4000
CALMET Settings	TERRAD = 7 km (All other settings left at default)
Terrain Data Source	NASA SRTM (90 m resolution)

Land use data source	Custom built using aerial photography from <i>TheList</i>
<b>CALPUFF</b>	
CALPUFF Version	7.2.1
Modelling Period	1 January 2020 -31 December 2020
Computation Grid Size	2km x 2km
Sampling Grid Resolution	100m x 100m
CALPUFF Settings	MDISP = 2 MPDF = 1 (All other settings left at default)

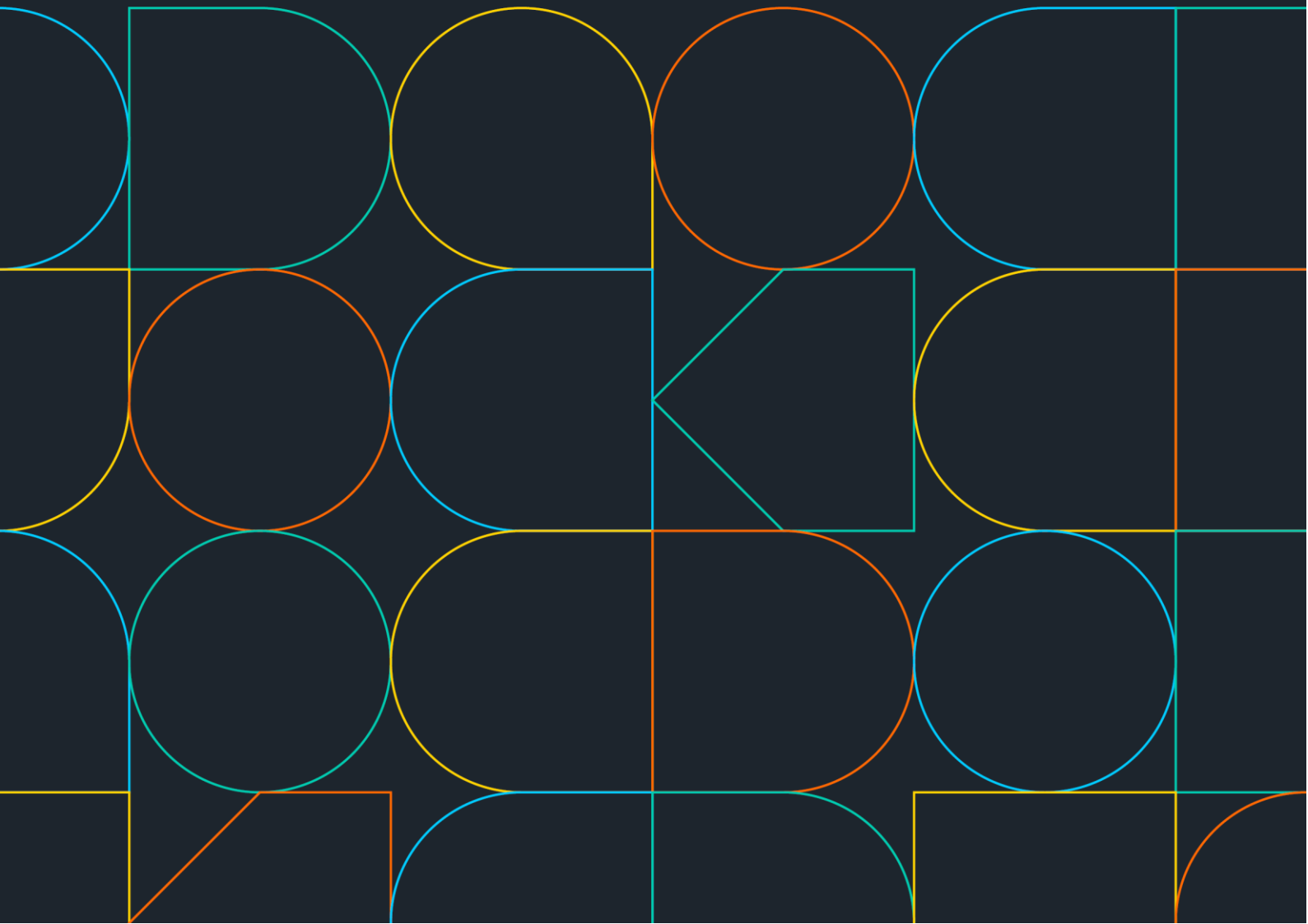
East Devonport Trade Waste Upgrade  
Attenuation Code Assessment

**Pitt & Sherry  
(Operations) Pty Ltd**  
ABN 67 140 184 309

Phone 1300 748 874  
info@pittsh.com.au  
pittsh.com.au

**Located nationally —**

Melbourne  
Sydney  
Brisbane  
Hobart  
Launceston  
Newcastle  
Devonport



Sheet List Table	
Sheet Number	Sheet Title
C100	COVER
C101	LOCATION PLAN
C102	SITE PLAN
C103	EQUIPMENT ELEVATION
C104	TRADE WASTE LINE

IMPORTANT  
WORKS ARE TO BE IN ACCORDANCE WITH THE  
APPLICABLE AUSTRALIAN STANDARDS,  
CONSTRUCTION CODES (NCC) & REQUIREMENTS  
OF ANY RELEVANT LOCAL AUTHORITIES

DRAWINGS TO BE READ IN CONJUNCTION WITH  
ANY WRITTEN SPECIFICATIONS AND ASSOCIATED  
DOCUMENTATION PREPARED BY THE ARCHITECT  
OR BUILDING DESIGNER AND THE RELEVANT  
SUB-CONSULTANTS

BASE DRAWING(S) PREPARED AND PROVIDED BY:

- HYDROFLOW

THE FOLLOWING ARE SURVEY DETAILS USED AS  
BASIS FOR DESIGN:

SURVEYOR: NOVA LAND  
SURVEY REF: L260126  
SURVEY DATE: 12/02/26  
COORDINATE SYSTEM: MGA2020  
VERTICAL DATUM: AHD83

WRITTEN DIMENSIONS TAKE PRECEDENCE OVER  
SCALED DIMENSIONS  
DIMENSIONS IN MILLIMETRES UNLESS NOTED  
OTHERWISE

DOCUMENTATION IS SUBJECT TO STATUTORY  
APPROVALS

THIS DESIGN IS INTENDED TO BE BUILT ONLY ONCE  
AND ONLY ON THE SITE THAT THE DESIGN WAS  
PREPARED FOR

02	FOR APPROVAL	JAM	JAM	SD	LD	18/02/26
01	DA	JAM	JAM	SD	LD	09/12/25
REV	DESCRIPTION	DRAFT	DES	CHKD	APP	DATE

PLOTTED: Feb 19, 2026 - 10:01am FILE: G:\Projects\IP25027 Petuna - East Devonport Trade Waste upgrade\20 Working files\20.1 Design and drawings\C3D\IP25027\_PETUNA EAST DEV C3D.dwg

SHEET: A3



## CBM Sustainability

51 York Street, PO Box 1971, Launceston, TAS 7250  
Ph: 03 6332 6988 E: info@cbmgroup.com.au  
www.cbmgroup.com.au

PETUNA EAST DEVONPORT  
TRADE WASTE UPGRADE  
SITE PLANNING  
COVER

PROJECT #: P25027 SHEET #: C100 REVISION #: 02

TASMANIAN PLANNING SCHEME ZONE:  
PORT AND MARINE

TASMANIAN PLANNING SCHEME ZONE:  
LIGHT INDUSTRIAL

TASMANIAN PLANNING SCHEME ZONE:  
GENERAL RESIDENTIAL

EXISTING WATER METER LOCATION  
FROM SURVEY  
100mm MEDIUM HAZARD  
INCLUDING FIRE BOOSTER ARRANGEMENT

11 JOHN STREET, EAST  
DEVONPORT TAS 7310  
TITLE: 161873/1  
SITE AREA 9,187m<sup>2</sup>

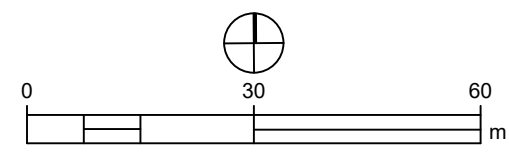
PROJECT LOCATION

THIS DRAWING MUST BE  
DISTRIBUTED IN FULL COLOUR



BEWARE OF ALL UNDERGROUND SERVICES. THE  
LOCATION OF UNDERGROUND SERVICES SHOWN ON  
THE DRAWING ARE APPROXIMATE ONLY AND NOT ALL  
MAY BE SHOWN. EXACT POSITIONS OF ALL  
UNDERGROUND SERVICES SHOULD BE LOCATED  
ONSITE AND IS THE RESPONSIBILITY OF THE  
CONTRACTOR.

02	FOR APPROVAL	JAM	JAM	SD	LD	18/02/26
01	DA	JAM	JAM	SD	LD	09/12/25
REV	DESCRIPTION	DRAFT	DES	CHKD	APP	DATE



**CBM Sustainability**  
51 York Street, PO Box 1971, Launceston, TAS 7250  
Ph: 03 6332 6988 E: info@cbmgroup.com.au  
www.cbmgroup.com.au

PETUNA EAST DEVONPORT  
TRADE WASTE UPGRADE  
SITE PLANNING  
LOCATION PLAN  
-----  
PROJECT #: P25027 SHEET #: C101 REVISION #: 02



- SOME ITEMS LISTED BELOW MAY NOT BE APPLICABLE
- PROPRIETARY STORMWATER PIT (TRAFFICABLE WHERE APPLICABLE) SIZED AS PER TABLE 7.5.2.1
  - POWER POLE
  - MANHOLE
  - SURFACE FALL (MIN 1:100 UNLESS OTHERWISE SPECIFIED)
  - RL (TO VERTICAL DATUM)
  - NEW SEWER LINE
  - NEW PUMPED SEWER LINE
  - EXISTING SEWER LINE
  - NEW TRADE WASTE LINE
  - NEW STORMWATER LINE
  - NEW AG DRAIN
  - NEW SWALE
  - NEW CHARGED STORMWATER LINE
  - NEW PUMPED STORMWATER LINE
  - EXISTING STORMWATER LINE
  - EXISTING SWALE
  - NEW WATER LINE
  - EXISTING WATER LINE
  - NEW GAS LINE
  - EXISTING GAS LINE
  - NEW ELECTRICAL CABLE
  - EXISTING ELECTRICAL CABLE
  - NEW COMMUNICATIONS CABLE
  - EXISTING COMMUNICATION CABLE

ADJACENT SURFACES TO BE FALLING AWAY FROM BUILDING

IO TO BE INSTALLED AT MAJOR BENDS IN STORMWATER AND SEWER LINES AND ALL LOW POINTS IN DOWNPIPES

PRODUCTS AND SYSTEMS TO BE INSTALLED AND/OR USED AS PER MANUFACTURERS INSTRUCTIONS

**IMPORTANT**  
WORKS ARE TO BE IN ACCORDANCE WITH THE APPLICABLE AUSTRALIAN STANDARDS, CONSTRUCTION CODES (NCC) AND REQUIREMENTS OF ANY RELEVANT LOCAL AUTHORITIES

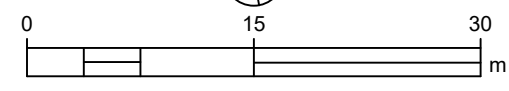
ALL WORKS IN ACCORDANCE WITH WATER SUPPLY CODE OF AUSTRALIA WSA03-2011-3.1 VERSION 3.1 MRWA EDITION V2.0 AND SEWERAGE CODE OF AUSTRALIA MELBOURNE RETAIL WATER AGENCIES CODE WSA02-2014-3.1 MRWA VERSION 2 AND TASWATER SUPPLEMENTS TO THESE CODE

**THIS DRAWING MUST BE DISTRIBUTED IN FULL COLOUR**



BEWARE OF ALL UNDERGROUND SERVICES. THE LOCATION OF UNDERGROUND SERVICES SHOWN ON THE DRAWING ARE APPROXIMATE ONLY AND NOT ALL MAY BE SHOWN. EXACT POSITIONS OF ALL UNDERGROUND SERVICES SHOULD BE LOCATED ONSITE AND IS THE RESPONSIBILITY OF THE CONTRACTOR.

02	FOR APPROVAL	JAM	JAM	SD	LD	18/02/26
01	DA	JAM	JAM	SD	LD	09/12/25
REV	DESCRIPTION	DRAFT	DES	CHKD	APP	DATE

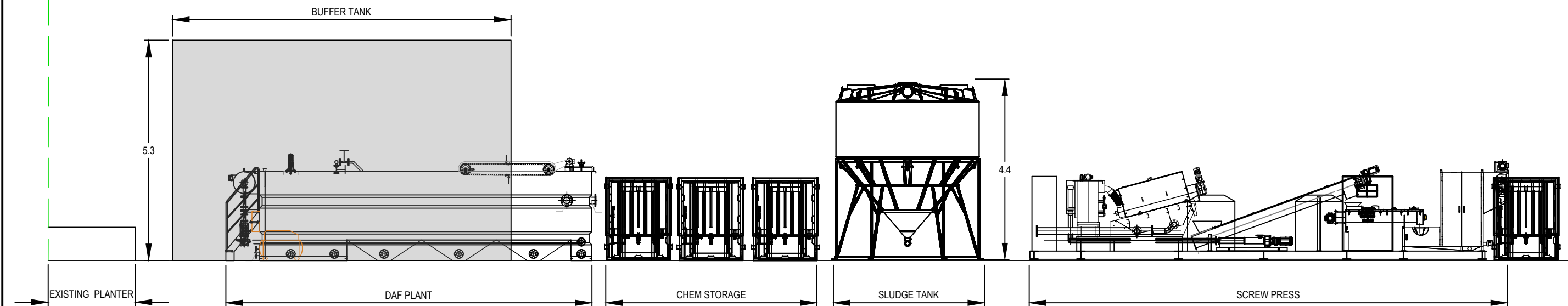


**CBM Sustainability**  
51 York Street, PO Box 1971, Launceston, TAS 7250  
Ph: 03 6332 6988 E: info@cbmgroup.com.au  
www.cbmgroup.com.au

PETUNA EAST DEVONPORT  
TRADE WASTE UPGRADE  
SITE PLANNING  
SITE PLAN

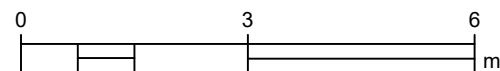
PROJECT #: P25027  
SHEET #: C102  
REVISION #: 02

BOUNDARY



02	FOR APPROVAL
01	DA
REV	DESCRIPTION

JAM	JAM	SD	LD	18/02/26
JAM	JAM	SD	LD	09/12/25
DRAFT	DES	CHKD	APP	DATE

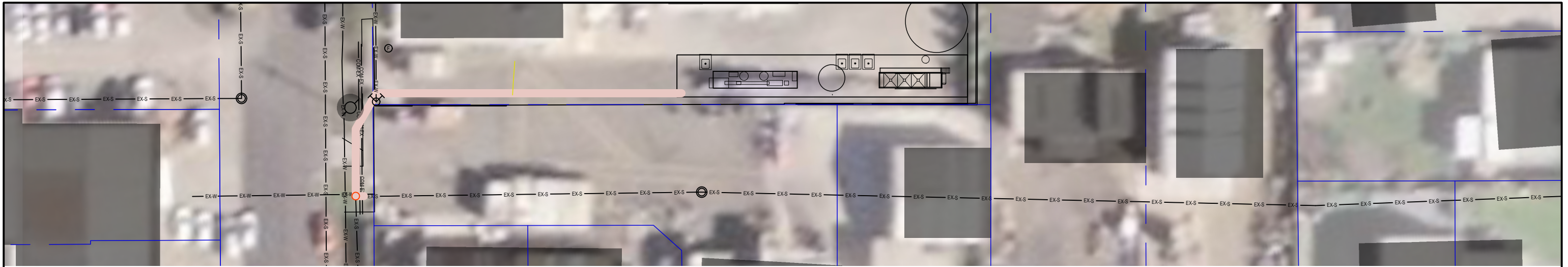


### CBM Sustainability

51 York Street, PO Box 1971, Launceston, TAS 7250  
 Ph: 03 6332 6988 E: info@cbmgroup.com.au  
 www.cbmgroup.com.au

PETUNA EAST DEVONPORT  
 TRADE WASTE UPGRADE  
 SITE PLANNING  
 EQUIPMENT ELEVATION  
 ELEVATION A

PROJECT #:	SHEET #:	REVISION #:
P25027	C103	02



VERT EXAG 1:5  
Datum 8.000

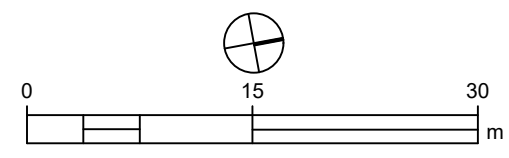
PIPE DETAILS  
PIPE LENGTH (m)  
GRADE %

DESIGN LEVELS		11.079	10.967	10.775	10.621	10.699			
EXISTING LEVELS		11.079	10.967	10.775	10.615 10.621	10.634	10.712		
COVER	0.746	MAX: 0.92 MIN: 0.75			0.903 0.903	MAX: 0.98 MIN: 0.90	0.975 0.975	MAX: 1.14 MIN: 0.98	1.141
INVERT LEVEL	10.259				9.542 9.542	9.488 9.488		9.400 9.377	
CHAINAGE	-0.500	10.000	20.000	30.000	39.893 40.000	45.289	50.000	54.056 54.377	58.000

PIPE (TW DISCHARGE LINE) LONG SECTION

THIS DRAWING MUST BE  
DISTRIBUTED IN FULL COLOUR

02	FOR APPROVAL	JAM	JAM	SD	LD	18/02/26
01	DA	JAM	JAM	SD	LD	09/12/25
REV	DESCRIPTION	DRAFT	DES	CHKD	APP	DATE



**CBM Sustainability**  
51 York Street, PO Box 1971, Launceston, TAS 7250  
Ph: 03 6332 6988 E: info@cbmgroup.com.au  
www.cbmgroup.com.au

PETUNA EAST DEVONPORT  
TRADE WASTE UPGRADE  
SITE PLANNING  
TRADE WASTE LINE  
LONGITUDINAL SECTION

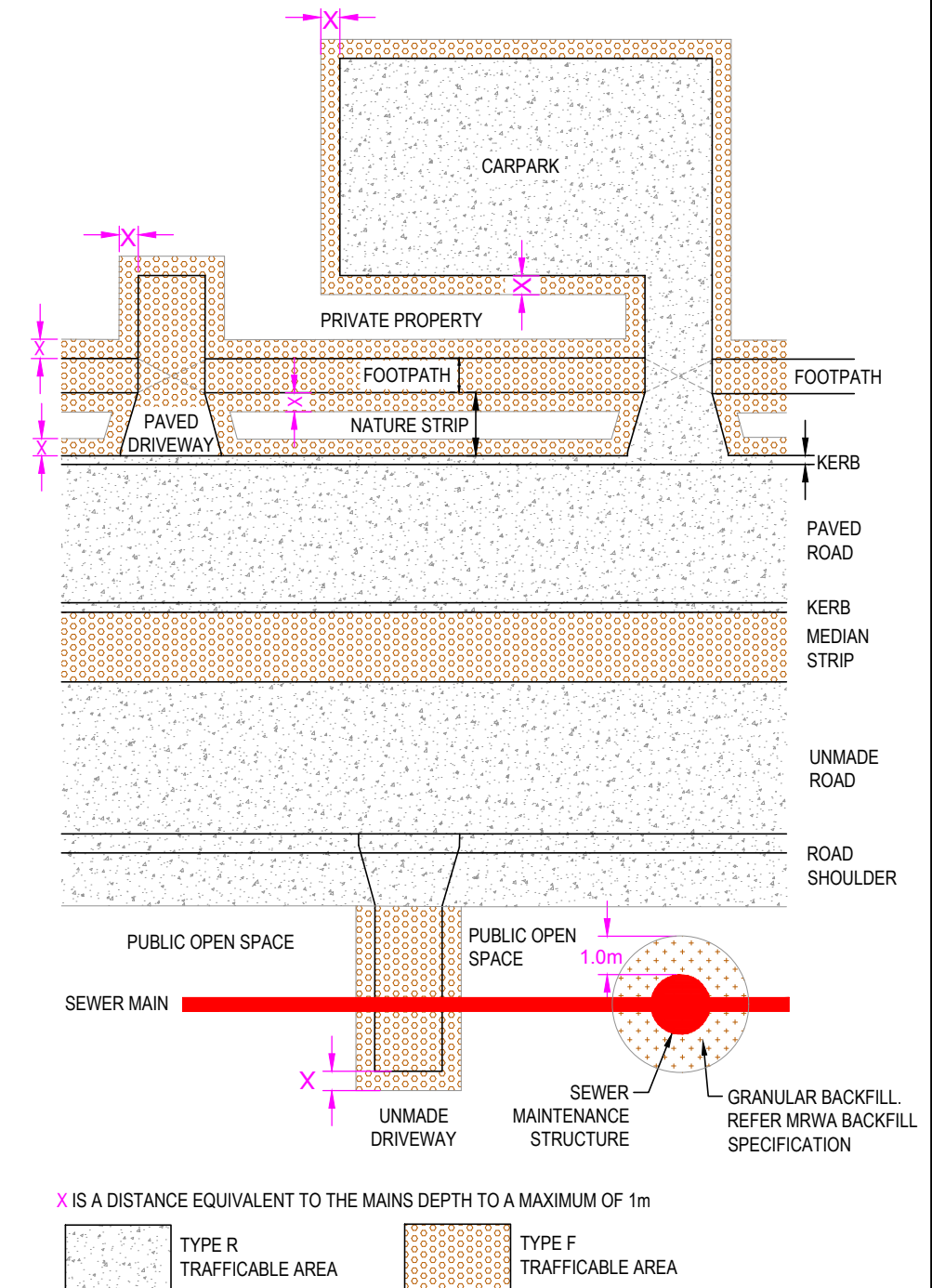
PROJECT #: P25027 SHEET #: C104 REVISION #: 02

**TABLE 201-A: TRAFFICABLE AREAS (TYPE R OR F BACKFILL)**

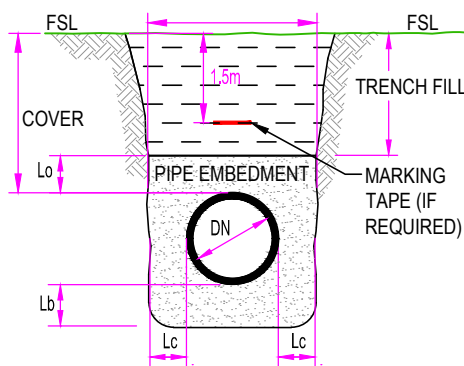
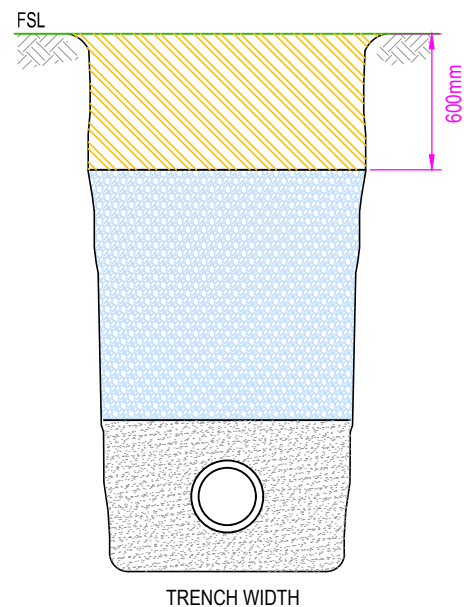
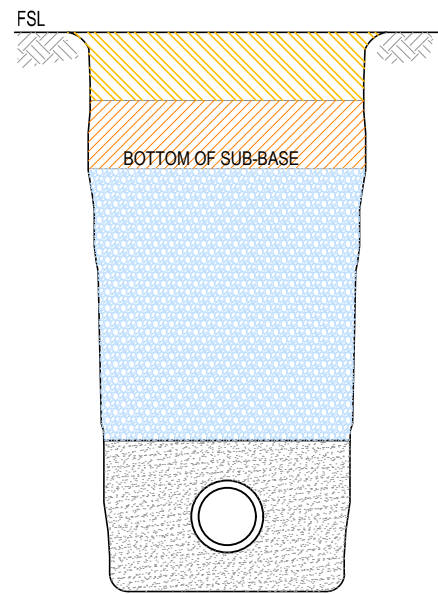
TRENCH ZONE	PREFERRED MATERIALS	PRODUCT SPEC. No.	METHOD OF PLACEMENT	MINIMUM COMPACTION
PAVEMENT ZONE	REFER TO ROAD OWNERS SPECIFICATION			98% R <sub>D</sub> TOP 100mm
SUB-BASE ZONE	REFER TO ROAD OWNERS SPECIFICATION			
BACKFILL ZONE	Refer to road owners specification, if not available: comply with MRWA backfill spec - MRWA spec 04.03, summarised as follows: A. For trenches <1.5 m deep in Type R situation: the backfill shall be 20mm Class 3 plant wet mixed crushed rock, for the full depth. B. For trenches > 1.5 m in Type R situation: • 20mm class 3 plant wet mixed crushed rock above the sub-base level. • 20mm class 4 (or better) crushed rock for the remainder. C. In Type F situations: • the backfill shall be 20mm Class 4 (or better) crushed rock.	VIC ROADS SPECS 812 FOR CLASS 3 & 4 FCR.  818 FOR CLASS 4 CRUSHED SCORIA.  820 FOR CLASS 4 CRUSHED CONCRETE.	Backfill material shall be placed and compacted in layers and moisture conditioned as required to achieve the required density. Where hand held or walk behind compaction equipment is used on the backfill zone, avoid compaction within 300mm of top of pipe. Where heavier compaction is used in the backfill zone, avoid compaction within 1200mm of top of pipe.	95% R <sub>D</sub>
EMBED-MENT ZONE	• Refer to MRWA-S-202. • All nominated embedment is satisfactory in Type R situations, however, it is critical that embedment have the correct moisture content and be properly placed to achieve adequate compaction. • Selected materials shall be worked around the pipe to ensure all voids at haunches are filled and the pipe is provided with good support along its entire length.		• Embedment to be placed under the haunches by shovel and compacted using hand tampers or vibrating probes or plates. • Risk of pipeline deflection may be further reduced by: •• increasing the depth of the overlay (to up to 1m), or •• cement stabilising the top surface of the embedment (hand distributed cement at 2 kg per square metre, worked into the top surface by shovel).	70% i <sub>D</sub>

**TABLE 201-B: NON TRAFFICABLE AREAS**

TRENCH ZONE	PREFERRED MATERIALS	METHOD OF PLACEMENT	COMPACTION REQUIRED
BACKFILL ZONE	Refer to Backfill Specification - MRWA specification 04.03. • For backfill < 1.5m deep, selected or ordinary fill. A. Selected Fill. Material that is free from organic or other deleterious material, obtained from excavation or imported, with a particle size of rock not greater than 20mm, or for other than rock not greater than 75mm (refer AS2566.2-2002). B. Ordinary Fill. Material obtained from excavation or imported that contains not more than 20% by mass of rock fragments with size between 75mm and 150mm, with no rock or clay fragments greater than 150mm (refer AS2566.2-2002). • For backfill > 1.5m deep, as per project specific backfill specification.	Refer to Backfill Specification - MRWA specification 04.03. • For backfill < 1.5m deep, selected or ordinary fill placed as required to meet the nominated compaction density. • For backfill > 1.5m deep, place as specified in the project specific backfill specification.  Place and compact in layers and moisture condition as required.  Where hand held or walk behind compaction equipment is used in the backfill zone, avoid compaction within 300mm of top of pipe. Where heavier compaction is used in the backfill zone, avoid compaction within 500mm from the top of pipe.	95% R <sub>D</sub> TOP 600mm   90% R <sub>D</sub>
EMBED-MENT ZONE	• Refer to MRWA-S-202. • The embedment proposed is satisfactory in non trafficable situations, however, it is critical the embedment have the correct moisture content and be properly placed to achieve maximum compaction. • Selected materials shall be worked around the pipe to ensure all voids at haunches are filled and the pipe is provided with good support along its entire length. Embedment to be placed under the haunches by shovel or fork and compacted to the required density.		60% i <sub>D</sub>



**FIGURE 201-B: TYPE R AND TYPE F LOCATIONS**



**FIGURE 201-A: TRENCH DIMENSIONS**

**NOTES Regarding Figure 201-A:**

- Sides of excavation to be kept vertical to at least 150 above the pipe.
- All rock intrusions out of trench wall must be removed prior to any pipe laying operations.
- Any foreign matter such as vegetation or litter shall be removed from the trench prior to pipe laying and backfill.
- Marker tape is required where the sewer is **not** the deepest service.
- Place marker tape at 1.5m deep or on first backfill layer, whichever is shallower.

**TABLE 201-C: MINIMUM COVER**

LOCATION	MINIMUM COVER
NON TRAFFICABLE	600
TYPE F TRAFFICABLE	750
TYPE R TRAFFICABLE (LOCAL ROADS)	900
TYPE R TRAFFICABLE (MAJOR & ARTERIAL ROADS)	1200

**NOTES Regarding Table 201-C:**

- Location definitions are provided in the MRWA backfill spec 04.03.
- Major and arterial roads are viceroads declared main roads.
- All other roads can be considered as local roads.

**TABLE 201-D: TRENCH DIMENSIONS**

SEWER SIZE (DN)	L <sub>b</sub> : BEDDING DEPTH		L <sub>c</sub> : OVERLAY		L <sub>s</sub> : SIDE SUPPORT	
	MINIMUM	MAXIMUM <sup>1</sup>	(MINIMUM)	MAXIMUM	MINIMUM	MAXIMUM
100 / 150	75	150	100 <sup>2</sup> / 300 <sup>3</sup>	100	350	
225 / 300	100	200	150 <sup>2</sup> / 300 <sup>3</sup>	150	400	
375 / 450	100	200	150 <sup>2</sup> / 300 <sup>3</sup>	200	450	
525 - 900	150	250	150 <sup>2</sup> / 300 <sup>3</sup>	250	500	
> 900	150	250	200 <sup>2</sup> / 300 <sup>3</sup>	300	550	

**NOTES Regarding Table 201-D:**

- If maximum bedding depth is exceeded, fill over excavation with special embedment as per drawing MRWA-S-202.
- The first minimum overlay figure is the minimum overlay required when walk behind trench backfill compaction equipment is to be used.
- The second minimum overlay figure is the minimum overlay required when:
  - Ride on trench backfill compaction equipment is to be used, or
  - The sewerage pipe is in the road carriageway.
  - This assumes that the first trench fill layer will be at least 200 thick (when compacted) so that there is a total cover > 500 during mechanical compaction.

REV	DESCRIPTION	DATE	APPROVED
3	CHANGE TO TYPE R BACKFILL & DRIVEWAYS	01/07/16	RJ / CP / JT
2	PUBLISHED FIRST ISSUE	01/10/15	CP / JT / KD / RJ
1	PRE-PUBLISHED DRAFT	01/03/15	CP / JT / KD / RJ

DESIGNED: R. JAGGER		DATE: 1 JULY 2015	
DRAWN: R. JAGGER		DATE: 1 JULY 2015	
CHECKED:	NAME	DATE	APPROVED:
<input checked="" type="checkbox"/>	CWW	D. MOORE	01/09/15
<input checked="" type="checkbox"/>	SEW	C. PAXMAN	01/09/15
<input checked="" type="checkbox"/>	YVW	K. DAWSON	01/09/15
<input checked="" type="checkbox"/>	CWW	R. CARRUTHERS	01/09/15
<input checked="" type="checkbox"/>	SEW	D. O'DONOVAN	01/09/15
<input checked="" type="checkbox"/>	YVW	J. TOMASI	01/09/15
ISSUED 2015		VERSION 1	

MELBOURNE RETAIL WATER AGENCIES

MRWA SEWERAGE STANDARDS

TRENCHING AND TRENCHFILL

NOT TO SCALE

MRWA-S-201

Planning	Design	Construction
	✓	✓✓✓✓

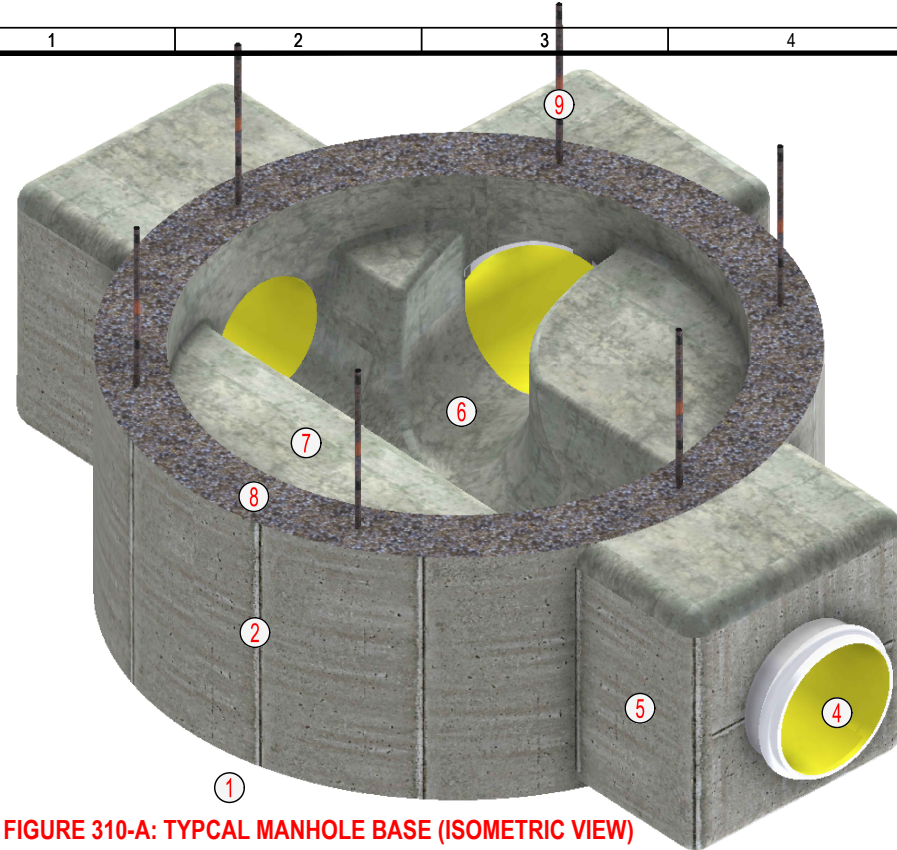


FIGURE 310-A: TYPICAL MANHOLE BASE (ISOMETRIC VIEW)

TABLE 310-A: BASE COMPONENTS

ITEM	DESCRIPTION	MATERIAL	NOTES
1	FOUNDATION	EARTH OR CONCRETE	NATIVE GROUND > 100kPa OR BLINDING CONG
2	BASE (INC NIB WALL)	CONCRETE	DIAMETER AS PER BASE DESIGN
3	REINFORCEMENT	MESH / BAR	AS PER TABLE 310-B
4	PIPE CONNECTORS	TO MATCH PIPE	REFER FIGURES 310-D TO G
5	CONNECTOR SUPPORTS	CONCRETE	SUPPORT OVER LENGTH AS PER TABLE 310-C
6	CHASE		HOT WIRE CUT POLYSTYRENE FOAM BLOCKOUT
7	TABLE	CONCRETE	BENCH TO 1 IN 8 GRADIENT. EDGES R20 RADIUS
8	NIB WALL	CONCRETE	CAST IN ONE PIECE WITH BASE
9	DOWELS	REINFORCING BAR	AS PER TABLE 310-B. INSERT IN WET CONCRETE

**ADDITIONAL NOTES Regarding Table 310-A Items:**

- Item 1. MH base shall not be laid onto compacted materials. Where over excavation occurs, for MHs > 8m deep and for MHs ≥ Ø1800, place base onto > 50 of N15 blinding concrete, poured immediately after excavation.
- Item 2. Use N40 concrete to construct MH bases which have external drops or are > 8m deep.
- Item 4. Cast base, nib wall and pipe connector supports in one piece. Cut out any part of pipe connectors which protrude within inner diameter of the MH.
- Item 8. Prepare top of nib wall surface in accordance with Figure 309-B.
- Item 9. Do not insert dowels within 100 of horizontal alignment of pipe. Insert to depth X as per Table 310-B. Inverted "U" shaped dowels with both ends inserted into the base concrete is an acceptable alternative to straight bar. Half as many bars would be required in such cases.

**General Notes:**

- Concrete and reinforcement as per drawing MRWA-S-309.
- For MHs containing an internal drop, refer to drawing MRWA-S-311 for additional requirements.
- For MHs containing an external drop, refer to drawing MRWA-S-312 for additional requirements.

TABLE 310-B: MANHOLE BASE PARAMETERS

DEPTH TO INVERT	MAINTENANCE HOLE SIZE	NO. DOWELS	DOWEL SIZE (ITEM 8)	X = DOWEL PROTRUSION	REINFORCEMENT (ITEM 3)	Z = BASE THICKNESS
< 8 m	1050	6	N12	400	SL81	150
	1200	8	N12	400	SL81	150
	1500	10	N12	400	SL81	150
	1800	12	N16	500	N12 - 200	200
	2100	14	N16	500	N16 - 200	250
BETWEEN 8 m & 15m	2400	16	N16	500	N16 - 200	250
	1050	6	N16	500	SL81	150
	1200	8	N16	500	N16 - 200	250
	1500	10	N16	500	N16 - 200	250
	1800	12	N20	650	N20 - 200	300
2100	14	N20	650	N20 - 200	300	
2400	16	N20	650	2 x (N20 - 200)	350	

**NOTES Regarding Table 310-B**

- \* Two layers of reinforcement required in this case.
- Where base reinforcement is to consist of bars, orientate one set of bars in one direction at 200 spacing and one set of bars at 90° to this direction also at 200 spacing.
- Bases at a depth > 8m require N40 concrete.

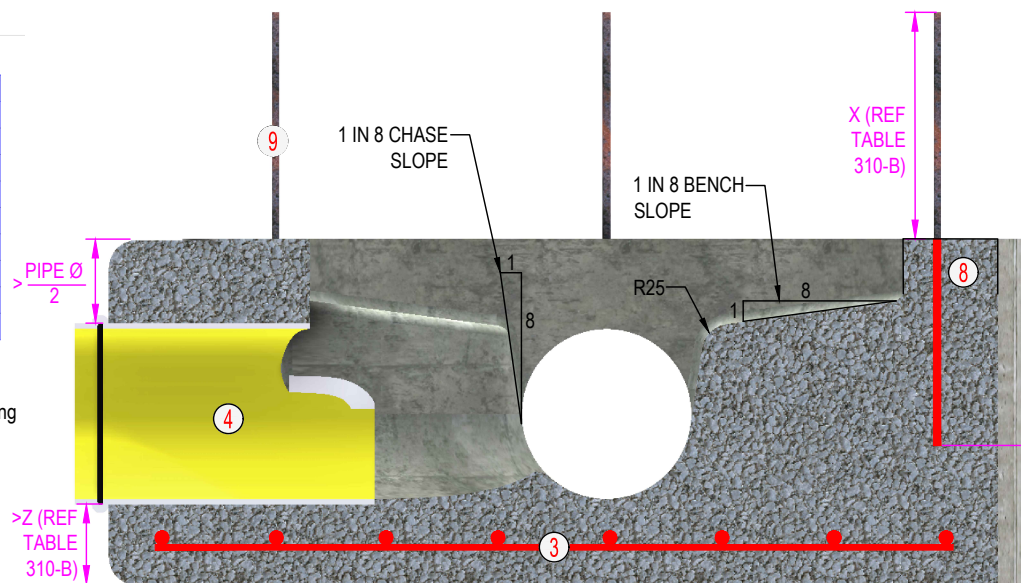


FIGURE 310-B: TYPICAL MANHOLE BASE (SECTION VIEW)

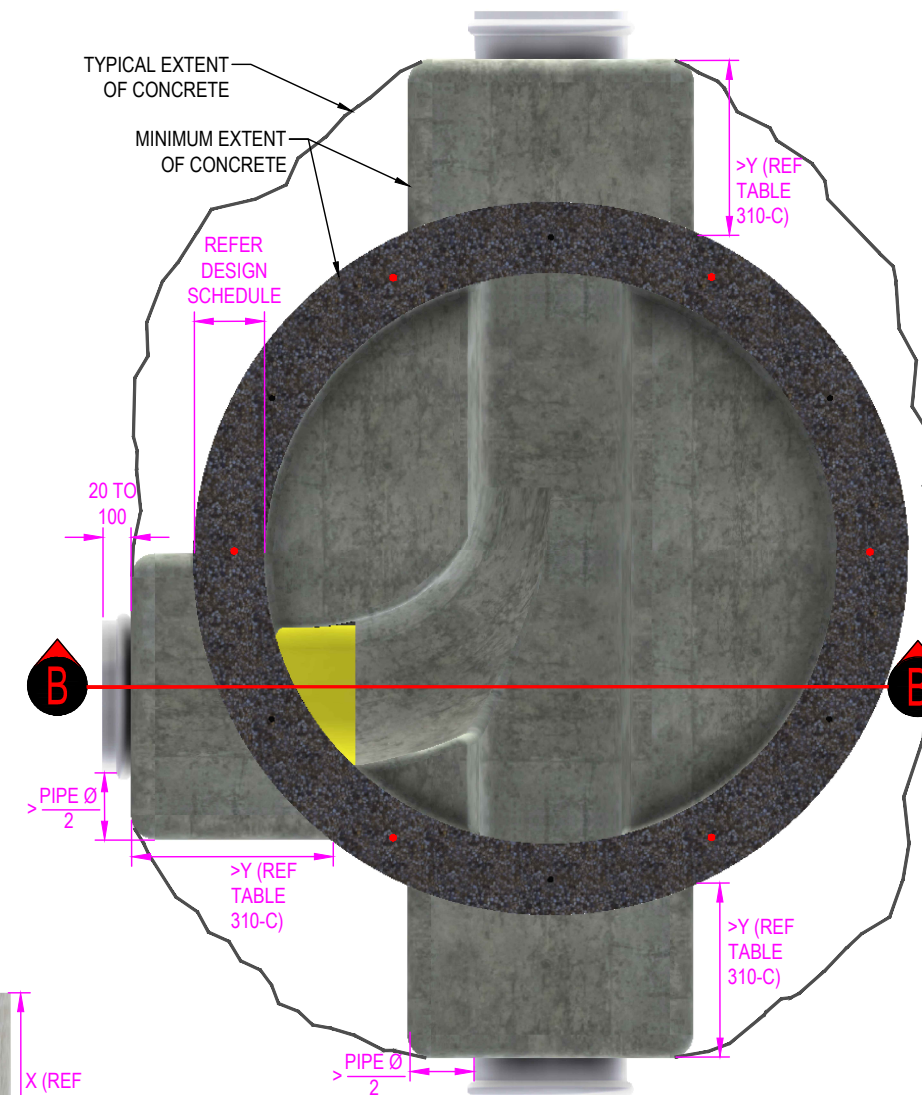


FIGURE 310-C: TYPICAL MANHOLE BASE (PLAN VIEW)

TABLE 310-C: PIPE CONNECTION CONCRETE ENCASEMENT

PIPE SIZE (DN)	Y
150	100
225	150
300	250
350 / 375	300
> 400	EQUAL TO PIPE DIAMETER

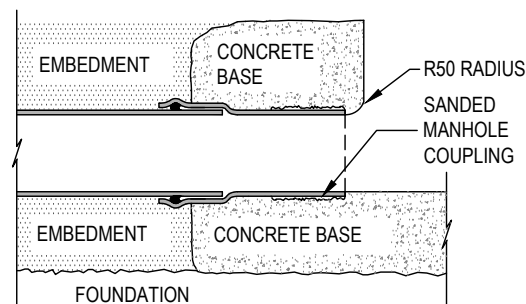


FIGURE 310-D: PVC PIPE CONNECTION (SECTION VIEW)

FIRST PIPE JOINT BACK FROM MH SHALL BE RRJ. THERE IS NO REQUIREMENT FOR A ROCKER PIPE.

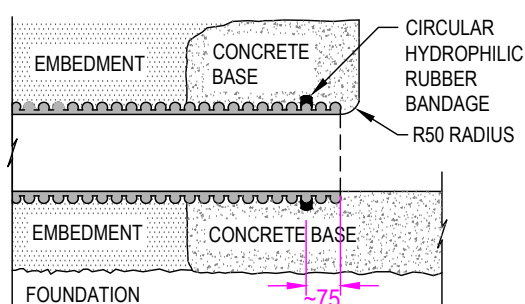


FIGURE 310-E: PP PIPE CONNECTION (SECTION VIEW)

CONNECTING PIPE SHALL BE > 3 x PIPE Ø LONG. THERE IS NO REQUIREMENT FOR A ROCKER PIPE.

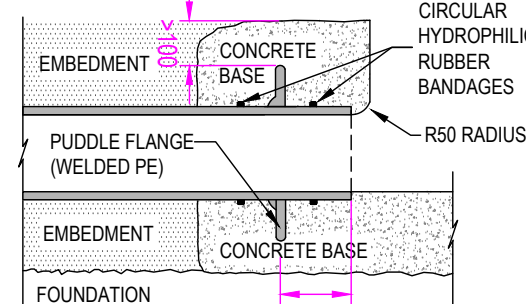


FIGURE 310-F: PE PIPE CONNECTION (SECTION VIEW)

THERE IS NO REQUIREMENT FOR A ROCKER PIPE.

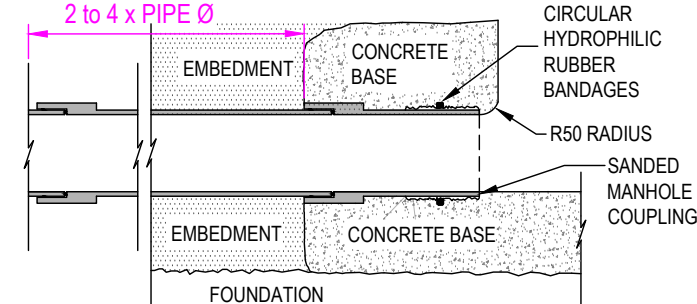


FIGURE 310-G: GRP PIPE CONNECTION (SECTION VIEW)

FIRST PIPELINE JOINT BACK FROM MANHOLE SHALL BE RRJ. CONNECTING PIPE SHALL BE 2 to 4 x PIPE Ø LONG.

REV	DESCRIPTION	DATE	APPROVED
2	PUBLISHED FIRST ISSUE	01/10/15	CP / JT / KD / RJ
1	PRE-PUBLISHED DRAFT	01/03/15	CP / JT / KD / RJ

DESIGNED: R. JAGGER		DATE: 1 JULY 2015	
DRAWN: R. JAGGER		DATE: 1 JULY 2015	
CHECKED:	NAME	DATE	APPROVED:
<input checked="" type="checkbox"/>	C. MOORE	01/09/15	<input checked="" type="checkbox"/> C. MOORE
<input checked="" type="checkbox"/>	C. PAXMAN	01/09/15	<input checked="" type="checkbox"/> D. O'DONOVAN
<input checked="" type="checkbox"/>	K. DAWSON	01/09/15	<input checked="" type="checkbox"/> J. TOMASI
ISSUED 2015		VERSION 1	



MRWA SEWERAGE STANDARDS  
CONCRETE MAINTENANCE HOLE  
BASE CONSTRUCTION

NOT TO SCALE

MRWA-S-310

Planning	Design	Construction
		✓✓✓✓