

Council Reference: GT1/52  
Your Reference: D17/5682



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Dear Madam

**NWS LICENCE APPLICATION UNDER THE WATER INDUSTRY  
COMPETITION ACT 2006 (NSW) FOR THE COBAKI ESTATE -  
TWEED SHIRE COUNCIL SUBMISSION**

I refer to your letter of 11 April 2017 inviting Tweed Shire Council to make comment on the Northern Water Solution's (NWS) network operator's licence and retail supply licence application currently being assessed by the Independent Pricing and Regulatory Tribunal (IPART).

Council has firstly addressed the three specific questions raised by IPART as well as provided general comments, highlighting areas of concern with the Licence Application/REF documentation for IPART's further consideration.

- ***Do you consider that our understanding of the approvals that have been obtained, and are required to be obtained, under the EP&A Act is correct (as outlined in Attachment A) for the activities the network operator's licence would authorise, if granted? If not, what approvals have been obtained or are required to be obtained?***

Approval Pathway

Council agrees that clause 106 of the Infrastructure SEPP (ISEPP) provides for the proposed sewage reticulation system, sewage treatment plant and water recycling facility to be considered as *development permitted without consent*, if a licence is issued by the Independent Pricing and Regulatory Tribunal (IPART) under the Water Industry Competition Act (WICA) 2006.

However, Council's interpretation of the approval requirements under the Environmental Planning and Assessment (EP&A) Act 1979 differ from those identified in Attachment A of IPART's letter dated 11 April 2017.

Council's position is that if an IPART licence is issued, the proposed sewage reticulation system, sewage treatment plant and water recycling facility will still require approval under Part 5 of the EP&A Act.

Council's Environmental Protection Licences (EPL's) for our various systems do not just relate to the treatment plant and its discharge, as noted in the POEO Act for Licensing Guidelines for Sewage Treatment Systems):

*Sewage treatment systems (including the treatment works, pumping stations, sewage overflow structures and the reticulation system) that have an intended processing capacity of more than 2,500 persons equivalent capacity or 750 kilolitres per day and that involve the discharge or likely discharge of wastes or by-products to land or waters.*

This does however include the requirement that it involve the discharge or likely discharge of wastes or by-products to land or waters.

It is Council's opinion that an EPL is required in that the size of the system proposed is greater than 2,500 persons and that the proposal includes the application of a by-product to land via irrigation. Council also considers that the size of the reticulation system should be considered significant in this type of development.

It is a concern that if the development is connected to Council's system, the NSW Environment Protection Authority (EPA) may consider any overflows within the private system to be related to Council's licensed system. Accordingly, to remove any uncertainty, Council requests that the obtaining of an EPL, regardless of whether the system is scheduled or not, be a condition of the WIC Act License, if granted.

Given that an EPL would likely be required for the development, it is considered that the EPA would be the most appropriate determining authority for the Part 5 application, which would consider whether an EIS is required for the proposed development.

It is noted and agreed that the proposed water reticulation system (drinking water storage tanks and drinking water reticulation system) requires development consent, with Tweed Shire Council being the consent authority.

### Existing Consents

The approvals to date for residential subdivision within the Cobaki Estate are noted below:

- DA10/0800 □ Precincts 1 and 2 (Council has acknowledged commencement of this approval);
- DA10/0801 □ Precinct 6 (this approval has since lapsed and is no longer applicable);
- DA16/0056 □ part Precinct 6 and part Precinct 7 (this application is currently being assessed by Council and is yet to be determined by JRPP);

All approvals/current subdivision applications have been based on standard gravity system, connecting to Council reticulated system. Modification of these consents will be required if an IPART licence is issued.

Note: the proposed Modification to the Concept Plan in relation to an alternative water/sewer authority (Mod 5) is yet to be determined by the Department of Planning & Environment. Amendments of the abovementioned approvals/applications can only be determined by Council once Mod 5 is favourably determined.

### Agreements in Place

The proposed development is reliant upon various agreements with Council in terms of bulk water supply, discharge of excess recycled water to Council's sewerage system and the use of a substantial amount of recycled water for irrigation purposes over public open space and sports fields. It should be noted that there are no agreements in place with regard to any of these matters.

As advised by IPART, Council is under no obligation to agree to the terms being proposed by the Licence Application. Given that there is no certainty that Council will accept the discharge of recycled water for irrigation purposes on public land, the proposed Water Balance for the development is considered to warrant further review, as the end result will be a much higher rate of discharge to Council existing infrastructure at higher costs to the proponent.

- ***Are you aware of any unacceptable risks to the environment posed by the activities to be licensed? If so, what are these risks?***

The proposed development raises a number of concerns with regard to risks to the environment.

As noted in the general comments below, it is considered that the documentation associated with the Licence Application and the Review of Environmental Factors have not adequately demonstrated that sufficient assessment has been undertaken with regard to the potential impacts associated with the proposed development. In this regard, the risk is considered too great for IPART and the determining authority of the Part 5 application to be satisfied that the proposal will not result in unacceptable and significant harm to the environment.

From an Environmental Health perspective, the proposal raises a number of questions/potential risks, as noted below:

- Will the proposal meet NSW Health requirements in terms of the standard of the final treated wastewater acceptable for reuse within dwellings and commercial sites (toilets, washing machines etc.)?
- Possible cross connection of potable and recycled water systems to end users;
- Treatment/disposal of the super-saline backwash residue liquid from the filtration membrane devices, in terms of removal and treatment/disposal?
- Overflow of contaminated waters into local waterways, particularly during prolonged rainfall events; and
- Contamination of potable water supply.

Council's Recreation Services Unit would require further information to determine the risks and feasibility of receiving treated wastewater from NWS for the purpose of irrigating 20 hectares of Council managed public open space. Concerns raised include:

- ***Economic factors:*** Details have not been provided regarding water pricing model, infrastructure costs, additional Council infrastructure costs, insurances, impact on the management and maintenance of the green waste stream generated, including transportation costs etc;
- ***Risk Management:*** In the documentation provided to NWS there is mention of developing an agreement to ensure Council is not disadvantaged. This has not been provided. What are the details of this agreement? Council is unable to assess the feasibility without this fundamental information;
- ***Existing policy:*** It is the policy of Recreation Services to manage water carefully to conserve the shire's water supply and to reduce water costs, while also ensuring our sports fields are kept in good, safe condition. Under current service levels we currently irrigate sports fields but do not

irrigate parks beyond the establishment period (maximum 12 month period and to a level that is fit for purpose). This is a policy currently applied across the shire to ensure equity in the management of open space.

- What controls would be in place to allow Council to monitor its own water use and would there be any cost to Council?
- How will variances in forecast and actual demand be managed?
- *Technical:* Irrigation volume is dependent on many factors e.g. rainfall and evaporation rates, soil type and a well-designed irrigation system. What will be the quality assurance measures in place for infrastructure and water quality? There is no detail regarding the management of technical issues, e.g. change in water quality, effects on soil, ground water e.g. potential issues arising from high salinity levels, possibility of groundwater contamination;
- *Social:* There are no details about managing the supply of recycle waste water through the lifecycle of the development e.g. in the initial phase when houses will not have been built yet, potential changes in property sales etc;
- *Management on contracts/agreements:* Should key stakeholders who established the agreement change, what are the implications for Tweed Shire Council?
- There are limited details on how the recycled water will be distributed to open space.

From a Natural Resource Management perspective, concerns are raised with regard to the risks associated with the runoff of recycled water from irrigation of the Cobaki Estate. It is not clear that the Storm Water Management Plan for the overall Cobaki development has taken into consideration the additional nutrient loads from the proposed irrigation that may impact on the downstream waterways (Cobaki Creek and Cobaki Broadwater).

Given the high sensitivity of the receiving environment to excess nitrogen (established through the process of preparing the Cobaki and Terranora Broadwater Catchment Management Plan and confirmed through recent water quality assessment), it is considered vital that MUSIC modelling be developed for the stormwater management plan to ensure that it takes account of potential additional load of total Nitrogen and total Phosphorous in runoff from any proposed irrigation.

From an overall Planning perspective, it is considered that insufficient detail has been provided with the REF for IPART or the determining authority of the Part 5 application to be satisfied that the proposed development does not pose a significant risk of harm to the surrounding environment.

- ***If granted, should the network operator's or retail supplier's licence contain any specific conditions in relation to protection of the environment? If so, what should these conditions be?***

Based on the information provided with the Licence Application and REF, the following matters are considered applicable (but by no means an exhaustive list) for the purposes of conditioning any IPART Licence:

- A requirement that the scheme be licensed by EPA under the Protection of the Environment Operations Act;
- Include the statements in the Application regarding pricing;
- Include all commitments made within the Application, REF and associated Appendices;
- Imported fill for the WWTP site must be from an approved, clean source;
- Proposed mitigation measures within the REF must match all of the recommendations incorporated with the associated Appendices; and
- Prior to the commencement of any work, a Vegetation Management Plan/Rehabilitation Plan be approved by Council with regard to 660 trees for offsetting purposes.

● **General comments:**

**Network Operator & Retail Supplier Licence Application**

There is no agreement yet in place between TSC and NWS on supply of drinking water or on receipt of excess effluent, or raw sewage for the initial stages or for the acceptance of recycled water for irrigation of public open space / sports fields.

Council's assessment of the Licence Application raises questions about the validity of the Water Balance Report details and there appears to be conflict between the REF and the Water Balance Report:

- It assumes every dwelling is 1 ET at 2.8 persons;
- It assumes every ET is a separate Lot;
- It assumes Council agreement to accept 58ML of effluent for irrigation of Passive and Active Open Space;
- The water balance assumes that other sites for recycled water will be available. The application refers to concrete plants, golf courses and food crops, none of which are likely to be permitted uses within the development area and even if they were the TDS of the recycled water may be too high for these applications; and
- It does not account for the "side stream of drinking water" mentioned in the Preliminary Risk Analysis as the way that TDS will be reduced to acceptable levels in the "Class A+" recycled water. That side stream would appear to be a significant quantity to be able to dilute 700 - 850mg/L to 500mg/L when Council's typical potable water TDS is 100 - 200mg/L. A one to one mux may be required negating any advantage claimed for the use of recycled water.

The connection point for water supply and sewerage for the development is at the intersection of Piggabeen Road and Gollan Drive which is much further than Piggabeen Road as stated in the Licence Application. The developer is responsible for the construction of the required works to this point, regardless of the location of the bulk metering points.

The Application states that it can rely on the exemptions in Clause 1 Schedule 3 of the WIC Act to undertake pipe works prior to being issued with a Network Operator's License. This is inconsistent with Council's position and legal advice received by Council. Any works undertaken prior to receipt of the Network Operator's License would require approval under s68 of the Local Government Act and be in accordance

with Council's requirements. The proposed reticulation systems with the possible exception of Water Supply are likely to be inconsistent with Council's requirements.

The NWS proposal to connect the first 500 lots directly to Council's systems has not yet been fully developed with Council and at this stage, there is no agreement between Council and NWS or the developer for this.

NWS proposes that their charges will be identical to Council's charges. If this is agreeable to IPART, this should be a specific condition of the licenses. It is also noted that NWS refers to issuing "Rate bills" NWS cannot issue Rate bills, but can, like Council, issue accounts for Access charges and Volume charges.

## **Review of Environmental Factors**

### **1 Introduction**

#### **1.1 Purpose of the report**

The REF states that "For the purposes of this REF, NWS is the proponent and the Minister administering the Independent Pricing and Regulatory Tribunal (IPART) is the determining authority under Part 5 of the EP&A Act"

As noted above, given that there are multiple authorities involved with the issuing of licences for the development, the Minister of Planning is responsible for nominating who the Determining Authority is in relation to the consideration of the Part 5 application, as per the provisions of cl 110A of the EP&A Act.

#### **1.4 Existing Approvals**

Table 3 of the REF (*Summary of previous approvals*) is incorrect in that development consent DA10/0801 is no longer applicable, having since lapsed. It should also be noted that DA16/0056 (which is currently being assessed by Council and will be determined by the JRPP) does not seek to provide for a flexible outcome that provides for "either a conventional Gravity Sewer arrangement or a Pressure Sewer System" DA16/0056 incorporates a proposal to connect to Council's standard gravity sewer and sewer system, as required under the current Concept Plan.

It is also noted that DA17/0017 has now been approved by Council and a S96(2) application to amend DA15/1026 has recently been submitted to Council in relation to proposed blasting.

### **2 Need and Options considered**

#### **2.1 Strategic Need for the Proposal**

The REF states that the "proposed WWTP and reticulation network is needed to facilitate urban services for the Cobaki Estate development approved under Project Approval MP06\_0316". It is not considered that there is a strategic "need" for the proposal. The current approvals / applications are capable of facilitating the Cobaki Estate as approved under the "Concept" Approval MP06\_0316 by way of connection to Council's standard infrastructure.

#### **2.4 Alternatives and options considered**

The REF incorporates an assessment of alternatives / options in terms of servicing the Cobaki development. The analysis is considered superficial and does not quantify the many factors involved with servicing a large development such as Cobaki. The evaluation summary for Option 2 focuses only on perceived negatives and for Option 3 focuses only on the perceived positives. The assessment is not considered to be accurate in that it suggests that all treated effluent can be reused on

site, where as the water balance relies upon return of a significant portion to Council's sewerage system requiring re-treatment and discharge to the waterway environment using Council's license and infrastructure. It also includes the construction of a 2.5km rising main. Further comments are provided below in relation to the description and evaluation summary for both options provided.

### Option 2 - Centralised Business As Usual Connection to TSC Network

- *Gravity sewer networks, some of which would be at considerable depth and located below the water table.*

With appropriate design there is no requirement for any of the sewer network to be located below the water table, nor should it be.
- *A number of smaller sub-catchment scale sewage pump stations.*

As compared to Option 3 there will be less pump stations. Option 3 involves as a minimum 1,375 pump stations plus catchment pump stations and some large pump stations to transfer sewage to the WWTP. Option 2 would only require the sub catchment and a small number of large pump stations.
- *Upgrades to the existing network;*

There is no need for Council to upgrade its existing network for the receipt of sewage from the development at Cobaki. The development has been planned for.
- *Treatment of Wastewater.*

Banora Point WWTP is a tertiary treatment facility with nutrient removal and disinfection. Some of the treated wastewater is suitable for reuse with some being recycled at the Coolangatta Tweed Heads golf course.
- *100% of treated effluent discharged to local waterways.*

This statement is incorrect. Council does not discharge 100% of treated effluent to local waterways as it has in place supply of treated effluent to the Tweed Heads Coolangatta Golf Club.
- *Potential for wet weather overflows from the gravity sewer network and pump stations;*

The potential for wet weather overflows is managed by requiring developers to provide adequate infrastructure and management of that infrastructure by Council.
- *Environmental risk associated with failure of the 2.5km sewer rising main*

The environmental risk associated with the 2.5km rising main is not considered significant, but also exists in the proponent's preferred Option 3.
- *Significant cost associated with constructing the necessary infrastructure to connect the development site to the existing network*

The proponent's Option 3 still requires a costly connection to Council's existing network for its first 500ET and for ongoing transfer of excess effluent.
- *Issues of septicity due to long detention times in the transfer system, particularly during earlier stages of development.*

The issues of septicity due to long detention times in the transfer system, particularly in the earlier stages of development equally apply to Option 3. In

addition, issues of septicity will be present in the proponent's pumped pressure sewer system.

### Option 3 □ Onsite Treatment with Water Recycling & Irrigation of Private & Public Land

- *Advanced Water Treatment Plant sized to treat approximately 60% of wastewater flow for recycling at each house;*

Experience from similar areas such as Pimpama/Coomera in Queensland has shown that 60% reuse has not been consistently achieved.
- *The 40% of surplus effluent managed by irrigation of open space irrigation areas;*

There is no agreement in place to manage the surplus effluent by irrigation of open space.
- *20 ha irrigation area and 2 ML wet weather storage to manage all surplus water by irrigation with no discharges to waterways.*

There is no agreement with Council to accept the recycled water for irrigation of open space.
- *100% of wastewater generated can be recycled back to each house and used for sustainable effluent irrigation of public spaces.*

The Water Balance clearly shows that the proposal relies on sending excess effluent to Council's sewerage system to be re-treated and disposed. In addition, for an interim period, waste from the first 500ET is proposed to be treated by Council and hence discharged via Council's licensed discharge to Terranora Creek.
- *No discharges of surplus recycled water to waterways;*

The assertion that there will be no discharges to waterways is considered to be incorrect in that the disposal of excess recycled water by discharge to Council's sewerage system will result in most of that excess water being discharged through Council's licensed system to Terranora Creek.
- *No wet weather overflows from the pressure sewer network;*

This cannot be guaranteed, just as overflows from gravity networks cannot be guaranteed.
- *Treat wastewater close to its source and avoid long sewage transfer systems;*

Treating wastewater close to its source avoiding long sewage transfer systems misrepresents the proposal in that:

  - i. The first 500 ET is proposed to be transferred to Council's system requiring a long transfer system; and
  - ii. Excess recycled water is still to be transferred by a long transfer system.
- *Relatively low energy option.*

The assertion that it is a relatively low energy option is not supported with any analysis, considering that:

  - i. The proposal includes around 1400 sewer pump stations each using energy;

- ii. Reticulation of recycled water using continuous pressure boosting pump systems; and
  - iii. Reticulation of drinking water using continuous pressure boosting pump systems having dissipated residual energy that is already in the supplied water if obtained as proposed from Council's system.
- *Can deliver 6064 ET capacity to allow whole subdivision approved under MP06\_0316 to proceed*

The purported advantage that Option 3 can deliver 6064 ET capacity to allow the whole subdivision to proceed should be balanced by granting the same advantage to Option 2 which will also be able to deliver the same benefit.

- *More cost effective than Option 2.*

There is no analysis to support the assertion that Option 3 is more cost effective than Option 2.

### **3 Description of the Proposal**

#### **3.1 The Proposal**

The REF makes reference to the drinking water being  *supplied to the development reservoir storage via a metered supply under agreement with TSC*. It should be noted that there is currently no agreement in place with regard to the supply of drinking water.

The REF also states that  *Recycled water would be used to irrigate open space areas only when available or supplied to offsite customers under agreement*. Again, it should be noted that there is currently no agreement in place with regard to the irrigation of public open space which will ultimately be under Council control.

##### **3.2.1 Drinking Water Supply**

Page 12 of the REF makes reference to a volumetric supply agreement volumetric supply agreement with Council and that  *Tweed Shire Council have agreed to supply the Cobaki Estate development with the daily volumetric requirement of 1.709 MLD of drinking water which would be sourced from an existing trunk water main located in Piggabeen Road*. As previously stated, there is currently no agreement in place with regard to the supply of drinking water.

##### **3.2.3 Wastewater Treatment Plant**

Earthworks are proposed as part of the works for the construction of the WWTP. Earthworks would require the importation and compaction of approximately 32,746m<sup>3</sup> of material to the site to create a level building platform.

Table 5 *Description of the MBR WWTP Process* makes reference to solid and liquid waste being transported from the site by licenced transport contractors to the  *nearest accepting licenced facility*. Further information should be provided in this regard to clearly identify which licenced facility the waste would be transported to.

##### **3.2.4 Effluent Irrigation**

The proposed public open space within the development shall consist of a combination of sporting fields and open parkland. It is assumed that the extensive sporting fields proposed for the site would require approximately half of the proposed 20Ha of nominated open space. It is proposed to irrigate all open space within the development with Class A+ recycled water from the recycled water (Purple Pipe) domestic reuse network with runs throughout the development.

The REF states that *“The total irrigation requirements for the public open space is dependent upon several factors including rainfall and evaporation rates, and needs to take into consideration the total number of wet days during a year where no irrigation can occur. Through hydrological modelling it is calculated that a maximum volume of 58,500kL per annum can be potentially be discharged through irrigation”*

The possibility that Council may not accept the recycled water for irrigation purposes on public land has not been taken into consideration by the proponent. As previously noted, there is no agreement in place in this regard. The implications of Council not accepting recycled water is significant in terms of the proponent’s total water balance calculations and the likely impact upon the economic viability of the proposal, given the need for additional on-site storage or increased discharge to Council’s existing sewage network.

The REF incorporates a number of uses that the Class A+ recycled water may be used for, including *“industrial uses”* *“concrete production”* *“golf courses”*. Industrial uses and concrete production are not permitted uses under the Development Matrix of the Cobaki Concept Plan. Whilst golf course may be permissible, it is unlikely they will occur given the zoning, topography and existing approvals over the land. Further it is generally found the TDS in recycled water is too high for concrete production.

### **3.2.5 Cobaki Estate Ultimate Scheme – Offsite Discharge**

The REF states that *“Any excess permeate during and after the development reaches maturity would be discharged off site to a new sewerage pump station (SPS) to be designed and installed at the Cobaki Parkway & Sandy Road roundabout”*. The design and installation of the SPS will need to meet the provisions of Council’s Design Specifications.

The REF makes reference to a trade waste agreement with Tweed Shire Council for the discharge of excess treated Class A permeate. As noted previously, there is currently no trade waste discharge agreement in place.

### **3.3.1 Plant Operation**

As noted under heading 3.2.4 above, the REF makes reference to *“appropriate”* non-potable uses of the recycled water, including: golf courses, turf farms and nurseries. Given the zoning of the Cobaki estate and the value of residential land, these uses are not considered likely to occur.

The REF’s statement that *“There is to be no discharge of treated effluent (permeate) to waterways, stormwater outlets or land at any time from the Cobaki Estate development”* is considered to be misleading. Stormwater runoff associated with the proposed irrigation of recycled water within the Cobaki Estate does not appear to have been taken into consideration. It is also noted that any excess recycled water will be discharged to Council’s existing infrastructure, which will result in the water being ultimately discharged to Terranora Inlet.

The issue of capacity is raised. As noted under heading 3.2.4 above, there has been an assumption that the irrigation of public open space will be supported by Council and an agreement be in place. Council’s Recreation Services Unit have raised a number of concerns with regard to the proposed irrigation of recycled water and these concerns need to be considered further before any agreement could be put in place (if at all). The consequences of there being no agreement in place have not been taken into consideration by the proponent, in terms of additional discharge to Council’s infrastructure.

### 3.3.3 Waste Management

*Membrane Bioreactor Screenings and Grit* - The REF notes that the waste material would be at approximately monthly intervals, the waste material would be taken off site for disposal at an approved land fill facility. Further detail is required in terms of what facility is proposed for the waste disposal.

*Membrane Bioreactor Waste Activated Sludge* - The REF states that *Waste sludge will be stored in a sealed tank until it is removed from the site at approximately weekly intervals by a licensed liquid waste transport contractor and disposed of to the nearest approved municipal wastewater treatment plant.* Concerns are raised in terms of the proposed weekly removal of sludge, when only two days storage is available.

*Membrane Bioreactor Chemical Cleaning Annual Soak Process* - The REF notes that the cleaning waste water will be removed from site by a fully qualified liquid waste cartage contractor for disposal at the nearest approved facility. Further detail is required in terms of what facility is proposed for the waste disposal.

*Irrigation Area Green Waste* - The REF states that *Irrigation as part of the proposal will generate a green waste stream. The irrigation areas are to be mowed and maintained to ensure ongoing plant growth and nutrient uptake. Biomass harvesting from the irrigation area will occur to export nutrients from the irrigation area. The green waste stream will be transported to nearest composting facility for disposal.* Further detail is required in this regard, noting that no agreement is place for the proposed irrigation or management requirements associated with the irrigation.

### 3.3.5 Water Quality

As noted in the Risk comments in Item 2 above, the WWTP Stormwater Management Plan (Appendix E) only relates to the site of the treatment plant itself. Further consideration needs to be given to the potential impact from nutrients associated with the irrigation of recycled water entering the stormwater system within the Cobaki development and ultimately ending up in the adjacent Cobaki Creek and ultimately the Cobaki Broadwater. It is considered that the potential impact of nutrients in the natural waterways has not been fully addressed.

It is also noted that the SWMP makes several incorrect references to (Brady's Creek). The correct name of the creek at the rear of the site is Piggabeen Creek.

Section 4.4 of the SWMP *Overland Flow Paths and Erosion Protection* states that *Catchment E will continue to direct all flows to the swale in Piggabeen Road. As this area contains sensitive vegetation, it has been assumed no change will occur that requires treatment or mitigation.* Has sufficient assessment been undertaken with regard to the potential impact to the existing sensitive vegetation as a result of increased stormwater runoff from the WWTP?

### 3.3.6 Noise

The modelled sound power levels within Table 4-3 of the Noise Assessment (Attachment F) do not appear to have taken into consideration the need for generators within the WWTP site in the event that there is a power failure.

The Noise Assessment already concludes that future residences within Precinct 10 (i.e. within 20m of Piggabeen Road) will be impacted by the WWTP during night time. Will the additional noise created from generators capable of running the WWTP increase this buffer distance? A minimum 20m buffer requirement will impact upon

the overall design of Precinct 10, with the average site having an average depth of 30m.

### **3.3.8 Chemicals Management**

The REF makes reference to the chemical storage area being  *appropriately lined and bunded* . The development plans indicate external bunds, however no roofing over the bunded areas are shown. It is unclear as to where the bunded areas are drained to (i.e. are they linked back to the WWTP?) as opposed to going into the stormwater system or Council trade waste system without appropriate treatment.

### **3.3.9 Utilities**

The REF states that  *No potable water would be used in the treatment process*  however the appended Integrated Water Management Plan and its Risk Analysis appendices indicate the use of a side stream of drinking water to maintain salt concentrations around 500mg/L TDS. This has the potential to change the Water Balance Report which does not appear to have considered this consumption.

### **3.4.2 Operation Environmental Management Plan**

#### **Integrated Water Management Plan (IWMP) (Appendix G of the REF)**

Section 1 *Introduction* of the IWMP makes reference to the IWMP is  *being submitted for the Part 5 Part 5 approval under the Environmental Planning and Assessment (EP&A) Act (NSW Government, 1979) to IPART and for an approval for an Environmental Protection License (EPL) from NSW Environmental Protection Authority (EPA)* . The Minister of Planning is yet to nominate the determining authority for the Part 5 application. This role may go to IPART, EPA or DPI Water. Council considers that the EPA is best suited to consider the environmental impacts associated with the proposal and as such should determine the Part 5 application (assuming an IPART licence is issued). In saying that, IPART must also be satisfied that the proposal will not pose a significant risk of harm to the environment.

Section 2.3 *Environmental Assessment* of the IWMP notes that the original Part 3A Concept Planning Approval is being amended by the developer. As noted previously, the Concept Plan Mod 5 is yet to be approved by DoPE.

Section 2.4 *Previous Water & Wastewater Investigations* makes reference to the irrigation of 20ha of public open space and sports fields, as well as the emergency discharge of treated effluent to TSC under a trade waste agreement. As noted previously, there is no agreement in place in terms of irrigation being accepted on public open space / sports fields that will ultimately be TSC assets. Additionally, there is no agreement in place in terms of a trade waste agreement. If irrigation is not accepted by TSC, the proposed water balance of the proposal will need review, as this will result in increased levels of discharge of treated effluent to TSC existing network.

Section 3 *Drinking Water Supply* of the IWMP states that drinking water is being sourced from TSC under a volumetric supply agreement. Whilst discussions have been held with regard to this matter, there is no agreement in place at this moment in time.

Section 4.4 *Class A+ Recycled Water Demand* makes reference to a number of non-potable uses for recycled water. As noted previously, uses such as golf courses, turf farms and nurseries are unlikely to occur within the Cobaki Estate and therefore should not be made reference to.

Section 4.5 *Surplus MBR Treated Effluent (Permeate)* includes several instances of reference source errors. The IWMP also references a trade waste agreement with TSC in relation to surplus MBR permeate water being discharged off site. As noted previously, no trade waste agreement is in place. The issue of irrigation of public open space / sports fields must be addressed, as this will have an impact upon the level of surplus MBR permeate water that NWS will need to discharge off site.

Section 6.1.1 *The MBR WWTP Process Description* and Section 6.1.2 *MBR Effluent Quality* have reference source errors.

Section 6.2 *Stage B - The Advanced Water Treatment Plant* states that a Recycled Water Management Plan for the AWTP will be documented once the scheme is approved and during detail design. It is considered appropriate that the management plan be required now to identify any risks associated with the AWTP, as opposed to waiting for the development being approved without knowing such risks.

Section 6.2 also makes reference to a number of uses for Class A+ recycled water. As noted previously, uses such as industrial uses, concrete production, golf courses and nurseries are unlikely to occur within the Cobaki Estate and therefore should not be made reference to.

With regard to residual chlorination, Table 11 *Overview of AWTP Unit Processes* states that  *The free chlorine CCP will be continuously monitored with alarms and automatic shutdown if the critical limits are reached* Has consideration been given to the implications associated with the development if it is shut down?

Section 6.3 *Waste Products generated by the processes at the WWTP Site* incorporates the treatment of waste associated with the MBR process. As noted previously, the proponent has not provided information with regard to who and where the waste will be transported to. In addition, the rate of waste sludge removal requires revision, with only 2 days on-site storage available.

Section 7.1 *Recycled Water Supply* has a reference source error.

Section 7.2 *Stage A*  *up to the first 500 ET* makes reference to Appendix K of the IWMP  *Open Space & Sports Fields Irrigation Management Plan*. The Management Plan appears to be an exact duplicate of the information provided in Appendix M of the REF *Land Capability Assessment for Effluent Irrigation*.

Section 7.2.2 *Cobaki Estate Ultimate Scheme*  *Offsite Discharge* states that  *The temporary irrigation scheme servicing up to the first 500ET, with excess Class A permeate from the MBR WWTP will be used to irrigate the open space areas & sports fields around precincts 6, 7 & 8 via controlled irrigation system installed in Stage A* It should be noted that there are no approvals yet in relation to Precincts 6 & 7 (DA16/0056), which currently involves 455 residential allotments, two parks and 10 small link parks (for pedestrian access / stormwater purposes). A development application has not yet been submitted in relation to Precinct 8. The area of structural open space (sports fields) to be provided with Precincts 6 and 7 is yet to be finalised, but it is expected to be in the order of 4ha for the first 500 lots. Has consideration been given to only 4ha of open space / sports fields being available for irrigation purposes in Stage A? As noted previously, no agreements are in place with Council in relation to discharge or irrigation.

As highlighted above, the determining authority for the required Part 5 approvals is yet to be nominated by the Minister of Planning, as per the requirements of cl 110A of the EP&A Act.

Section 8 *Environmental & Public Health Risk Assessment* makes reference to the risk assessment in Appendix E. Such reference is incorrect. The *Hazard Analysis and Risk Assessment* associated within the Integrated Water Management Plan is Appendix M of the same document.

The Risk Assessment (Appendix M of the IWMP) makes reference to 2.4m high security fencing. The *Statement of Landscape Intent & Visual Impact Assessment* (Appendix O of the REF) makes reference to 1.8m high fencing.

The Risk Assessment makes reference to an 80m buffer to nearest residential dwelling from the WWTP in terms of noise, odour and visual impacts. Has future dwellings within the Cobaki Estate been taken into consideration?

The strategy relating to relating to noise hazards makes reference to [Wilton Water]?

Visual impact strategy notes that all PSU's are located below ground, with the only thing visible being the lid and power turret for each PSU. Has consideration been given to any ventilation stack (provided on all house connections)?

Visual impact strategy notes that the proposal (which connects four lots to one PSU) as having less impact to a standard pressure sewer model with one PSU per lot. What is the visual impact of the proposed pressure sewer system where a pump station is required for every four lots as opposed to a standard gravity sewer.

The visual impact strategy notes that the WWTP is of similar construction and visual appearance to other buildings in the rural zone. The overall size of the WWTP and all associated infrastructure and hardscape surrounding the development is much larger than the average building located within the surrounding rural area.

The visual impact strategy notes that the use of recycled water storage removes the need for an elevated reservoir on a hill to provide service pressure to the scheme. The concept plan has always identified a water reservoir to meet the demands of the future Cobaki estate. It is considered that this use of gravity fed water through Council's standard water / sewer connections is a more sustainable development given that it would not require the continual pumping of drinking water / sewerage / recycled water from the WWTP throughout the development site.

The plans included in the Risk Assessment (Appendix M) have been superseded, with particular regard to the access point and piping location.

### **Appendix H of the REF *Hazard Analysis and Risk Assessment***

The Appendix B and Appendix C sheets are incomplete / blank and do not provide any information as to what hazard was identified at the workshop. The Appendix C sheets have a formatting problem [the wording is illegible. Is it acceptable to just say [high risk items will receive particular attention during the detailed design, construction, commissioning and operational phases of the project]? Shouldn't they be identified now, so that IPART / EPA etc can consider such risks?

The plans included in Appendix H have been superseded, with particular regard to the access point and piping location.

### **Appendix M of the REF [Land Capability Assessment for Effluent Irrigation]**

Section 2.3 of Appendix M states that [This report provides sufficient information to demonstrate that irrigation of the proposed restricted access irrigation areas with recycled water in Stage A and beyond will not result in significant environmental impacts]. It is not considered that sufficient information has been provided to

demonstrate that there will be no significant impacts resulting from the proposed irrigation of recycled water.

Section 4.3 *Surplus Recycled Water Supply that can be used for Irrigation Purposes* states that *“All surplus recycled water that is not recycled back to each house is managed by land irrigation or offsite uses or discharge to the existing TSC sewerage network”*. As previously advised, there is no agreement in place with Council in terms of irrigation or discharge to Council's infrastructure. Acceptance of the recycled water for irrigation purposes on Council owned land needs to be addressed, as this will have serious implications to the overall water balance for the development and may well result in high levels of discharge to Council.

It is also noted that Section 4.3 has several reference source errors.

Section 4.4 *Irrigation Areas Required Buffers* makes reference to the 20ha of irrigation areas on plans in Appendix C of the Assessment. The plans do not clearly identify the irrigation areas and do not identify the buffer areas noted within the document.

Section 4.5 *Site and Soil Assessment* makes reference to a site and soil assessment of the 20ha open space and sports fields in *“Appendix D”* of the Land Capability Assessment. There is no corresponding document and Appendix D relates to Process Flow Diagrams. It is however noted that Appendix L of the REF incorporates the site and soil assessment for the open space / sports fields areas.

Table 4.2 notes that in terms of vegetation, *“All irrigation areas are located inside the footprint of the approved subdivision”*. It must be noted that no approval for subdivision in Precincts 6 and 7 (the first 500 lots) has been granted at this stage. Whilst clearing of native vegetation and earthworks were dealt with under DA15/1026 for the Masterplan and Bulk Earthworks across Precincts 6 - 12, use of recycled water for irrigation purposes has not been proposed under DA15/1026 or DA16/0056). The Table also notes that *“Vegetation in the irrigation areas shall be established by a landscape specialist using a dense deep rooted turf species, e.g. kikuyu pasture”*. The Open Space Masterplan associated with DA16/0056 does not incorporate any management process in terms of vegetation type etc for irrigation purposes.

The SEPP 14 Wetlands assessment within Table 4.2 notes that *“there is no potential for effluent irrigation activities to impact the wetland”*. As highlighted below, there is potential for indirect impact upon the nearby SEPP 14 Wetlands. Further consideration is considered warranted in this regard.

Section 5 *Effluent Quality Hazard Assessment* incorporates a preliminary assessment in terms of effluent quality hazards for the first 500 lots only. It is considered that a more detailed assessment for the overall development (5,500 lots should be undertaken to be satisfied that proposal does not pose any significant risks of harm to the environment. The documentation is heavily relying upon management plans that are to be prepared later in the development of the WWTP (i.e. after approval has been granted), as opposed to identifying all risks associated with the entire development (rather than only the first 500 lots).

The *Nutrients - Nitrogen and Phosphorus* assessment within Section 5 states that *“Appropriate irrigation management and stormwater management practices to reduce the potential for surface runoff of nutrients to waterways will be employed”*. This assessment acknowledges the potential for impact from nutrients in surface runoff. It is not clear within the documentation what these mitigation measures are.

The *Salts* assessment within Section 5 states *□□ Appropriate selection of vegetation species in effluent irrigation areas that can tolerate salt concentrations□*. The proposed vegetation species must accord with the provisions of the yet to be approved Open Space Masterplan and Landscape Masterplan Strategy associated with DA16/0056.

The *Sodium Absorption Ratio* assessment within Section 5 recommends the application of gypsum to irrigation areas as a control measure. Who will be responsible for the monitoring and application of gypsum? Agreement must be in place with Council with regard to acceptance of irrigation and must clearly define who is responsible for the monitoring / application of such control measures.

Section 6.1 *Introduction* (Effluent Irrigation Scheme Water Balance Modelling) notes that *□□ The water balance has also been designed to remove the risk of overflow from the wet weather storage by providing an emergency discharge system to the TSC existing sewerage network in wet weather events or when excess treated effluent is produced and with low average irrigation rates□*. Again, it needs to be highlighted that without a formal agreement with regard to the acceptance of recycled water for irrigation purposes, the Water Balance of the entire project is unknown. If irrigation is not supported, the level of discharge to TSC's existing infrastructure will increase dramatically.

Section 7 *Environmental & Public Health Risk Assessment* notes that the *□□ Risk assessment for the urban recycled water supply system that supplies □Class A+□ recycled water to individual dwellings in the scheme is included in the Recycled Water Management Plan to be developed for the scheme prior to Stage B when the AWTP is constructed and commissioned□*. It is not considered acceptable that a risk assessment for the majority of the proposed irrigation of the development be undertaken at a later stage. It is considered appropriate that such risk assessment be undertaken prior to any decision being made on the proposed development.

### **3.5.3 Environmental Monitoring of the Irrigation Scheme**

The REF notes that *□□ Environmental monitoring of the irrigation scheme would be undertaken to ensure there are no significant environmental or public health impacts caused as a result of irrigation activities□*. Insufficient investigation has been undertaken in terms of the potential impact upon the downstream environment (in particular the Cobaki Creek and Broadwater), particularly in relation to impacts arising from the proposed irrigation of the public open space / sports fields within the development. It is not considered acceptable to simply rely upon future monitoring as a safeguard for significant environmental / public health impacts. Further information is considered to be required in order for IPART and the determining authority of the Part 5 application to be satisfied that there isn't going to be an impact upon the surrounding locality. As such, it is considered that an EIS is required to fully consider the potential risks to the environment.

## **4 Statutory and planning framework**

### **4.1.1 State Environmental Planning Policy (Infrastructure) 2007**

The REF notes that the *□□ proposed water reticulation network is subject to approvals already granted in the Cobaki Estate (under the development code and Concept Approval and also the approvals listed earlier in the REF), however the Water Supply infrastructure at the WWTP site (storage tanks and pipes under Piggabeen road in particular), will be subject to the need for separate development consent under Part 4 of the EP&A Act, 1979□*

The Concept Plan Approval provides a conceptual layout for the development site and incorporates a Development Code for future development. Applications have been made with regard to amending the Concept Plan (Mod 5) and Development Code so as to allow for an alternate water/sewer provider. It should be noted that Mod 5 is yet to be granted approval. The existing subdivision approval (Precinct 1 & 2) will require further amendment if an IPART licence is issued. The current subdivision application (DA16/0056) for Precinct 6 and 7 (the first 500 lots □ Stage A) is currently being assessed by Council, with the application proposing standard connection to Council's water / sewer infrastructure. DA16/0056 will need to be amended if an IPART licence is issued. Council agrees that the proposed Water Supply infrastructure on the WWTP site will require development consent from Council under Part 4 of the EP&A Act.

#### **4.1.2 State Environmental Planning Policy No.14 □ Coastal Wetlands**

The REF makes reference to a Stormwater Management Plan (SWMP) under the Concept Plan to minimise any indirect impacts upon the SEPP 14 Wetlands within / adjacent to the Cobaki development.

Although the WWTP site is well removed from the SEPP 14 area, it is unclear as to whether the SWMP associated with the overall Cobaki development has taken into considerations any potential impacts from the WWTP (e.g. nutrients from the irrigation of public open space / sports fields / stormwater runoff from residential properties being directed through the stormwater system into the adjacent waterways. It is considered that further information is required in this regard for IPART / EPA / DPI Water to be satisfied that the proposed WWTP will not have any direct / indirect impacts upon the local waterways.

#### **4.1.4 State Environmental Planning Policy No. 33 □ Hazardous and Offensive Development (SEPP 33)**

Refer to comments noted above in relation to Appendix M of the IWMP.

#### **4.3.1 Protection of the Environment Operations Act, 1997**

EPL is required □ EPA can be a determining authority for the Part 5 application. Minister of Planning is yet to nominate the determining authority. It is considered appropriate that the EPA is the determining authority, given their experience in assessment impacts upon the environment.

#### **4.3.9 Roads Act, 1993**

It is acknowledged that any proposed trenching works (and any new driveways) associated with the WWTP within the Piggabeen Rd road reserve will require an approval under Section 138 of the Roads Act from Council prior to the commencement of such works.

### **5 Stakeholder and Community Consultation**

#### **5.1 Community involvement**

The REF notes that □ *Community involvement and consultation has been limited for the proposed WWTP and reticulation network. The proposal is such that it will not have undue adverse impact on the residential allotments it will adjoin within the Cobaki Estate development and would not impact upon the existing Cobaki or Piggabeen villages* □

Council is not aware of any community consultation. Based on feedback from the local community, it is considered that the existing Cobaki or Piggabeen villages disagree with the proponent's statement that there would be no impact upon them.

## **5.2 Aboriginal community involvement**

The REF notes that a *copy of the Cultural Heritage Impact Assessment report for the proposed WWTP (refer Appendix N) is to be tabled at the Aboriginal Advisory Committee meeting scheduled for the 2nd December 2016*. It is noted that the Cultural Heritage Impact Assessment report was not tabled with the AAC until 5 May 2017.

## **5.3 ISEPP consultation**

The proponent has stated that formal consultation with TSC has occurred, largely in relation to *potential direct impact to public authority's assets*. Whilst several meetings have taken place, they have been limited to discussions Council Water / Wastewater Unit in relation to terms of a possible agreement for supply of bulk water and receipt of excess recycled water. No agreements are in place in this regard. No formal discussions have been held with Council's Recreation Services Unit in terms of the proposed irrigation of public open space / sports fields etc and as noted previously, no agreement is in place with regard to the proposed irrigation of recycled water. As advised by IPART, Council will be under no obligation to accept the recycled water for Council owned assets.

Section 5.3 of the REF is considered to not adequately acknowledge Council's position in relation to s68 approval of works carried out prior to grant of a WIC Act license. Whilst it is acknowledged that Council may be able to process s68 applications, Council's position is that anything approved by Council would have to be for a system that Council would be willing to take over should the license not be granted. To this end, Council is unlikely to provide s68 approval for the proposed pressure sewer system or the recycled water system. It would only approve drinking water infrastructure if it complied with Council's requirement for ductile iron cement lined pipes and if sizes were adequate for a single water distribution system.

## **6 Environmental Assessment**

### **6.1.3 Safeguards and management measures (Biodiversity)**

The Table within section 6.1.3 does not include the recommended offsets as a result of the loss of 55 native trees across the site, which are noted in section 6.3 of the Flora & Fauna Assessment (Appendix K of the REF). The Table should be amended to incorporate the recommended offsets, which are noted as follows:

*660 trees are to be planted on the site. Revegetation is to occur along the western and northern boundaries to augment existing narrow patches of regrowth straddling the site boundaries. Species utilized are to include Eucalyptus tereticornis, E. microcorys and E. robusta.*

### **6.2.2 Potential impacts (Soil)**

The REF notes that *the construction of the WWTP would require the importation of approximately 32,746m<sup>3</sup> of fill material to the site. The likely source of the fill material would be from the Cobaki Estate development and all material would be clean fill*. It should be noted that development consent is required for the removal of fill for the removal of fill material from the Cobaki development site. The WWTP is not part of the overall Cobaki Concept Plan approval site.

### **6.2.3 Safeguards and management measures (Soil)**

The safeguards and management measures noted in the Table within section 6.2.3 do not appear to take into consideration all of the measures and inspection programs that are identified within the Erosion & Sediment Control component of the SWMP (Appendix E of the REF). For example, the Table notes that *□ All erosion and sediment controls would be inspected weekly and within 24 hours of a major rainfall event to ensure they are maintained in proper working order throughout the time they are in place*□ whereas the Control Plan requires (but is not limited to) daily inspections of the stabilised access point and amendments as necessary as well inspections after 10mm rainfall events in 24 hours.

### **6.4.2 Potential impacts (Waterways & Water Quality)**

The REF lists the potential risks associated directly with the WWTP site, making reference to the SWMP (Appendix E of the REF). As noted previously, the REF does not take into consideration the potential impacts to the waterways adjoining the Cobaki estate as a result of the proposed irrigation of the recycled water across the development site. The REF notes that the Concept Approval makes reference to a SWMP for each subdivision application within the development site. None of the subdivision approvals / current DAs incorporate a SWMP that considers the irrigation of the public open space / sports fields with recycled water as proposed under this application. As such, the potential impacts and risks to the surrounding waterways (Cobaki Creek and Cobaki Broadwater) have not been taken into consideration. Accordingly, it is considered that the determining authority should be requesting an EIS on the proposed development as it has not been demonstrated that there is no significant risk of harm to the environment.

### **6.5.2 Potential impacts (Noise)**

The REF notes that noise modelling for the WWTP (as detailed in the Noise Impact Assessment - Appendix F of the REF) has identified several existing / future dwellings nearby that may be impacted by noise levels during the construction of the WWTP, with mitigation measures proposed.

As noted above, the modelled sound power levels within Table 4-3 of the Noise Assessment do not appear to have taken into consideration the need for generators within the WWTP site in the event that there is a power failure.

The Noise Assessment already concludes that future residences within Precinct 10 (i.e. within 20m of Piggabeen Road) will be impacted by the WWTP during night time. Will the additional noise created from generators capable of running the WWTP increase this buffer distance? A minimum 20m buffer requirement will impact upon the overall design of Precinct 10, with the average site having an average depth of 30m.

### **6.6.2 Potential Impacts (Groundwater)**

The REF notes that *□ The operational use of the proposed WWTP is also identified as having the potential to impact upon groundwater at the site through the use of effluent irrigation*□

As noted previously, it is considered that insufficient investigation has been undertaken in terms of the potential impact upon the downstream environment (in particular the Cobaki Creek and Broadwater), particularly in relation to impacts arising from the proposed irrigation of the public open space / sports fields within the development. It is not considered acceptable to simply rely upon future monitoring as a safeguard for significant environmental / public health impacts. Further information

is considered to be required in order for IPART and the determining authority of the Part 5 application to be satisfied that there isn't going to be an impact upon the surrounding locality. As such, it is considered that an EIS is required to fully consider the potential risks to the environment.

## **6.8 Odour**

Section 6.8 Odour of the REF references an odour study in Appendix D. This study does not inspire confidence in that it incorrectly references the site as the *Farley Wastewater Treatment Works* (located slightly west of Maitland in the Hunter Valley), *Table 6-1: Mean Long-term Weather Data for Maitland [BOM 1982-2016]* and *Figure 6-1: Comparison of Maitland Wind Roses from BOM (1982 - 2010) and TAPM (2014)*. The actual information does appear correct.

### **6.14.1 Potential impacts (Waste Management)**

The REF notes a number of management measures with regard to the removal of waste products from the WWTP.

Council has concerns that the redundancy for inflow and for sludge storage is inadequate. The plant is designed on average dry weather flow plus ten percent and has two 600kL redundancy tanks. It is questioned as to whether this is adequate and places a high reliance on control of incoming pumps to maximize storage in the field rather than balance tanks at the plant.

Council also has concerns that sludge production is estimated at 40 kL/day and storage of 80kL is provided. This means that sludge removal will be vital to keep up as any break of more than a day could lead to potential overloading of the storage tanks once the development has reached maturity.

## **6.15 Cumulative Impacts**

The REF states that *In comparison to the previously approved business as usual model, the proposal has significantly less impacts in its construction and operation. The proposal provides benefits through reduced energy consumption, reduced potable water demand, increased use of recycled water and no overflows into the receiving environment*. There appears however to have been no definitive analysis and assessment to support the purported benefits as being real.

The REF has incorporated an assessment of the cumulative impacts associated with the proposed WWTP (Appendix A of the REF), as required under Clause 228 (2) of the EP&A Act. As noted throughout this submission, it is considered that insufficient assessment has been undertaken to confidently conclude that the proposal complies with the provisions of Clause 228(2). Based on the information provided with the REF, it is considered that an EIS is required.

## **7 Environmental management**

### **7.1 Summary of safeguards and management measures**

As noted above, should a Licence be granted for the proposed development, it is considered warranted that all commitments associated with the application and REF be conditioned as part of the Licence.

## **8 Conclusion**

### **8.3 Social / Community Effects**

The REF's claimed benefits are not considered to be benefits, as the alternative of using TSC services will have the same benefits. The existing Council system has been developed over many years to include the development of Cobaki estate.

### **8.4 Economic Context**

The REF's claimed beneficial effects are not considered to be any different to the development of the estate using Council's conventional system to develop the community. There is no substantial analysis to demonstrate that proposed benefits are real.

### **8.5 Ecologically Sustainable Development**

Council agrees that the principles of ecologically sustainable development are important and govern Council's activities in the area of water supply and sewerage services.

For the REF to claim that the proposed development is superior is difficult to accept in the absence of accurate modelling that includes the energy consumption and embedded greenhouse gas emissions associated with the proposed collection system, advanced water treatment and distribution of recycled water. Such a proposal will still have the need to dispose a portion to the environment through a system that will necessitate its further treatment. It is not considered that the proposed development is more sustainable than the conventional system, which returns water to the environment in accordance with licence conditions and has the economy of scale to reduce treatment and energy costs.

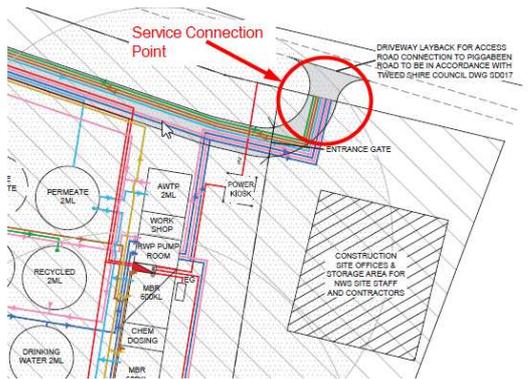
The REF's (inter-generational equity) statement that *□□ The proposed development responds in the positive to inter-generational equity providing a modern alternative to traditional sewerage treatment systems, an alternative source of water and does not require typical discharges of sewerage into the environment□□* is considered to be a misrepresentation of Council's existing system.

Council's sewerage treatment systems do not discharge *□sewerage□*(sic) into the environment. Only treated effluent is discharged into the environment in accordance with environmental licences. In addition, the use of treated effluent by the proposed development for irrigation is considered to be a discharge to the environment.

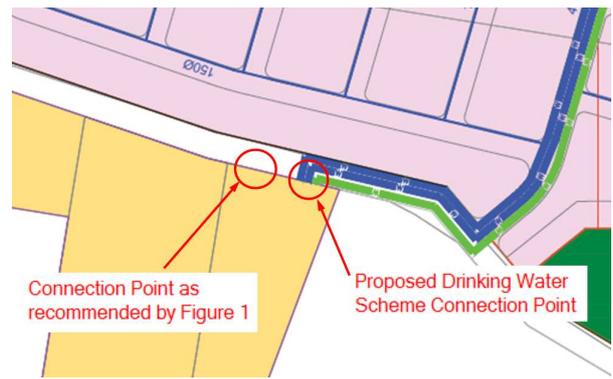
### **Inconsistency between documents**

There are a number of inconsistencies between various documents in terms of the location of infrastructure / pipework within the WWTP site. For instance, the service connection points are recommended as per Figure 1 below, yet the Drinking Water Scheme (Figure 2), Recycled Water Scheme (Figure 3) and Pressure Sewer Scheme (Figure 4) identify different locations at the entry point of the WWTP site.

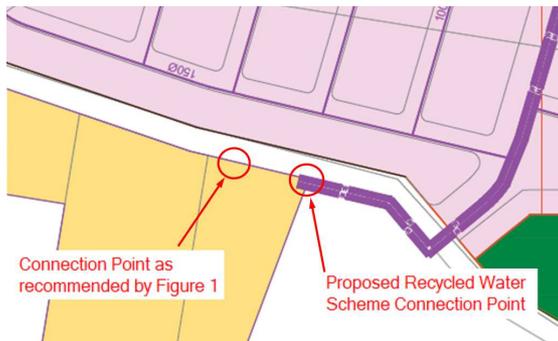
All documentation needs to be revised to ensure consistency with the recommendations of the Flora and Fauna Assessment (Appendix K of the REF) to avoid impact upon large existing vegetation.



**Figure 1**



**Figure 2**



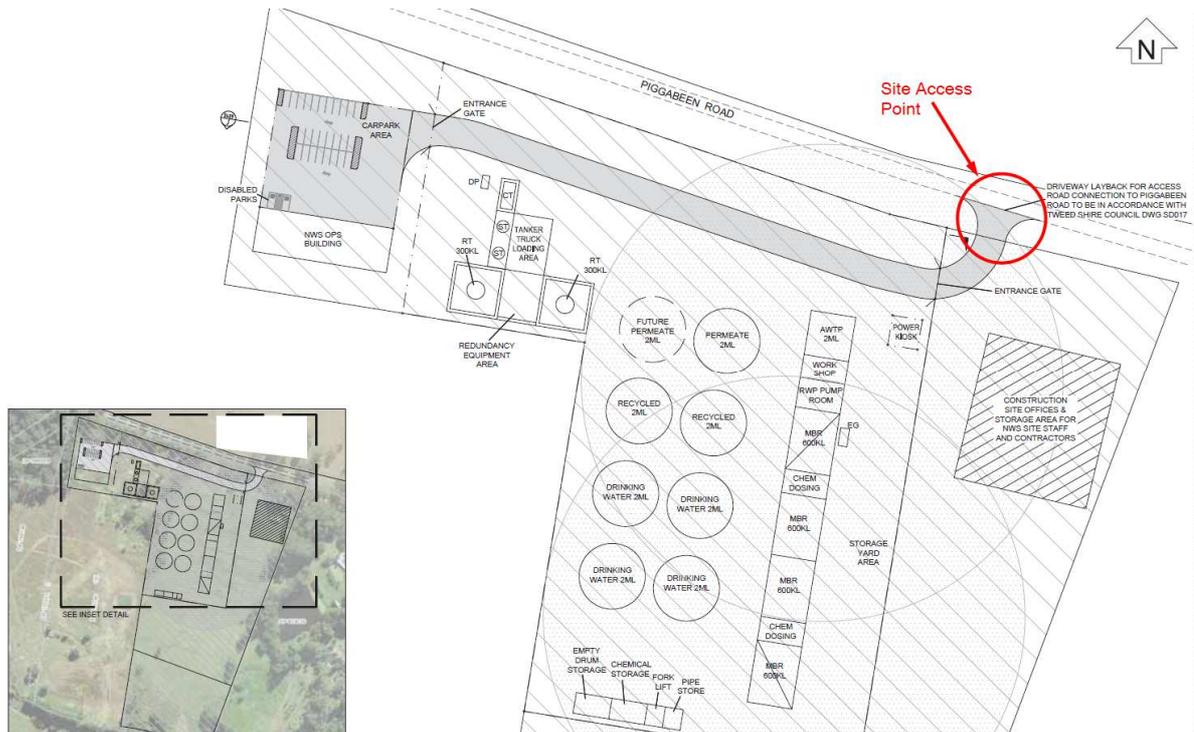
**Figure 3**



**Figure 4**

There are also inconsistencies between documents in terms of the site configuration. The Site Layout Plan (Revision D) in Appendix B of the REF indicates an eastern access point for the site (as shown in Figure 5 below), which accords with the Flora and Fauna Assessment (Attachment K of the REF) to avoid impact upon large existing trees. There are a number of supporting documents that do not incorporate the latest site design.

All documentation needs to be revised to ensure consistency with the design plans (Appendix B) and the recommendations of the Flora and Fauna Assessment (Appendix K).



**Figure 5 □ Site Layout**

Inconsistencies have also been identified between the Site Layout Plan (Appendix B) and Stormwater Management Plan (Attachment E of the REF □ Figure 6 below) and the Statement of Landscaping Intent (Appendix O of the REF □ Figure 7 below).

In addition to inconsistencies with the site access point, Figures 6 and 7 differ from the proposed Site Layout Plan in terms of the grass swale requirements for stormwater drainage purposes. All documents need to be consistent in terms of site access, driveway location and stormwater requirements.

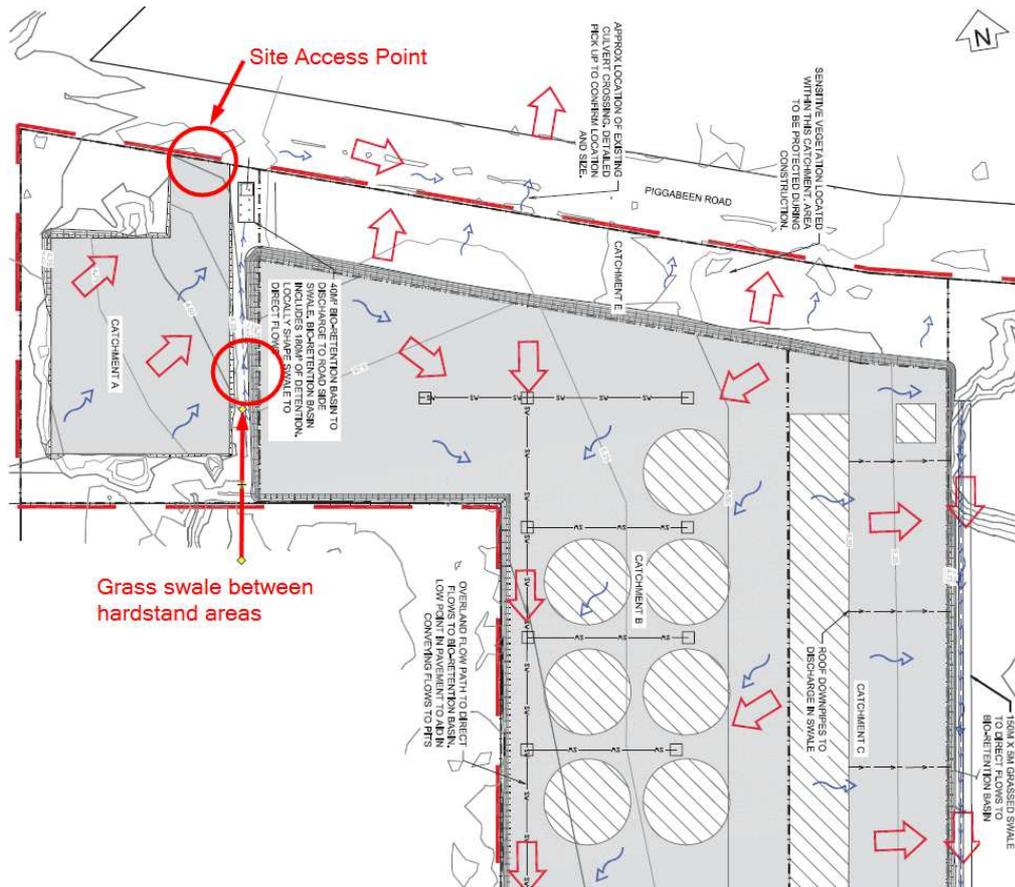


Figure 6 □ SWMP

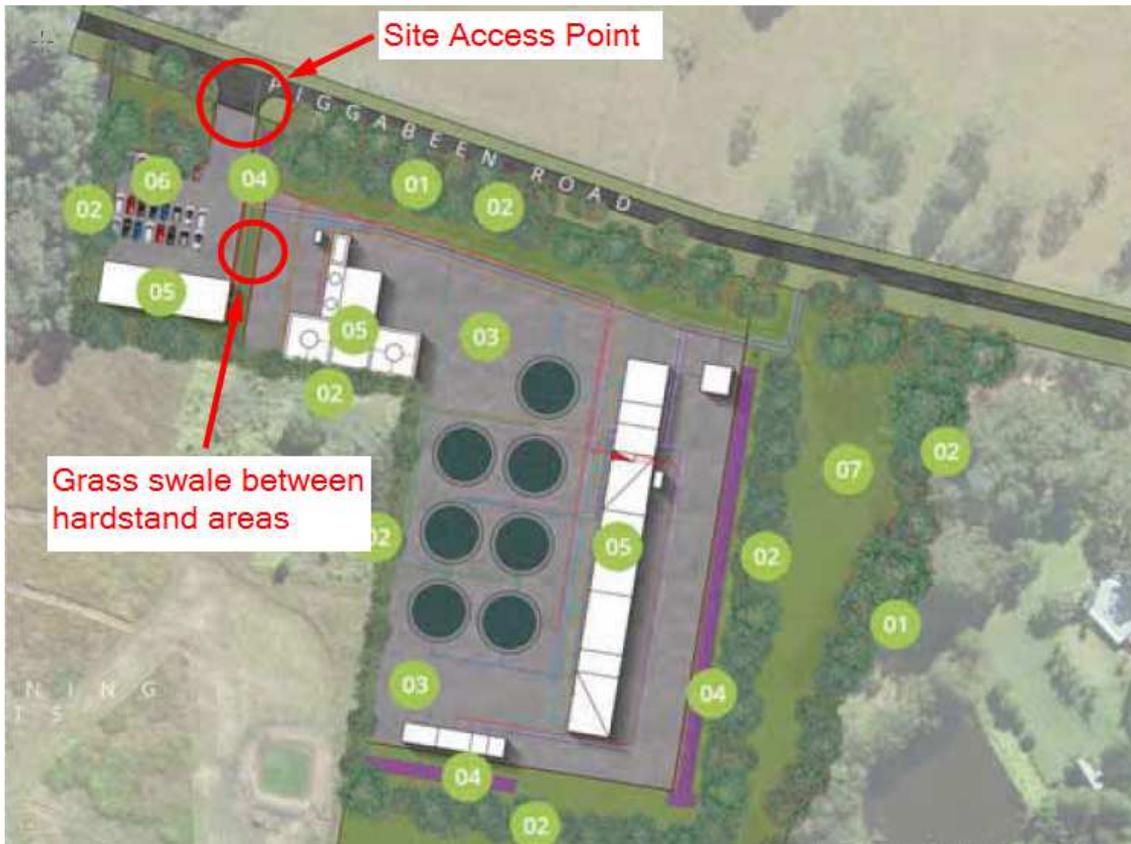


Figure 7 □ Landscaping Intent

## **Public Interest**

Public interest needs to be taken into consideration when assessing the proposed development. Is the proposed site for the WWTP appropriate in terms of impact upon the surrounding locality? The WWTP serves no benefit for the surrounding community, with only the Cobaki Estate being serviced by the proposal. It is considered that a more appropriate location for the WWTP is within the Cobaki Estate itself, as opposed to impacting upon the existing locality with a development that is completely out of character with the surrounding rural nature of the area.

Alternatively, it is considered appropriate that the Cobaki Estate development be serviced by way of standard connection with Council's infrastructure, as approved under Concept Plan Approval MP06\_0316 and Council approvals for residential subdivision.

## **Broader concerns**

It should also be noted that Council has previously made submissions to the Department of Planning and Environment advising of Council's preference for a gravity sewer system as opposed to pressure sewer which has been proposed by the proponent. Additionally Council would have concerns if it was to be nominated as the 'operator of last resort' for the water supply and sewerage system proposed by the proponent. It is considered that these systems are unconventional in nature and will ultimately provide a lower level of service to this development.

For further information regarding any of the matters raised above, please contact Colleen Forbes on (02) 6670 2596.

Yours faithfully

**Troy Green**  
**GENERAL MANAGER**