

Meeting Minutes

Project:	Warrumbungle Shire Council 3 STP Upgrades		
Purpose:	Stakeholder Meeting		
Venue:	EPA Office Dubbo		
Date:	10/12/2018	Time:	12:10 pm
Attendees:	Warrumbungle Shire Council; Cornelia Wiebels		
	Hunter H₂O; Clara Laydon, Flora Markis		
	Stakeholders; EPA, NSW DoI		
	EPA	NSW DoI	
	Sheridan Ledger	Robert Mitchell	
	Helen Smith		
	Apologies - Hunter H₂O: Mark Dawson		

Purpose of Meeting

Stakeholder negotiations were carried out in Dubbo, NSW on the 10th of December, with NSW EPA and Department of Industry (DoI) on the progress to date on the Coolah, Dunedoo and Coonabarabran Sewage Treatment Plant (STP) upgrades. Discussions focused on further actions required and advise on licensing conditions prior to tendering.

Proceedings of Meeting

Hunter H₂O presented a summary of the progress to date on Coolah, Dunedoo and Coonabarabran Sewage Treatment Plant upgrades. This focused on the projects' background, and more recent options assessment work. Particular comments and questions for each plant are provided below.

Coolah STP

Initial comment from Robert Mitchell, representing NSW DoI, clarified that activated sludge process the most suitable if discharge to waterways was required. However the option of sourcing more land area for a reuse target ~100% was also discussed and if this could be achieved a lower technology treatment option could be considered. As a side note DoI recommended that the capital costs be reviewed, citing recent activated sludge processes of a similar size costing more than the estimated \$4M that is presented in the Options Assessment.

Both DoI and EPA strongly expressed preference of relocation the STP due to issues relating to floodability, and proximity to neighbouring properties as well as increasing the possibility of reuse. Furthering the previous comment DoI and EPA expressed a request for a more detailed alternative site assessment including MEDLI modelling to determine required land area, effluent storage. If a ~100% reuse scheme is feasible than an additional option including on a low-tech system with reuse benefits should be included as an amendment to the Options Assessment.

Ultimately, the stakeholders recommend further work be carried out regarding the Coolah STP upgrade options, more specifically, a detailed alternative site assessment, land assessment, reuse options in conjunction with a low-tech treatment system. The alternative site assessment will address the following:

- Floodability
- Effect of noise and odour to neighbouring areas
- Adequate reuse options such as irrigation land and storage.
- Consideration of a new potable water bore be taken into consideration

Dunedoo STP

The stakeholders recommend that UV options be assessed including costing in regard to Option 2 as well as onsite storage for storm collection. DoI recommended consideration be made to refurbishing the catch pond for pump arrangement to UV system.

It was suggested that Hunter H₂O provide EPA and NSW DoI with a memo summarising the effluent quality and flow monitoring results (including rainfall data). EPA outlined that the licence will determine the Wet Weather Event and this will be reviewed when available data is provided.

Coonabarabran STP

Ammonia targets within the Hunter H₂O memo were questioned by DoI, as a result the proposed value will be confirmed by Hunter H₂O. Questions were also regarding the location of the packaged inlet works subject to the location of other processing units, this will also be confirmed.

It was recommended that bypass arrangements be considered, and this include the maturation pond, storm pond and septic waste receival. The selected Option schematics should also be updated to include bypass arrangement as well as return streams and emergency overflows.

Furthermore, stakeholders provided discussion relating to an alternate location or additional pond be used to capture alum sludge, including a specific consideration for septic receival being within the alum sludge pond with the supernatant to be returned to plant for treatment.

Licence Conditions

The initial objectives of the meeting was to then review licence conditions of the three STPs. However during the discussions EPA requested that specific licence conditions *not* be the focus of the meeting but instead EPA acknowledged that the currently licences required review and that this would be undertaken shortly.

Furthermore, EPA provided more recent nutrient concentration licence conditions for both Trickling Filter plants and upgraded aerated/activated sludge plants. EPA outlined that these can be a starting point for licence concentration discussions. This is presented in the table below.

Pollutant	Current Trickling Filter example		Preferred EPA limits	
	100 percentile	90 percentile	100 percentile	
BOD	20 mg/L	10 mg/L	15 mg/L	
Faecal Coliforms	-	200 cfu/100mL	600 cfu/100mL	
Nitrogen (Ammonia)	-	2 mg/L	5 mg/L	
Nitrogen (Total)	40 mg/L	10 mg/L	15 mg/L	
Oil and Grease	10 mg/L	5 mg/L	10 mg/L	
pH	6.5-8.5	-	6.8-8.5	
Phosphorous (Total)	10 mg/L	0.5 mg/L	1 mg/L	
TSS	30 mg/L	15 mg/L	30 mg/L	

Summary of Key Minutes

A summary of the key minutes and actions from the table is found in the section below.

Item	Minutes of Discussion	Action By & Date
Coolah STP	<p>Dol and EPA have requested a more detailed alternate site assessment to be carried. This will address the following:</p> <ul style="list-style-type: none"> ▪ floodability ▪ effect of noise and odour to neighbouring areas ▪ adequate reuse options such as irrigation, land for storage. 	Alternative Site Assessment
	<p>Dol and EPA have requested further review including MEDLI modelling to determine irrigation land area and storage requirements to achieve an approximate 100% reuse scheme.</p> <p>Following on from this, treatment options will be assessed to determine if a lower technology option can be applied which will meet log reduction requirements as per the Australian Guidelines for Water Recycling (AGWR)</p>	As part of the Alternative Site Assessment also include a review of Land requirements for 100% Reuse and Treatment Option
Dunedoo STP	<p>Dunedoo is progressing accordingly with Hunter H2O providing flow monitoring and water quality data on the STP.</p> <p>The outcomes of these investigations this will help determine the required upgrade option.</p>	Hunter H2O to provide Dol and EPA with a copy of the flow monitoring results and water quality data on the unit processes of the current STP.
Coonabarabran STP	<p>The project progress and the selected upgrade option were discussed.</p> <p>There were no major concerns or issues raised by stakeholders.</p> <p>EPA notified WSC that the current licence conditions will be reviewed whereby concentration limits will be revised.</p>	EPA will provide advice regarding licence conditions for WSC comment. WSC will then initiate the tendering process