PENRITH LAKES DEVELOPMENT CORPORATION LTD.

Nepean River Pump and Pipeline

Submissions Report

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1. Introduction

1.1 Purpose of report

The Nepean River pump and pipeline (NRPP) involves the construction and operation of a pump and pipeline system to extract water from the Nepean River upstream of Penrith weir and discharge to Penrith Lakes. The water is required to fill the lakes and provide long term top-up water supply for the Penrith Lakes Scheme.

The project is being assessed under Part 3A of the Environmental Planning and Assessment Act 1979 (the Act). In accordance with the requirements of the Act, an Environmental Assessment (EA) was prepared to assess the potential environmental effects of the project on the surrounding environment.

The EA was publicly exhibited from the 25th September 2006 until 30th October 2006 inclusive. The exhibition included notices in Penrith and Sydney newspapers (sample attached in Appendix A). The EA was available for viewing at four locations:

1. Penrith Lakes Development Corporation (PLDC) offices
2. Penrith City Council
3. Department of Planning, Parramatta
4. Department of Planning, Sydney

Six submissions were received. This report analyses and responds to those submissions. Where appropriate the statement of commitments (SOC) detailed in the EA has been adjusted to accommodate responses to issues raised.

Figure 1 illustrates where the submissions report fits in the project environmental assessment and approval process.

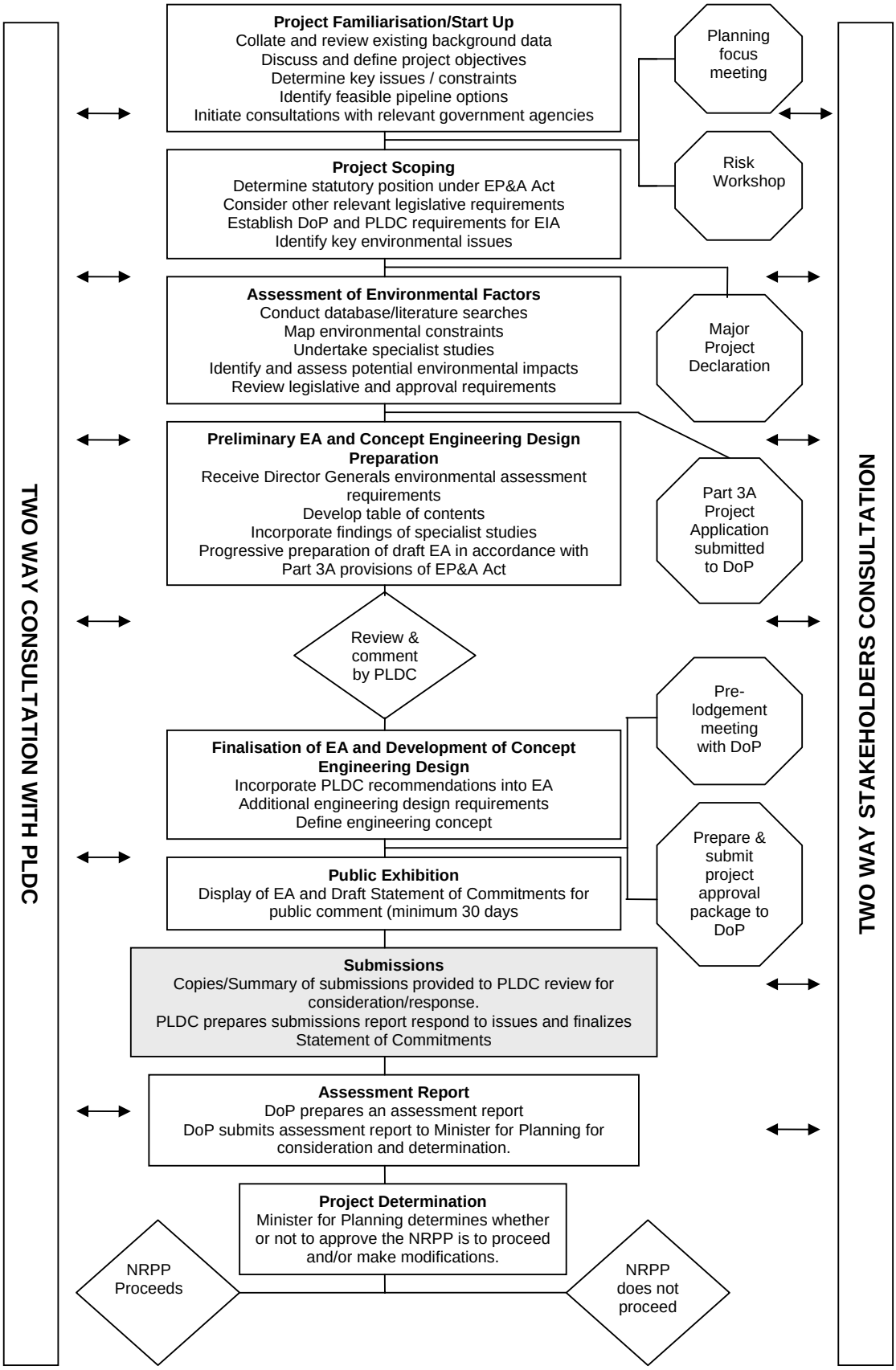


Figure 1: Approval process flow chart

1.2 Overview of project

1.2.1 Background

The Penrith Lakes Scheme has been part of the Penrith local community for more than 25 years. The Penrith Lakes Development Corporation (PLDC) was established in the 1980's with a view to achieving the planned extraction of sand and gravel to meet Sydney's medium term construction needs and to provide a major water orientated recreation facility for Western Sydney.

As the Scheme approaches completion, there are a number of projects underway. One of these is the application for the NRPP for the initial filling and long term topping up of the lakes to ensure optimum operation.

Once completed the Penrith Lakes will include 4 large lakes:

- Regatta and Warm-up Lakes which are currently operated by the NSW Department of Sport and Recreation and are used for various sporting activities.
- Lake A and B which will mainly be used for recreation including sailing, fishing and canoeing.
- Wildlife Lake which provides habitat for native plants and animals and educational opportunities.

At the completion of the Penrith Lakes Scheme (approximately 2012) all the parklands and lakes including the water management infrastructure will be handed over by PLDC to the NSW Government.

Currently the water in the Lakes is provided from urban run-off. Rain falling on the surrounding catchments of Cranebrook and the Castlereagh escarpment flows into the lakes via a series of detention basins prior to flowing into the recreation lakes. Since 1995, when the Regatta Lakes were opened to the public, water quality in these Lakes has achieved a high standard allowing swimming, canoeing, rowing and other water sports to be enjoyed all year round.

To date, no water has been extracted from the river to fill the lakes. However when construction of the lakes is complete an additional 600ha of recreation lakes will be completed. Water from another source will be required to fill the lakes, and 'top up' water to maintain the lakes within the operating water levels.

1.2.2 Project Scope

The objectives of the proposed Nepean River Pump and Pipeline project are to:

- Provide long term water supply for the Scheme, to establish a world-class water based recreational facility for western Sydney.
- Provide responsible pumping rules that protect the Nepean River and deliver adequate water to the Scheme to provide for its long term viability.
- Provide a mechanism to fill the lakes.
- Minimize any environmental impact, working towards sustainable outcomes.

The pump and pipeline project is illustrated in **Figure 2 and 3** and includes:

- A 4.3km, 900mm diameter pipeline installed below ground from upstream of Penrith

Weir to the Penrith Lakes Scheme site.

- Construction of a pump station and control building co-located with the existing public amenity building at Weir Reserve. The pump station will include a river viewing platform and seating area along the Great River Walk.
- Landscaping in the vicinity of the pump station using native shrubs and grasses.
- Upgrading of the pathway from upper Weir Reserve to the Great River Walk river side pathway.
- A screening system at the pipeline inlet with low velocity inlet to protect river users and aquatic life.

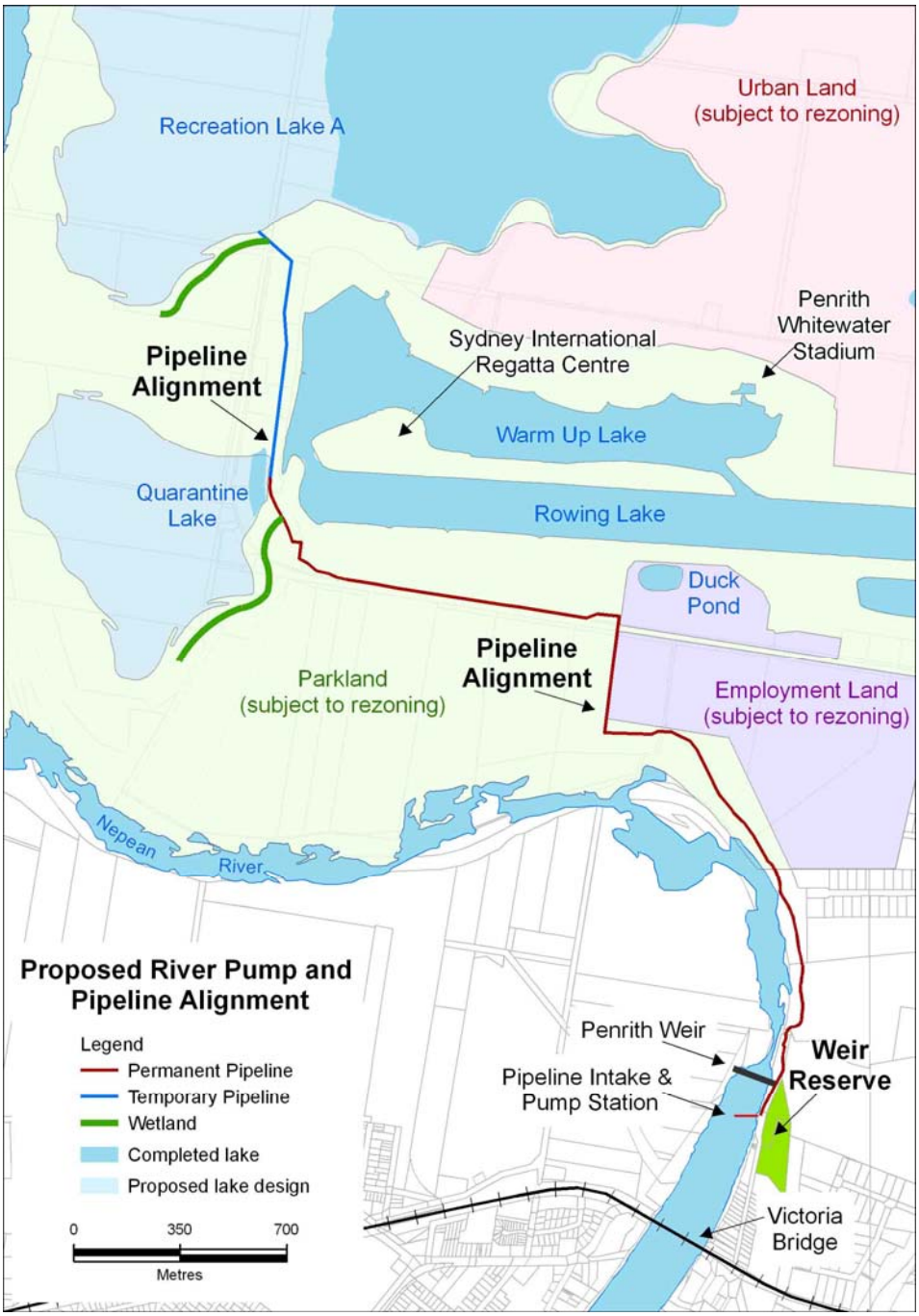


Figure 2: Nepean River pump and pipeline route

The pipeline will be constructed in time to commence filling the lakes following the opening of New Castlereagh Road and the removal of Old Castlereagh Road. The pipeline construction is expected to commence in late 2007 and to be completed over an 18 month period.

The construction will be spread over two construction periods. The pipeline from weir reserve to Lake A will be constructed in 2007/08. The final discharge will then be constructed in 2010/11 once the Quarantine Lake foreshore is completed.

The project is further detailed in the *Nepean River Pump and Pipeline Environmental Assessment August 2006* prepared by Maunsell/AECOm.

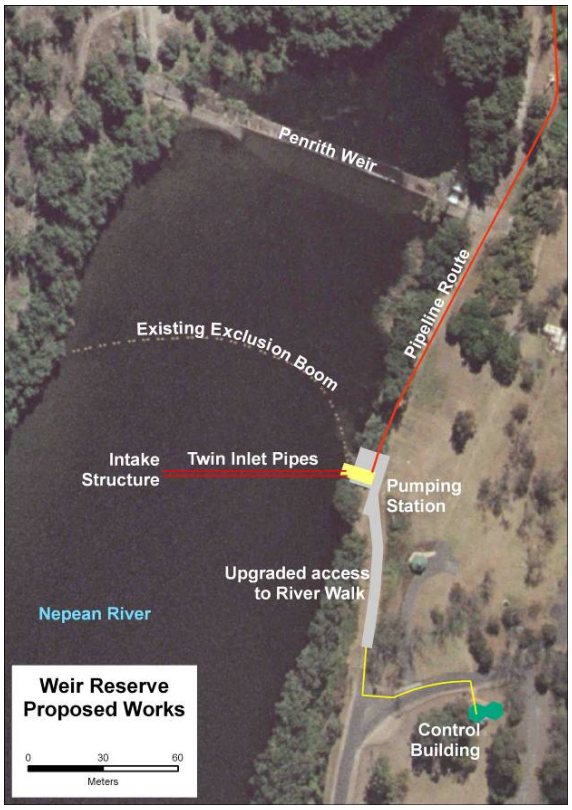


Figure 3: Weir Reserve proposed works

1.2.3 Approval Scope

As the NRPP is part of the wider Penrith Lakes Scheme, some components which make up the project have been, or will be approved through other statutory approval process'. The NRPP project is specifically seeking approval for:

1. A 4.3km, 900mm diameter pipeline that will convey water from the Nepean River to the Scheme site (this includes permanent and temporary pipelines).
2. Pump station comprising two submersible pumps built into the eastern bank of the Nepean River, each with a capacity of 500 litres per second.
3. Inlet and discharge pipe work connected to the intake structure and submersible pumps.
4. A control building that will house electronic instrumentation equipment and cabling at Weir Reserve and connections to the pump station.

5. Earthworks associated with the establishment of working areas, pipe trench excavation and backfilling, landscaping and reinstatement.
6. Constructed wetlands (including temporary and permanent systems) at the pipeline discharge point within the Scheme boundary.
7. Operation of the pump and pipeline system to fill and top up the lakes in accordance with the pumping rules. Pumping rules: pumps can start when flow over Penrith weir reaches 500ML/d, pumps automatically stop when flows over Penrith weir drop below 350ML/d.

The following features are the subject to other approvals and not the NRPP approval;

1. Quarantine Lakes both permanent and temporary.
2. Pipelines to transfer water from the Quarantine lakes to the rest of the Penrith Lakes Scheme.
3. Water management within the Penrith Lakes Scheme including the Quarantine Lakes.

2. Consideration of Submissions

2.1. Submissions summary

A total of 6 submissions were received from the public exhibition of the NRPP Environmental Assessment, as summarised in **Table 1**. Copies of submissions (excluding submission 1-private submission as this was not provided to PLDC by the DOP) are included in the **Appendix B.**

Table 1: Submission summary

Submissions type	No of submissions
Government agencies • Dept of Environment and Conservation (DEC) • Dept of Primary Industries (DPI) • Penrith City Council (PCC)	3
Private companies	1
Individuals	2

Two of the three private submissions supported the project, one objected to the project.

The Department of Primary Industries (Aquatic Habitat Protection) had no objections to the project and provided comments to be constructive. The Department of Environment and Conservation provided final comments, while Penrith City Council objected to the project and provided a series of issues to be considered and addressed.

In addition, the Department of Planning provided a brief summary of issues to be addressed in the submission report.

2.2. Submissions response

2.2.1. Private submission 1 (no name provided)

Submission summary:

- At this time, NSW and Australia are in a very serious drought situation and water should not be taken from the Nepean River just to fill Penrith Lakes for recreational purposes. Water should only be taken when the river is in flood situations. This should only be done if the Water Authorities who control water allocations from our rivers give permission for this to happen.
- disagreed with the proposed pumping rules - suggested that pumps can be started when natural flows over Penrith weir reach 1000ml/day with the permission of the controlling Water Authority; and pumps will stop automatically when flow over the weir drops to 500ml/day.
- from time to time, the riparian valve below Warragamba Dam is opened to let water into the Nepean-Hawkesbury River system for various reasons: to flush these rivers with fresh water, to supply irrigation with adequate water, and to ensure that North Richmond WTP has an adequate supply to operate.

Response:

The pumping rules have been developed following advice from experts including the Independent Expert Panel for the Hawkesbury Nepean, Shoalhaven and Woronora Catchments and detailed modelling of river flows and lake water levels. As part of the EA extensive investigations were undertaken to ensure that the environmental flows in the Nepean River and downstream irrigators and North Richmond Water Treatment Plant will not be affected.

The project has been submitted to the Department of Planning for assessment under Part 3A of the Environmental Planning and Assessment Act 1974. The proposed pumping rules have been reviewed by the Department of Planning, Department of Natural Resources, Department of Primary Industries (NSW Fisheries) and other Government agencies. There have been no objections raised to the pumping rules by these Government agencies. The Department of Primary Industries (Aquatic habitat Protection) have noted that the pumping rules are suitable to reduce the risks of interfering with fish migration.

The pump will automatically start if the lakes are below optimum levels and the flow over Penrith Weir exceeds 500ML/d, or 250mm deep over the weir. The pump will transfer water to the lakes until the flow over Penrith weir drops to below 350ML/d of 200mm over the weir. These rules protect access to water for irrigators and other downstream water users.

The pumping rules proposed in the EA are the most appropriate rules to protect the River health and downstream water users while providing adequate water for the Penrith lakes.

2.2.2. Private Submission 2 (Castlereagh Academy)

Submission summary:

- The project is a necessary adjunct to the effective operation of the overall concept of the Penrith Lakes Scheme which is and will continue to be a positive benefit to the wider Sydney area for recreation and sport.
- The operational rules imposed regarding times of pumping are warranted and fair and the regard for health of the river system is commendable.
- The provision of the pipeline ensures the continuing adequacy of water obtained in periods of abundance.

Response:

Noted.

2.2.3. Private Submission 3 (Boral)

Submission summary:

- Boral as an adjoining landholder and shareholder of the Penrith Lakes Development Corporation supports the proposal. The pump and pipeline are essential for the long term water supply for the lakes Scheme.
- The comprehensive environmental assessment that accompanies the application demonstrates that the project is environmentally acceptable and will facilitate a project that will provide significant benefits.

Response:

Noted.

2.2.4. Department of Conservation (DEC)

Submission summary:

Pollution Control

- The project is not a scheduled activity under the Protection of the Environment (Operations) Act 1997 (POEO Act), and will not require an environmental protection licence.
- The Proponent and the contractor will need to comply with the general provisions of the POEO Act during the construction and operation of the pump and pipeline. The appropriate regulatory authority under the POEO Act for this project is the local Council.

Species protection

- page 8 of the flora and fauna assessment (Appendix D) indicated that flora growing in the study area were surveyed by undertaking a general habitat assessment, and that targeted searches for threatened species were conducted within likely habitats.

  Appendix D, page 71 (of the EA), reports the presence of River-flat Eucalypt Forest, an endangered ecological community, in the study area. This habitat is known to be a habitat for *E benthamii* (vulnerable plant species). Appendix D also reports, at page 16, Table 1, that there was no habitat for *E benthamii* in the study area. On this basis, DEC is not confident that a targeted survey for *E benthamii* was undertaken.

  Please provide a better explanation of the reasoning and assessment of this species.

Aboriginal cultural heritage

- Appendix E of the EA (Aboriginal Cultural heritage assessment report) contains recommendations for handling Aboriginal heritage matters. In undertaking the project, the proponent should follow the recommendations of the report as well as the recommendations made by the Aboriginal community respondents during the assessment process.

Response

Pollution Control

PLDC agrees that the project is not a Scheduled activity and as such does not require an environmental protection licence.

The Construction Environmental Management Plan (CEMP) will provide the mechanism to ensure compliance with the general provisions of the POEO Act.

Species protection

The vegetation survey was conducted by random meander which is the approved survey methodology of DEC for vegetation surveys and no Eucalyptus species were recorded in that section. The area near the Nepean River was defined as River-flat Eucalypt Forest because it was dominated by *Casuarina cunninghamiana* which does not occur in Swamp Oak Floodplain Forest and was in poor condition, with a much reduced species diversity.

The nearest record for *E. benthamii* is 9 km from the study area. In addition, the DEC species profile for *E. benthamii* lists the associated species at known sites as including *Eucalyptus elata, E. bauerina, E. amplifolia, E. deanei E. crebra, E. punctata,* and *Angophora subvelutina*. Understorey species include *Bursaria spinosa, Leptospermum flavescens, Acacia filicifolia, Pteridium esculentum* and a wide variety of agricultural weeds. None of the listed associate species were recorded in the River-Flat Eucalypt Forest in the study area. The RFEF in the study area exists as a thin degraded strip of vegetation dominated by *Casuarina cunninghamiana* ssp. *cunninghamiana* in the canopy and exotic herbaceous species in the understorey. It is therefore highly unlikely that the RFEF in the study area is potential habitat for *E. benthamii*, given the poor condition, simplified diversity and the fact that none were recorded despite random meander transects undertaken through the RFEF. No further surveys are recommended for this issue.

Aboriginal cultural heritage

The recommendations made by the Aboriginal community respondents during the assessment process have been generally included in the Statement of Commitments (SOC), specifically SOC 2.6.3 commits PLDC to ensuring that all earthworks are monitored by a suitably qualified archaeologist.

2.2.5. Department of Primary Industries (Aquatic Habitat Protection)

Submission summary:

Project and pumping rules

- The Department has not objection to the proposal.
- The proposed extraction licence conditions related to flow rates over the Penrith weir appear to be suitable to reduce the risks of interfering with fish migration.

Aquatic weed transfer

- The issue of extraction also infecting Penrith Lakes with aquatic weeds raises the issue of the potential use of a sediment control system, such as a CDS unit, to remove small particles of aquatic weeds before they enter the treatment train. This unit would also assist in removing sediment and nutrients from the raw water.

Construction water quality

- The primary issue of concern is the potential impact of the works on the water quality in the Nepean River from the construction of the intake structures and the crossing of Boundary Creek. Consequently, the Department of Planning should ensure that stringent controls on sediment and erosion controls are in place and monitored by the relevant authorities.

Response:

Project and pumping rules

Noted.

Aquatic weed transfer

During the extraction, the pump station, wetland and the associated silt fences have been designed to prevent migration of aquatic weeds. The inclusion of a sedimentation control system would provide an additional factor of safety by adding another barrier. However, the inclusion of a sedimentation control would also attract additional maintenance requirements, would have minimal impact on nutrient removal and is not considered a necessary requirement.

Construction water quality

The CEMP will provide the mechanism to ensure that stringent controls are in place and monitored by the construction contractor and the independent Environmental Management Representative.

2.2.6. Penrith City Council (PCC)

Submission summary

Construction compound/pipe laydown area

- Objects to the proposed location of the temporary site compound (on the basis that no location information was provided), including administration, amenities, site office buildings, etc within Weir Reserve or in close proximity of the river. Only stockpiling and storage of materials for immediate works may be suitable where it is sensitively placed (in relation to existing landscaping and access), and for a limited timeframe (ie less than a month).
- No work should occur within Weir Reserve on weekends.

Traffic management

- Any necessary Roads Act approvals should be obtained prior to carrying out works not in PLDC ownership.
- The pipeline should be bored under Castlereagh Road to maintain its current condition and minimise traffic impacts.
- A Traffic Management Plan should be prepared by an appropriately qualified person and implemented during the construction phase.
- Access to Weir Reserve via the existing public road should be maintained.
- A dilapidation report on existing infrastructure, including roads and buildings should be submitted (to Council?) prior to commencement of works. Any damage should be rectified by PLDC prior to finalisation of works.

Cumberland Land Snail.

- Council's Bush generation contractor has found evidence (ie shells) that the Cumberland Land Snail has existed north of Boundary Creek. This matter should be reviewed and any necessary actions included in the flora and fauna assessment, and implemented during construction.

Impact on the Great River Walk

- The Great River Walk (GRW) should be reinstated where impacted by works.
- A landscape plan showing proposed plantings and vegetation within the easement and riparian zone should be prepared and implemented.
- Reinstatement of landscaping from Chainage 900-1700 represents a prime opportunity for PLDC to implement their commitment to the GRW.

Control building in Weir Reserve

- Proposed location and design of the control building on the reserve should minimise any potential vegetation loss.
- The control building should reflect a contemporary design in its context, CPTED principles and provide for future utility, including adaptive re-use.
- If the existing building is to be retained, this building should be an integrated addition to present as a single built form (refer to Council's recommended built form for an addition to the existing).

Pump station/platform

- The concrete wall elements of the proposed pump station/platform do not sit aesthetically well in this natural setting.
- Concerns are raised over the use of gabion walls in terms of structural integrity, vandalism and maintenance.
- Other options should be investigated such as the use of locally sourced, natural materials compatible with the riverbank setting which also meet the engineering construction requirements of the platform. From a visual and maintenance perspective, concrete walls embedded with Nepean River Stone, as used in the main entry gates to the SIRC, are recommended.

Potential for future connection to pipeline

- As recommended in the recent review of the Penrith Lakes Water Plan, the pipeline should be constructed so as to permit future connection of treated effluent (from the Penrith STP?) upon acceptable water quality being achieved.

Response

Construction compound/pipe laydown area

The Department of Planning did not require plans of the construction compounds as part of the EA submission. To assist PCC in understanding the scope of the construction impact on Weir Reserve **Figure 4** (drawing 20019005-CI-2002) indicates the potential size and location of construction compounds and public access restriction areas. The main site office and compound would be located within the Penrith Lakes Scheme with other site compounds located within Weir Reserve.

Two construction compounds are proposed in Weir Reserve, the location of which will be determined with the construction contractor as part of the CEMP. PLDC and the construction contractor will work with PCC in the development of the CEMP to determine the best

location for the construction compounds which addresses construction requirements and minimises the disruption to the users of Weir Reserve.

PLDC had proposed Saturday morning for construction to reduce the time frame of disruption at the park while working in a low use time (Saturday mornings). If work is not undertaken in Weir Reserve on weekends the construction period for the project would extend by 2 months. PLDC and the construction contractor will work with PCC to manage the weekend works to minimise the disruption to the users of Weir Reserve.

Additional detail has been added to the SOC 2.13.1 addressing this issue.

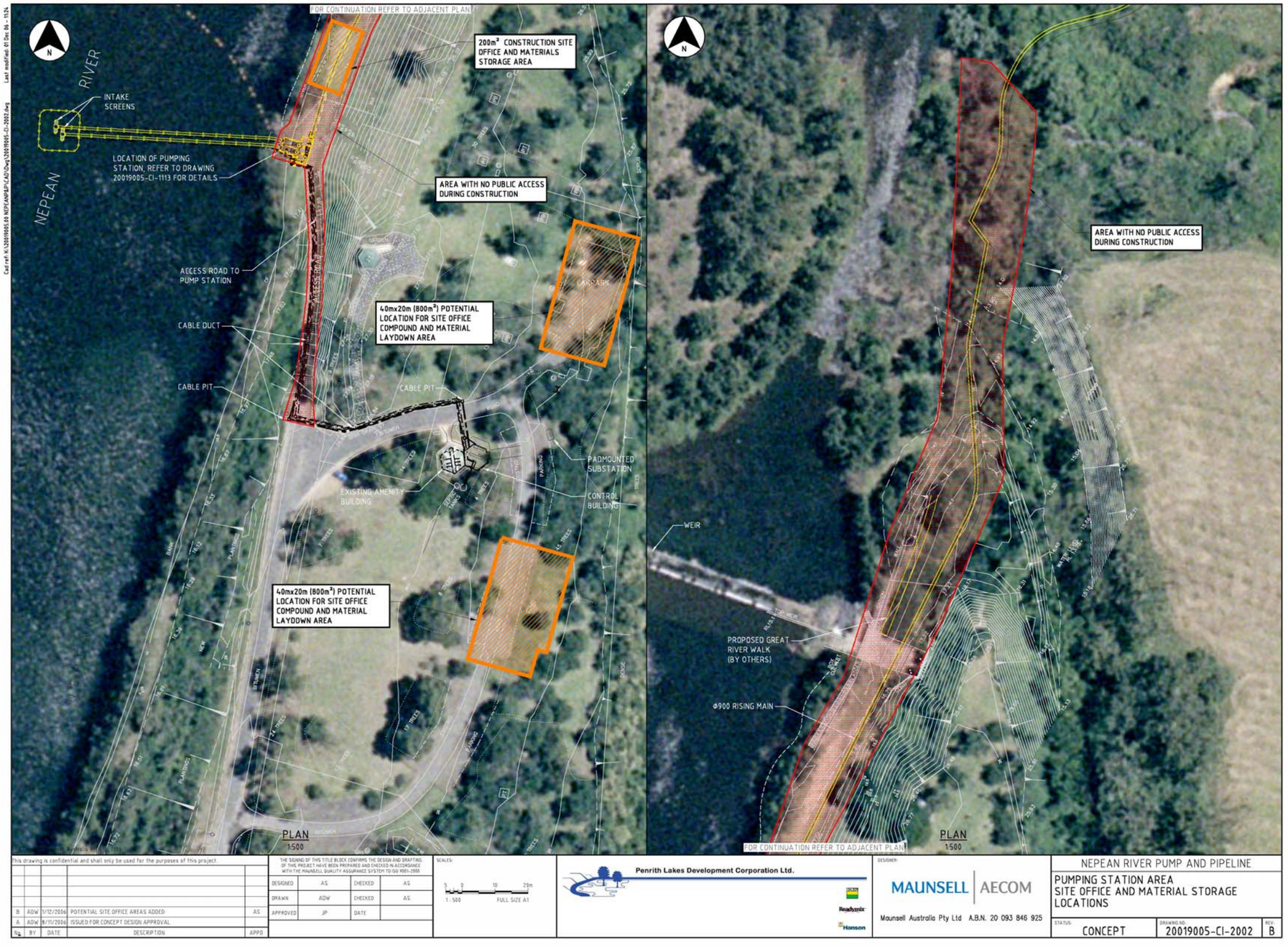


Figure 4: Site office and construction compounds Weir Reserve

Traffic management

As required under Part 3A of the EP&A Act, Roads Act approvals will be sought where required. The approvals are required under clause 75V of the EPA Act to be consistent with the Part 3A approval.

Castlereagh Road at Chainage 2000 will be directional drilled to avoid disruption to traffic. Crossing of Castlereagh Road at Chainage 4250 will occur following the opening of new Castlereagh Road and closure of old Castlereagh Road (see Appendix C for chainages).

A traffic management plan will be prepared as part of the construction environmental management plan (CEMP) as specified in the SOC 1.1.6 h.

It is not anticipated that access to Weir Reserve from the public road will be impacted by the construction of the NRPP. Traffic arrangement will be subject to the preparation of the traffic management plan.

It is considered that the NRPP construction will have no impact on existing buildings and should have no impact on existing roads. As such, we did not deem it necessary to include a dilapidation report as part of this project. It will be requirement of the construction contract to make good any damage caused by the construction of the NRPP.

Cumberland Land Snail.

Biosis Research Pty. Ltd was commissioned to undertake a targeted assessment of Cumberland Plain Land Snail along the proposed Nepean River to Penrith Lakes pipeline route. This assessment was carried out in response to the comments on the initial flora and fauna assessment and concerns of Penrith City Council regarding the presence of Cumberland Plain Land Snail along the route.

The following advice was provided by Biosis Research Pty. Ltd.

Cumberland Plain Land Snail *Meridolum corneovirens* is listed as Endangered on Schedule 1 of the *TSC Act*. This species is predominantly nocturnal and is a fungivore. Exfoliated bark, logs, leaf litter and other structures including man made litter such as sheet metal, and plastic can provide shelter and foraging habitat (NPWS 2000). The snail is restricted to eucalyptus woodland communities and edges of River Flat Eucalypt Forests of the Cumberland Plains of Western Sydney.

The initial survey of the route options was conducted in June 2005 with the report being produced in March 2006. An additional targeted survey for Cumberland Plain Land Snail was conducted in the vicinity of Boundary Creek at the Nepean River in Penrith on 22 November, 2006. The survey consisted of a visual assessment of the available habitat and hand raking of leaf litter and turning of logs and rubbish. Prior to the field survey Penrith City Council's Bush Regenerator Contractor was contacted to determine the location of potential Cumberland Plain Land Snail shells which were observed by the contractor during bush regeneration and weed control activities associated with the Great River Walk in Mid 2006.

No Cumberland Plain Land Snails or shells were recorded during the targeted survey. Due to construction of the Great River Walk there has been significant change in the site with large areas cleared for the widening of the track, installation of bridges over Peach Tree Creek and Boundary Creek, and associated weed control and site rehabilitation. The existing habitat was considered to be in poor condition.

The existing mitigation measures from the initial report, such as weed control strategies and site rehabilitation, will reduce the impact upon the snail if they are present at the site. Other mitigation measures include the minimization of the footprint, following areas disturbed by the upgrade to the Great River Walk and replacement of any ground habitat during site rehabilitation.

An Assessment of Significance was undertake for the Cumberland Plain Land Snail under Section 5A of the *Environmental Planning and Assessment Act 1979* (NSW). The assessment can be seen in Appendix D. The Assessment of Significance concluded that there was unlikely to be a significant impact to the Cumberland Plain Land Snail in the local vicinity and that an SIS is not recommended.

No changes to the SOC is proposed.

Impact on the Great River Walk

The Great River Walk will be re-instated where impacted by works as stated in SOC 2.8.2: "The working width will be reinstated along the entire length of the pipeline route, as soon as reasonably practical".

A landscape plan showing proposed plantings and vegetation within the easement and riparian zone will be prepared and implemented. SOC 1.1.4 has been amended to include provision of the landscape plans to be reviewed and approved by the Accredited Certifier.

PLDC are committed to the Great River Walk. PLDC are in the process of developing a riverbank management plan which will address the rehabilitation of the riverbank within the Penrith Lakes Scheme including the integration of the Great River Walk.

The establishment of the Great River Walk between chainage 900-1700 is not viable until the cessation of quarrying and major earthworks activities in the southern part of the Scheme. The path would be a dead-end where an operating haul road crosses the river. Encouraging public access to this point is undesirable as even with appropriate fencing people have accessed the quarry site where heavy machinery pose a significant safety risk for trespassers.

The pipeline landscaping will be undertaken such that a path can be placed over the top of the pipeline with minimum works once a link to the Regatta Centre or continuation of the Great River Walk for the full length of the Scheme is possible.

Control building in Weir Reserve

The design team (including architects Choi Ropiha) have developed and assessed a number of options for the control building in consultation with PCC. Four options were assessed in terms of architectural merit (the building and how it fits with the surrounding landscape), user outcomes and cost. The options being:

1. Small stand alone building
2. Twin hexagon integrating with existing toilet block
3. Alternative hexagon integration with existing toilet block (preferred by PCC)
4. New toilet block and control room

Appendix E provides concept drawings of the four options.

In consultation with the architects PLDC's preferred option is option 2, the twin hexagon shape integrating the existing toilet block with the new control building (**Figure 5**: Drawing

20019005-CI-2005, Control Room General arrangement and elevation). The reasons for the choice were:

- Option 1, the small stand alone new building was not preferred by PCC.
- Architects advice is that option 2, the twin hexagon fits better in the overall landscape than the alternative extension to the existing toilet block (option 3) for the following reasons:

    1. Increased natural light penetration, ventilation and also visibility through the building
    2. The building is parallel to the main access road
    3. This option would retain the original hexagon building. The existing internal fixtures and fittings largely left untouched.

- Option 3, the alternative hexagon had a number of disadvantages, as follows:

    1. This option would not retain much of the original building externally or more particularly, internally. This would question the purpose (and cost) of trying to retain the existing building.
    2. Internal reconfiguration and extension of the existing toilet block results in the need for stripping out and replacing all wall and floor tiling.
    3. Removal and relocation of toilet pans and cisterns may result in the need for new ones.
    4. The total floor area is marginally larger than the previous option (by approx. 2.5sqm).
    5. The existing toilet cubicle depth and space around the access to the cubicle does not comply with the Australian Standard for a disabled toilet. That is, the existing spaces do not allow for wheelchairs or for people with ambulant disabilities.
    6. As the gazebo roof form does not relate to the toilet planning below it, skylights will also not be able to relate to these spaces. Insertion of skylights into the toilets would result in awkward ceiling and roof geometries.
    7. Additional cost of $50,000.

- Option 4, the entirely new building and toilet block was excessive in the additional cost of $157,000 in comparison to option 2 for only a marginal benefit in terms of user outcomes and architectural merit.

Based upon the above PLDC propose option 2 (**Figure 5**). If PCC wishes to see an alternative outcome the funding of any additional costs over and above the PLDC preferred option will need to be sort from elsewhere.

Pump station/platform

The Nepean River stone up stand wall concept will be adopted as part of the detailed design for the pump station platform similar to that provided of the Sydney International Regatta Centre main entry gates. The gabions have been designed to withstand the loadings of and remain as part of the proposed design. The location of the gabions, under the platform hidden from view with little to no access should minimise the risk of vandalism.

Potential for future connection to pipeline

Potential for future connection to the pipeline has been included in the design with blanked off T-piece located at approximately chainage 300 and chainage 1675 to enable future connection and discharge of water from the Sewerage Treatment Plant (STP).

An additional commitment has been added (SOC 1.1.9) stating “The pipeline will be designed and constructed to facilitate future connection and discharge of water from the Penrith STP”.

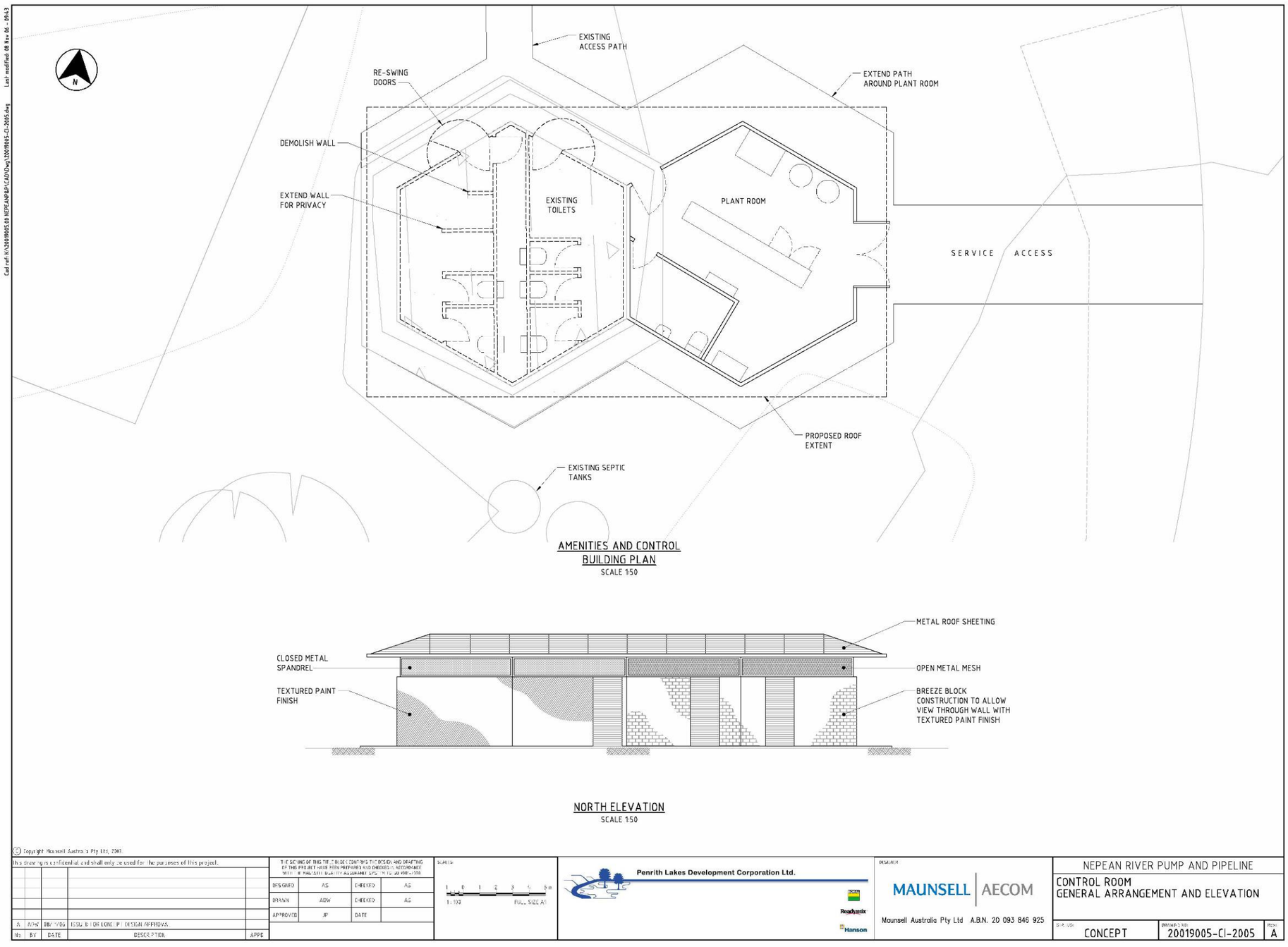


Figure 5: Proposed Control room twin hexagon co-located with existing toilet block.

2.2.7. Department of Planning (DOP)

Submission

Temporary and the permanent Quarantine Lake

- Describe relationship between the temporary and permanent Quarantine lakes, including approval status and other relevant details.
- Construction of temporary Q lake, its lifespan and what happens to it afterwards.
- Timing of construction and operation of the permanent Quarantine Lake.
- Include necessary impact assessment of the temporary Q lakes and wetlands.
- Figure 2.2 of the EA suggests water will be discharged directly from the Q Lake to Lake A. Elsewhere, it is suggested that it will discharged directly to the warm up lake. Which is correct? Does this diagram show the temporary situation?

Prohibited development

- The EA indicated that the NRPP project is a prohibited development on land zoned 6(b) and 6(d) – page 23 of EA. The discussion regarding assessment of prohibited development is not clear and needs to be adequately explained.

Water extraction and pumping

- Are there any proposals to cease pumping when flow in the Nepean exceeds 5,000ML/day to protect water quality (see p. 28 of the WRL report)? The Aquatic Weed Transfer Control Report suggests this upper limit would be about 2,500ML/day - p. 1). Also, will water extraction be conducted so as to avoid the rising limb of the hydrograph (WRL p. 28)?

Scope of requested approval

- it needs to be made explicitly clear that the approval of the Minister is being sought for water extraction. The word ‘operation’ of the NRPP project is not as explicit.

Licences and Statutory Approvals

- indicate if an EPL would be required from the DEC for the project.

Need for diagrams/photomontages of the buildings

- it is essential that the Submissions Report contain artist impressions/photomontages of the final design for the ‘visible’ components of the proposed infrastructure (control building, pump station, construction compound), including landscaping proposed for the riparian areas and affected parts of the GRW.

Impact of coffer dam on flooding (and vice versa)

- it is unclear how the coffer dam won’t exacerbate flooding. Are there any adverse implications from allowing the flood waters to flow over the dam?

Noise mitigation measures

- Do the predictions assume the mitigation measures on page 117 (where they directly contribute to noise reduction) or are they additional measures? Any complaints mechanism in the mitigation measures? Any issues/impacts resulting from additional working hours within the scheme boundary area? From whom will approvals be sought for additional work hours?
- The Noise Assessment suggests consideration be given to the use of temporary barriers to mitigate noise impacts (eg at p. 16 of the Wilkinson Murray Report). However, there does not appear to be any suggestion in the EA that this option will be considered (eg. at p. 117).
- There should be a complaints mechanism committed to in the noise section.

Response

Temporary and the permanent Quarantine Lake

The NRPP is proposed to be constructed in two stages. An initial interim system with discharge to the south western portion of the proposed Lake A and the final discharge to the Quarantine Lake (**Figure 1**). The temporary discharge is required to enable the lake filling to commence in advance of the construction of the Quarantine Lake.

Both the permanent and temporary systems include a triple cell wetland system.

Temporary system:

The temporary discharge will be to the south western corner of Lake A. The 'quarantine' facility will be provided through a series of low embankments isolating the corner of the lake from the broader Lake A area. The wetland will be constructed along the southern shore of Lake A. The temporary system will operate from approximately 2008 until Lake A, Lake B and the Wildlife Lake are full. In any event the permanent system will not be able to commence operation until it is completed in approximately 2012. Once the temporary pipeline is decommissioned the temporary quarantining embankments will be removed and the area integrated into Lake A.

Lake A is one of the major lakes which forms the Penrith Lakes Scheme. The Lake construction (on the western side of Castlereagh Road) is approved as part of Development Application 4 for the Penrith Lakes Scheme and subsequent detailed design approvals. The temporary quarantine facility does not require approval as part of the NRPP project. The temporary treatment wetland is specifically required for the treatment of the water pumped from the River. As such the wetland system requires approval as part of the NRPP approval.

From the temporary quarantine area, water will cascade to the rest of Lake A. The water will then be either pumped or flow by gravity through specifically constructed pipelines to other recreational lakes within the Scheme. The movement of water within the Scheme is not part of the NRPP approval.

Permanent system:

The Quarantine Lake is located in the south western corner of the Penrith Lakes Scheme. Currently the area is utilised for the Readymix and fine sand processing plants. The processing plants will be decommissioned in approximately 2008 and the area quarried for the sand and gravel prior to the Quarantine Lake being constructed in approximately 2012.

The Quarantine Lake is one of the major lakes which form the Penrith Lakes Scheme. The Lake construction is approved as part of Development Application 4 for the Penrith Lakes Scheme and subsequent detailed design approvals. The Quarantine Lake does not require approval as part of the NRPP project. The treatment wetland is specifically required for the treatment of the water pumped from the River. As such the wetland system requires approval as part of the NRPP approval.

From the Quarantine Lake water will cascade to be pumped to either Lake A or the Warm-up Lake depending on the needs of each lake and the water quality within the Quarantine Lake. The water will then be either pumped or flow by gravity through specifically constructed pipelines to other recreational lakes within the Scheme. The movement of water within the

Scheme is not part of the NRPP approval as it is addressed in previous Development Approvals.

Prohibited development

The NRPP project will involve the construction and operation of a new water supply pipeline, intake/discharge pipework and structures, pump station and instrumentation equipment, and a constructed wetland and Quarantine Lake. The following discussion regarding the permissibility replaces that provided in the EA.

The NRPP project is subject to the provisions of two LEPs (*Penrith (Urban Lands) LEP 1998 (PLEP 1998)*; *Penrith LEP 1996 – Industrial Lands*) and an Interim Development Order (*Interim Development Order No.93 – Penrith)*. These environmental planning instruments (EPIs) are identified in Table 3.2, along with a description of the relevant zone and zone objectives.

Table 2: Relevant LEP zones

Relevant LEP	Zone	Objectives of Zone[1]
Interim Development Order No.93 – Penrith	1(a2) Rural 'A2'	None specified.
Penrith LEP 1996 – Industrial Lands	4(a) General Industry Zone	*To encourage a diversity of industrial employment generating activities.* *To promote development which observes responsible, and environmentally sound, management practices.* *To promote development which makes efficient use of industrial land.*
Penrith LEP 1998 – Urban Lands	6(b) Proposed Public Recreation and Community Uses	*To reserve land for a variety of open space, recreational and community pursuits.*
Penrith LEP 1998 – Urban Lands	6(d) Regional Open Space	*To reserve land for regional open space.* *To ensure that development:* *a) Is for a purpose that promotes or is related to the use and enjoyment of open space;* *b) Does not substantially diminish public use of or access to open space; and* *c) Does not adversely affect the natural environment, any items or areas of heritage significance or the existing amenity of the area.*

Source: *Interim Development Order No.93 – Penrith, Penrith LEP 1996 – Industrial Lands, Penrith LEP 1998 – Urban Lands*.
Interpretation by Maunsell, 2005.

The land use zoning of NRPP project is shown in Figure 3.2 of the EA.

[1] Not all objectives of each zones are listed here.

As the proposal is being carried out by PLDC, which is not considered to be a 'public authority', the project does not fall within the definition of a 'public authority undertaking' under the relevant EPIs. Note that the pipeline is being undertaken in accordance with an agreement with the State Government for eventual handover to the Government. Accordingly, the permissibility of the proposed NRPP is described in the table below:

Table 3: Zones and permissibility

Zone	Permissibility	Comment
1(a2) Rural	Prohibited	Development of the NRPP project on land zoned 1(a2) Rural 'A2' is prohibited as it does not fall within the land uses listed under clause 3 of the *Interim Development Order No.93 – Penrith.*
4(a) Industrial	Permissible with consent	Development of the NRPP project on land zoned 4(a) is permissible with consent as the construction of a pipeline is a land use that is 'any other land use other than those included in Item (b)(iii)' (which lists prohibited development).
6(b) Proposed Public Recreation and Community Uses	Prohibited	Furthermore, development of the NRPP project on land zoned 6(b) – Proposed Public Recreation and Community Uses and 6(d) – Regional Open Space is prohibited as the development does not fall within the definition of a utility undertaking that is provided.
6(d) Regional Open Space	Prohibited	

Consultations held with representatives of PCC during May and June 2005 regarding the permissibility or otherwise of NRPP confirmed the project would be prohibited under *PLEP 1998*.

However, *Sydney Regional Environmental Plan No. 11 – Penrith Lakes Scheme* (SREP 11) applies to land within the Penrith Lakes Scheme, which includes part of the NRPP project located on land zoned 1(a2) Rural 'A2' as described above. Under clause 8(1) of SREP 11 '*development for the purposes of implementing the Penrith Lakes Scheme may, with development consent, be carried out on land to which this plan applies*'. Therefore development within the Penrith Lakes Scheme is permissible with consent on land covered by SREP 11.

The NRPP was declared a Major Project under State Environmental Planning Policy (Major Projects) 2005. Development for the purpose of lake formation within the Penrith Lakes Scheme (including infrastructure location in or outside that area) is listed under Schedule 2 of SEPP (Major Projects) as being a specified site subject to Part 3A of the EP&A Act.

Under clause 75J(3)(b) of the EP&A Act the Minister cannot approve of the carrying out of a project '*that would (but for this Part) be wholly prohibited under an environmental planning instrument*'. As the NRPP project is not wholly prohibited under the relevant environmental planning instruments, the proposal can be approved under Part 3A of the EP&A Act.

Water extraction and pumping

An important part of the NRPP system design and modelling was to determine if the water quality in the river was adequate to transfer to the Penrith Lakes. Historical water quality data was analysed, the analysis identified that in very high flows water quality deteriorated below the acceptable quality for the lakes. High flow cut off limits were subsequently included in the modelling of pumping from the river to enable the modelling to more accurately assess the water balance implications for the Scheme lakes.

In operation, the high end cut-off will be based on water quality trigger values using real time monitoring of water quality in the river. Sensors located at the pump station will monitor total nitrogen, chlorophyll-a, total phosphorus, and turbidity. When the trigger level for these water quality parameters are reached the pump will automatically cut-off.

Scope of requested approval

The scope of the project being submitted for approval is provided in Section 1.2 of this report.

Licences and Statutory Approvals

As noted by DEC in their submission to the NRPP EA, the project is not a scheduled activity under the Protection of the Environment (Operations) Act 1997 (POEO Act), and will not require an environmental protection licence.

Need for diagrams/photomontages of the buildings

Diagrams and concept drawings have been provided throughout this report to provide greater clarity of the proposed physical features of the NRPP.

Impact of coffer dam on flooding (and vice versa)

The coffer dam could have minor local impacts during a flood event. However, the probability of a flood occurring during the period when the coffer dam will be in place is considered very low. Mitigations would be put in place to minimise any potential impacts that could affect local flood levels during construction. These include restricting construction to dryer months, restricting the length of coffer dam that can be installed at any one time (staging construction) and setting the top level of the coffer dam to say the 2 year flood level, so that in the event of a significant flood, the coffer dam would overtop and fill. Whilst this would severely impact on construction activities, it would provide a failsafe system to prevent any significant flooding. This is addressed in SOC 2.2.1

Noise mitigation measures

The noise mitigation measure proposed in the EA and committed to the SOC are designed to minimise the impact of the construction noise on adjoining land holders and Weir Reserve users through the provision of information to impacted parties and the management of working hours. The mitigation measures are unlikely to make any significant impact on the noise level.

Temporary barriers may provide some minor attenuation to noise, however they are not considered practical due to the topography of the land and the length of the construction work area.

Approval for any additional working hours would only occur for works to cross haul roads within the Penrith Lakes Scheme. This area is included in PLDC's Environment Protection Licence under the POEO Act (EPL 2956) for the extraction and rehabilitation of the Penrith Lakes Scheme.

Signage will be provided in Weir Reserve with contact details of the construction contactor and/or PLDC during the construction activities. An information sign will be provided at the completed pumping station explaining the role of the pumping station and PLDC's contact details. These commitments have been added to the SOC (new commitments 2.8.5 and 4.3.3).

3. Conclusion

3.1. Statement of Commitments

The SOC prepared as part of the EA has been updated to include additional commitments and amendments to commitments arising from the submissions received during public exhibition.

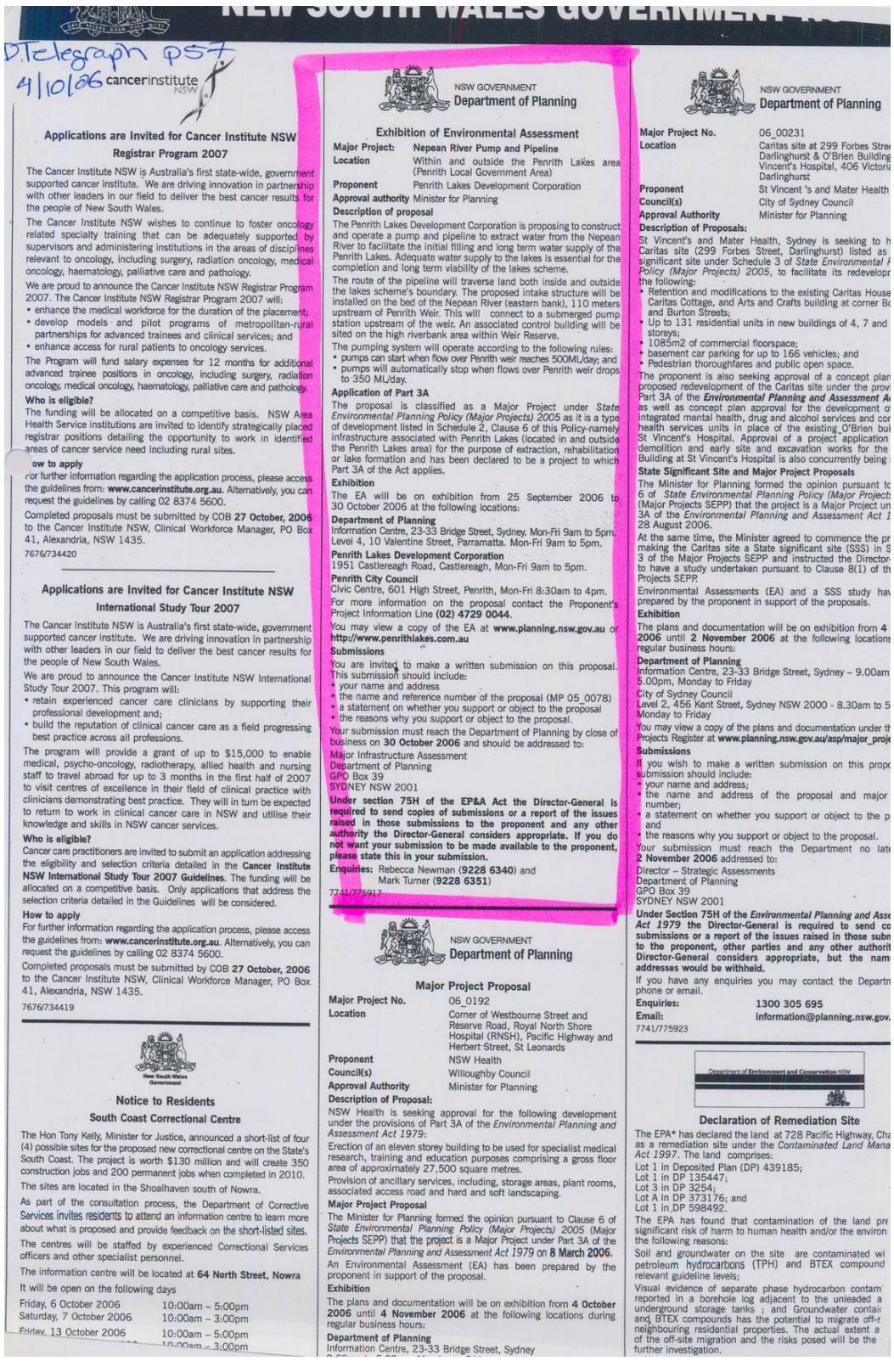
New/amended commitments are listed below:

1.1.4
1.1.9
2.13.1
2.8.5
4.3.3

A full and final SOC is provided in **Appendix F.**

All issues raised have been adequately addressed. Based upon the detail provided in this submission report, including the revised SOC, PLDC seek approval of the NRPP under Part 3A of the Environmental Planning and Assessment Act 1979.

Appendix A: Public Exhibition advertisement



D.Telegraph p57
4/10/06

cancerinstitute NSW

Applications are Invited for Cancer Institute NSW Registrar Program 2007

The Cancer Institute NSW is Australia's first state-wide, government supported cancer institute. We are driving innovation in partnership with other leaders in our field to deliver the best cancer results for the people of New South Wales.

The Cancer Institute NSW wishes to continue to foster oncology related specialty training that can be adequately supported by supervisors and administering institutions in the areas of disciplines relevant to oncology, including surgery, radiation oncology, medical oncology, haematology, palliative care and pathology.

We are proud to announce the Cancer Institute NSW Registrar Program 2007. The Cancer Institute NSW Registrar Program 2007 will:

- enhance the medical workforce for the duration of the placement;
- develop models and pilot programs of metropolitan-rural partnerships for advanced trainees and clinical services; and
- enhance access for rural patients to oncology services.

The Program will fund salary expenses for 12 months for additional advanced trainee positions in oncology, including surgery, radiation oncology, medical oncology, haematology, palliative care and pathology.

Who is eligible?

The funding will be allocated on a competitive basis. NSW Area Health Service institutions are invited to identify strategically placed registrar positions detailing the opportunity to work in identified areas of cancer service need including rural sites.

ow to apply

or further information regarding the application process, please access the guidelines from: **www.cancerinstitute.org.au**. Alternatively, you can request the guidelines by calling 02 8374 5600.

Completed proposals must be submitted by COB **27 October, 2006** to the Cancer Institute NSW, Clinical Workforce Manager, PO Box 41, Alexandria, NSW 1435.

7676/734420

Applications are Invited for Cancer Institute NSW International Study Tour 2007

The Cancer Institute NSW is Australia's first state-wide, government supported cancer institute. We are driving innovation in partnership with other leaders in our field to deliver the best cancer results for the people of New South Wales.

We are proud to announce the Cancer Institute NSW International Study Tour 2007. This program will:

- retain experienced cancer care clinicians by supporting their professional development and;
- build the reputation of clinical cancer care as a field progressing best practice across all professions.

The program will provide a grant of up to $15,000 to enable medical, psycho-oncology, radiotherapy, allied health and nursing staff to travel abroad for up to 3 months in the first half of 2007 to visit centres of excellence in their field of clinical practice with clinicians demonstrating best practice. They will in turn be expected to return to work in clinical cancer care in NSW and utilise their knowledge and skills in NSW cancer services.

Who is eligible?

Cancer care practitioners are invited to submit an application addressing the eligibility and selection criteria detailed in the **Cancer Institute NSW International Study Tour 2007 Guidelines**. The funding will be allocated on a competitive basis. Only applications that address the selection criteria detailed in the Guidelines will be considered.

How to apply

For further information regarding the application process, please access the guidelines from: **www.cancerinstitute.org.au**. Alternatively, you can request the guidelines by calling 02 8374 5600.

Completed proposals must be submitted by COB **27 October, 2006** to the Cancer Institute NSW, Clinical Workforce Manager, PO Box 41, Alexandria, NSW 1435.

7676/734419

New South Wales Government

Notice to Residents

South Coast Correctional Centre

The Hon Tony Kelly, Minister for Justice, announced a short-list of four (4) possible sites for the proposed new correctional centre on the State's South Coast. The project is worth $130 million and will create 350 construction jobs and 200 permanent jobs when completed in 2010.

The sites are located in the Shoalhaven south of Nowra.

As part of the consultation process, the Department of Corrective Services invites residents to attend an information centre to learn more about what is proposed and provide feedback on the short-listed sites.

The centres will be staffed by experienced Correctional Services officers and other specialist personnel.

The information centre will be located at **64 North Street, Nowra**

It will be open on the following days

Friday, 6 October 2006	10:00am – 5:00pm
Saturday, 7 October 2006	10:00am – 3:00pm
Friday, 13 October 2006	10:00am – 5:00pm
	10:00am – 3:00pm

NSW GOVERNMENT
Department of Planning

Exhibition of Environmental Assessment

Major Project: **Nepean River Pump and Pipeline**
Location Within and outside the Penrith Lakes area (Penrith Local Government Area)
Proponent Penrith Lakes Development Corporation
Approval authority Minister for Planning

Description of proposal

The Penrith Lakes Development Corporation is proposing to construct and operate a pump and pipeline to extract water from the Nepean River to facilitate the initial filling and long term water supply of the Penrith Lakes. Adequate water supply to the lakes is essential for the completion and long term viability of the lakes scheme.

The route of the pipeline will traverse land both inside and outside the lakes scheme's boundary. The proposed intake structure will be installed on the bed of the Nepean River (eastern bank), 110 meters upstream of Penrith Weir. This will connect to a submerged pump station upstream of the weir. An associated control building will be sited on the high riverbank area within Weir Reserve.

The pumping system will operate according to the following rules:

- pumps can start when flow over Penrith weir reaches 500ML/day; and
- pumps will automatically stop when flows over Penrith weir drops to 350 ML/day.

Application of Part 3A

The proposal is classified as a Major Project under *State Environmental Planning Policy (Major Projects) 2005* as it is a type of development listed in Schedule 2, Clause 6 of this Policy-namely infrastructure associated with Penrith Lakes (located in and outside the Penrith Lakes area) for the purpose of extraction, rehabilitation or lake formation and has been declared to be a project to which Part 3A of the Act applies.

Exhibition

The EA will be on exhibition from 25 September 2006 to 30 October 2006 at the following locations:

Department of Planning
Information Centre, 23-33 Bridge Street, Sydney. Mon-Fri 9am to 5pm.
Level 4, 10 Valentine Street, Parramatta. Mon-Fri 9am to 5pm.

Penrith Lakes Development Corporation
1951 Castlereagh Road, Castlereagh, Mon-Fri 9am to 5pm.

Penrith City Council
Civic Centre, 601 High Street, Penrith, Mon-Fri 8:30am to 4pm.

For more information on the proposal contact the Proponent's Project Information Line **(02) 4729 0044.**

You may view a copy of the EA at **www.planning.nsw.gov.au** or **http://www.penrithlakes.com.au**

Submissions

You are invited to make a written submission on this proposal. This submission should include:

- your name and address
- the name and reference number of the proposal (MP 05_0078)
- a statement on whether you support or object to the proposal
- the reasons why you support or object to the proposal.

Your submission must reach the Department of Planning by close of business on **30 October 2006** and should be addressed to:

Major Infrastructure Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Under section 75H of the EP&A Act the Director-General is required to send copies of submissions or a report of the issues raised in those submissions to the proponent and any other authority the Director-General considers appropriate. If you do not want your submission to be made available to the proponent, please state this in your submission.

Enquiries: Rebecca Newman (**9228 6340**) and Mark Turner (**9228 6351**)

7741/775917

NSW GOVERNMENT
Department of Planning

Major Project Proposal

Major Project No.	06_0192
Location	Corner of Westbourne Street and Reserve Road, Royal North Shore Hospital (RNSH), Pacific Highway and Herbert Street, St Leonards
Proponent	NSW Health
Council(s)	Willoughby Council
Approval Authority	Minister for Planning

Description of Proposal:

NSW Health is seeking approval for the following development under the provisions of Part 3A of the *Environmental Planning and Assessment Act 1979*:

Erection of an eleven storey building to be used for specialist medical research, training and education purposes comprising a gross floor area of approximately 27,500 square metres.

Provision of ancillary services, including, storage areas, plant rooms, associated access road and hard and soft landscaping.

Major Project Proposal

The Minister for Planning formed the opinion pursuant to Clause 6 of *State Environmental Planning Policy (Major Projects) 2005* (Major Projects SEPP) that the project is a Major Project under Part 3A of the *Environmental Planning and Assessment Act 1979* on **8 March 2006.**

An Environmental Assessment (EA) has been prepared by the proponent in support of the proposal.

Exhibition

The plans and documentation will be on exhibition from **4 October 2006** until **4 November 2006** at the following locations during regular business hours:

Department of Planning
Information Centre, 23-33 Bridge Street, Sydney

NSW GOVERNMENT
Department of Planning

Major Project No.	06_00231
Location	Caritas site at 299 Forbes Stree Darlinghurst & O'Brien Building Vincent's Hospital, 406 Victoria Darlinghurst
Proponent	St Vincent 's and Mater Health
Council(s)	City of Sydney Council
Approval Authority	Minister for Planning

Description of Proposals:

St Vincent's and Mater Health, Sydney is seeking to h Caritas site (299 Forbes Street, Darlinghurst) listed as significant site under Schedule 3 of *State Environmental P Policy (Major Projects) 2005*, to facilitate its redevelopr the following:

- Retention and modifications to the existing Caritas House Caritas Cottage, and Arts and Crafts building at corner Bo and Burton Streets;
- Up to 131 residential units in new buildings of 4, 7 and storeys;
- 1085m2 of commercial floorspace;
- basement car parking for up to 166 vehicles; and
- Pedestrian thoroughfares and public open space.

The proponent is also seeking approval of a concept plan proposed redevelopment of the Caritas site under the provi Part 3A of the ***Environmental Planning and Assessment A*** as well as concept plan approval for the development o integrated mental health, drug and alcohol services and cor health services units in place of the existing O'Brien bui St Vincent's Hospital. Approval of a project application demolition and early site and excavation works for the Building at St Vincent's Hospital is also concurrently being

State Significant Site and Major Project Proposals

The Minister for Planning formed the opinion pursuant to 6 of *State Environmental Planning Policy (Major Projects* (Major Projects SEPP) that the project is a Major Project un 3A of the *Environmental Planning and Assessment Act 1* 28 August 2006.

At the same time, the Minister agreed to commence the pr making the Caritas site a State significant site (SSS) in S 3 of the Major Projects SEPP and instructed the Director to have a study undertaken pursuant to Clause 8(1) of th Projects SEPP.

Environmental Assessments (EA) and a SSS study hav prepared by the proponent in support of the proposals.

Exhibition

The plans and documentation will be on exhibition from **4 2006** until **2 November 2006** at the following locations regular business hours:

Department of Planning
Information Centre, 23-33 Bridge Street, Sydney – 9.00am 5.00pm, Monday to Friday

City of Sydney Council
Level 2, 456 Kent Street, Sydney NSW 2000 - 8.30am to 5 Monday to Friday

You may view a copy of the plans and documentation under th Projects Register at **www.planning.nsw.gov.au/asp/major_proje**

Submissions

If you wish to make a written submission on this propo submission should include:

- your name and address;
- the name and address of the proposal and major number;
- a statement on whether you support or object to the p and
- the reasons why you support or object to the proposal.

Your submission must reach the Department no late **2 November 2006** addressed to:

Director – Strategic Assessments
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Under Section 75H of the *Environmental Planning and Asse Act 1979* the Director-General is required to send co submissions or a report of the issues raised in those subm to the proponent, other parties and any other authorit Director-General considers appropriate, but the nam addresses would be withheld.

If you have any enquiries you may contact the Departm phone or email.

Enquiries: **1300 305 695**
Email: **information@planning.nsw.gov.**

7741/775923

Department of Environment and Conservation NSW

Declaration of Remediation Site

The EPA* has declared the land at 728 Pacific Highway, Cha as a remediation site under the *Contaminated Land Mana Act 1997*. The land comprises:

Lot 1 in Deposited Plan (DP) 439185;
Lot 1 in DP 135447;
Lot 3 in DP 3254;
Lot A in DP 373176; and
Lot 1 in DP 598492.

The EPA has found that contamination of the land pre significant risk of harm to human health and/or the environ the following reasons:

Soil and groundwater on the site are contaminated wi petroleum hydrocarbons (TPH) and BTEX compound relevant guideline levels;

Visual evidence of separate phase hydrocarbon contam reported in a borehole log adjacent to the unleaded a underground storage tanks ; and Groundwater contai and BTEX compounds has the potential to migrate off-s neighbouring residential properties. The actual extent a of the off-site migration and the risks posed will be the further investigation.

Penrith Press Friday 29/9/06

EXHIBITION OF ENVIRONMENTAL ASSESSMENT

Major Project: Nepean River Pump and Pipeline

Location	Within and outside the Penrith Lakes area (Penrith Local Government Area)
Proponent	Penrith Lakes Development Corporation
Approval authority	Minister for Planning

Description of proposal
The Penrith Lakes Development Corporation is proposing to construct and operate a pump and pipeline to extract water from the Nepean River to facilitate the initial filling and long term water supply of the Penrith Lakes. Adequate water supply to the lakes is essential for the completion and long term viability of the lakes scheme.
The route of the pipeline will traverse land both inside and outside the lakes scheme's boundary.
The proposed intake structure will be installed on the bed of the Nepean River (eastern bank), 110 metres upstream of Penrith Weir. This will connect to a submerged pump station upstream of the weir. An associated control building will be sited on the high riverbank area within Weir Reserve.
The pumping system will operate according to the following rules:
- pumps can start when flow over Penrith weir reaches 500ML/day; and
- pumps will automatically stop when flows over Penrith weir drops to 350 ML/day.

Application of Part 3A
The proposal is classified as a Major Project under *State Environmental Planning Policy (Major Projects) 2005* as it is a type of development listed in Schedule 2, Clause 6 of this Policy – namely infrastructure associated with Penrith Lakes (located in and outside the Penrith Lakes area) for the purpose of extraction, rehabilitation or lake formation and has been declared to be a project to which Part 3A of the *Environmental Planning & Assessment Act 1979* (EP&A Act) applies.

Exhibition
The EA will be on exhibition from **25 September 2006 to 30 October 2006** at the following locations:
Department of Planning
- Information Centre, 23-33 Bridge Street, Sydney. Mon-Fri 9am to 5pm.
- Level 4, 10 Valentine Street, Parramatta. Mon-Fri 9am to 5pm.

Penrith Lakes Development Corporation
- 1951 Castlereagh Road, Castlereagh, Mon-Fri 9am to 5pm.

Penrith City Council
- Civic Centre, 601 High Street, Penrith, Mon-Fri 8:30am to 4pm.

For more information on the proposal contact the Proponent's Project Information Line (02) 4729 0044.

You may view a copy of the EA at www.planning.nsw.gov.au or www.penrithlakes.com.au

Submissions
You are invited to make a written submission on this proposal. This submission should include:
- your name and address
- the name and reference number of the proposal (MP 05_0078)
- a statement on whether you support or object to the proposal
- the reasons why you support or object to the proposal.

Your submission must reach the Department of Planning by close of business on **30 October 2006** and should be addressed to:
Major Infrastructure Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Under section 75H of the EP&A Act the Director-General is required to send copies of submissions or a report of the issues raised in those submissions to the proponent and to any other authority the Director-General considers appropriate. If you do not want your submission to be made available to the proponent, please state this in your submission.

Enquiries: Rebecca Newman (9228 6340) and Mark Turner (9228 6351

NSW GOVERNMENT
Department of Planning

7719917

Appendix B: Copies of submissions

Your reference : P05033
Our reference : SR862: DOC06/51414
Contact : Mark Villa, 9995 6814

RECEIVED
- 3 NOV 2006
BY:.....

31 October 2006

Mr N Osborne
Manager, Energy and Water
Major Infrastructure Assessments
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Dear Mr Osborne

NEPEAN RIVER PUMP AND PIPELINE ENVIRONMENTAL ASSESSMENT

I refer to a letter dated 21 September 2006 from Rebecca Wright of the Penrith Lakes Development Corporation enclosing a copy of the environmental assessment (EA) for the above project and inviting the Department of Environment and Conservation (DEC) to provide further comments if required.

DEC provided advice on this project to the Department of Planning in December 2005 on the matters that needed to be addressed in the environmental assessment in relation to pollution control, species protection and aboriginal cultural heritage, and a further letter on 24 July 2006 with comments on the draft EA. DEC now offers the following final comments on the EA:

Pollution Control

As noted in our previous advice, the project is not a scheduled activity under the *Protection of the Environment (Operations) Act 1997* (the POEO Act), and will not require an environmental protection licence. However, the proponent and its contractors will need to comply with the general provisions of the POEO Act during the construction and operation of the pump and pipeline. The appropriate regulatory authority under the POEO Act for this project is the local Council.

Species Protection

In its initial advice, DEC noted that the EA should assess specific points in relation to species protection, including:

- Targeted surveys for the vulnerable plant species *Eucalyptus benthamii*;
- Determination of whether any *E benthamii* found are planted or naturally occurring;

PO Box 668, Parramatta NSW 2124
Level 7, 79 George St, Parramatta NSW
Tel: (02) 9995 5000 Fax: (02) 9995 6900
ABN 30 841 387 271
www.environment.nsw.gov.au

Department of **Environment and Conservation** NSW

- Assessment of whether local population(s) of *E benthamii* will be lost as a result of the proposal; and, if so,
- Whether that population is important for the conservation of the species.

DEC notes the statement on page 8 of the flora and fauna impact assessment (Appendix D) that flora growing in the study area were surveyed by undertaking a general habitat assessment, and that targeted searches for threatened species were conducted within likely habitats.

Appendix D, page 71, reports the presence of River-flat Eucalypt Forest, an endangered ecological community, in the study area. This habitat is known to be a habitat for *E benthamii.* Appendix D also reports, at page 16, Table 1, that there was no habitat for *E benthamii* in the study area. On this basis, DEC is not confident that a targeted survey for *E benthamii* was undertaken.

DEC requires a better explanation of the proponent's reasoning and assessment of this species.

Aboriginal Cultural Heritage

The DEC notes the recommendations contained in the Aboriginal cultural heritage assessment report (Appendix E). In undertaking the project, the proponent should follow the recommendations of the report as well as the recommendations made by the Aboriginal community respondents during the assessment process.

Should you require any further advice in this matter, please contact Mark Villa in the first instance on (02) 9995 6814.

Yours sincerely

NEALE PHILIP
Head Metropolitan Infrastructure Unit
Environment Protection and Regulation

cc Rebecca Wright, Penrith Lakes Development Corporation Limited, 1951 Castlereagh Road, Castlereagh NSW 2749

NSW DEPARTMENT OF
PRIMARY INDUSTRIES

Our ref: PR06-08-3372
Your ref: Major Project number: 05-0078

30 October 2006

Rebecca Newman
NSW Dept of Planning
GPO Box 39
SYDNEY NSW 2001

Dear Rebecca

Re: Proposed Nepean Pump and Pipeline – Major Project No: 05_0078

Thank you for giving DPI the opportunity to comment on the above proposal.

The Department has reviewed the issues in the EA that have relevance to the legislative responsibilities of the Department. Whilst the Department has no objections to the proposal, the following comments mat be constructive.

The proposed extraction licence conditions related to flow rates over Penrith weir appear to be suitable to reduce the risks of interfering with fish migration.

The issue of extraction also infecting Penrith Lake with aquatic weeds raises the issue of the potential use of a sediment control system, such as a CDS unit to remove small particles of aquatic weeds before they enter the treatment train. This unit would also assist in removing sediment and nutrients from the raw water.

The primary issue of concern with this proposal is the potential impact of the works on the water quality in the Nepean River from the construction of the intake structures and the crossing of Boundary Creek. Consequently the Department requests that the Department of Planning ensure that stringent controls on sediment and erosion controls are in place and monitored by the relevant authorities.

For further information please contact me on 02 4916 3931.

Yours faithfully

Scott Carter
Senior Conservation Manager - Central

Aquatic Habitat Protection
NSW Department of Primary Industries
Locked Bag 1
NELSON BAY NSW 2315

ABN 51 734 124 190
www.dpi.nsw.gov.au
Tel: 02 4916 3931
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Penrith City Council

Civic Centre, 601 High Street, PENRITH NSW 2750

Telephone: (02) 4732 7777 Fax: (02) 4732 7958

e-mail: pencit@penrithcity.nsw.gov.au

Our Ref: 1177271
Contact: P. Wood
Telephone: 4732 7577
Date: ***7 November 2006***

Dear Rebecca,

Nepean River Pump & Pipeline Environmental Assessment

Further to Council's submission dated 26 October 2006, we are disappointed to be advised that the Environmental Assessment (EA) will not be revised to include the information and documentation Council submitted should form part of the EA. From the Director General's "Assessment Requirements" and plans commented on by Council at draft stage, it was assumed that plans would form part of the EA. Consistent site, floor, elevation and section plans showing the proposed permanent and temporary structures, built forms and revegetation/landscaping are necessary to undertake an adequate assessment of the proposal, in particular potential landscaping, visual impacts and land use conflicts.

Concerns are therefore raised as to the ability of the Department to undertake a proper and appropriate assessment of the proposal and Council's inability to comment once undefined concept proposals are approved. In the absence of such documentation, the extensive construction period, sensitivity of the location and potential conflicts with existing land uses, Council must continue to object to the proposal in its present form. Notwithstanding the aforementioned, and should the Department proceed with the assessment of the application, we trust that youwill give particular consideration to the following:

- Council's objects to the proposed location of the main temporary site compound/pipe laydown area including admin., amenities, site office buildings, vehicle parking, stockpiling and materials storage (including fuel) within Weir Reserve or close proximity to the river. Only stockpiling and storage of materials for immediate works may be suitable where it is sensitively placed in relation to existing landscaping, access and for a limited timeframe i.e. less than one month. Other long-term construction storage and functions should occur at the Penrith Lakes end of the

pipeline where there is significantly more area to eliminate potential pollution, visual impacts, conflicts with open space users and maintenance. No work should occur within Weir Reserve on weekends;

- Any necessary Roads Act Approvals, easements or legal agreements as required under relevant legislation should be obtained or entered into prior to carrying out works on land not in PLDC ownership and for on-going restoration and maintenance. The pipeline should be bored under Castlereagh Road to maintain its current condition and minimise traffic flow impacts. A Traffic Management Plan should be prepared by an appropriately qualified person and implemented during the construction phase of the development with a copy of the plan available on site at all times. Access to Weir reserve via the existing public road should be maintained;

- A dilapidation report on existing infrastructure including roads and buildings should be submitted prior to commencement of works and any damage rectified by PLDC prior to finalisation of the works;

- Council's Bush Generation Contractor has found evidence that the Cumberland Land Snail has existed north of Boundary Creek by way of shells. This matter should be reviewed and any necessary actions be included in the recommendations of the flora & fauna impact assessment report and implemented during construction;

- The Great River Walk should be re-instated where impacted by works. A landscape plan showing proposed plantings and revegetation within the easement and riparian zone, being endemic plantings of local provenance and consistent with the Great River Walk Project Planting List, should be prepared and implemented. Retention of as many existing trees as possible should be achieved through supervision of excavation within root zones by an appropriately qualified aborist. Reinstatement of landscaping from Chainage 900 -1700 represents a prime opportunity for PLDC to implement their commitment to the Great River Walk by providing a finished and surfaced level as an extension to that established to the south for that length;

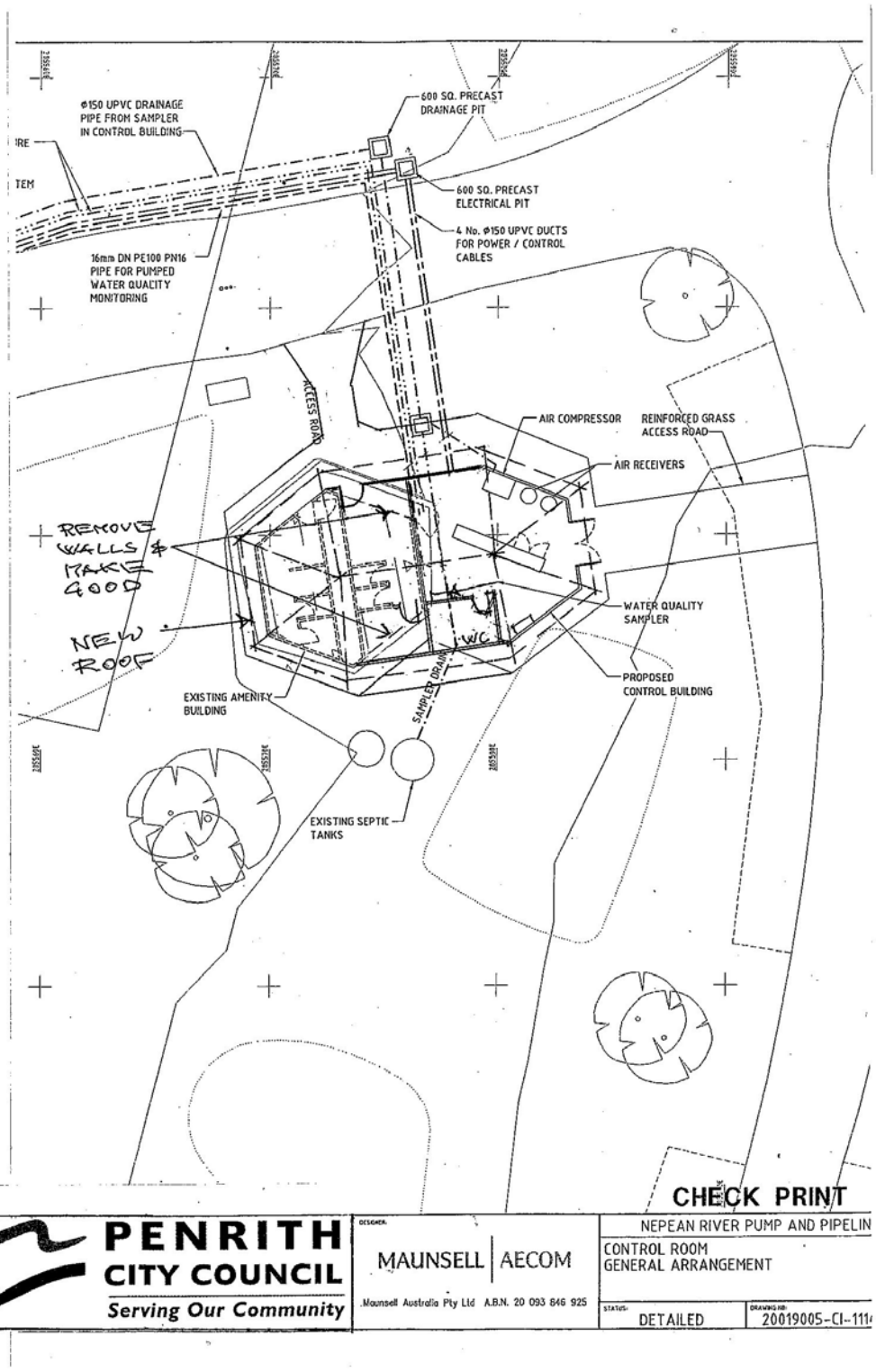
- The proposed location and design of the control building in Weir Reserve should minimize any potential vegetation loss. It should reflect a contemporary design in its context, CPTED principles and provide for future utility including adaptive re-use. If the existing amenities building is to be retained, this building should be an integrated addition to present as a single built form (see attached Council's recommended built form for an addition to the existing);

- The pipeline should acknowledge the recommendations in the recent review of the Penrith Lakes Water Plan and be constructed so as to permit future connection of treated effluent upon acceptable water quality being achieved; and,

- The concrete wall elements of the proposed pump station/platform do not sit aesthetically well in this natural setting. Concerns are also raised over the use of gabion walls regard to structural integrity, vandalism and maintenance. Other options should be investigated such as incorporating the use of locally sourced, natural materials compatible with the riverbank setting which also meet the engineering construction requirements of the platform. In this regard concrete walls embedded with Nepean River Stone as used in the main entry gates to the SIRC are recommended from a visual and maintenance perspective.

Should the Department proceed to assess and determine the application, we trust that you will consider the above matters and reflect them in any determination.

Peter Wood
Development Assessment Co-ordinator


600 SQ. PRECAST DRAINAGE PIT
Φ150 UPVC DRAINAGE PIPE FROM SAMPLER IN CONTROL BUILDING
600 SQ. PRECAST ELECTRICAL PIT
4 No. Φ150 UPVC DUCTS FOR POWER / CONTROL CABLES
16mm DN PE100 PN16 PIPE FOR PUMPED WATER QUALITY MONITORING
ACCESS ROAD
AIR COMPRESSOR
REINFORCED GRASS ACCESS ROAD
AIR RECEIVERS
REMOVE WALLS & MAKE GOOD
NEW ROOF
WATER QUALITY SAMPLER
WC
PROPOSED CONTROL BUILDING
EXISTING AMENITY BUILDING
SAMPLER DRAIN
EXISTING SEPTIC TANKS
CHECK PRINT
PENRITH CITY COUNCIL
Serving Our Community
DESIGNER
MAUNSELL AECOM
Maunsell Australia Pty Ltd A.B.N. 20 093 846 925
NEPEAN RIVER PUMP AND PIPELIN
CONTROL ROOM
GENERAL ARRANGEMENT
STATUS: DETAILED
DRAWING NO: 20019005-CI-111

From the Department of Planning

Temporary and the permanent Quarantine Lake

- describe relationship between the temporary and permanent Quarantine lakes, including approval status and other relevant details.
- construction of temporary Q lake, its lifespan and what happens to it afterwards.
- timing of construction and operation of the permanent Quarantine Lake.
- include necessary impact assessment of the temporary Q lakes and wetlands.
- figure 2.2 of the EA suggests water will be discharged directly from the Q Lake to Lake A. Elsewhere, it is suggested that it will discharged directly to the warm up lake. Which is correct? Does this diagram show the temporary situation?

Prohibited development

- the EA indicated that the NRPP project is a prohibited development on land zoned 6(b) and 6(d) – page 23 of EA. The discussion regarding assessment of prohibited development is not clear and needs to be adequately explained.

Water extraction and pumping

- are there any proposals to cease pumping when flow in the Nepean exceeds 5,000ML/day to protect water quality (see p. 28 of the WRL report)? The Aquatic Weed Transfer Control Report suggests this upper limit would be about 2,500ML/day - p. 1). Also, will water extraction be conducted so as to avoid the rising limb of the hydrograph (WRL p. 28)?

Scope of requested approval

- it needs to be made explicitly clear that the approval of the Minister is being sought for water extraction. The word 'operation' of the NRPP project is not as explicit.

Licences and Statutory Approvals

- indicate if an EPL would be required from the DEC for the project.

Need for diagrams/photomontages of the buildings

- it is essential that the Submissions Report contain artist impressions/photomontages of the final design for the 'visible' components of the proposed infrastructure (control building, pump station, construction compound), including landscaping proposed for the riparian areas and affected parts of the GRW.

Impact of coffer dam on flooding (and vice versa)

- it is unclear how the coffer dam won't exacerbate flooding. Are there any adverse implications from allowing the flood waters to flow over the dam?

Noise mitigation measures

- don't the predictions assume the indicated noise mitigation measures on page 117 (where they directly contribute to noise reduction) or are they additional measures? Any complaints mechanism in the mitigation measures? Any issues/impacts resulting from additional working hours within the scheme boundary are, and from whom will the approvals be sought for additional work hours.
- the Noise Assessment suggests consideration be given to the use of temporary barriers to mitigate noise impacts (eg at p. 16 of the Wilkinson Murray Report). However, there does not appear to be any suggestion in the EA that this option will be considered (eg. at p. 117).
- there should be a complaints mechanism committed to in the noise section.

3

Mark Turner
Environmental Planning Officer
Major Infrastructure Assessment
Department of Planning
GPO Box 39
Sydney 2001

Nepean River Pump and Pipeline Project MP 05 0078

Dear Sir,

I am the General Manager of the Castlereagh Academy Conference Centre at 1727 Castlereagh Road, Castlereagh, a close neighbour of the Penrith Lakes Development Corporation who seek to construct and operate the pump and pipeline from the Nepean River.

I have examined the environmental impact study relating to the project and discussed matters relating to the location of the pipeline as well as the impact of the work required to install it with staff of Penrith Lakes Development Corporation.

This project is a necessary adjunct to the effective operation of the overall concept of the Penrith Lakes scheme which is and will continue to be of positive benefit to the wider Sydney area for recreation and sport. The operational rules to be imposed on the Lakes Scheme regarding times of pumping are warranted and fair and the regard for the health of the river system is commendable.

I support the proposal because it is necessary for the efficient operation of the recreational lakes and the established water-related sporting facilities. From our perspective the whole scheme enhances our operation which will ultimately be set in the heart of parklands and water features and in a peaceful central location. The provision of the pipeline ensures the continuing adequacy of water obtained in periods of abundance.

Yours sincerely,

R.S. Udy

Rev.R.S. Udy B.A.(Hon)Dip.Ed.
General Manager

Australian
Construction
Materials

BORAL

ABN 42 000 061 843
BORAL RECYCLING PTY LIMITED

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Development Business Unit
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Telephone (02) 9033 5000
Facsimile (02) 9033 5305
www.boral.com.au

Mark Turner
Environmental Planning Officer
Major Infrastructure Assessment
Department of Planning
GPO Box 39
Sydney NSW 2001

Dear Mark

Re: Nepean River Pump and Pipeline Project

Reference is made to your letter dated 22 September 2006 advising of the public exhibition of the Project Application for the above proposal.

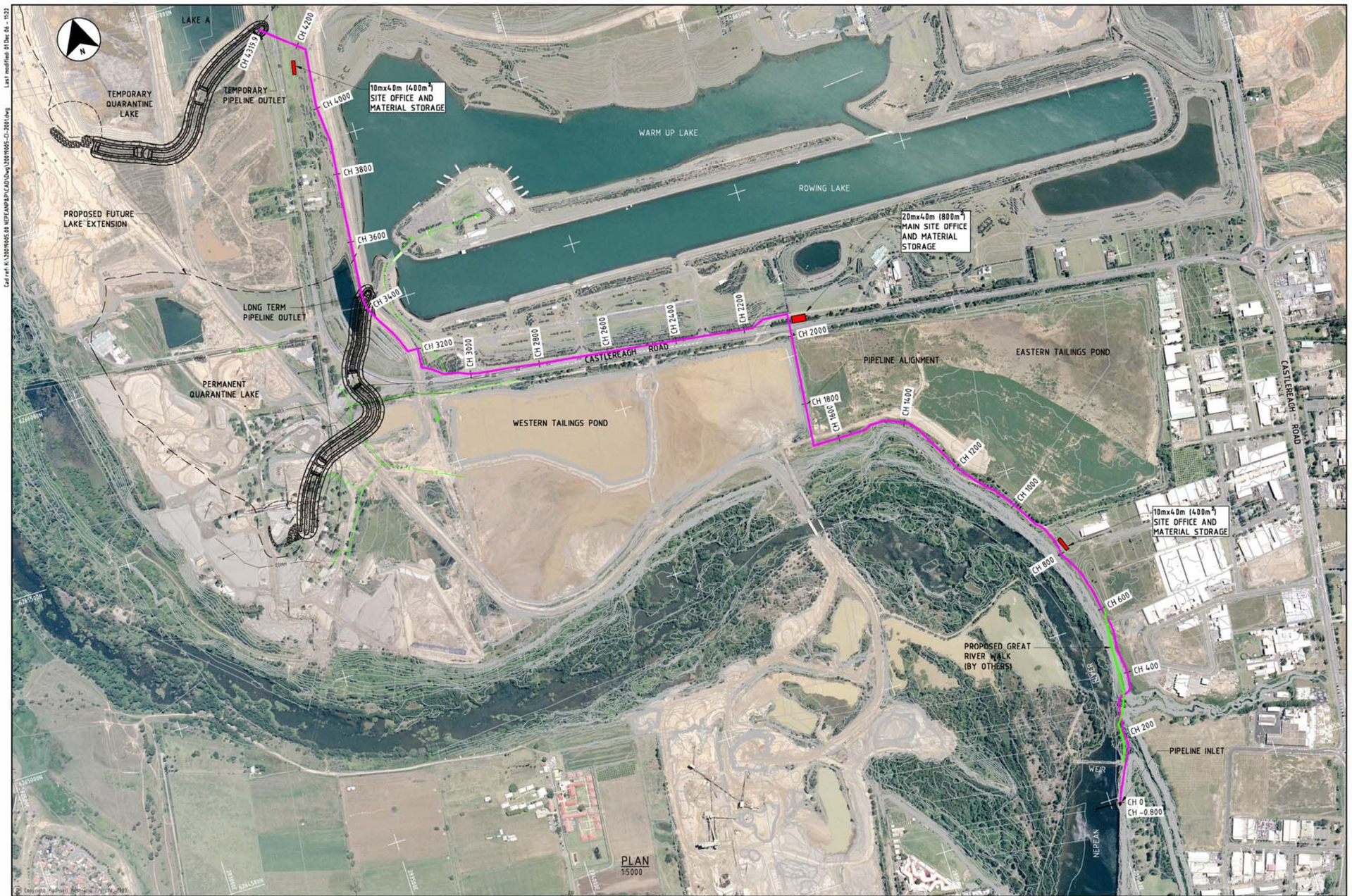
Boral as an adjoining landowner and shareholder of the Penrith Lakes Development Corporation supports the proposal. The pump and pipeline are essential for the long term water supply for the lakes scheme.

The comprehensive environmental assessment that accompanies the application demonstrates that the project is environmentally acceptable and will facilitate a project that will provide significant benefits. We support approval of the project that will help realise the vision established in 1980 for the creation of a major water orientated recreational facility in western Sydney.

Yours faithfully

Judy McKittrick
Manager Planning & Development

Appendix C: Pipeline alignment and chainages



THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE MAUNSELL QUALITY ASSURANCE SYSTEM TO ISO 9001-2000

DESIGNED	AS	CHECKED	AS
DRAWN	ADW	CHECKED	AS
APPROVED	JP	DATE	

No.	BY	DATE	DESCRIPTION	APPD
B	ADW	1/12/2006	SITE OFFICE AREA AMENDED AT CH 2000	AS
A	ADW	8/11/2006	ISSUED FOR CONCEPT DESIGN APPROVAL	

SCALES: 50 0 100 200m — 1 : 5000 FULL SIZE A1

Penrith Lakes Development Corporation Ltd.

Readymix Hanson

DESIGNER: MAUNSELL AECOM

Maunsell Australia Pty Ltd A.B.N. 20 093 846 925

NEPEAN RIVER PUMP AND PIPELINE

OVERALL SITE PLAN
SITE OFFICE AND MATERIAL STORAGE LOCATIONS

STATUS: CONCEPT

DRAWING NO: 20019005-CI-2001

REV: B

Last modified: 01 Dec 06 - 11:22

Cad ref: K:\20019005.03 NEPEAN\P&P\CAD\Dwg\20019005-CI-2001.dwg

Assessment of Significance

Meridolum corneovirens	**Cumberland Plain Land Snail**

Meridolum corneovirens Cumberland Plain Land Snail is listed as Endangered on Schedule 1 of the *TSC Act*. This species is predominantly nocturnal and is a fungivore. Exfoliated bark, logs, leaf litter and other structures including man made rubbish such as sheet metal and plastic can provide shelter and foraging habitat for this species (NPWS 2000). The snail is restricted to eucalyptus woodland communities and edges of River Flat Eucalypt Forests of the Cumberland Plains of Western Sydney.

A targeted survey was undertaken by one ecologist on 22 November 2006 in the area around Boundary Creek. The area around Boundary Creek, Peach Tree Creek and the Nepean River was classified as River Flat Eucalypt Forests during the initial assessment and is highly degraded with weed species. Since the initial survey in June 2005 significant areas of the study area have been cleared and recent bush regeneration, weed control and slashing carried out in associated with construction of the Great River Walk. The area around Boundary Creek was considered to be very poor potential habitat for the Cumberland Plain Land Snail.

The proposed project will require a 10 m wide corridor for laying the pipeline along the eastern side of the Nepean River. This will result in the loss of 0.26 ha of River Flat Eucalypt Forest, which is the only vegetation community recognised on the site. Mitigation measures proposed in the initial report such as site rehabilitation and weed control measures will assist in reducing the impact to Cumberland Plain Land Snail if they are present on the site.

In the case of a threatened species, whether the action proposed is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.

No Cumberland Plain Land Snails were recorded during the recent target survey or the initial survey of the area. However, they have been previously recorded within a 10 km radius of the study area (DEC Atlas of NSW Wildlife). Penrith City Council bush regeneration contractors have reported encountering snail shells near exotic vegetation north of Boundary Creek during weed control works in mid 2006 (S. Grundy pers. com. 2006)

Very little is known about the life cycle of the Cumberland Plain Land Snail, though it is known to rely upon the presence of woody debris and litter for food

and shelter. The study area contains poor habitat for this species within riparian areas of Peach Tree Creek and Boundary Creek and is unlikely to support a viable population. The area has been recently modified due to the construction of the Great River Walk with clearing and track widening, slashing and weed control and bush regeneration. As a result it is unlikely that the proposed clearing and rehabilitation of 0.26 ha of vegetation will have an adverse effect on the life cycle of a local population of Cumberland Plain Land Snail.

In the case of an endangered population, whether the action proposed is likely to have an adverse effect on the life cycle of the species that constitutes the endangered population such that a viable local population of the species is likely to be placed at risk of extinction.

An endangered population is defined under the TSC Act as 'a population specified in Part 2 of Schedule 1'. At the present time, there are no endangered populations of this species listed under the Act.

In the case of a critically endangered or endangered ecological community, whether the action proposed:

i. **is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or**

ii. **is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.**

Not applicable to threatened species.

In relation to the habitat of a threatened species, population or ecological community:

i. **the extent to which habitat is likely to be removed or modified as a result of the action proposed, and**

ii. **whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed action, and**

iii. **the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species, population or ecological community in the locality.**

Cumberland Plain Land Snail requires the presence of ground habitat, in the form of litter, bark and logs within Cumberland Plain Woodlands. The study area is highly degraded and is considered to be very poor habitat.

The proposal will remove approximately 0.26 ha of River Flat Eucalypt Forest. Similar vegetation exists within the riparian corridor of the Nepean River, Boundary Creek and Peach Tree Creek. Given the degraded and dendritic nature of the vegetation, the existing impact of the construction of the Great River Walk and site rehabilitation it is unlikely the action will result in the fragmentation of a population of Cumberland Plain Land Snail if present on the site.

It is unlikely that the clearing of 0.26 ha of poor quality habitat will have long-term negative consequences for the species' local occurrence, on the provision that recommended mitigation measures are implemented during the construction phase of the proposal.

Whether the action proposed is likely to have an adverse effect on critical habitat (either directly or indirectly).

Critical habitats are areas of land that are crucial to the survival of particular threatened species, populations or ecological communities. Under the TSC Act, the Director-General maintains a register of critical habitat. To date, no critical habitat has been declared for this species (DEC Threatened Species Unit).

Whether the action proposed is consistent with the objectives or actions of a recovery plan or threat abatement plan.

There is no recovery plan in place for the Cumberland Plain Land Snail, However, there have been eight recovery actions identified by DEC for this species, which are detailed below:

- review species' conservation status with consideration of data obtained since listing as endangered;
- ensure public land plans of management include appropriate actions for species' protection;
- install structures (where necessary) to prevent accidental slashing and removal of plant debris;
- implement weed control at sites where necessary;

- investigate population census techniques and responses to environmental conditions, with the aim of developing estimates of true population size based on numbers detected in standard surveys;
- implement appropriate fire regimes (ones that allow build up of grass and litter layers);
- approach priority private site landholders to negotiate implementing protective management regimes; and
- identify priority sites for conservation actions on private land.

The proposed works are not in conflict with the identified recovery actions.

Whether the action proposed constitutes or is part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.

Key threatening processes are defined under Schedule 3 of the TSC Act. The proposal will involve 'Clearing of Native Vegetation' which is a recognised KTP. The proposal will remove approximately 0.26 ha of poor condition River Flat Eucalypt Forest which is considered poor potential habitat for this species. Vegetation clearing will be restricted to a 10 m wide corridor which will be actively regenerated.

Other threats to the Cumberland Plain Land Snail include the increase in frequency of high intensity fires, weed invasion and removal of ground habitat. The mitigation measures and rehabilitation of the proposed works will assist in the reduction of the risk of these threats to the Cumberland Plain Land Snail in the local area.

Conclusion

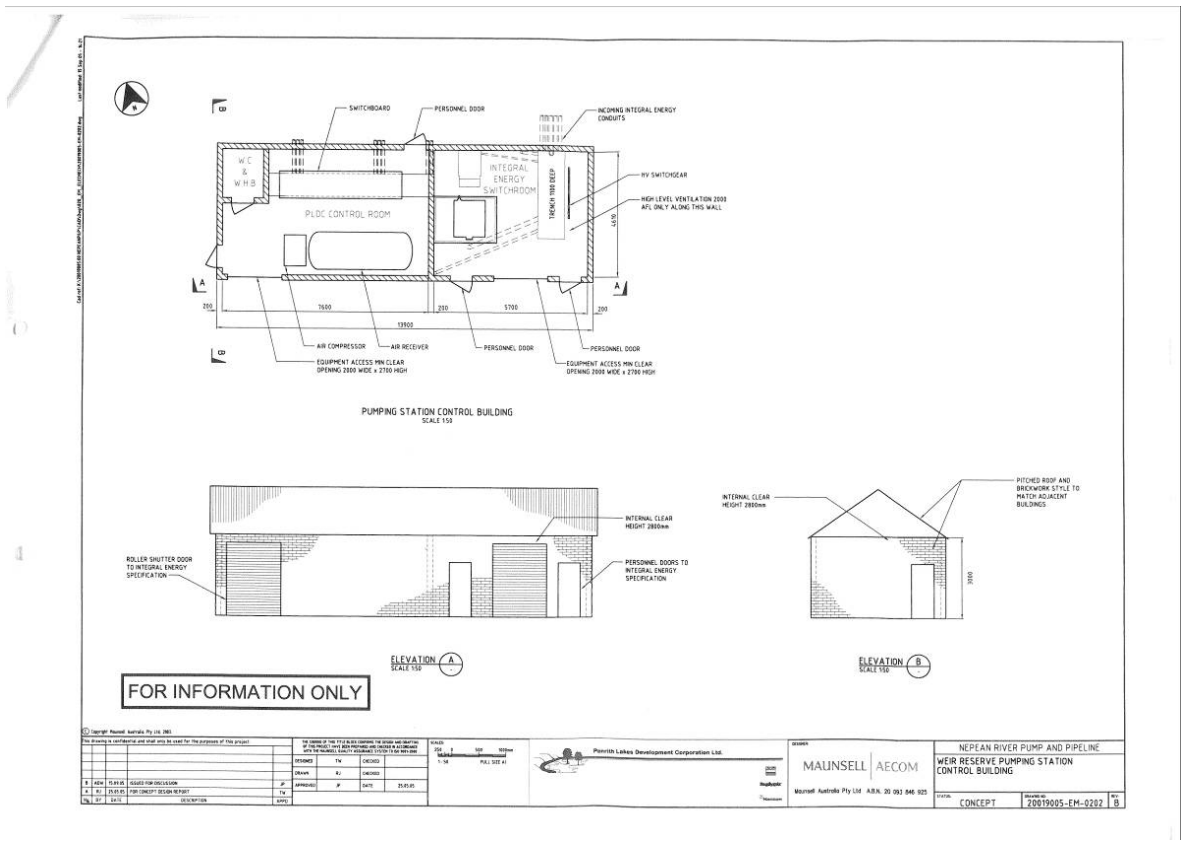
The proposal will remove approximately 0.26 ha of poor quality potential habitat for this species. With suitable mitigation measures implemented during the rehabilitation phase, it is unlikely that the proposed works will have long-term negative consequences for the species local occurrence.

A Species Impact Statement is not recommended.

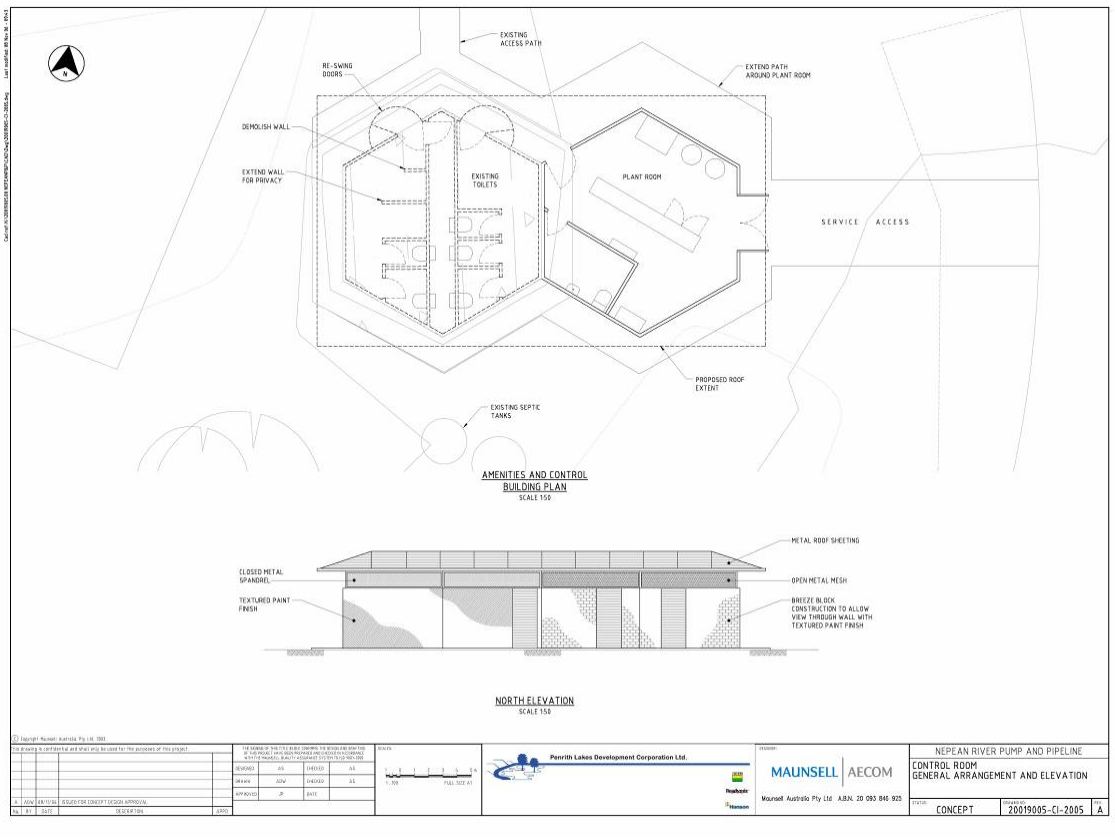
References

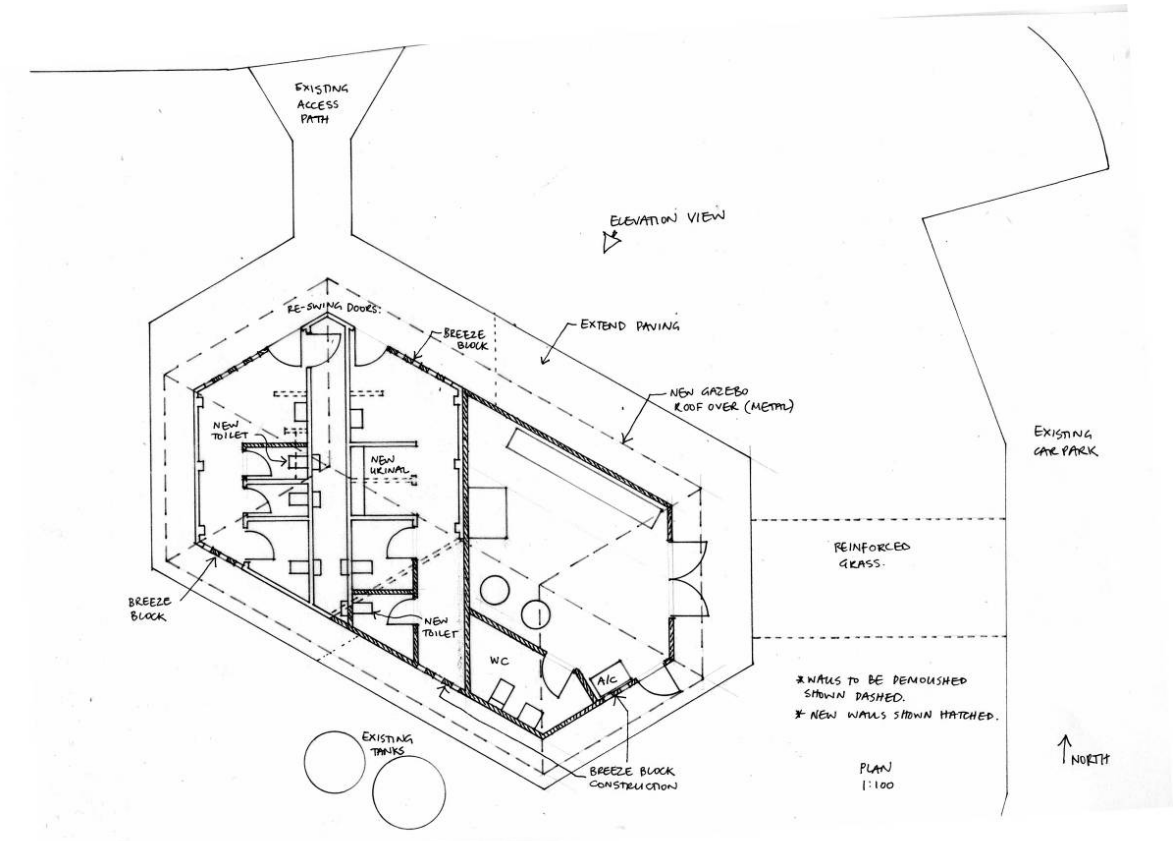
NPWS 2000, *Cumberland Plain Large Land Snail: Threatened Species Information*, NSW National Parks and Wildlife Service, Hurstville.

Appendix E: Control building options

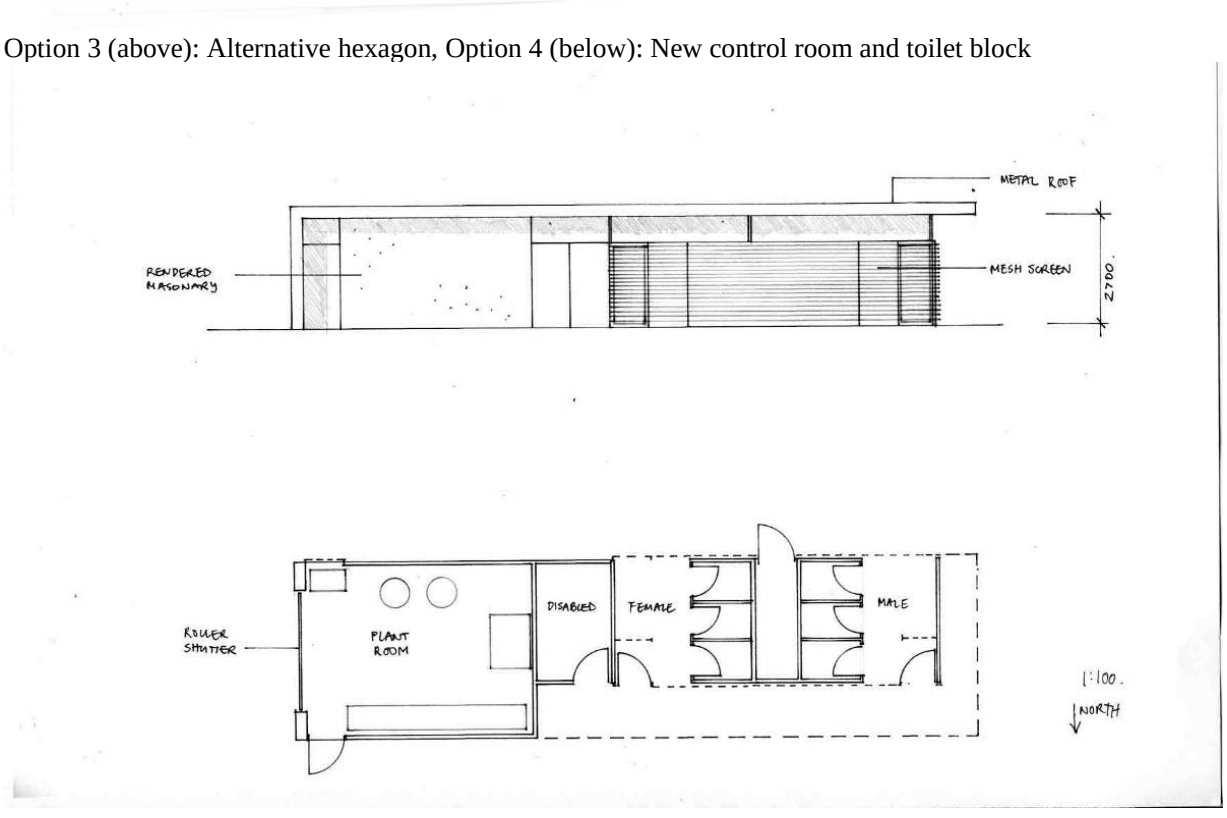


Option 1 (above): Stand alone control room, Option 2 (below): Twin Hexagon co-located with existing toilets block





Option 3 (above): Alternative hexagon, Option 4 (below): New control room and toilet block



Appendix F: Statement of Commitments (revised)

1 Prior to Construction	
Environmental outcome (commitment)	Measure (commitment)
1.1 The proposed Nepean River Pump and Pipeline (NRPP) will be constructed in accordance with the proposal contained in the Environmental Assessment 'Nepean River Pump and Pipeline Environmental Assessment' prepared by Maunsell dated August 2006.	1.1.1 PLDC will notify in writing, the Director-General and Penrith City Council of the start of construction of the NRPP. This notification will be four weeks (or within any other time agreed to by the Director-General) prior to commencement of construction.
	1.1.2 The NRPP will be constructed in stages. PLDC will provide to the Director-General a staging report four weeks (or within any other time agreed to by the Director-General) prior to construction commencement. The staging report will : a) Describe the stages; b) Identify how the conditions will be addressed in each stage
	1.1.3 PLDC will engage an Environmental Management Representative (EMR) that demonstrates compliance with AS/NZS ISO 14012:1996 Guidelines for Environmental Auditing: Qualification criteria for environmental auditors. The EMR will be available during the construction activities as defined in the CEMP. PLDC will request approval for the nominated EMR from the Director-General at least eight weeks before construction commences (or within any other time agreed to by the Director-General).
	1.1.4 PLDC will engage an Accredited Certifier to provide independent review and approval of design including engineering and landscape plans. The Certifier will be accredited to issue construction and Compliance Certificates under the Engineers Australia "Accredited Engineers Scheme".
	1.1.5 PLDC will obtain a Construction Certificate under Part 4A of the EP&A Act for detailed engineering plans.
	1.1.6 A Construction Environmental Management Plan (CEMP) will be prepared in accordance with the conditions of approval, mitigation measures detailed in the Environmental Assessment and all

	relevant Acts and Regulations. PLDC will obtain the Director-Generals approval for the CEMP before construction commences. The CEMP will be reviewed by the EMR prior to submission to the Director General. The CEMP will include programs addressing: a) Soil and water management including sediment and erosion control in accordance with the 'blue book' NSW Department of Housing publication; b) Vegetation and weed management (including aquatic weeds); c) Resource and waste management in accordance with Waste Avoidance and Resource Recovery Act 2001; d) Construction method statements for the intake pipe construction and creek crossings; e) Flora and fauna management; f) Noise and vibration management; g) Air quality management; h) Traffic Management; and i) Complaints management
	1.1.7 PLDC will provide information regarding the construction of the NRPP on the Penrith Lakes website before construction commences and maintain the information until the construction ends. The information will include updates of the work progress and future planned works, any publicly available reports relating to the NRPP and contact details for relevant staff for queries or complaints.
	1.1.8 PLDC will submit a Pre-Construction Compliance report to the Director-General at least four weeks before construction commences (or within any other time agreed to by the Director-General) detailing compliance with pre-construction terms of approval.
	1.1.9 The pipeline will be designed and constructed to facilitate future connection and discharge of water from the Penrith Sewerage treatment plant.

2 During Construction	
Environmental outcome (commitment)	Measure (commitment)
2.1 NRPP to be implemented in accordance with environmental approvals and industry standards	2.1.1 The EMR will be available during construction at the site and be present on-site during any critical construction activity as defined in the CEMP. The EMR will: a) Consider and advise PLDC and the Director-General on matters specified in the Conditions of Approval and compliance with such; b) Determine whether work falls within the definition of construction where clarification is requested by PLDC; c) Review the CEMP; d) Periodically audit PLDC's activities to evaluate compliance with the CEMP. Periodic auditing will involve site inspections of active work sites at least fortnightly; e) Provide written reports to PLDC of any non-compliance with the CEMP observed or identified by the EMR. Non compliance will be managed as identified in the CEMP; f) Issue a recommendation to PLDC to stop work immediately if in the view of the EMR an unacceptable impact on the environment is occurring or is likely to occur. The stop work recommendation may be limited to specific activities causing an impact if the EMR can easily identify those activities. The EMR may also recommend that PLDC initiate reasonable actions to avoid or minimise adverse impacts; g) Review corrective and preventative actions to monitor the implementation of recommendations made from audits and site inspections; h) Certify that minor revision to the CEMP are consistent with the approved CEMP; and i) Provide regular (as agreed with the Director General) reports to the Director-General on matters relevant to carrying out the EMR role including notifying the Director-General of any stop work recommendations.
	2.1.2 All works will be undertaken in accordance with the CEMP approved by the Director-General.
	2.1.3 All works will be completed in accordance with the design drawings approved by the Accredited Certifier.

2.2 Minimise impact on hydrology	2.2.1	Works within the Nepean River bed will be confined within a sheet-piled cofferdam (or equivalent). A sediment curtain will be fitted around the cofferdam to manage and control release of sediment generated during construction works. The temporary coffer dam will be designed so as not to exacerbate flooding and to minimise the disruption to the flow regime and geomorphology of the water course corridor.
2.3 Minimise impact on water quality of local watercourses (i.e. Nepean River, Peachtree Creek and Boundary Creek)	2.3.1	Temporary flow diversions at Peach Tree Creek and Boundary Creek crossings will include in-river bunding (sheet piling) or piping of the creeks. Where possible, drainage would be attenuated so as not to introduce scouring or erosion at the outlet points for the diversion. This may be achieved through the temporary construction of an attenuation pond, which would facilitate the reduction in the diverted creek flows prior to discharge into the Nepean River.
	2.3.2	An appropriate Water Quality Management Strategy (WQMS) will be developed for incorporation into the CEMP incorporating controls recommended in the Environmental Assessment.
	2.3.3	A site specific Erosion and Sediment Control Plan (ESCP) will be developed for incorporation into the CEMP. All erosion and sediment controls would be in accordance with the 'Blue Book' - NSW Department of Housing publication.
2.4 Minimise the impact on terrestrial ecosystems	2.4.1	A Vegetation Management Plan will be developed detailing bush regeneration works, weed management strategies and monitoring to be undertaken. The VMP will be implemented by qualified contractors and be consistent with any existing management plans for the area.
	2.4.2	Large and mature trees will be retained as far as reasonably practicable.
	2.4.3	Vegetation representing ground cover (grass tussocks), understorey (e.g. low shrubs and trees) and tree canopy (e.g. large trees) will be planted during the revegetation process.
	2.4.4	Plants used for the revegetation or landscaping will be native species or local provenance where practical.
	2.4.5	Weed biomass material that is cleared from the direct impact zone will be bagged and removed from

		the site to be disposed in appropriate greenwaste facilities. Any native biomass material will be left onsite.
2.5 Minimise the impact on aquatic ecosystems	2.5.1	Any freshwater mussels located within the construction area or disturbed during excavation of the substrate within the Nepean River will be immediately relocated to similar habitat upstream of the pump and pipeline works area.
	2.5.2	Intake structure, pump station and pipe work construction activities will be scheduled outside fish migration season (July to October) where practical.
	2.5.3	An aquatic weed management plan will be prepared as a sub-plan to the VMP.
	2.5.4	'Cut to stump' clearing methods will be employed during the bank side clearing where practical.
	2.5.5	The areas disturbed during the excavation of the Nepean River will be rehabilitated by replacing the original soil profile, protected by sediment curtains and revegetated with *V. americana*
	2.5.6	Large woody debris or snags partially or completely within the construction area will be lopped, realigned or locally relocated to minimise damage to habitat.
	2.5.7	Fish located within the cofferdam when the construction area is pumped dry will be released back into the weir pool, any pest species will be euthanized. Photos of pest species will be provided within the CEMP for easy identification.
2.6 Minimise impact on indigenous heritage	2.6.1	Should any buried or in-situ relic, artefact or material (including skeletal) remains suspected of being of Aboriginal origin be encountered during ground investigation works or during construction the following measure will be applied: a) All work would cease immediately in the impact area so as to avoid any potential further damage/disturbance to the artefact/relic. b) The construction contractors will immediately notify PLDC's heritage Officer to arrange for a NSW DEC officer to attend the site and advise on appropriate measures to be implemented. Appropriate 'rescue-record' procedures would be implemented in accordance with the requirements of the NPW Act 1974.

	2.6.2	All personnel working on site during construction will receive appropriate training as part of site inductions regarding their responsibilities under the NPW Act in terms of archaeological relics.
	2.6.3	All earthworks will be monitored by a suitably qualified archaeologist.
2.7 Minimise impact on non indigenous heritage	2.7.1	All personnel working on site during construction will receive appropriate training as part of site inductions regarding their responsibilities under the Heritage Act 1977 in terms of archaeological relics and the specific location of the heritage items; Castlereagh area, upper room chapel, hall and cemetery and mouquet farm hard stand slab.
	2.7.2	Should any item be encountered during construction of the NRPP project, which is suspected to be a relic of heritage value, all work will cease that may expose the area to damage or disturbance. The EMR will be notified immediately and appropriate arrangements will be made to contact a representative of the NSW Heritage Office or other suitably qualified personnel to attend the site.
	2.7.3	Temporary construction signage would be erected to advise on the proximity to heritage items to secure the area.
2.8 Minimise impact on urban design, landscape and amenity	2.8.1	Construction of the pump station, control building and pipeline will be undertaken in stages and in a timely manner.
	2.8.2	The working width will be reinstated along the entire length of the pipeline route, as soon as reasonably practical.
	2.8.3	Construction work areas will be designated and clearly defined.
	2.8.4	Temporary stockpiles and spoil mounds will be kept under two metres in height.
	2.8.5	Signage will be provided at Weir Reserve with contact details for the Construction contractor to facilitate feedback on construction activities.

2.9 Minimise impact on topography, geology and soils	2.9.1 A soil and Water Management Plan (SWMP) including Erosion and Sediment Control Plan (ESCP) will be prepared and incorporated into the CEMP.
	2.9.2 Vegetation clearance will be limited to that required as a minimum for the purpose of construction.
	2.9.3 A temporary coffer-dam or similar structure will be constructed downstream of the construction activities prior to any excavations at the Boundary Creek and Peach Tree Creek crossings and water will be diverted around the construction zone.
	2.9.4 The excavated pipe trench will be shored at the creek crossings to provide stability during excavation.
	2.9.5 Rock and clean fill excavated from the creek will be moved to a separate bunded area, away from the creek bank and fenced off to dry out. This rock clean fill will be used to reshape the creek banks to their original form on completion of the works.
	2.9.6 Graded rock 200mm or 400mm in diameter will be placed over the trenched area of the creek bed to protect it from erosion by flowing water during re-establishment.
	2.9.7 The creek banks will be re-contoured to their original form using the previously extracted materials, covered with geofabric, jute matting and/or coir matting and replanted with native revegetation. Revegetation will extend from the toe, up the bank using seedlings and reasonably established tube stock, up to two metres in height where appropriate.
2.10 Minimise impact of noise and vibration	2.10.1 A Construction Noise Management Plan (CNMP) will be prepared as part of the CEMP.
	2.10.2 Construction hours to be restricted to: <u>Outside the Scheme boundary</u> Weekdays (i.e. Monday to Friday) 7am to 6pm Saturday: 8am to 1pm No construction work is to be carried out on Saturday or Public Holidays or during night-time hours.

		<u>Within the Scheme boundary</u> Monday to Saturday 7am to 7pm. No work on Sundays or public holidays or during night-time hours, with the exception of that required for quarry haul road crossings. Should work be required outside of the agreed construction hours prior approval will be sort and the community and PCC consulted.
	2.10.3	Stationary plant and equipment will be operated directing the noise emissions away from sensitive receptors where practical.
	2.10.4	The offset distance between noisy plant and equipment, and surrounding noise sensitive receptors will be maximised.
	2.10.5	PLDC will notify the local community of construction activities, including that the duration will be limited and the times of construction strictly controlled. Notification will be provided a minimum of 48hrs prior to works commencing.
	2.10.6	Low noise emission plant and equipment will be selected for the duration of works (where possible).
	2.10.7	Signage will be provided at Weir Reserve two weeks prior to works commencing to alert users to the upcoming disruption.
	2.10.8	Noisy works will be scheduled for less sensitive periods of the day, wherever practicable, particularly around any significant Church events.
2.11 Minimise impact on air quality	2.11.1	All vehicle loads entering and departing the working width will be covered and secured.
	2.11.2	Exposed stockpiles and unsealed construction areas will be sprayed with water as appropriate, or stabilised with seeding and planting as soon as it is practicable to do so.
	2.11.3	Onsite vehicle speed limits will be established and enforced, and as appropriate reviewed in accordance with meteorological conditions, site safety requirements, and the VMP.
	2.11.4	Vehicles and machinery will be regularly serviced and maintained to minimise potential emissions.

	2.11.5 Works will cease when wind speeds exceed 10m/s and where dust generation cannot be effectively minimised until adequate controls can be implemented or until such weather conditions abate.
	2.11.6 No vegetation, timber or combustible material would be burnt on site. Material that is unsuitable for reuse or recycling on site will be removed and transported for subsequent storage, reuse recycle or disposal.
	2.11.7 Any complaints relating to air emissions from construction activities would be promptly investigated and additional controls implemented where required.
	2.11.8 Vehicles and construction crews will be confined to works areas to prevent any inadvertent encroachment or otherwise into exposed and stripped areas of ground or areas subject to rehabilitation.
	2.11.9 All emission controls used on vehicles and construction equipment would comply with relevant NSW DEC standards as provided under Section 124 of the Protection of the Environment Operations Act 1997
	2.11.10 Revegetation/stabilisation of disturbed land surfaces with appropriate seeding and native plant mixes will be undertaken as soon as it is possible to do so to minimise dust episodes and topsoil dispersion.
2.12 Minimise waste generation	2.12.1 A Resource Management Plan embodying the principals of the resource management hierarchy will be prepared as part of the CEMP.
	2.12.2 All wastes will be correctly classified in accordance with the Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes, produced by the EPA in July 1999 to accurately identify management, transportation and disposal requirements.
	2.12.3 Handling, storage and transport of hazardous materials and waste will be in accordance with the National Code of Practice and the relevant Material Safety Data Sheets (MSDS) for the product.

2.13 Minimise impact on existing land use	2.13.1	PLDC will consult with Penrith City Council to coordinate the pipeline works in weir Reserve in regards to location of construction compounds and weekend works to minimise the disruption to users of Weir Reserve and the Great River Walk,
	2.13.2	A Traffic Management Plan will be developed and implemented during the construction phase to provide maximum safety and ease of access for adjacent land uses to the construction zone.
	2.13.3	Land drains and watercourses intercepted by the pipeline route will be reinstated to reflect their former state.
2.14 The effectiveness of the mitigation measures will be assessed and reported during the construction phase.	2.14.1	PLDC will provide the Director–General and Penrith City Council report(s) in respect of the environmental performance of the construction works and compliance with the CEMP, the Statement of Commitments and any other relevant Conditions of Approval. The reports(s) will be prepared within six months of the start of construction and there-after at six monthly intervals. The EMR will review the Construction Compliance Reports before they are submitted to the Director-General and bring to the Director-Generals attention any shortcomings.
2.15 Construction will comply with approved designs.	2.15.1	A compliance certificate under Part 4A of the EP&A Act will be issued by an Accredited Certifier to the Department of Planning, confirming that works have been completed in accordance with approved designs.

3 Pre-Operation	
Environmental outcome (commitment)	Measure (commitment)
3.1 The proposed NRPP will be operated in accordance with the proposal contained in the Environmental Assessment 'Nepean River Pump and Pipeline Environmental Assessment' prepared by Maunsell dated August 2006.	3.1.1 PLDC will submit a Pre-Operation Compliance Report to the Director-General at least four weeks before the Operation of the NRPP (or within any other time agreed to by the Director-General) detailing compliance with pre-operation terms of approval.
	3.1.2 An Operation Environmental Management Plan (OEMP) will be prepared and implemented addressing the operational mitigation measures proposed in the Environmental Assessment, Statement of Commitments and the Conditions of Approval. The OEMP will be submitted to the Director-General for approval before operation commences.

4 Operation	
Environmental outcome (commitment)	Measure (commitment)
4.1 The proposed NRPP will be operated in accordance with the proposal contained in the Environmental Assessment 'Nepean River Pump and Pipeline Environmental Assessment' prepared by Maunsell dated August 2006.	4.1.1 The NRPP will be operated in accordance with the approved OEMP.
	4.1.2 The automatic pump operating system will be fully maintained with provisions for monitoring and overriding control from PLDC offices, or other appropriate location to suit future management of the Lakes Scheme.
4.2 The NRPP will be operated to protect the Penrith Lakes from poor Nepean River water quality	4.2.1 Quarantine lake will be designed to enable water detention time of approximately 24 days in order for 95 percent of faecal coliform to die/degrade before being discharged to the Rowing Lake or Lake A.
	4.2.2 All water pumped from the Nepean River will be pumped via constructed wetlands, as well as appropriate mixing and circulation of the receiving lake waters.
4.3 Minimise impact on urban design, landscape and visual amenity	4.3.1 The pump station will be configured and located to reduce potential visual impacts. An appropriate range of materials, colours and textures will be integrated into the design and hard surfaces to take account of surrounding landscape colours.
	4.3.2 The height of the control building will be kept as low as possible (less than four metres in height) and an appropriate range of materials, colours and textures will be integrated into the building design and hard surfaces to take account of surrounding landscape colours.
	4.3.3 Signage will be provided at the Weir Reserve control building and pumping station explaining the role

	of the pump an pipeline and PLDC's contact details.
4.4 Minimise impact on Nepean River flows and fish passage	4.4.1 The pump and pipeline will be operated in accordance with the following the operating rules: a) Maximum pumped flow rate to be 1.0 m^3/s b) Pumping to commence when flows over Penrith weir exceed 500 ML/day and pumping to cease when flows fall below 350 ML/day
	4.4.2 After initial filling of the lakes, the pump will be operated for lakes system top up only, not for lake flushing.
4.5 Protect the lakes from weed invasion as a result of NRPP operation	4.5.1 Implementing a multi-barrier approach to weed transfer control including: ***a) Constructed wetland with shallow and water deep zones;*** ***b) Submerged intake pipes with Johnson screens;*** ***c) Rocks rip rap at the inlet of the wetlands;*** ***d) Floating silt curtain; and*** ***e) Quarantine lake.***