NSW GOVERNMENT | Environment, Climate Change & Water

#8

Your reference: S08/01819
Our reference: DOC10/54855 FIL10/2655
Contact: Julian Thompson, 6992 7002

Ms Lisa Mitchell
Manager, Water Projects
Infrastructure Projects
Department of Planning
GPO Box 39
Sydney NSW 2001

21 December 2010

Dear Ms Mitchell,

**RE: Environmental Assessment - Proposed Googong Township Water Cycle Project – Part 3A**
***Environmental Planning & Assessment Act* 1979**

I refer to your letter dated 10 November 2010 regarding the Environmental Assessment (EA) for the proposed Googong Township Water Cycle Project.

The Department of Environment, Climate Change and Water (DECCW) has reviewed the EA and provides comments and recommendations for the Department of Planning's consideration. These comments and recommendations are in **Attachment 1** to this letter.

DECCW is happy to discuss these comments further with the Department of Planning and the proponent. If you have any queries about this matter, or wish to arrange a meeting, please contact me on (02) 6229 7002.

Yours sincerely,

**JULIAN THOMPSON**
**Unit Head – South East Region**
**Environment Protection and Regulation Group**

PO Box 622 Queanbeyan NSW 2620
11 Farrer Place Queanbeyan NSW
Tel: (02) 6229 7000 Fax: (02) 6229 7001
ABN 30 841 387 271
www.environment.nsw.gov.au

## Attachment A

### Googong Township - Water Cycle Project – Environmental Assessment

### Department of Environment, Climate Change & Water (NSW) – Comments – December 2010

**General**

An Environment Protection Licence under the *Protection of the Environment Operations Act* 1997 is likely to be required for a Scheduled Activity (Sewage Treatment Systems) as the project approval for Neighbourhood 1A caters for up to 3,600 Equivalent Persons.

The Load Based Licensing scheme as set out in the *Protection of the Environment Operations Act* 1997 and Regulations will apply to all discharges (to irrigation and to waters) from the scheme. Fee discounts may apply in accordance with the Regulations for effluent which is beneficially reused.

DECCW generally supports the proposal to use modern sewage treatment technology to achieve good effluent quality and enable partial reuse of treated effluent in preference to discharge to waters.

**Wastewater Treatment for Discharge to the Environment**

The EA proposes that a membrane bioreactor plant (MBR) be used to treat wastewater from the township to a standard for a combination of non-potable re-use, irrigation and direct discharge to the environment into Googong Creek. Final disinfection (ultraviolet light and Chlorine dosing) would be undertaken for all treated effluent.

An emergency bypass system for the sewage treatment plant is also proposed which discharges to Montgomery Creek. The capacity of sewage treatment plant is 3.5 times average dry weather flows before discharge of primary treated sewage to Montgomery Creek. Each sewage pumping station is proposed to have a minimum of 4 hours of peak dry weather flow as emergency storage in the event of pump or power failure.

The MBR plant, water supply and sewerage system is proposed to be built in stages to accommodate growth of the township over the 25 year development horizon. Appropriate odour controls have been incorporated into the design of the plant and the sewerage infrastructure.

Project approval is sought in this application for Stage 1a – up to 1000 people, with sewage to be generally tankered away from sewage pumping station SPS 1, and Stage 1b – Two sewage pumping stations (SPS 1 and SPS 2) to be constructed.

In Table 5.8 of the EA the proponent sets out its proposed consent conditions for effluent quality. DECCW has reviewed these against its current expectations for modern sewage treatment systems and in light of the Water Quality Objectives assessment (ANZECC) provided in the EA. DECCW's recommendations for final effluent quality are slightly different to those suggested in the EA and are outlined below.

*DECCW recommendations regarding final effluent quality*

| Parameter | DECCW Proposed discharge limits to Environment (90th %) | Proponent's proposed limit (90th %) |
|---|---|---|
| BOD | 10 mg/L | 10 mg/L |
| Suspended Solids | 10 mg/L | 20 mg/L |
| TN | 10 mg/L | 15 mg/L |
| TP | 0.5mg/L | 0.5 mg/L |
| TDS | 700 mg/L | 700 mg/L |
| Faecal Coliforms | 200 cfu/100mL | No limit proposed |
| pH | 6.5-8.5 | No limit proposed |
| Free Chlorine (residual) | 0.1 mg/L | No limit proposed |
| Nitrogen – Ammonia | 2 mg/L | No limit proposed |
| Oil & Grease | 2 mg/L | No limit proposed |

DECCW would also propose to establish 100% concentration limits after sufficiently reliable performance data for the plant is available after commissioning. Loads limits would also be imposed for the sewage treatment plant in accordance with the Load Based Licensing protocol and the *Protection of the Environment Operations (General) Regulation* 2009.

**Irrigation Water Quality**
It is proposed to use recycled water (treated effluent) to contribute to the irrigation of public areas (eg parks and sporting fields). The EA has demonstrated that irrigation of treated effluent is not likely to impact on ground or surface waters or lead to a build up of nutrients in the soil. There is a small risk of a build up of salt loads in the soil. DECCW supports the development of a Recycled Water Risk Management Plan (draft statement of commitments HH2) which will expand on the analysis in the EA and provide guidance about detailed irrigation designs and nutrient, salt and hydraulic loads.

DECCW recommends that any such Risk Management Plan be drafted to comply with the requirements of the *Environmental Guidelines: Use of Effluent by Irrigation, DEC, 2004.*

**Biodiversity**
Sewage Pumping Station (SPS 2) is proposed to be located within 30 metres of a Pink-tailed Legless Lizard (*Aprasia parapulchella)* record and habitat. It is possible that this pump station could fail as it is designed to contain a minimum of four hours of peak dry weather flows of sewage. The pump station is located upslope of the known habitat of the Pink-tailed legless lizard.

DECCW is concerned that adverse impacts on the Pink-tailed Legless Lizard, and its habitat in that location, could be caused by overflows from the sewage pumping station. If overflows occur on a periodic basis (ie. during significant rainfall events) it is expected, over time, that the vegetation composition this species requires will be lost and replaced by nutrient loving weeds. To prevent any adverse impact on the Pink-tailed Legless Lizard habitat in the catchment around SPS 2, DECCW recommends that any potential for overflow of SPS 2 be eliminated. Measures to achieve this could include any combination of;

- Back-up pumps and uninterruptible power supply;
- Specifically design SPS 2 to contain a greater amount of sewage in the event of pump failure or power outages (eg. 24 hours average dry weather flows). This extended capacity could allow adequate time for back-up pumps or power sources to be sourced and installed;
- Physical measures to divert and capture any untreated sewage overflows from SPS2.

**Aboriginal Cultural Heritage**
The draft Statement of Commitments in the EA (at page 265) has two recommendations in relation to Aboriginal Cultural Heritage.

H1 - According to this commitment avoidance and mitigation of impacts to Indigenous sites will be done in accordance with DECCW guidelines and permits. As this development is being assessed under Part 3A of the EP&A Act there will be no requirement for any DECCW Aboriginal Heritage Impact Permits.

H2 – Effective implementation of this commitment would require a monitoring program conducted by archaeologists and Aboriginal people throughout the earthmoving and vegetation clearance phases of construction. The commitment should be amended to indicate this and to clarify the following:

- how unknown Indigenous heritage items (Aboriginal objects) will be located and identified during construction
- who will do this identification work
- whether all construction work will be monitored by qualified archaeologists and Aboriginal stakeholders

In the Aboriginal and Historical Archaeological Assessment (Navin Officer, Oct 2009), Appendix G to the EA, it is not clear whether Aboriginal site recording forms (or updated forms) for all of the previously recorded sites, newly recorded sites, excavated sites and collected surface sites been provided to DECCW. Provision of site cards is a legal requirement under the National Parks &

Wildlife Act that is not turned off by a Part 3A assessment process. The proponent should indicate whether this has been done and if not, provide this information to DECCW.

There are four Indigenous sites that have moderate to high, or high local significance (GA21, GA22 and GA 24, GA 26), see Appendix G, sec 8.1.2. The Statement Commitments in the EA does not specifically list or discuss these sites, nor does it recommended these sites be avoided and protected from any impact before, during and after development. DECCW recommends complete protection of the most significant sites within the development precinct. This should be included in the draft Statement of Commitments.

**Noise Impacts**

The EA indicates that noise levels from construction of water related infrastructure during stage 1 of the project is likely to exceed construction noise goals at nearby rural residences. The DECCW recommends the mitigation measures suggested in the EA be incorporated into any consent conditions for the project (eg. via a Construction Environmental Management Plan).