

16 October 2013

Independent Pricing and Regulatory Tribunal
PO Box Q290
QVB Post Office NSW 1230

Attention: Mamata Titus

Dear Mamata,

**Subject: Catherine Hill Bay Water Utility Pty Ltd (CHBWU)
WICA Network Operator Licence Application
Lake Macquarie City Council comments**

Thank you for your email of 18 September 2013 inviting Council to comment on CHBWU's WICA network operator licence application. Council officers have reviewed the information and provide the following advice.

SEPP (Major Development) 2005 Amendment

Council maintains the advice as noted in it's letter to the Department of Planning and Infrastructure dated 25 July 2013 (copy attached).

WICA Network Operator Licence Application

CHBWU and it's representatives have met with Council on a number of occasions to discuss the merit of the proposal, and Council's opinion as the owner of affected land.

From a review of the information contained in the network operator licence application, Council confirms it's previous advice to Harvest Water Management Consultants Pty Ltd dated 14 May 2013 (copy attached).

In this advice Council raises a number of issues including land use and permissibility, irrigation of public open space, water balance accuracy and assumptions, impact on adjacent natural areas, public asset management and maintenance, cumulative impacts, and the public interest.

Although the proposal has been refined since this advice the majority of issues raised in Council's letter remain of concern and are reiterated to IPART in the form of an objection to the proposal. The impact on the environment and Council land is not acceptable and the proposal is not supported by Council at this time.

Please accept this letter and two attachments as Council's submission to IPART regarding CHBWU's network operator licence application.

Should you require further information, please contact the undersigned on 4921 0311.

Yours faithfully

Chris Dwyer
Principal Development Planner
Development Assessment & Compliance Department

14 May 2013

Harvest Water Management Consultants Pty Ltd
164 Rivergum Drive
BURPENGARY QLD 4505

Attention: Brad Irwin

Dear Sir,

**Subject: On site Sewage Treatment Plant
Solo Water - Catherine Hill Bay Water Utility Project**

Thank you for your recent enquiries regarding the Catherine Hill Bay Water Utility project, proposing an on-site sewage treatment plant and reticulated water reuse scheme, instead of a reticulated sewerage system for the development known as the Rose Group residential subdivision at Catherine Hill Bay, NSW.

The project has been considered by Council in its preliminary form and the following advice is provided.

Lake Macquarie City Council is committed to sustainable development practices where it is demonstrated that there will be a net social, economic and environmental benefit. As Council fulfils a number of roles in this enquiry (eg consent authority, land owner and land manager), the merits and sustainability of the proposal have been sought from separate areas of Council.

Land Use Planning and Permissibility

State Environmental Planning Policy (Major Development) 2005 (Major SEPP)

The land is zoned R2 Low Density Residential pursuant to the Major SEPP (Part 14). A Sewage Treatment Plant or Waste Water Treatment Plant is prohibited within this zone [clause 9(4)].

However, Clause 25 operates to permit development under the Major SEPP, that is permitted to be carried out with or without consent under State Environmental Planning Policy (Infrastructure) 2007.

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)

Division 18, Clause 106(1) of the ISEPP provides that sewage treatment plants may be undertaken without consent by a public authority or a person licensed under the Water Industry Competition Act 2006, or by any person with consent, in a prescribed zone. Clause 105 defines prescribed zones, which does not include the zoning of the subject land.

Therefore the land does not benefit from the provisions of Division 18 of the ISEPP, and a sewage treatment plant cannot be undertaken with consent under the ISEPP. In turn the proposal is not permissible under the Major SEPP, and the land use is prohibited.

Notwithstanding the prohibition, the following comments are provided to assist with future planning of the proposal if it is your intention to pursue the creation of permissibility through a change to the Major SEPP, ISEPP or other Environmental Planning Instrument.

As identified in the Land Capability Assessment, access to and use of Council and public lands are central and necessary to the success of the proposal. The following comments are provided by Council in its position of land owner and land manager, and the responsible public authority for the provision of future Council services and infrastructure.

Controlled Irrigation of Public Open Space

The Land Capability Assessment indicates that approximately 40% of the treated effluent is proposed to be used for controlled irrigation of public open space areas. This appears to be an assumption made in the absence of Council input, and one which Council does not support for the following reasons:

- Council's past, current and likely future practises to only irrigate high profile sports grounds and recreation areas;
- Likely adverse impacts on areas which are designed to be low maintenance;
- Likely impact on service provision by increasing the maintenance burden;
- Lack of information regarding the individual allotment irrigation scheme ((Recycled Water Management Plan yet to be developed) to confirm the 60/40 split in application;
- Maintenance of irrigation infrastructure, or alternatively the management of private infrastructure on public land; and
- Likely adverse impacts on sensitive natural areas outside the development footprint.

The Land Capability Assessment identifies the open space areas proposed for irrigation. In reference to Village Park, Moonee Reserve, Munmorah Reserve, Heath Reserve, and Possum Gully, the Planning Assessment Commission report of 13 May 2011 states that "identification of these drainage reserves as open space is not satisfactory", and further in reference to the village park and precinct parks, the PAC report states "these parks are drainage reserves".

Council's submission to the draft DCP highlighted that these open space areas "should be labelled as drainage reserves not parks", and that "species for drainage reserves must be drought tolerant species, low maintenance and fire retardant". The intention for these areas is drainage reserves of low management / low maintenance requirements, and irrigation of these areas is inappropriate.

Further to discussion of the Village Park, Council advice for the DCP is that "This is a drainage reserve and is not suited to park activities, playground facilities and the like." This parcel of land is not intended for 'active' use by the public warranting irrigated areas for quality turf growth, and falls into the same category as other low maintenance drainage reserves.

With regard to the proposal to irrigate the Coastal Walk reserve, the same issues arise as the drainage reserves with respect to Council's proposed level of maintenance of this area, not being a high profile sports or recreation area. Irrigation of the proposed gravel bush fire track is assumed to be an error.

The only area upon which Council is supportive of effluent irrigation is the proposed sports grounds at Middle Camp, however the volume of irrigation water at this location will not closely resemble the project's requirements of 40% disposal of treated effluent.

Water Balance Accuracy and Assumptions

Specific comments on the water balance are as follows. Where mentioned, the 'Sections' and 'Tables' refer to those within the Land Capability Assessment:

- Appropriately qualified professionals should be involved in the preparation of the design of the irrigation system, in particular a qualified soil scientist (e.g. Certified Practising Soil Scientist), an Irrigation Australia certified Irrigation Designer (Commercial Turf/Landscape specialist) and an Irrigation Australia certified Irrigation Agronomist. It is recommended that these specialists review and refine the concept before further work is commissioned;
- Section 5.1: Rainfall exceeds evapotranspiration approximately 1 year in every 4-5 years and irrigation is rarely required between May and July inclusive. Recycled water generation over this 3 month period will be about 9.5 ML, which is close to the 10 ML storage capacity. This doesn't allow for rainfall inflows or wet years in which irrigation may not be needed in April or September. Given this information, the storage will overflow more often than stated.
- Section 5.1: Sandy soils may not be suitable for sub-surface drip irrigation as the water is more likely to move down through the profile, rather than sideways. Therefore, for irrigation to be effective, spray irrigation may be required, with appropriate control measures to prevent irrigation in windy conditions. It is noted that the Land Capability Assessment indicates spray irrigation is not deemed appropriate in residential settings, so irrigation of these areas may not be feasible.
- Section 5.2: Based upon available recycled water of around 105 kL/day, this equates to about 38.3 ML per annum. A typical sports field will require in the order of 2-3 ML/ha per annum (depending on climate conditions), so at least 13-20 hectares of sports fields/open space will be required. The table provided only has approximately 11 hectares (noting that this figure is not accepted by Council), which is insufficient. Should the proposed sports facility proceed, it could only add approximately 2.5 hectares, which on its own is not sufficient;
- Table 5.4: The proposed irrigation application rates in Stage 1 appear to be excessive. Stage 2 application rates are not low - but rather are close to average/normal;
- Table 6.1: Management of salts using low irrigation application rates appears to be inconsistent with the irrigation application rates proposed in Table 5.4;
- Section 7.1: The use of pan evaporation is incorrect. This should be evapotranspiration consistent with UN FAO Paper 56 (modified Penman method or equivalent);
- Section 7.3.1: Irrigation modelling parameters, specifically irrigation scheduling, are inappropriate. Irrigating almost every day and to field capacity will result in excessive waterlogging/deep drainage and/or run-off. Evapotranspiration-based scheduling for irrigation is more appropriate. Specialist advice should be sought as to more appropriate parameters for modelling (refer to the first bullet point above);

- Section 7.3.2.2: The implications of deep drainage and leaching of salts has not been adequately addressed;
- The design parameters for the irrigation system to optimise water and energy efficiency have not been provided. It is suggested that the system should have a designed distribution uniformity (DU) of 90% or more with friction losses being 5% or less;
- Section 9: With regard to irrigation management it is suggested that inclusion of a weather station to provide evapotranspiration-based irrigation scheduling is undertaken.

The proposed scheme is overly optimistic in terms of the amount of irrigation water to be applied and the areas available for irrigation, and has not adequately assessed the impacts on adjacent natural areas (see below). The proposal is inappropriate for the site and inconsistent with the 'statements of commitments' that were provided by the proponent when the residential development was proposed and approved.

Impact on Adjacent Natural Areas

A large proportion of the land that is proposed for effluent irrigation is vegetated in remnant bushland/heathland (especially the Coastal Walk area and Possum Gully), and any adverse impacts upon the remnant vegetation in these areas is not supported.

The proposal to irrigate these bushland/heathland areas with treated effluent is inconsistent with the retention of ecological values. Alternatively, if the native vegetation in these areas is proposed to be cleared or substantially modified to cater for effluent irrigation, a robust ecological assessment (and appropriate biodiversity offsets, preferably using the NSW BioBanking Scheme) should be undertaken.

The downstream waters that would receive surface overflows or groundwater discharges are highly sensitive (SEPP 14 wetland, ICOL, and popular swimming beaches). The potential for groundwater to contaminate these areas is high when the soil conditions that are prevalent on-site are considered. The issue of surcharges of effluent (either treated or untreated) to these receiving waters is also considerable, and inadequately addressed in the Land Capability Assessment.

The proposed buffers appear inadequate, and contrary to any appropriate standards. The draft Lake Macquarie Development Assessment Framework for On-Site Effluent Management provides for the following buffer distances to wetlands/EEC. These buffers are the minimum distances that are appropriate for the site:

- 250 metres minimum distance to wetlands (including SEPP 14 wetlands) for treated effluent land application; and
- 100 metres minimum distance to Endangered Ecological Communities (EECs) of vegetation for treated effluent land application.

Public Asset Management and Maintenance

It is recognised that statements within the 'Responsibilities' section of the Land Capability Assessment are made with regard to public asset management and maintenance, however these statements are required to be clarified.

The document indicates Rose Group (initially) and Catherine Hill Bay Water Utility (CHBWU) (from five years after subdivision completion) would take responsibility for operations and maintenance of public open space areas.

Details are required regarding management and maintenance activities including mowing, horticultural maintenance, arboricultural maintenance, litter removal, access control, cleaning, repairs to structures, furniture, and fencing in public reserves, drainage reserves, road verges, and other public spaces.

Details are also required regarding the standards of maintenance that will be delivered (e.g. how often will grass be mown, weeds removed, dead plants be replaced, mulch be topped up, and how will tree hazards be assessed and mitigated, etc).

Further, details are required with regard to which maintenance activities would be performed by Rose Group and CHBWU, what standards would be delivered, and which open space areas would be maintained by them, so that Council may provide a clearer response to the proposal's impacts on Council's maintenance resources.

The impact of the irrigation of public open space also needs to be reconciled with the approved open space landscape outcomes that form the context and setting of the Rose Group's Catherine Hill Bay development. Although the Land Capability Assessment at section 5.2 indicates an assessment has been made against the landscape masterplan for the development, the estimate that 75% of the open space area is available for effluent irrigation is not agreed with. It appears at this stage that most, if not all, of the land to be irrigated does not require, or cannot cater for, such irrigation due to slope, vegetation (existing and future), size, function and location.

Concerns are raised of the validity of assumptions used in the Land Capability Assessment with regard to the available open space area for effluent irrigation, and the environmental, maintenance and cost impacts (to Council or the community through higher levies) resulting from the proposed irrigation.

Cumulative Impacts and the Public Interest

The proposal should not only be considered with regard to the benefits and impacts on the site, but also on the benefits and impacts on the locality.

Existing Catherine Hill Bay Sewage Management

At present approximately 100 dwellings exist in Catherine Hill Bay and Middle Camp, all relying upon on-site sewage disposal systems.

The approved reticulated sewerage system for the Rose Group development will allow the existing dwellings in Catherine Hill Bay and Middle Camp to connect to it and the resultant decommissioning of the approximately 100 on site sewage systems would provide a significant environmental benefit. This benefit would not be realised if the CHBWU were pursued, and would be seen as a significant adverse environmental impact of the proposal.

Coal and Allied project impacts

The proposed Coal and Allied residential subdivision for 222 allotments at Middle Camp relies upon a reticulated sewer system, with a cost sharing arrangement with Rose Group.

In the event that the Rose Group provide an on-site scheme, this shared reticulated scheme may not remain available to Coal and Allied, and alternatives would need to be investigated.

An assessment of the likely impact on the feasibility of the Coal and Allied project will be required. This assessment should evaluate the resultant environmental and economic impacts of Coal and Allied moving toward an on-site system if a reticulated system does not remain feasible.

Conclusion

The proposal to modify the Rose Group Catherine Hill Bay residential subdivision from a reticulated sewerage disposal system to an on-site sewerage disposal system relies upon data and assumptions that are not supported by Council.

Council does not support the Land Capability Assessment as currently drafted and does not support the use of unsuitable or incapable lands for the disposal of treated effluent through irrigation.

Council remains concerned of the direct and cumulative environmental, social and economic impact of the proposal on the site and within the Catherine Hill Bay locality.

Due to the inter-governmental nature of the proposal, it is requested that the above advice be raised in any discussions with government stakeholders such as the Department of Planning and Infrastructure, Department of Environment and Heritage (National Parks and Wildlife Service), the Environment Protection Authority, and IPART.

Should you require further information, please contact the undersigned on 4921 0311 during business hours.

Yours faithfully

Chris Dwyer
Principal Development Planner
Development Assessment & Compliance Department

cc Planit Consulting (Mr Adam Smith)
PO Box 1623
Kingscliff NSW 2487

Solo Water (Mr Wayne Williamson)
1-19 Hill Street
Sunshine Beach QLD 4567

NOTE:

In providing the advice in this letter, Council has relied upon the following:

Documentation:

- *Land Capability Assessment for Effluent Irrigation for the Catherine Hill Bay Water Utility Scheme*, March 2013, Project Number H10052, Report Number H10052_R1A by

Harvest Water Management Consultants Pty Ltd; and

- Covering email from Brad Irwin – Harvest Water Management Consultants Pty Ltd dated Wednesday 20 March 2013, to Allen Brierley and Greg Weir of LMCC; and
- Covering email from Adam Smith – Planit Consulting dated Thursday 18 April 2013, to Chris Dwyer of LMCC.

Plans / Drawings:

- *Bulk Water Transfer Main Layout Plan* Drawing No P05, Project Number H10052 Issue A dated 8/4/2013 by Harvest Water Management Consultants Pty Ltd; and
- *Open Space Effluent Irrigation Areas* Drawing No P09, Project Number H10052 Issue A dated 13/3/2013 by Harvest Water Management Consultants Pty Ltd; and
- *Wastewater Treatment Plant Site Layout* Drawing No P10, Project Number H10052 Issue A dated 30/3/13 by Harvest Water Management Consultants Pty Ltd; and
- *Catherine Hill Bay Pressure Sewerage Scheme Master Plan* Drawing No SK001, Rev A dated 04/04/2013 by Solo Water and Pressure System Solutions Pty Ltd; and
- *Catherine Hill Bay Potable Water Scheme Master Plan* Drawing No SK002, Rev A dated 04/04/2013 by Solo Water and Pressure System Solutions Pty Ltd; and
- *Catherine Hill Bay Recycled Water Scheme Master Plan* Drawing No SK003, Rev A dated 04/04/2013 by Solo Water and Pressure System Solutions Pty Ltd.

25 July 2013

Shivesh Singh
Strategic Assessment
NSW Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Shivesh

Subject: Proposed Catherine Hill Bay SEPP Amendment

Thank you for the opportunity to comment on the proposal to rezone land adjacent to Montefiore Street, Catherine Hill Bay, from R2 Low Density Residential Zone to SP2 Infrastructure Zone under Schedule 3 of State Environmental Planning Policy (Major Development) 2005. The purpose of the rezoning is to allow the construction of a sewage system by a Private Waste Water Utility called SOLO Water.

Council staff have reviewed the proposal and have identified several significant concerns outlined below. Council does not support the proposal until these concerns have been adequately addressed.

Catherine Hill Bay - Major Project Determination and Development Control Plan

- The Planning Assessment Commission approved the development at Catherine Hill Bay on 13 May 2011 after a lengthy assessment process. The assessment process was associated with a very high level of public interest and involvement. The purpose of the rezoning appears to be inconsistent with the Major Project Determination No. 10-0204 issued by the Planning Assessment Commission. In particular, statement of commitment B7 in Schedule 3 states the provision of water and sewer services by Hunter Water.
- A Water and Sewer Servicing Strategy also supported the Major Project Determination. An amended Strategy for the site has not been prepared to demonstrate that the change in sewer services from Hunter Water to SOLO Water will adequately service the surrounding land.
- The Catherine Hill Bay (South) Development Control Plan (DCP) was prepared by the Department of Planning and Infrastructure. The DCP identifies the site of the proposal as residential development.
- Council recommends that the Department ensure that the proposal is consistent with the Major Project Determination and DCP. Council recommends that if the proposal is inconsistent with the Major Project Determination and DCP, it should be publically exhibited to allow community comment, and the Major Project Determination and DCP will need to be modified to reflect any changes.

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Site suitability and impacts on adjacent land

- The purpose of the rezoning is to allow the construction of a sewage system by a Private Waste Water Utility called SOLO Water. The proposal is not accompanied by sufficient justification to demonstrate the suitability of the site, and does not consider impacts on the adjacent land. Key issues that need to be addressed include:
 - assessment of noise and odour emissions from the proposal on the adjacent residential land;
 - assessment of visual impacts on the surrounding visually sensitive areas; and
 - assessment of bushfire risk, as the proposal may be located within a bushfire asset protection zone (Rural Fire Services may require consultation on this matter).

Should you require further information, please contact me via email at galderson@lakemac.com.au or on 4921 0368.

Yours faithfully

A handwritten signature in black ink, appearing to read 'Grant Alderson', with a long horizontal flourish extending to the right.

Grant Alderson
Strategic Landuse Planner
Integrated Planning Department