



Office of
Environment
& Heritage

#6

Your reference:

Our reference:

Contact:

Doc12/37193

Rachel Lonie , 9995 6837

Director, Infrastructure Projects
Department of Planning and Infrastructure
GPO Box 39
Sydney NSW 2001

Attention: Swati Sharma

Dear Director

I refer to your correspondence received 5th September 2012 seeking comment from the Office of Environment and Heritage (OEH) on the Environmental Assessment (EA) for the Water and Wastewater Servicing of the West Dapto Urban Release Area and Adjacent Growth Areas (09_0189).

OEH has reviewed the documents and provides detailed comment in Attachment 1. OEH considers that biodiversity offsets are required and specifically requests that the biodiversity offsets be secured prior to any vegetation being cleared.

If you have any queries regarding this matter please contact Rachel Lonie (02) 9995 6837 (note working days are generally Monday and Wednesday only).

Yours sincerely

Lou Ewins 26/10/12

LOU EWINS
Manager, Planning and Aboriginal Heritage
Regional Operations Metropolitan
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ATTACHMENT 1

Office of Environment and Heritage (OEH) Comment on the Environmental Assessment for Water and Wastewater Servicing of the West Dapto Urban Release Area and Adjacent Growth Areas (09_0189)

1. Biodiversity

1.1 Assessment of Impacts

The Environmental Assessment (EA) states that the majority of proposed water pipelines will be located in future road verges and pathways. Proposed wastewater pipelines will generally be laid adjacent to drainage lines and creek lines while rising wastewater pipelines will generally be laid within road reserves.

The EA states that environmentally sensitive locations such as stands of native vegetation, habitats for threatened species, steep slopes, waterways, wetlands, and Aboriginal relics and sacred sites are to be avoided "where possible". Boring is proposed where there are environmental constraints such as major creek crossings and where ground conditions permit. OEH supports such an approach.

OEH compared vegetation mapping (Native Vegetation of the Illawarra Escarpment and Coastal Plain) to the pipeline easement data provided by the Proponent Sydney Water Corporation. It was assessed that the following areas will be impacted by the project:

Veg Community	Ha
Acacia Scrub	0.38
Coastal Grassy Red Gum Forest (Illawarra Lowlands Grassy Woodland EEC)	5.39
Floodplain Wetland	0.31
Lowland Woollybutt-Melaleuca Forest (Illawarra Lowlands Grassy Woodland EEC)	4.60
Moist Box-Red Gum Foothills Forest	0.42
Riparian River Oak Forest	0.81

These areas differ from the areas identified in Appendix E - Flora and Fauna Report (F&F report). OEH considers the discrepancies could be explained by clearing since the mapping was done, more detailed information from ground truthing and under boring as proposed to avoid impacts.

A review of the data overlaid on the imagery currently available (2009 ADS40) indicates that there are no sites where there are significantly greater impacts than the report describes. OEH concludes that the report has identified the potential impacts of the project where infrastructure is proposed.

Should additional areas be impacted that have not been assessed (for example if the routes are varied) these will require additional offsetting.

1.2 Offsetting

The F&F report (p. 86) states that offsetting is not considered necessary as the impacts are low in the context of the region and the likely impacts to follow when the area is developed. OEH does not consider this to be an acceptable reason to avoid offsetting.

There are precedents such as the South West Rail Link where offsets were required for the accumulated impacts of a linear infrastructure project within a highly disturbed and fragmented landscape to be heavily developed in the future.

OEH provided comment on the draft Environmental Assessment Requirements (EARs) in November 2009 that offsets should be considered. Offsets should be required for all native vegetation types impacted by the

proposal, not just the Illawarra Lowlands Grassy Woodland endangered ecological community (EEC), as the other vegetation communities are habitat for threatened species, especially fauna. This loss of habitat needs to be appropriately offset.

The OEH *Interim Policy on Assessing and Offsetting Biodiversity Impacts of Part 3A, State Significant Development (SSD) and State Significant Infrastructure (SSI) Projects* is being trialled in partnership with Department of Planning and Infrastructure (DP&I). The policy acknowledges that these projects do not necessarily have to meet the maintain or improve (Moi) standard of Biobanking, but adopts the Biobanking Assessment Methodology (BBAM) for quantifying the offsets that would be required if a Moi were to be met. The policy then provides a structured approach to determining how projects may meet alternative standards.

OEH notes that ELA have conducted a number of Biobanking plots for this project, but that the data is not provided. It is recommended that the Proponent use the data available to determine the credits generated and either:

- Purchase and retire that number and type of credits at a biobanking site; or
- Use the Credit Converter (<http://www.environment.nsw.gov.au/resources/biocertification/Creditconverter.xls>) to determine the number of hectares of offset that is required to be secured for this project to meet the maintain or improve standard (assuming red flags would be waived).

DP&I should then assess the project under Section 4.2 of the policy to determine if red flags should be waived and a Tier 2 'No Net Loss' outcome can be obtained.

If a Tier 2 outcome cannot be obtained, then OEH will assess the project under Tier 3 ('Mitigated Net Loss' outcome) and provide requirements for how this standard can be met.

Biodiversity offsets should be secured prior to any vegetation being cleared.

2. Aboriginal Cultural Heritage

Previous advice from OEH regarding the Aboriginal Cultural Heritage Assessment dated April 2012 stated that the assessment of Aboriginal Heritage for the concept and project approval was adequate, but that, contrary to the recommendations in the assessment report, OEH did not wish to be notified of the commencement of the testing and salvage programme as OEH is not the consent authority. Instead, all notifications should be provided to the consent authority.

OEH notes that Section 18.2 of the July 2012 version of the Aboriginal Cultural Heritage Assessment and Impact Management report now states that all notifications will be made to DP&I. OEH considers that this is the appropriate notification procedure as DP&I is the relevant consent authority in this instance.

The draft Statement of Commitments (SoCs) state that Sydney Water is committed to avoiding impacts on items of Aboriginal cultural heritage significance "where practicable" (SoC 10) and where not practicable that management measures will be implemented to mitigate impacts (SoC 11). OEH considers that the Proponent should clearly identify the proposed mitigation measures that will be implemented should impacts occur.

3. Floodplain Risk Management

It is noted that Sydney Water are seeking *Concept Approval* for all new trunk drainage infrastructure required to service West Dapto and Adjacent Growth Areas (including Calderwood, North Macquarie and Tullimbar) as well as *Project Approval* for specific components required for the early release areas including Kembla Grange, Sheaffes/Wongawilli and West Horsley precincts as well as the construction of reservoirs and pipelines for the Marshall Mount Reservoir site.

Floodplain risk management (FRM) advice relating to the West Dapto Water and Wastewater proposal was previously provided to DP&I from the then DECCW on the EARs for DGR's in October 2009. It is noted that several specific requirements relating to flooding were incorporated in the DGR's.

Sydney Water is now seeking Concept Approval and site specific Project Approval from DP&I for the construction of critical infrastructure in floodplain areas which have the potential to be impacted by or cause an impact on flooding.

Consistent with prior advice OEH maintains that DP&I, as the approval authority for this proposal, considers and is satisfied in its determination over the following matters:

- the impact of flooding on the development (including the implications of inundation of electrical components of extreme floods up to the PMF on shut-down);
- the impact of the development on flood behaviour (particularly for creek crossings of pipes) including any management measures to mitigate adverse flood impacts;
- the impact of flooding on the safety of people/users of the development including flood hazard on access routes and access requirements in times of flood;
- the full range of flood events, up to and including the probable maximum flood (PMF) including availability and function of water and wastewater services during and after all floods including those greater than the 1% Annual Exceedence Probability (AEP) event;
- the implications of climate change (sea level rise and increased rainfall intensity) and cumulative development impacts on flooding and estimated flood planning levels;
- the development control plans or policies of Wollongong City Council (WCC) and Shellharbour City Council (SCC) in relation to the management of flood risk; and
- the best available flood information for the area from WCC and SCC.

From the flooding information provided in section 6.12 of the EA, it is unclear as to whether adequate consideration has been given to these issues in their entirety, particularly with regard to events greater than the 1% AEP event to the PMF. The EA also shows the water and wastewater infrastructure components crossing flood affected areas identified as '100-year flood zone' in multiple locations. It is unclear as to why the analysis did not consider flood events greater than the 1% AEP, including potential impacts of flood behaviour on the infrastructure or resulting from the infrastructure in flood events to the PMF noting that this consideration was identified in the DGR's. Water and wastewater infrastructure are considered critical utilities and failure due to flooding has the potential to cause significant economic, social and environmental impacts including disruption to the recovery process after a flood event. In the subject area, there may not be a large cost differential to afford protection against failure and/or damages in events larger than the 1% AEP event. These events could have significant consequences and therefore should be considered in planning for this infrastructure.

It is also noted that floodplain areas within the suburbs of Calderwood and North Macquarie to Tullimbar, mainly within the SCC local government area, have not been identified in the analysis. Without an understanding of the extent, behaviour and impacts of flooding in these floodplains over all flood events, it is unclear as to how the proposal will deal with the potential impacts associated with flooding in these areas. It should be noted that SCC has recently commenced the Macquarie Rivulet flood study in conjunction with WCC which covers the watercourses draining to Macquarie Rivulet including Marshall Mount Creek within the proposed EA area.

Given the potential impacts associated with provision of this infrastructure, it is recommended that DP&I consult with both WCC and SCC as the authorities responsible for floodplain risk management in their local government areas.

Through the floodplain management program OEH has assisted WCC in completing its Mullet Creek Floodplain Risk Management Study and Plan in addition to the Macquarie Rivulet Flood Study currently under development. The information and models available in these areas would provide invaluable information to the Proponent and consent authority in its current considerations.

In summary, OEH understand that the DoPI as the approval authority is responsible for ensuring that flood risk management matters are adequately addressed in determining this proposal. The proposal for critical water and sewerage infrastructure in this area has the potential for adverse flood impacts, significant losses and flood recovery impacts can be mitigated with adequate consideration of potential flood risks in the planning and design of the works. These considerations should ensure that the infrastructure meets the operational needs of the future community to a satisfactory standard for the full range of potential flood events, including the potential impacts of climate change and does not result in any otherwise avoidable impacts or liabilities associated with flood related issues. It is presently unclear whether the flood risk management issues identified above have been addressed in the EA.

Should DP&I require any further advice on flood risk management matters, it should not hesitate to contact the OEH.

