

CDO File Ref: TWEDO-GCOR-013086

28 October 2021

**Alison Hughes**  
A/Deputy Director  
EPA Tasmania Board

Dear Alison

**CYGNET STP EIS SUPPLEMENT**

Thank you for your letter dated 14 October 2021 entitled *Cygnnet WWTP Outfall Relocation, Port Cygnnet (DA 176/2021) Request for Additional Information*.

In response to your request for additional information, the TasWater CDO provides the following Supplement to the Cygnnet Sewage Treatment Plant Outfall Relocation Project Environmental Impact Statement in the form of a tabulated response to the information requests, as outlined in **Attachment A Response to additional information required by the EPA Board**.

We hope the information provided is sufficient to allow the Board to complete its assessment of the project.

Should you require any further information or clarifications please contact me at [matt.drysdale@taswater.com.au](mailto:matt.drysdale@taswater.com.au).

Yours Sincerely

A handwritten signature in blue ink, appearing to read "Matt Drysdale".

**Matt Drysdale**  
Project Manager  
TasWater CDO

Table 1 Response to additional information required by the EPA Board

Agency / EIS Section	Comments and Issues	Additional Information Required	Proponent Response
Marine Farming Branch DPIPWE <b>EIS Section 4</b>	The EIS recognises aquaculture as a significant sensitive receptor but there is no documented stakeholder consultation with marine farming licence holders (or their representative bodies such as Oysters Tasmania or the Tasmanian Seafood Industry Council).	Please provide response with respect to this comment.	Local leaseholders and representative bodies such as Oysters Tasmania and the Tasmanian Seafood Industry Council were not engaged with directly, however, considerable engagement was undertaken within the local Cygnet community providing adequate notice and opportunity for the community to raise concerns. TasWater consulted with the Huon Valley Council as well as local community groups such as the Port Cygnet Sailing Club, the Cygnet Association and the Cygnet Landcare Group. TasWater received feedback from community members (such as queries about the type of STP) and provided written responses, confirming that there was local awareness of the consultation effort.  Given the distance to nearby marine farming leases, the overall improvement in dilution achieved by the proposal outfall relocation and the predicted water quality outcomes, further direct consultation with the marine farming lease holders was not considered necessary and not undertaken at the time.
Marine Farming Branch DPIPWE <b>EIS Appendix B</b>	The EIS reports ADCP results, but the detailed report in the appendix does not include the depth that the ADCP was mounted at, or at what depths the current data report relates to.	EPA Water Specialist has provided some advice with respect to this comment confirming that given the depth of the bay at this location there is unlikely to be significant variation in currents. However, if this information is available, please confirm depth of ADCP during deployment.	The depth of the ADCP was approximately 7.1 m at GPS position 507135 E and 5219190 N (GDA94).  The current data used for modelling was an average from all depths measured by the ADCP at the deployment site. The use of an average current speed throughout the water column was considered a suitable approach, given the shallow nature of the ADCP location and lack of any significant stratification.

<p>Marine Farming Branch DPIPWE <b>EIS Appendix B</b></p>	<p>The sensitivity assessment reports that the marine farming leases are 1.7km from the outfall (see pg. 130), this appears to be an error, as the proposed outfall appears to be closer to 1km from the marine farming leases.</p>	<p>For noting. Error in reported distance to marine lease in Gardner Bay in Appendix B is confirmed. EPA review of the Environmental Risk Characterisation (section 5 of Appendix B) has concluded that at 1km away the nearest marine lease is well beyond the predicted toxicant and pathogenic modelled mixing zone and therefore does not change the outcome of this assessment.</p>	<p>Error of 1.7 km in Appendix B is noted, and should read approximately 1 km. As noted by the EPA, this error does not affect the outcome of the assessment.</p>
<p>Marine Farming Branch DPIPWE <b>EIS Section 6.9</b></p>	<p>The social and economic assessment mentions potential impact on aquaculture but doesn't provide any detail on the likely outcome of that impact.</p>	<p>Please provide response with respect to this comment.</p>	<p>The proposal is being undertaken with the objective of improving dilution via a new outfall site and is predicted to result in an overall improvement in local water quality in the area. Improved water quality both now and into the future has positive implications for the aquaculture industry. By reducing the water quality risks posed by the existing STP outfall, the project reduces potential for impacts to downstream users (including aquaculture) and improves certainty of future water quality in the bay. Further discussion on water quality impacts are provided in Section 6.2 of the EIS (Water Quality).</p>
<p>Marine Farming Branch DPIPWE</p>	<p>There is very little detail provided on future forecast effluent volumes, and any future proofing of the pump station etc.</p>	<p>Provide information on the future population growth for Cygnet, what this information is based on and how this was used to determine projected wastewater volumes to inform the EIS and sizing of the infrastructure required for the proposed development.</p>	<p>It should be noted that this EIS does not propose any changes to treated effluent quality or quantity from the STP, with the focus of the assessment entirely based on improving environmental outcomes by increasing the dilution and dispersion effects by moving the existing outfall to a new location, however the following information is provided for transparency.</p> <p>TasWater recently completed flow surveys within the Cygnet STP sewer network to obtain accurate data on network conditions. This data was incorporated into TasWater's Cygnet STP sewer network (InfoWorks) model, with local rainfall data adopted to allow the model to be calibrated. Additionally, the TasWater Growth and Capacity Plans were reviewed to confirm catchment growth in line with Huon Valley Council planning information and Census data, with future planning horizons applying an annual growth rate of 1.55% p.a. to 2019 Equivalent Tenements (ET). The growth rate was applied to both residential and non-residential ETs (modelled trade flows were converted to ETs by adopting 450 L/ET/Day) and this resulted in an additional 405 ETs within the catchment by the 2050 Planning Horizon. The additional ETs were distributed throughout the Cygnet catchment for the 2050 planning horizon.</p>

Whilst growth was applied to both residential and non-residential ETs, all additional ETs were incorporated in the model as residential ETs.

TasWater adopts a general 30-year planning horizon for detailed business cases, hence the 2050 planning horizon.

A site-specific qualitative risk assessment for the proposed Cygnet STP effluent outfall pumping station was completed to confirm a medium SPS location sensitivity as per Table 6.1 of the EPA Sewage Pumping Station Environmental Guidelines, 2019. A maximum overflow frequency of 1 event/year was adopted (i.e. 1 year ARI (average recurrence interval) design storm). The calibrated InfoWorks model, along with the nominated growth rate, allowed peak flows into the STP to be calculated for a range of ARI storm events. The resulting ARI hydrographs identified the critical duration of the storm and therefore the peak instantaneous flow to be managed through pump capacity and buffering (i.e. absorbing peak inflows through available volume in the STP).

The table below nominates a range of flows for both ADWF (average dry weather flow) and PWWF (peak wet weather flow) prior to the STP buffering capacity volume being adopted to reduce the storm peak. It's worth noting that storm events in urban areas are extremely peaky, with the use of buffer storages impacting significantly on design flow rates. While a design rate of 87.7 L/s was calculated, buffering within the existing STP system reduced this to ~60 L/s. This is the final pump capacity used for the project, which is aligned with managing a peak event after buffering.

Cygnet STP	kl/day	L/s
STP licence capacity (EPN 8533/1)	400	
ADWF (TasWater currently adopted)	263	3.0
ADWF (2019 - from model)	267	3.1
ADWF (2050 - from model)	424	4.9
Peak instantaneous flow (2050)		
1 year ARI		88.0
10 year ARI		182.0

ShellMAP, Biosecurity Tasmania, DPIPWE	Future forecast volumes and future proofing of the system should come from modelling of forecasts based on results of the actual plume dilution study conducted within the first 12 months of commencing operation, not the 'Visual Plume' modelling.	This comment is provided for information only.	Noted.
ShellMAP, Biosecurity Tasmania, DPIPWE	Results from the plume study and any monitoring that is done for this development during pre-construction and ongoing should be reported to ShellMAP because that is what the Program requires to best manage any potential public health risks coming from this development.	This comment is provided for information only.	Noted.