

# Minutes



## Community Reference Group (CRG) for the Burwood Beach Wastewater Treatment Works (WWTW) Stage 3 Upgrade – Master Planning and Environmental Impact Assessment (EIA) Phase

**MEETING DATE AND TIME:** 2 June 2011, 4 pm

**VENUE:** Hunter Water Head Office, Honeysuckle Drive

**PRESENT:**

John Flannery (JF)	Chairman
Simon Fane (SF)	Hunter Community and Environment Centre
Michele Peden (MP)	local resident/customer
Tim Ryan (TR)	Merewether National Surfing Reserve Committee
Brad Warren (BW)	OceanWatch
Scott Wiseman (SW)	Merewether Heights Public School P&C
Peter Dennis (PD)	General Manager, System Strategy and Sustainability (Hunter Water)
Greg Bone (GB)	R/Manager System Planning (Hunter Water)
Lauren Randall (LR)	Project Manager (Hunter Water)
Sheena Martin (SM)	Community Consultation Coordinator (Hunter Water)
Darren Cleary (DC)	Manager Treatment Delivery (Hunter Water)

### 1. APOLOGIES

Apologies were received from Chris Tola, Ross Taggart and Bob Hawes.

### 2. MINUTES OF PREVIOUS MEETING

The minutes from the previous meeting were approved with no changes.

### 3. UPDATE ON STAGE 2 UPGRADE AND ABF TOWER REFURBISHMENT

Darren Cleary (DC), advised members that the Stage 2 Upgrade was commissioned in March 2011. DC outlined the plans for refurbishment of the Activated Biofilter (ABF) tower later this year. The refurbishment process involves:

- Taking the tower offline (ie bypassing inflows around the tower while the work is being undertaken)
- Flushing the tower for 7 weeks with secondary effluent, followed by a weak chlorine solution, to remove as much biomass from the filter media as possible (Sep/Oct)
- Removing the roof of the tower (late Oct)

- Removing approximately 3,000m<sup>3</sup> of used media from the tower (Nov)
- Repairing the internal workings of the tower and placing the existing media with new plastic media already being shipped from America (late Nov/early Dec)
- Replacing the tower roof (Dec)

The following points were noted in relation to the ABF tower refurbishment:

- The Office of Environment and Heritage (OEH) have approved a relaxation of the full treatment flow limit from 1,400 L/s down to 1,000 L/s for six months to enable this work to proceed. All effluent quality limits (concentration and load) will still apply during this period. The reason for doing this work after completing the Stage 2 Upgrade is because the plant now has sufficient spare capacity to enable the ABF tower to be taken offline without impacting on the quality of the discharge.
- All dry weather flow will be treated through the activated sludge process while the tower is offline. During wet weather, the volume that bypasses biological treatment will be slightly higher, however this is not expected to significantly alter the discharge quality as the influent is diluted by rainwater at these times.
- There is increased potential for odour emissions from the site once the roof is removed from the tower. The period of highest risk of odours is while the existing filter media is being removed.
- The existing filter media will be removed by crane with operations 24 hours per day, 7 days per week (for a maximum of approximately 3 weeks). These extended hours have been adopted to minimise the duration of the activity with the highest odour potential.
- Options for odour mitigation whilst the roof is off the tower have been investigated. No feasible options were identified due to the large volume of air that would need to be treated. Masking agents have not been found to be particularly effective.
- The used filter media will be transported offsite to Summerhill Landfill. The material (treated pine with some residual slime from the biological treatment process) is suitably classified to allow disposal at a licensed landfill. Any material removed overnight will remain onsite (in lined, covered skip bins) until normal working hours, when the material would be transported offsite to landfill.
- Whilst retention of the used filter media onsite was considered, this would require construction of a large lined area to prevent leaching. This option was not found to be as cost-effective as transporting the material offsite.
- There may be a slight risk of increased odours before the roof is removed and while the tower is being flushed however no significant impact is expected during this time as the air within the tower will still be vented to the existing odour control unit (soil bed filter) for treatment. Any odour that may be experienced during this time would only be remnant in the treated air coming off the top of the soil bed filter due to the increased loading on the odour control unit at this time.
- Due to the large volume of biomass involved, it is considered that temperature is unlikely to significantly alter the odour generation potential of this activity. However, as more people tend to be outside or have windows open during the warmer months, the Hunter Treatment Alliance will strive to complete the work as quickly as possible. If there is any risk of adverse circumstances that would prevent the work being completed within the above timeframes, the work will not proceed until the cooler

months next year. We would not proceed with removal of the lid if it was at all likely that work would extend into the Christmas holiday period.

- Significant consideration of odour potential has been included in preparation of the method and timeframe for completing the work on the ABF tower, including consideration of wind direction based on historical records as well as discussions with experts in the United States with experience in this type of activity. September is known for its offshore winds which could help to reduce any odour risks, the current program is considered to be the most appropriate. The team responsible for this work are investigating options for condensing the timeframe for the work and every effort will be made to complete the work earlier than outlined above if at all possible.
- Solid particles of biomass flushed out of the ABF tower will be captured in the clarifiers and discharged with the biosolids stream.
- The concentration of the chlorine solution used for flushing will be very weak and no residual chlorine will be discharged to the ocean. In fact, chlorine residual will be closely monitored throughout the flushing, because any residual chlorine upset the activated sludge process.

#### **4. UPDATE ON STAGE 3 INVESTIGATIONS**

Lauren Randall (LR) provided an update on the Stage 3 Upgrade investigations. The following key points were discussed.

- Worley Parsons has been engaged to undertake the two-year Marine Environmental Assessment Program. The inception meeting was held on 18 May and fieldwork is scheduled to commence in late June. The initial bathymetric mapping in June will be used to refine the sampling locations and methodology for the ecological studies. Regular updates will be provided to the CRG based on monthly and quarterly progress reports. Consulting Environmental Engineers (CEE) has been engaged to provide independent peer review of the study results.
- Results from the Marine Environmental Assessment Program will build on monitoring data from the last 17 years that indicates there is no significant impact on the marine environment from the plant discharge. It is obvious that any discharge to the marine environment will have some impact. The current program is designed to answer some very specific questions about the impact and provide a better understanding of the footprint (area) of impact. This knowledge will enable informed decisions regarding the future of the plant.
- The two-year Marine Environmental Assessment Program is designed to take into account seasonal and year-to-year variability in ocean conditions. There is potential for preliminary results to provide more direction regarding the potential upgrade requirements, however the full suite of results will provide a better picture of the impact on aquatic ecology.
- Hunter Water and the consultants are working with the Office of Environment and Heritage (OEH), formerly the Department of Environment, Climate Change and Water (DECCW), to build on the knowledge gained from monitoring programs for other outfalls around Australia. Therefore, it is unlikely that any unidentified risks will arise from the program.
- Hunter Water Australia has commenced anaerobic digestion trials to better understand how easily sludge from the unique Burwood Beach process can be

digested anaerobically and whether standard design assumptions would apply for this sludge. Aerobic digestion trials were completed in 2010 for the same reasons. The outcomes from both sets of trials will feed into the upgrade options being developed, to ensure that process design and cost estimates are robust. In addition, the anaerobic digestion trials will measure biogas generation rates, to better understand the potential value of energy recovery as an option.

- Procurement of a consultancy to undertake further options development, provide assistance with the sustainable decision making process and develop a Master Plan for the plant is underway, with work expected to be underway next month. Options include nitrogen removal processes and land-based biosolids management options. Diversion of parts of the Burwood Beach catchment to other catchments is also being investigated, to enable additional recycled water usage in future.

**ACTION** – A list of options for the Stage 3 Upgrade that have been considered and/or will be further developed will be distributed for discussion at the next meeting.

## **5. SUMMARY OF STAGE 3 VALUES & ISSUES**

LR distributed a summary of the issues and values to be considered in the Stage 3 Upgrade. The summary was collated based on feedback obtained from the CRG, local councils, government agencies, members of the public who responded to a questionnaire distributed by the CRG and discussions at the Open Day held at the plant in October. The issues have been grouped broadly into four categories: technical, social, environmental and financial. Further feedback on the key issues and values for the project is welcome.

## **6. INTRODUCTION TO SUSTAINABLE DECISION MAKING (OPTIONS ASSESSMENT) FRAMEWORK FOR STAGE 3**

A handout was provided outlining the key steps to achieving a sustainable decision on the preferred upgrade option for Burwood Beach WWTW. Key points in the discussion were:

- The issues and values already captured are being used by Hunter Water and its consultants to develop a framework for assessing the upgrade options, including the evaluation criteria and scoring system.
- A multi-criteria analysis (MCA) has been selected as the preferred decision making tool for the project. MCA is an effective way of looking at complex problems that are characterised by a number of monetary and non-monetary objectives and is well suited to decisions involving social and environmental impacts or benefits that do not have a robust market value.
- Consideration will also be given to the use of other decision making tools in addition, such as a cost-benefit analysis, which seeks to value the expected impacts of an option in monetary terms.
- It is important to understand that the sustainable decision-making tools help the decision-makers to understand the issues that impact on the decision, rather than “tell you the answer”. There are many judgements that need to be made, sometimes with uncertainty involved in the outcomes. The decision-making tools are designed to highlight which aspects have an impact on the decision or what the distinguishing features between the options are. The tools also provide a useful framework for meaningful discussion with stakeholders on issues central to the decision to be made.

- An important step in the MCA process is to assign weightings to each of the evaluation criteria. For recent previous projects the weightings have been assigned by consensus in a workshop environment, often using a pair-wise comparison approach, as explained in the handout. This method involves comparison of the relative importance of the evaluation criteria two-at-a-time.
- Hunter Water would like the CRG to assist Hunter Water to assign weightings for the evaluation criteria. A pair-wise comparison process will be used to capture the CRG's feedback. Information will be distributed prior to the next meeting so that the exercise may be completed individually before the meeting but it will then be discussed as a group at the meeting.
- Feedback will be obtained on all evaluation criteria (including technical criteria).
- Actual weightings adopted in the final MCA workshop (where upgrade options will be scored and ranked) will still need to be refined and confirmed as the project moves forward, with further input from the Hunter Water project team and the consultants.
- Broader community feedback on the evaluation criteria may be obtained (eg when the upgrade options are publicly exhibited for comment), particularly if there is significant polarisation among the CRG. There would need to be an element of education about the process and the project objectives, drivers, etc to ensure informed and meaningful feedback. It was noted that people's views of the project, and the evaluation criteria and weightings may change as more information becomes available (eg results of the Marine Environmental Assessment Program).
- Where there is some uncertainty or polarisation regarding weightings, sensitivity analyses can be undertaken as part of the MCA process. This would involve scoring options based on a given weighting and then revising the weighting to determine whether it changes the overall outcome of the decision.
- Lifecycle cost will be a key factor in the evaluation criteria. This could either be included as one of the evaluation criteria for the MCA process, or considered as a separate issue, with non-financial factors scored separately.
- Some of the information for the MCA scoring process will come directly from work completed by the consultants, for example quantitative criteria such as greenhouse gas emissions and lifecycle costs. Other criteria will be qualitative and may be much more subjective, for example acceptability to the community.
- There will be an opportunity for one or two CRG members to participate in the final MCA workshop with the project team and relevant consultants if they are interested and available. Other external stakeholders such as the OEH, and independent expert consultants, may also be involved in the workshop. This is likely to be a full-day commitment in early-mid 2012.

**ACTION** – Details of the evaluation framework and a pair-wise comparison matrix will be distributed ready for discussion at the next meeting.

## **7. WORKSHOP – STAGE 3 CONSULTATION TOOLS/MECHANISMS**

LR briefly outlined the different consultation phases for the project, as summarised in the 1-page overview handed out. Sheena Martin (SM) ran a workshop to capture suggestions from members regarding consultation for the public exhibition period, given the following information:

- **What?** Public feedback on upgrade options
- **When?** Nov 2011 – Mar 2012\*

\* It was noted that the timeframe for this phase may potentially be deferred depending on the availability of sufficient information from the Marine Environmental Assessment Program. It is important that information provided to stakeholders during the public exhibition phase encompasses the entire range of information required for an informed decision. Information also needs to be targeted at the right level for the stakeholders (eg not too technical).

Members were asked to provide suggestions regarding the following questions:

- **Where?** Where should we consult with the public?
- **How?** How should we consult with the public?
- **Why?** Why would the public want to participate?
- **Measuring success?** How do we know we have done enough to engage the community? Eg do we need to reach a given number of people?

Suggestions from members were discussed briefly at the end of the workshop.

**ACTION** – Members' consultation suggestions will be compiled and considered for inclusion in the consultation plan for the project.

**ACTION** – Feedback on if/how members' consultation suggestions were incorporated into the consultation plan for the project will be provided at the next meeting.

## 8. GENERAL BUSINESS

- An updated summary of member contact details was supplied.
- LR reminded members to submit bank details to enable processing of meeting payments.

## 9. NEXT MEETING

The next meeting will be held at Bimet Lodge on Thursday 1 September 2011 commencing at 4 pm.

**MEETING CLOSED:** The meeting was closed by JF at 6:10 pm

# Minutes



## ACTIONS ARISING FROM CURRENT MEETING (2/6/11):

Action		Responsibility	Due Date
21	A list of options for the Stage 3 Upgrade that have been considered and/or will be further developed will be distributed for discussion at the next meeting.	LR & JF	5/8/11
22	Details of the evaluation framework and a pair-wise comparison matrix will be distributed ready for discussion at the next meeting.	LR & JF	5/8/11
23	Members' consultation suggestions will be compiled and considered for inclusion in the consultation plan for the project.	SM & LR	1/9/11
24	Feedback on if/how members' consultation suggestions were incorporated into the consultation plan for the project will be provided at the next meeting.	SM & LR	1/9/11

## ACTIONS FROM PREVIOUS MEETING (3/3/11):

Action		Responsibility	Status/Comment
18	An electronic copy of the Glenrock Plan of Management will be distributed to members.	LR & JF	Complete
19	An electronic copy of the Meeting Payment form will be distributed to members.	LR & JF	Complete

Action		Responsibility	Status/Comment
20	An overview of Hunter Water's thoughts regarding future consultation and an opportunity to workshop ideas will be provided at the next meeting.	LR & SM	Complete

**OUTSTANDING ACTIONS FROM EARLIER MEETINGS:**

Action		Responsibility	Status/Comment
6	An overview of Hunter Water's capital works portfolio and information on other major projects relevant to the Burwood Beach project to be provided at future meetings.	LR & JF	Overview of Capital Program complete. Further details of specific projects to be provided at future meetings.
15	Hunter Water will distribute a matrix for pair-wise comparison of assessment criteria by CRG members.	LR	Matrix will be distributed in 2011 once the assessment criteria have been developed (options need to be screened first to ensure selected criteria are meaningful and useful in differentiating the options).
17	Hunter Water will consider the implications of storm loads from the Hunter River on the local beaches and marine environment in conjunction with another project (Hunter River Catchment Effluent Management Master Plan).	LR	Outcomes from the Hunter River modelling will be considered and addressed in reports prepared for the Burwood Beach Marine Environmental Assessment.