

This planning application is open for
public comment until
31 August 2026

Reference no	PLN-26-0120
Site	WESTERN JUNCTION SEWAGE TREATMENT PLANT, RICHARD STREET (FR 107909/1) AND ACCESS OVER 81 EVANDALE ROAD WESTERN JUNCTION
Proposed Development	Temporary process change and desludging of Western Junction Sewage Treatment Plant
Zone	26.0 Utilities
Use class	Utilities

Written representations may be made during this time to the General Manager;
mailed to PO Box 156, Longford, Tasmania 7301,
delivered to Council offices or
a pdf letter emailed to planning@nmc.tas.gov.au

(no special form required)



Received
15/07/2026

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Office Use Only:

PLANNING APPLICATION

FOR BUILDINGS, WORKS AND CHANGE OF USE

(E.g. Residential houses, sheds, carports, retaining walls, visitor accommodation, commercial development, signage etc.)

The Proposal

Description of proposal:

As part of TasWaters statewide lagoon desludging program, Western Junction STP lagoon 1 has been identified as having sludge levels which are higher than what would be considered ideal for optimal treatment performance. This lagoon is therefore considered high priority for desludging and TasWater have scheduled in works to remove the sludge in Oct/Nov 2026. Due to site and process constraints, the preferred desludging methodology is to temporarily take lagoon 1 offline by bypassing flows to lagoon 2 and dewatering the surface water into lagoon 2 to expose the sludge layer. Sludge will then be removed using excavation machinery and sludge pumps into tanker trucks which will transport it to suitable farmland for beneficial reuse.

Driveway construction material:

The Land

Site address:

Richard St, Western Junction TAS 7212

and ROW - 81 Evandale Rd, Western Junction TAS 7212

Title reference:

C/T: 107909 ROW C/T: 180211

Existing buildings on site:

None

Existing use of site:

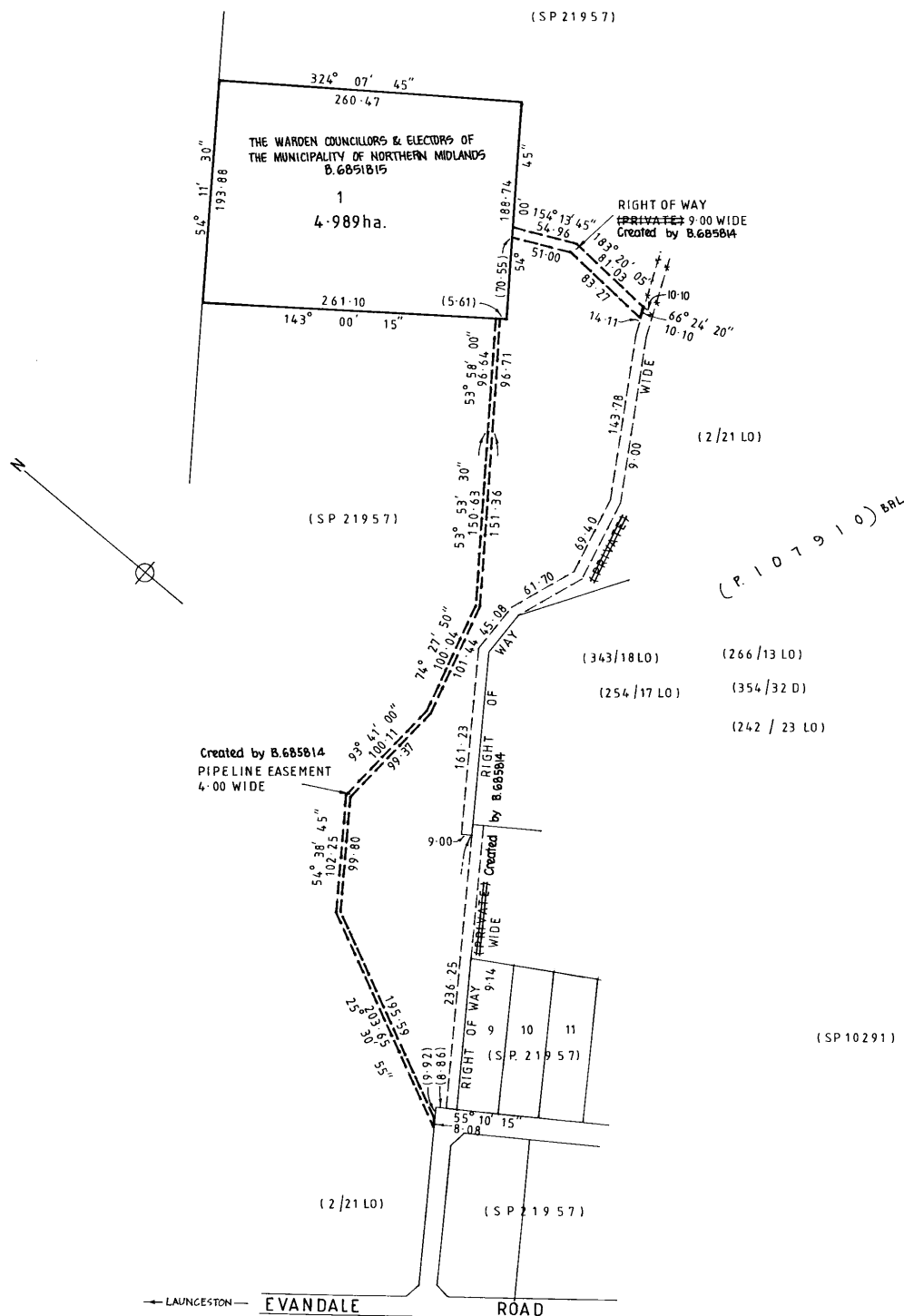
Wastewater Treatment

Applicant justification of any variation/discretion to the Tasmanian Planning Scheme – Northern Midlands

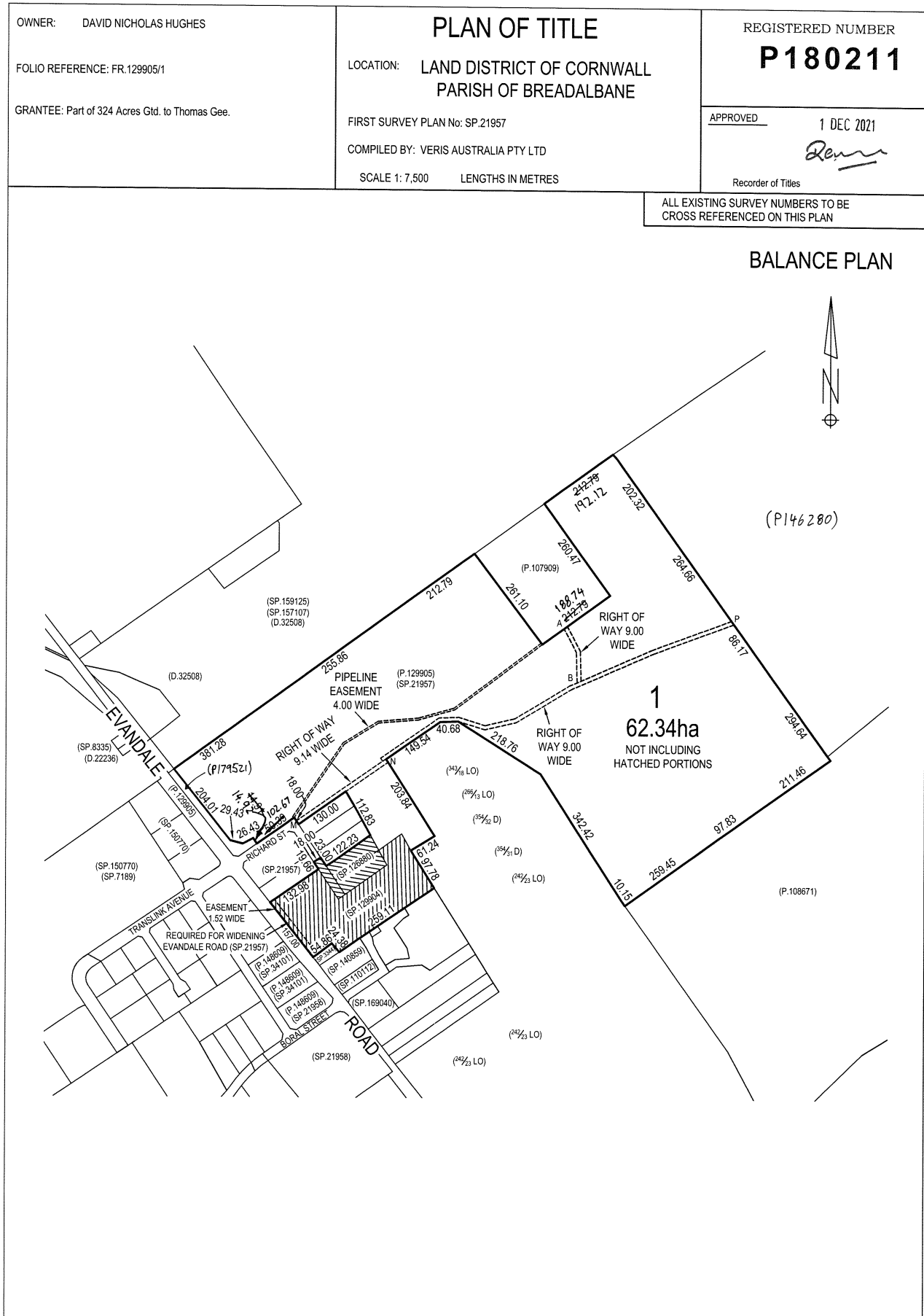
Desludging of wastewater lagoons is considered an ongoing maintenance task. Whilst there may be some notable short term impacts to effluent quality during the works, the desludging will result in long term improvement to treatment performance. The attached desludging plan outlines the anticipated impacts and mitigation measures to minimise environmental harm.

The land application of the removed sludge will be carried out according to the requirements of the EPA Tasmania Biosolids Reuse Guidelines and a separate Biosolids Management Plan will be prepared by our consultant and provided to Council and EPA to demonstrate how the activity will comply with the guidelines.

Owner: RICHARD AFLECK HUGHES, DAVID NICHOLAS HUGHES, PETER RICHARD HUGHES AND TASMANIAN PERMANENT EXECUTORS AND EQUITY TRUSTEES LIMITED	PLAN OF SURVEY by Surveyor: PAUL ANTHONY PHELPS of land situated in the CAMPBELL SMITH PHELPS FIDLEY PTY. LTD. of 60 ELPHINSTON ROAD, LAUNCESTON, of land situated in the LAND DISTRICT OF CORNWALL PARISH OF BREADALBANE	REGISTERED NUMBER P 107909
Title Reference: CT 4059-98 2195718	SCALE 1: 3000 MEASUREMENTS IN METRES	Approved Effective from: 6 DEC 2023 <i>[Signature]</i> Recorder of Titles
Grantee: PART OF 324 ACRES GRANTED TO THOMAS GEE		



TITLE NO. 47	LAST TFSWP REF NO. 0494	LAST CLOSURE PLAN NO. S.P.21957
ALL SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN		



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Western Junction Sewage Treatment Plant Dewatering/Desludging Plan

CM: 26/32329

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Document approval and issue notice

This is a managed document. Changes will only be issued as a complete replacement document. Recipients should remove superseded versions from circulation. This document is authorised for release once all signatures have been obtained.

Prepared: Sonal Jutla, Environmental Scientist Date: 23/04/2026
(for release)
Endorsed: George Fitzgibbon, Senior Environmental Scientist Date: 07/05/2026
(for acceptance)
Approved: Jeremy Verdouw, Senior Environmental Scientist Date: 14/05/2026
(for acceptance)

Build status:

Date	Author	Reason	Sections
23/04/2026	S.Jutla	Draft for review	All
14/05/2026	J.Verdouw	Review and finalise for submission	All

Amendments in this release:

Section title	Section number	Amendment summary

Distribution:

Copy number	Issue date	Issued to

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1. Purpose

This document outlines TasWaters plan to dewater and desludge Western Junction Sewage Treatment Plant (STP) Lagoon 1 as part of our statewide lagoon desludging program. It provides an overview of the methodology as well potential environmental impacts of the works and how these will be mitigated.

2. Project Overview

Western Junction STP is a Level 1 sewage treatment plant consisting of two separate treatment lagoons in series, a primary lagoon (Lagoon 1) and a secondary lagoon (Lagoon 2) (Figure 1). Treated effluent can only be discharged to environment at the designated outfall to Briarly Creek.



Figure 1. An aerial view of Western Junction STP showing the two treatment lagoons.

A sludge survey of Lagoon 1 completed in May 2025 (Appendix A) revealed that the lagoon contained an estimated sludge content of 53% of lagoon capacity, or approximately 2331m³ sludge. This level of sludge is considered higher than optimal, placing the STP at risk of reduced treatment and potential negative impacts to effluent quality. Western Junction STP Lagoon 1 is therefore rated as a high priority for desludging.

Desludging has been scheduled for the period between October to November 2026 and a preferred methodology has been determined. The works have been assigned to Giraffe Civil, one of TasWaters contracted lagoon desludging providers. TasWater requires Northern Midlands Council approval of the temporary process reconfiguration prior to conducting the works.

Proposed reconfiguration (see Section 3.1):

- by-pass Lagoon 1 with flows from the inlet works directed to Lagoon 2
- dewatering Lagoon 1 into Lagoon 2 down to the sludge level
- discharge of partially treated effluent from Lagoon 2 to Briarly Creek

Sludge from Western Junction STP Lagoon 1 has been tested and classified as a Class 2 Biosolids product which is suitable for direct application to land (Appendix B). TasWater expects to remove approximately 2331 wet tonnes (at 6.5% Total Solids) of sludge from Lagoon 1.

Land application rates will be in accordance with the Tasmanian Biosolids Reuse Guidelines (TBRG 2020) and the Approved Management Method for the Reuse of Biosolids (AMM 2020). Should it be deemed appropriate to utilise application rates exceeding 50 wet tonnes/ha, TasWater will seek an EPA Reg21 approval for high application rate (220 wet t/ha).

3. Project Plan

3.1 Dewatering Methodology (Contractor/TasWater)

TasWater will work with the desludging contractor to complete the dewatering of Lagoon 1. The dewatering plan is to divert flows from Lagoon 1 to Lagoon 2, via an existing bypass pipeline and then lowering the level of water in Lagoon 1 down to the sludge level by pumping the contents to Lagoon 2 (Figure 2). Dewatering is expected to take approximately 2 weeks at a rate of 150kL/day.

Dewatering will be controlled to limit the impact on effluent quality and the potential for hydraulic overload in Lagoon 2. Average daily flows from this STP are estimated to be 330kL/day (2024_25 AER), this with the dewatering rate of 150kL/day should bring the total flow to approximately 480kL/day. Impacts to receiving environment will be minimised by ensuring the lagoon remains offline for the shortest time possible. Details of the predicted impacts of dewatering on effluent quality and risk mitigation measures are outlined in Section 4.1.

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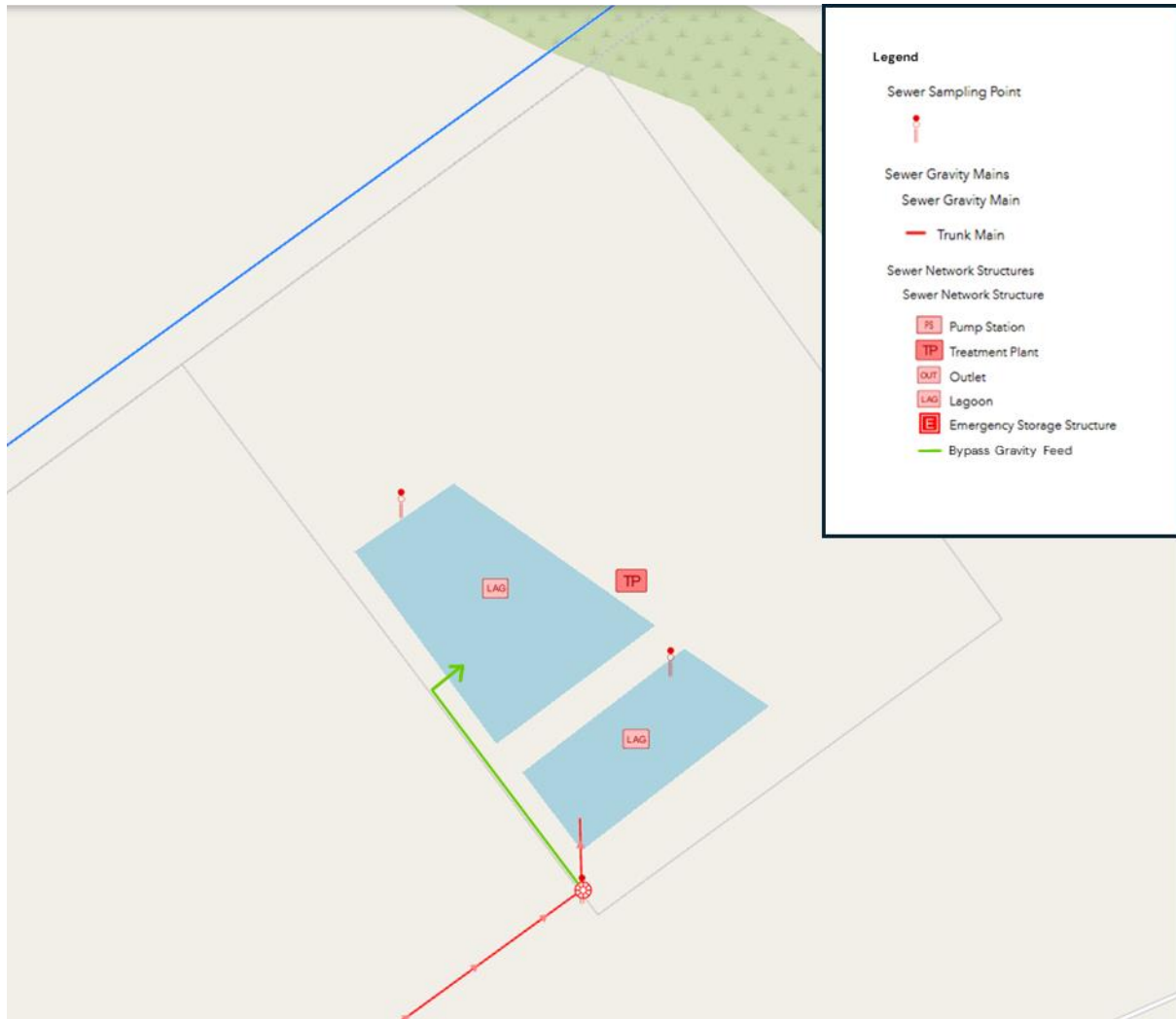


Figure 2. Western Junction STP bypass configuration

3.2 Desludging Methodology (Contractor)

3.1.1. Desludging

The contractor will remove sludge from Lagoon 1 by dewatering into Lagoon 2 until the sludge layer is exposed. The sludge will then be homogenised using excavation equipment and pushed towards a load out point where it will be pumped into trucks for transport to suitable farmland for spreading. The contractor anticipates that the desludging will take 5 days to complete (once lagoon is dewatered). Testing results indicate that the dewatered sludge will have a total solids content of around 6.5%. TasWater is aiming to commence works between October and November 2026 in order to make the most of the drier conditions typically experienced at this time of year for this region whilst still having sufficient flows in the receiving environment to provide sufficient effluent dilution.

3.1.2. Land spreading

Once the lagoon has been dewatered, liquid sludge will be transported to approved farmland and spread in accordance with the Biosolids Management Plan (BMP) adopted

for the site. TasWater will submit a copy of the BMP to Northern Midlands Council and EPA once it has been finalised and approved.

The application to the land will be in accordance with the provisions of the Tasmanian Biosolids Reuse Guidelines (TBRG 2020).

4. Potential Environmental Impact and Mitigation

4.1 Effluent Quality

4.1.1. Estimated impact on effluent quality

The major factors that are anticipated to impact effluent quality will be in response to the reduced treatment capacity and retention times during the dewatering and desludging of Lagoon 1.

TasWater anticipates that the main impacts on effluent quality will be increases in pathogens and BOD resulting from reduced hydraulic retention time (HRT). Hydraulic retention time has been calculated for the period of dewatering for the differing lagoons (Table 1).

Table 1. Hydraulic retention time modelling during dewatering / desludging

Lagoon	Normal Operation (d)	L2 Bypassed (d)	L1 dewatering (d)
Lagoon 1	13	–	–
Lagoon 2	23	23	16
All Lagoons	36	23	16

BOD and *E.coli* levels are expected to increase during the course of the works; however, with the installation of a temporary chlorine dosing system (Section 4.1.2.), TasWater is confident that sufficient pathogen reduction will be achieved to manage public health and environmental risks, with performance verified through the monitoring program outlined in Section 6.

TasWater will increase sampling frequency for effluent quality and ambient sampling to fortnightly throughout the duration of the project to monitor the impact of the desludging and reduced HRT on effluent quality and verify water quality impacts. The increased sample frequency will continue throughout the desludging and for two weeks post completion.

4.1.2. Mitigation measure on effluent quality and potential impacts

TasWater's primary mitigation measure to limit the impact of these works on effluent quality, odour and noise emissions is to reduce the amount of time the lagoon is offline. To achieve this, TasWater has developed strict timeframes for dewatering, starting as close as possible to the desludging date. In addition, TasWater will be sending all the sludge to the nearest suitable farmland which will reduce transport time. Reducing transport times results in a greater amount of sludge being removed each day and ultimately reducing the amount of time Lagoon 1 will need to be offline.

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To minimise potential impacts to Briarly Creek, TasWater is progressing fencing of the STP land to prevent direct livestock access to the effluent drain; this will be in place prior to desludging works. Desludging activities will also be scheduled for springtime to align with higher flows in Briarly Creek and support dilution and mixing.

To manage *E. coli* loadings, a temporary chlorine disinfection system using chlorine tablets will be implemented. Chlorine tablets will be dosed using a similar arrangement as other lagoon STPs with the tablets placed in a dosing basket in the outfall pit. A chlorination dosing trigger framework has been developed for this project that will inform TasWater of the requirement to maintain, increase or decrease the chlorine dosage in order to maintain optimal dosing (Figure 3). The results from the Lagoon 2 Effluent will be received fortnightly, however TasWater acknowledges that changes to chlorine dosing will be dependent on *E.coli* testing turnaround times from the laboratory (anticipated 48 hours).

Chlorine levels will be monitored, and dosing will be managed to minimise residual chlorine in the discharge, with a target to maintain concentrations in the receiving environment as <1 mg/L (where practicable).

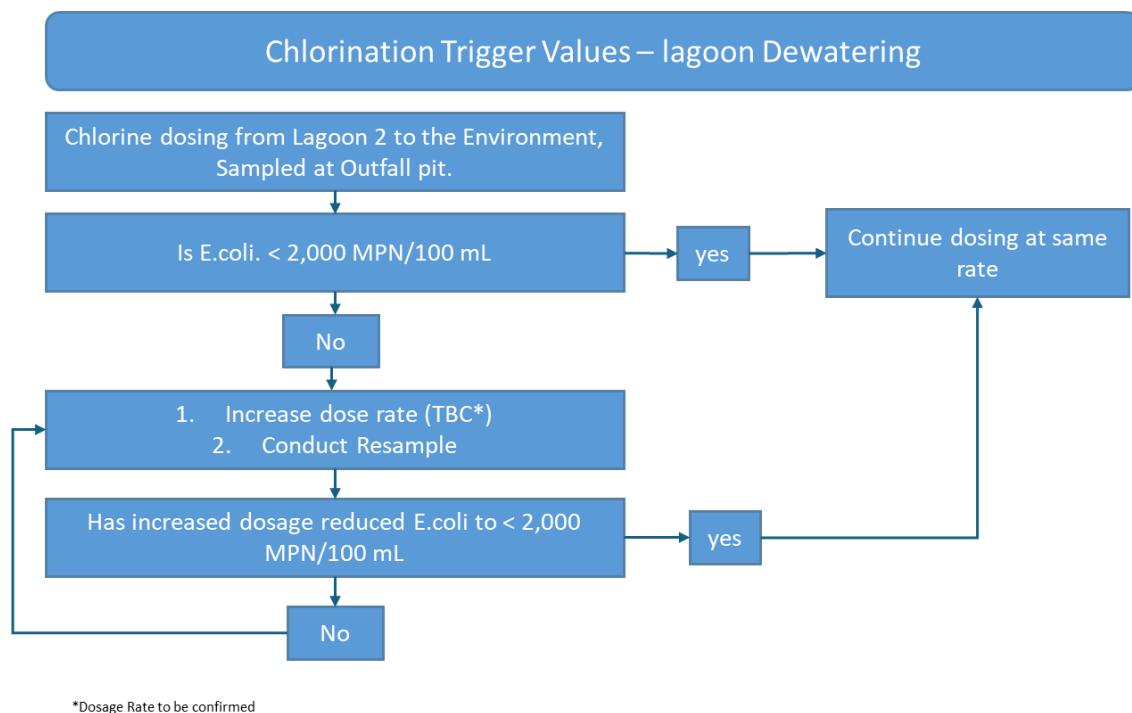


Figure 3. Project chlorination framework

TasWater proposes to increase the frequency of its effluent and ambient monitoring from monthly to fortnightly for the duration of these works to monitor potential impacts on the environment. Additional details for increased monitoring are outlined in Section 6.

4.2 Receiving Environment

The Western Junction STP discharges via an open effluent drain into the small ephemeral Briarly Creek. Briarly Creek receives stormwater runoff from surrounding agricultural land, the Translink Industrial Park (via unnamed creek) and the Midlands

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Highway at Breadalbane (Figure 4) and flows through private land into a small storage Quarry Dam within the Western Junction Quarry and then into Kellys Creek and Rose Rivulet and associated wetlands before eventually entering the North Esk River at Patersons Island and Corra Linn approximately 6kms further downstream. There are several licensed water offtakes including the Quarry Dam and three further downstream at Patersons Island.



Figure 4: Briarly Creek and surrounding catchment

Protected Environmental Values (PEVs) likely to apply for Briarly Creek are limited and include:

- A: Protection of Aquatic Ecosystems
 - (ii) Protection of modified (not pristine) ecosystems
- B: Recreational Water Quality & Aesthetics
 - (ii) Secondary contact water quality
 - (iii) Aesthetic water quality
- D: Agricultural Water Uses
 - (i) Irrigation
 - (ii) Stock watering
- E: Industrial Water Supply

Land use around Briarly Creek is primarily privately owned agriculture (livestock grazing) and non-operational quarry operations. Water extraction from Briarly Creek and the Quarry Dam is currently prohibited under EPN 11584/1 (August 2023) to prevent the spread of PFAS identified at elevated concentrations within these two water bodies. The EPN effectively prevents any agricultural and/or industrial uses of water immediately downstream of the STP discharge. Public access and natural barriers restrict access and reduces the likelihood of secondary contact human exposure. The intermittent flows

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also likely restrict the presence of sensitive aquatic ecosystems although this cannot be discounted.

Briarly Creek has a high Integrated Conservation Value (ICV) but is heavily modified/degraded and heavily vegetated with introduced weed species including blackberry, gorse, thistle, willow and hawthorn, as well as endemic cumbungi, tea tree and eucalypts (Figure 5). Livestock (sheep) introduced (wild pig and deer) and native animals have access to the existing effluent drain and Briarly Creek although this is relatively limited due to the significant vegetation present that impairs easy access. Direct livestock access to the effluent drain will be addressed via stock fencing around the STP land prior to desludging works. No livestock drinking water troughs draw from the creek.



Figure 5: Briarly Creek receiving environment. Clockwise from upper left: Briarly Creek upstream; downstream Quarry Dam; STP effluent drain and Briarly Creek immediately downstream of effluent discharge point.

Summer flows in Briarly Creek are minimal, with small flows or standing water observed in summer 2026. Winter flows are significantly higher with water levels within the creek increasing significantly (~ 1-2m, personal communication). Desludging activities will be timed to during periods when reasonable flows are occurring to provide dilution and mixing (springtime).

Ambient monitoring is not currently undertaken within Briarly Creek; however, TasWater has developed new monitoring sites (asset codes assigned) and has reached agreements with nearby landowners to access locations both upstream and downstream of the STP effluent discharge (Figure 6). Implementation of the ambient

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monitoring sites will occur as part of the increased monitoring program described in Section 6.



Figure 6: Western Junction STP and Briarly Creek water quality monitoring locations.

In summary, the Briarly Creek receiving environment is a heavily degraded, ephemeral water course with limited PEVs. Additional effluent discharges into Briarly Creek during desludging activities may present limited short-term impacts to the receiving environment that would be expected to recover during high flow river flushing events during periods of extended rainfall. Potential risks to livestock and downstream users will be managed through controls implemented through this project and existing EPA regulatory controls.

4.3 Odour

4.3.1 Estimated Odour Impact

Exposing sludge to air has the potential to increase odour emissions from the STP. The dewatering and desludging works may result in temporary increase in odour levels above current conditions which may be detectable beyond the site boundary. The nearest sensitive receptor is located approximately 500m to the west (Figure 7). Surrounding land uses include a small number of rural properties, Launceston Airport to the south, and a quarry to the east.

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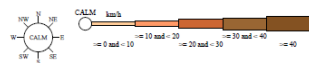


Figure 7. Western Junction STP in relation to neighbouring properties

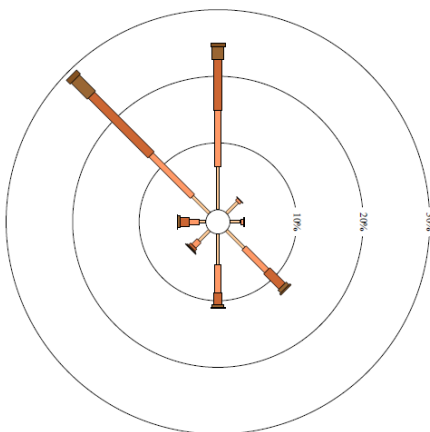
Historical wind data for Western Junction indicates that during springtime (around October), when the works are proposed, prevailing winds are predominantly from the northwest in both the morning and afternoon (Figure 8). As the nearest sensitive receptors are not located downwind under these prevailing conditions, the likelihood of odour impacts to nearby residents is considered low.

Rose of Wind direction versus Wind speed in km/h (01 Apr 1939 to 17 Jun 2009)

Custom times selected, refer to attached note for details
LAUNCESTON AIRPORT COMPARISON
 Site No: 091104 • Opened Jan 1931 • Closed Jun 2009 • Latitude: -41.5397° • Longitude: 147.2033° • Elevation 166m
 An asterisk (*) indicates that calm is less than 0.5%.
 Other important info about this analysis is available in the accompanying notes.

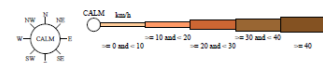


9 am Oct
 2085 Total Observations
 Calm 9%



Rose of Wind direction versus Wind speed in km/h (01 Apr 1939 to 17 Jun 2009)

Custom times selected, refer to attached note for details
LAUNCESTON AIRPORT COMPARISON
 Site No: 091104 • Opened Jan 1931 • Closed Jun 2009 • Latitude: -41.5397° • Longitude: 147.2033° • Elevation 166m
 An asterisk (*) indicates that calm is less than 0.5%.
 Other important info about this analysis is available in the accompanying notes.



3 pm Oct
 2062 Total Observations
 Calm 4%

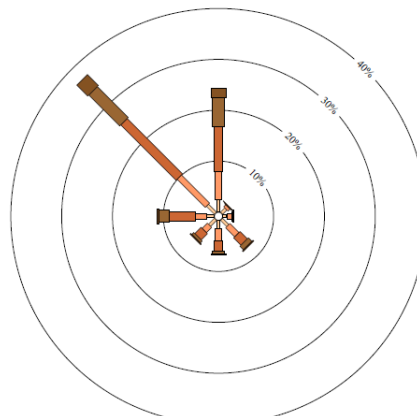


Figure 8. Stemar "am" and "pm" wind rose and speed, Launceston Airport (1.4km away from Western Junction STP) Site Number: 091311

4.3.2 Odour Mitigation

TasWater has not received any odour complaints relating to Western Junction STP in the past year. Although desludging may temporarily increase odour emissions due to the dewatering process exposing sludge, TasWater anticipates that the desludging will have long term benefits for reducing the potential for odour generation for customers.

There are limited direct actions that TasWater can take to reduce odours throughout the desludging process, however TasWater commits to:

- Providing information to proximal customers with relation to the proposed plan and potential odour generation (SMS message to neighbouring properties)
- Notifying the Northern Midlands Council Environmental Health Officer (EHO) of the proposed works, and provide updates of any delays or upon the completion of the works
- Monitoring (frequent checks by Contractors and TasWater operators) odour levels and deploy masking agent when prevailing winds may be unfavourable, or odours are detected outside the STP boundary.

4.4 Noise

4.4.1 Potential Noise Impact

The contractor will be required to use civil equipment to complete the desludging works, which will all be used within the treatment plant boundary. Noise generation from desludging at the STP is not expected to go above or beyond the ambient noise generation from typical STP related activities. Works will be undertaken between 7am and 6pm weekdays and it is unlikely that 50db will be exceeded.

4.4.2 Noise Mitigation

Neighbouring properties will be informed about the potential noise impacts as part of the community engagement notifications.

5. Timeframe

TasWater is looking to commence these works in late spring 2026 (between October and November), to maintain reasonable flows in the creek, which is often low or dry over summer.

It is expected that the initial dewatering of Lagoon 1 will take 2 weeks. Once dewatering is completed, the contractors have estimated approximately 5 days to remove the sludge from the lagoon. In total the project is expected to take approximately three weeks to complete. TasWater will notify Northern Midlands Council once works have been completed.

TasWater will be in communications with the farmers/landholders of which the liquid sludge will be applied and will work with them to ensure their land is suitable for spreading before commencing.

6. Monitoring and Reporting

A summary of the additional monitoring locations, parameters and frequencies to be completed during and after desludging is shown in Table 2.

Table 2. Additional monitoring requirements

Location	Sample Code	Parameters	Frequency
Western Junction STP Effluent	WJDO1SO3	Field: pH, temperature, DO, Total Residual Chlorine, Free Chlorine Lab: Conductivity, Total Suspended Solids (TSS), BOD Pathogens: <i>E. coli</i> , enterococci Nutrients: Total Nitrogen (TN), Ammonia, Nitrate, Nitrite, Total Kjeldahl Nitrogen (TKN), Total Phosphorus (TP), O-Phosphate. Algae: total algae, Blue-Green Algae (BGA) & speciation, chlorophyll Other: PFAS (low level)	Fortnightly during desludging and for 2 weeks post-completion
Briarly Creek (Upstream)	WJSP4	Field: pH, temperature, DO Lab: Conductivity, TSS	Fortnightly during desludging and for 2 weeks post-completion
Briarly Creek (Downstream)	WJSP5	Pathogens: <i>E. coli</i> , enterococci Nutrients (low level): TN, Ammonia, Nitrate, Nitrite, TKN, TP, Dissolved Reactive Phosphorus (DRP) Algae: total algae, BGA & speciation, chlorophyll Other: PFAS (low level)	

7. Contact

Jeremy Verdouw

Senior Environmental Scientist



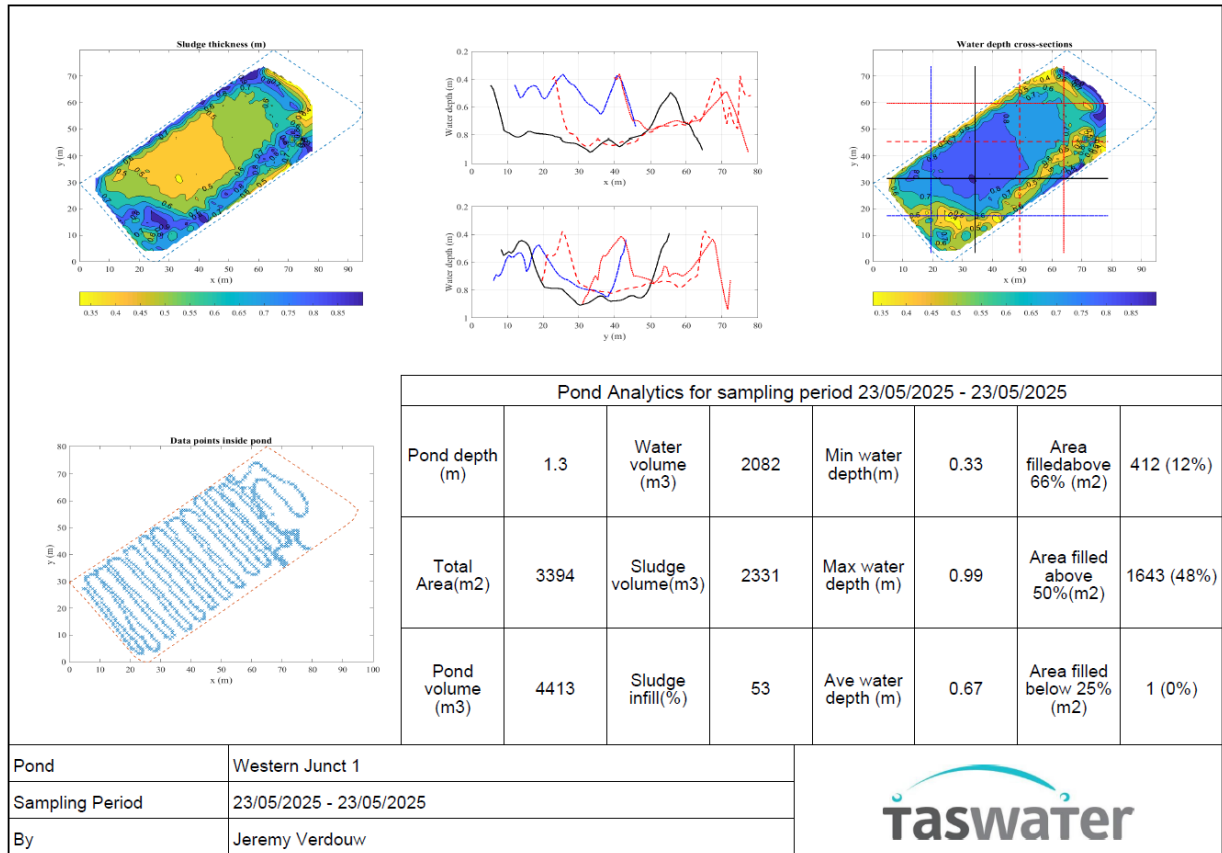
GPO Box 1393, Hobart TAS 7001



Birdwood Ave Moonah

Appendices:

Appendix A – Profile report for Western junction Lagoon 1 – May 2025



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Appendix B – Sludge testing and classification for Western junction Lagoon 1 – Dec 2025

Western Junction STP		Overall Contaminant Classification			B	
Lagoon 1						
Parameter	Number of Samples	Maximum (mg/kg)	Mean (mg/kg)	Minimum (mg/kg)	BACC (mg/kg)	Contaminant Classification
Arsenic	3.0	7.0	6.0	5.0	7.0	A
Cadmium	3.0	9.5	5.8	3.7	9.0	B
Chromium	3.0	82.0	73.7	66.0	81.7	B
Copper	3.0	1400.0	1143.3	930.0	1381.3	B
Lead	3.0	63.0	52.3	44.0	62.0	A
Mercury	3.0	0.9	0.6	0.5	0.8	A
Nickel	3.0	80.0	72.7	66.0	79.7	B
Zinc	3.0	2300.0	1866.7	1500.0	2270.8	B
Hydrocarbon	Mean (mg/kg)	IB105 Level 2 limit (mg/kg)	IB105 Level 3 limit (mg/kg)	IB105 classification		
C10-36 total	13666.7	5000	10000	Level 3		
PFAS	Mean (ug/kg)	PFAS NEMP 3.0 unrestricted use limit (ug/kg)	PFAS NEMP 3.0 restricted use limit (ug/kg)	PFAS NEMP 3.0 classification		
PFOS + PFHxS	12	1.1	31	Restricted use		
PFOA	LOR	5	81	Unrestricted use		
Overall Stabilisation Classification					B	
Stabilisation method	Anaerobic digestion	15°C for >180 days	Hasn't been desludged for >10 years			
Volatile Solids Reduction	Result (%)	Grade B Requirement (%)	Classification			
Average VS%	40.86	<60%	B			
E.coli	Result (MPN/g)	Grade B Requirement (MPN/g)	Classification			
E.coli	2550.5	<2000000	B			