

Our ref: BW/JN/ST[2725]

Mr Scott Jeffries
A/Director
Critical Infrastructure & Special Projects
Department of Planning
23-33 Bridge Street
SYDNEY 2000

Dear Sir,

APPLICATION NUMBER: 06_0259
**LOW PRESSURE WATER PUMPING STATION, BAYSWATER POWER STATION,
HUNTER RIVER, SINGLETON LOCAL GOVERNMENT AREA**

Response to Public Display Submissions

Reference is made to your letter of 23 March 2007, which included copies of the submissions received during the public display period for the abovementioned project.

In accordance with clause 75H (6) of the *Environmental Planning and Assessment Act 1979*, the Director-General requires Macquarie Generation to respond to the issues raised in the submissions.

The three submissions received by the Department of Planning were from:-

- 1) the Department of Natural Resources,
- 2) the Department of Environment and Conservation, and from
- 3) the General Public.

Following is a summary of the issues raised and Macquarie Generations response to these issues for each of the three submissions received at the completion of the public display period.

1. Response to the Department of Natural Resources Submission

Issue	Response
<p>Issue 1.1) <i>“Hydrological Assessment Figure 5.1 Flow Duration Curve in the environmental assessment (EA) should be replotted with a Y axis from 0-3000 ML/day to show the impact of higher flow rate at relatively low flow rates. Most of the impact will be below 2000-3000 ML/day. The EA should address this issue to permit further discussion”</i></p>	<p>Response: Agreed, Macquarie Generation will modify the graph in the EA, and will forward a copy to the Department as soon as it is completed.</p>
<p>Issue 1.2) <i>“The EA states that the operation of the new pumps will be automated based on the flow condition at Jerrys Plains in accordance with the condition of the licence. Details of such automatic operation should be illustrated in the EA using sample flows and pumping rates including step up and step down rates”</i></p>	<p>Response: Agreed, Macquarie Generation will provide details as soon as the design is finalised. The design of the automated operation of the pumps has not been finalised as variable speed control is currently being assessed. If variable speed control is implemented, pumping will be able to follow the river hydrograph precisely, without any step-up or step-down required.</p>
<p>Issue 1.3) <i>“The EA does not include an assessment of the potential impact of accessing regulated flows at a higher rate than is currently possible. This may result in impacts on the bed and bank stability of the upstream reaches of the Hunter River. In addition, such a release may have impacts on prolonged inundation and flooding of riparian vegetation. The EA needs to address these issues.”</i></p>	<p>Response: Macquarie Generation will not access regulated flows at a rate that is greater than the maximum capacity of the existing low pressure pumping station, unless an agreement with DNR and/or State Water is reached beforehand.</p>
<p>Issue 1.4) <i>“Licensing and Approvals Although authorisations under the Water Management Act 2000 (WMA) are not required for an approved project</i></p>	<p>Response: Agreed.</p>

under Section 75U(1)(h) of the Environmental Planning and Assessment Act 1979 [EPAA]), State Water as operators of the regulated river system will require Macquarie Generation (MG) to nominate a specific work approval number for the purpose of water ordering, and for licensed usage metering requirements. DNR therefore suggests that in the interest of the applicant, Macquarie Generation be advised to obtain a work approval under the WMA for the proposed pump”

Issue 1.5)

“If a Part 3A Major Projects approval is granted it will be critical that the approval requires MG to monitor its water extraction and provide other relevant information to DNR”

Response:

Agreed, this information is currently recorded and stored, and provided to DNR on request, as required by Macquarie Generations existing Water Licence. It is intended that this process should continue.

2. Response to the Department of Conservation and Environment Submission

Issues

DEC states that there are three specific issues that are not satisfactorily dealt with by the EA and / or the Statement of Commitments

Issue 2.1)

“The new pump facility and associated construction activities must be confined to the heavily disturbed section of bank immediately upstream of the existing structure”

Issue 2.2)

“All pump station construction works that may impact on the local platypus population must be undertaken during the period of mid-March to mid-

Response

Response:

Please find attached an updated version of the “Statement of Commitments”, noting that the recommended changes have been indicated in yellow bolding.

Response:

Agreed, the new pumping facility will be located adjacent to the existing pumping facility and confined to the heavily disturbed section of riverbank. The Statement of Commitments has been modified to address this issue (see attached modified version).

Response:

Advice received from Dr Tom Grant (see attached document) explains that if site preparation work can commence prior to September, any platypus present will not be

September inclusive unless it has been demonstrated, in consultation with DEC and to the satisfaction of DoP, that the temporary removal, care and eventual return of the animals will not adversely impact the local platypus population;”

breeding, and will move away from the construction area. Work can continue through the September-March breeding period as the platypus will not be able to re-enter the site. Macquarie Generation will prepare the site for construction before September and maintain the site in such a way that the platypus cannot move back into the construction area. Macquarie Generations Environment Officers will conduct visual inspections prior to commencement of construction, during construction and post construction.

Consistent with the advice of Dr. Grant initial excavation will involve the careful removal of the top metre of soil to uncover any burrows, if they exist, enabling the platypus to escape. If platypus are found in the riverbank construction site during this time, Macquarie Generation will cease construction until the platypus can be relocated back into the river.

Issue 2.3)

“The proponent must implement a long-term management plan and monitoring program targeting the conservation and management of the local platypus population and the River-flat Eucalypt Forest Endangered Ecological Community. These must be prepared in consultation with the DEC and to the satisfaction of DoP prior to commencement of site works.”

Response:

Agreed. The proposed pumping station augmentation will be constructed adjacent to the existing pumping station.

The monitoring, conservation and long term management of the above mentioned platypus and eucalypt community will be included in the existing ISO14001 accredited Bayswater Power Station Environmental Management Plan.

3. Response to the General Public Submission

Issues	Response
<p>The submission states “The ... Wishes to object to increased water extractions from the Hunter River to supply water to the Bayswater and Liddell Power Stations”.</p>	<p>Response Macquarie Generation will not be increasing water extractions from the Hunter River but will continue water pumping consistent with the existing licence.</p>
<p>Issue 3.1) <i>“Inadequate Project Justifications – There is a requirement for water efficiency to be maximised within the Power Stations. The main use of water in the power station is for steam generation and cooling of equipment. With 50% of water used for cooling</i></p>	<p>Response: Macquarie Generations Bayswater Power Station was designed and built as a zero water discharge site incorporating substantial infrastructure to optimise the efficient use and recycling of the water it uses. Worlds best practice recycling techniques are currently used at both of Macquarie Generations</p>

purposes significant gains can be made if the level of recycling is increased and water is maintained within the system... ”

Issue 3.2)

“Alternative Options

.....these options are preferable to the increased water extractions from the Hunter River”

Issue 3.3)

Environmental Impacts

“We are concerned that the threefold increase in water extraction during the rivers flood periods will significantly damage the Hunter Rivers aquatic ecosystems, riparian vegetation and soil structure of surrounding lands, as well as exacerbate the occurrence of land degradation due to sedimentation”

Issue 3.4)

“Particular bodies of water that would be damaged by the enhanced extraction are the Hexham Swamp and Kooragang Island, which are already under stress and require high flows to maintain environmental health”

Issue 3.5)

“...the quality of water runoff from the pump station into the nearby Plashett Dam will be diminished, causing further damage to aquatic vegetation and species biodiversity”

power stations.

Response:

There will not be any increased water extraction from the Hunter River. Macquarie Generation will continue to extract water from the Hunter River consistent with the terms of its existing Water Licence.

Response:

As above

Response:

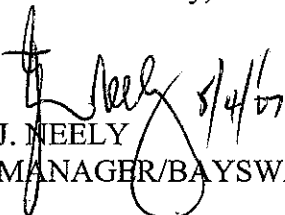
Macquarie Generation will not be extracting any more water than it is currently permitted to do. The EA states that there will be minimal change to the flow regime of the high flow “freshes” essential for river system ecological health.

Response:

This comment is unclear in its meaning. The water quality in Plashett Dam will not be adversely affected by the project.

If you have any questions regarding the responses given by Macquarie Generation to the issues raised by the Public Display Submissions, please direct these to Bayswater Power Stations Environment Officer, Mr Sean Trebley, on phone number 0265420723 or e-mail address sean.trebley@macgen.com.au.

Yours Sincerely,


J. NEELY
MANAGER/BAYSWATER POWER STATION

6. Statement of Commitments

This Section of the Environmental Assessment states the commitments made by Macquarie Generation to ensure that the impacts of implementing the augmentation project are acceptable.

Subject to the incorporation of the mitigation measures identified in Table 6.1, the augmentation of the Hunter River Pumping Station project can be implemented with acceptable impacts to the environment as indicated in Section 5.

Table 6.1 – Statement of Commitments

Issue or Section No.	Commitment
Administrative Condition - Compliance	<p>Macquarie Generation will notify in writing the Director-General, Relevant Government Departments and Singleton Council of the start of the Project's Construction and Operation. Such notification must be provided at least four weeks before the relevant start date unless otherwise agreed to by the Director-General.</p> <p>Macquarie Generation will bring to the Director-General's attention any matter that may require further assessment by the Director-General.</p> <p>Macquarie Generation will comply with any requirements of the Director-General arising from the Director-General's assessment of:</p> <ul style="list-style-type: none"> (a) any reports, plans or correspondence that are submitted to satisfy the Conditions of Approval; and (b) the implementation of any actions or measures contained in such reports, plans or correspondence.
Administrative Condition – Pre Construction Compliance Report	<p>Macquarie Generation will submit a Pre-Construction Compliance Report to the Director-General at least two weeks before Construction commences (or within any other time agreed to by the Director-General).</p> <p>The Pre-Construction Compliance Report will include:</p> <ul style="list-style-type: none"> (a) details of how the Conditions of Approval required to be addressed before Construction were complied with; (b) the time when each relevant Condition of Approval was complied with, including dates of submission of any required reports and/or approval dates; and (c) details of any approvals or licences required to be issued by Relevant Government Departments before Construction commences.
Administrative Condition – Pre Operation Compliance Report	<p>Macquarie Generation will submit a Pre-Operation Compliance Report to the Director-General at least two weeks before Operation commences (or within any other time agreed to by the Director-General).</p> <p>The Pre-Operation Compliance Report must include:</p> <ul style="list-style-type: none"> (a) details of how the Conditions of Approval required to be addressed before Operation were complied with; (b) the time when each relevant Condition of Approval was complied with, including dates of submission of any required reports and/or approval dates; and (c) details of any approvals or licences issued by Relevant Government Departments for the Project's Operation.

Issue or Section No.	Commitment
<p>Administrative Condition – Construction Compliance Reports</p>	<p>Macquarie Generation will provide the Director-General, Singleton Council and any other government department nominated by the Director-General with Construction Compliance Reports. The environmental management representative (EMR) must review the Construction Compliance Reports before they are submitted to the Director-General and bring to the Director-General's attention any shortcomings.</p> <p>The first Construction Compliance Report will report on the first six months of Construction and be submitted a maximum six weeks after expiry of that period (or at any other time interval agreed to by the Director General). The second, and subsequent, Construction Compliance Reports will be submitted at maximum intervals of six months from the date of submission of the first Construction Compliance Report (or at any other time interval agreed to by the Director General) for the duration of Construction.</p> <p>The Construction Compliance Reports will include information on:</p> <ul style="list-style-type: none"> (a) compliance with the CEMP and the Conditions of Approval; (b) compliance with any approvals or licences issued by Relevant Government Departments for Construction; (c) the implementation and effectiveness of environmental controls. The assessment of effectiveness will be based on a comparison of actual impacts against performance criteria identified in the CEMP; (d) environmental monitoring results, presented as a results summary and analysis; (e) the number and details of any complaints, including a summary of main areas of complaint, action taken, response given and intended strategies to reduce recurring complaints; (f) details of any review and amendments to the CEMP resulting from Construction during the reporting period; and (g) any other matter relating to compliance with the Conditions of Approval or as requested by the Director-General. <p>The Construction Compliance Reports will be made publicly available.</p>
<p>Environmental Impact Audits- Environmental Impact Audit Report - Construction</p>	<p>An Environmental Impact Audit Report - Construction will be prepared by Macquarie Generation and submitted to the Director-General a maximum three months after Construction is complete (or at any other time interval agreed to by the Director-General). The Environmental Impact Audit Report – Construction will also be submitted to other government departments upon the request of the Director-General.</p> <p>The Environmental Impact Audit Report – Construction will:</p> <ul style="list-style-type: none"> (a) identify the major environmental controls used during Construction and assess their effectiveness; (b) summarise the main environmental management plans and processes implemented during Construction and assess their effectiveness; (c) identify any innovations in Construction methodology used to improve environmental management; and (d) discuss the lessons learnt during Construction, including recommendations for future Projects.

Issue or Section No.	Commitment
<p>Environmental Impact Audits- Environmental Impact Audit Report - Operation</p>	<p>An Environmental Impact Audit Report - Operation will be submitted by Macquarie Generation to the Director-General a maximum 24 months after the Project begins Operation and at any additional periods that the Director-General may require. The Environmental Impact Audit Report - Operation must also be submitted to other government departments upon the request of the Director-General.</p> <p>The Environmental Impact Audit Report - Operation will:</p> <ul style="list-style-type: none"> (a) be certified by an independent person at the Proponent's expense. The certifier must be advised to the Director-General before the Environmental Impact Audit Report - Operation is prepared; (b) compare the Operation impact predictions made in the EA, Submissions Report and any supplementary studies with the actual impacts; (c) assess the effectiveness of implemented mitigation measures and safeguards; (d) assess compliance with the systems for operation maintenance and monitoring; (e) discuss the results of consultation with the local community particularly any feedback or complaints; and (f) be made publicly available.
<p>Environmental Management - Construction Environmental Management Plan</p>	<p>A Construction Environmental Management Plan (CEMP) will be prepared by Macquarie Generation and implemented in accordance with all relevant Acts and Regulations. Macquarie Generation will obtain the Director-General's Approval for the CEMP before Construction commences or within any other time agreed to by the Director-General. The CEMP must be reviewed by the EMR before Macquarie Generation seeks the Director-General's approval for the CEMP. The EMR must bring to the Director-General's attention any shortcomings.</p> <p>Macquarie Generation will ensure that the mitigation measures identified in this EA are incorporated into the CEMP or the relevant Sub Plan.</p> <p>The CEMP will be prepared in accordance with the Department's publication entitled Guideline for the Preparation of Environmental Management Plans (2004).</p>
<p>Environmental Management - Operation Environmental Management Plan</p>	<p>An Operation Environmental Management Plan (OEMP) will be prepared by Macquarie Generation and implemented in accordance with these Conditions and all relevant Acts and Regulations. Macquarie Generation will obtain the approval of the Director-General for the OEMP before Operation commences or within any other time agreed to by the Director-General.</p> <p>Macquarie Generation will ensure that the mitigation measures identified in this EA are incorporated into the OEMP or the relevant Sub Plan.</p> <p>The OEMP must be prepared in accordance with the Department's publication entitled Guideline for the Preparation of Environmental Management Plans (2004).</p>

Issue or Section No.	Commitment
<p>Environmental Management – Environmental Management Representative</p>	<p>Macquarie Generation will request the Director-General's Approval for the appointment of an Environmental Management Representative (EMR) at least eight weeks before Construction commences (or within any other time agreed to by the Director-General). In its request Macquarie Generation will provide the following information, the:</p> <ul style="list-style-type: none"> (a) qualifications and experience of the EMR including demonstration of general compliance with relevant Australian Standards for environmental auditors; (b) authority and independence (from the Proponent or its contractors) of the EMR including details of the Proponent's internal reporting structure; and (c) resourcing of the EMR role. The EMR will be available: <ul style="list-style-type: none"> (i) for sufficient time to undertake the EMR role. This timing shall be agreed between Macquarie Generation and the EMR and advised to the Director-General in the request for approval; (ii) at any other time requested by the Director-General; (iii) during any Construction activities identified in the CEMP to require the EMR's attendance; and (iv) for the duration of Construction. <p>The Director-General may at any time immediately revoke the approval of an EMR appointment by providing written notice to Macquarie Generation. Interim arrangements for EMR responsibility following the revocation must be agreed in writing between the Director-General and Macquarie Generation.</p> <p>The Director-General may at any time conduct an audit of any actions undertaken by the EMR.</p> <p>Macquarie Generation will:</p> <ul style="list-style-type: none"> (a) facilitate and assist the Director-General in any such audit; and (b) include in the conditions of the EMR's appointment the need to facilitate and assist the Director-General in any such audit. <p>The EMR is authorised to:</p> <ul style="list-style-type: none"> (a) consider and advise the Director-General and Macquarie Generation 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 Macquarie Generation; (c) review the CEMP; (d) periodically monitor Macquarie Generation's activities to evaluate compliance with the CEMP. Periodic monitoring must involve site inspections of active work sites at least fortnightly; (e) provide a written report to Macquarie Generation of any non-compliance with the CEMP observed or identified by the EMR. Non compliance must be managed as identified in the CEMP;

Issue or Section No.	Commitment
	<p>(f) issue a recommendation to Macquarie Generation 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 Macquarie Generation initiate reasonable actions to avoid or minimise adverse impacts;</p> <p>(g) review corrective and preventative actions to monitor the implementation of recommendations made from audits and site inspections;</p> <p>(h) certify that minor revisions to the CEMP are consistent with the approved CEMP; and</p> <p>(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.</p> <p>The EMR must immediately advise Macquarie Generation and the Director-General of any incidents relevant to these Conditions resulting from Construction that were not dealt with expediently or adequately by Macquarie Generation.</p>
<p>Community and Consultation - Advice of Construction Activities</p>	<p>Macquarie Generation will ensure that the local community and businesses are advised of Construction activities that could cause disruption. Methods to disseminate this information will be identified in the CEMP. Information to be provided will include:</p> <p>(a) details of any traffic disruptions and controls;</p> <p>(b) construction of temporary detours; and</p> <p>(c) work approved to be undertaken outside standard Construction hours, in particular noisy works, before such works are undertaken.</p>
<p>Community and Consultation - Complaints Management</p>	<p>Prior to the commencement of Construction, Macquarie Generation will ensure that the following is available for the construction and operation period:</p> <p>(a) a postal address to which written complaints may be sent;</p> <p>(b) an e-mail address to which electronic complaints may be transmitted; and</p> <p>(c) a 24-hour telephone contact line.</p> <p>Macquarie Generation will keep a legible record of all complaints received in an up-to-date Complaints Register. The Complaints Register will record, but not necessarily be limited to:</p> <p>(a) the date and time, where relevant, of the complaint;</p> <p>(b) the means by which the complaint was made (telephone, mail or e-mail);</p> <p>(c) any personal details of the complainant that were provided, or if no details were provided, a note to that effect;</p> <p>(d) the nature of the complaint;</p> <p>(e) any action(s) taken by Macquarie Generation in relation to the complaint, including any follow-up contact with the complainant; and</p> <p>(f) if no action was taken by Macquarie Generation in relation to the complaint, the reason(s) why no action was taken.</p> <p>The Complaints Register will be made available for inspection on request of the Director-General. The record of a complaint must be kept for at least four years after the complaint was made.</p>

Issue or Section No.	Commitment
<p>Flora and Fauna Management Sub Plan</p>	<p>A Flora and Fauna Management Sub Plan will be prepared by Macquarie Generation as a sub plan of the CEMP. This sub plan will include:</p> <ul style="list-style-type: none"> (a) plans showing terrestrial vegetation communities; important flora and fauna habitat areas; locations where threatened species, populations or ecological communities were recorded; and areas to be cleared. The plans must also identify vegetation adjoining the Project where this contains important habitat areas and/or threatened species, populations or ecological communities; (b) methods to manage impacts on flora and fauna species (terrestrial and aquatic) and their habitat which may be directly or indirectly affected by the Project. These will include: <ul style="list-style-type: none"> (i) procedures for vegetation clearing, soil management and managing other habitat damage during Construction; (ii) methods to protect vegetation both retained within, and also adjoining, the Project from damage during Construction; (iii) a habitat tree management program including fauna recovery procedures and habitat maintenance (e.g. relocating hollows or installing nesting boxes); (iv) where possible, and where consistent with DEC or DPI requirements, strategies for re-using in rehabilitation works individuals of any threatened plant species that would be otherwise be destroyed by the Project; (v) performance criteria against which to measure the success of the methods (c) rehabilitation details including: <ul style="list-style-type: none"> (i) identification of locally native species to be used in rehabilitation and landscaping works, including flora species suitable as a food resource for threatened fauna species; (ii) methods to remediate affected aquatic habitats; (iii) the source of all seed or tube stock to be used in rehabilitation and landscaping works including the identification of seed sources within the Project. Seed of locally native species within the Project will be collected before Construction commences to provide seed stock for revegetation; (iv) methods to re-use topsoil (and where relevant subsoils) and cleared vegetation; (v) measures for the management and maintenance of all preserved, planted and rehabilitated vegetation; (d) a Weed Management Strategy including: <ul style="list-style-type: none"> (i) identification of weeds within the Project and adjoining areas; (ii) methods to treat and re-use weed infested topsoil; (iii) strategies to control the spread of weeds during Construction; (e) a program for reporting on the effectiveness of flora and fauna management measures against the identified performance criteria. Management methods must be reviewed where found to be ineffective; (f) the mitigation measures in Chapter 5 of the EA.

Issue or Section No.	Commitment
Cultural Heritage Sub Plan	A Cultural Heritage Management Sub Plan will be prepared by Macquarie Generation as part of the CEMP. The sub plan must incorporate the mitigation measures identified in Chapter 5 of the EA.
Non Indigenous Object	In the event that a non-indigenous heritage item is uncovered during Construction, all work in the vicinity of the object will cease and Macquarie Generation will contact the NSW Heritage Council to determine an appropriate course of action prior to the re-commencement of work in the vicinity of the item.
Soil and Water Management Sub Plan	<p>As part of the CEMP, a Soil and Water Management Sub Plan will be prepared by Macquarie Generation in consultation with Relevant Government Departments and Singleton Council. The Sub Plan will:</p> <ul style="list-style-type: none"> (a) where relevant, be consistent with the RTA's Guidelines for the Control of Erosion and Sedimentation in Roadworks; (b) identify the Construction activities that could cause soil erosion or discharge sediment or water pollutants from the site; (c) describe management methods to minimise soil erosion or discharge of sediment or water pollutants from the site including a strategy to minimise the area of bare surfaces during Construction; (d) describe the location and capacity of erosion and sediment control measures; (e) identify the timing and conditions under which Construction stage controls will be decommissioned; (f) include the mitigation measures in Chapter 5 of the EA, including measures to minimise dust from disturbed areas; (f) include contingency plans to be implemented for events such as fuel spills; and (g) identify how the effectiveness of the sediment and erosion control system will be monitored, reviewed and updated. <p>Construction</p> <p>An appropriately skilled Engineer or soil scientist will be consulted according to the Soil and Water Management Sub Plan to:</p> <ul style="list-style-type: none"> (a) undertake inspections of temporary and permanent erosion and sedimentation control devices; (b) ensure that the most appropriate controls are being implemented; (c) check that controls are being maintained in an efficient condition; and (d) check that controls meet the requirements of any relevant approval and/or licence condition. <p>The results of these inspections and any follow-up actions will be reported in the Construction Compliance Reports.</p>
Greenhouse and Energy Management Strategy	A <i>Greenhouse and Energy Management Strategy</i> will be prepared by Macquarie Generation prior to construction commencing, to ensure the efficient use of any non-renewable <i>resources</i> for Construction and Operation and where practicable, minimised.

Issue or Section No.	Commitment
<p>Construction Traffic Management Sub Plan</p>	<p>As part of the CEMP, a Construction Traffic and Transport Management Sub Plan will be prepared by Macquarie Generation. The sub plan will:</p> <ul style="list-style-type: none"> (a) Include the mitigation measures outlined in Chapter 5 of the EA; (b) identify designated transport routes for heavy vehicles to the Development Site; (c) include measures to minimise traffic disruption through Singleton and along the New England Highway; (d) include measures to minimise disturbance from traffic noise; (e) include measures to manage Construction traffic to ensure the safety of: <ul style="list-style-type: none"> (i) livestock and limit disruption to livestock movement; (ii) school children and limit disruption to school bus timetables; and (f) include a community information program to inform the community of any traffic disruptions resulting from the construction program.
<p>Road Dilapidation</p>	<p>Macquarie Generation will maintain the access road on its property in a safe condition during the construction phase. Any damage resulting from construction traffic, except that resulting from normal wear and tear, is to be repaired at Macquarie Generation's cost.</p>
<p>Bushfire Risk Management Sub Plan</p>	<p>As part of the Construction and Operation EMPs, Macquarie Generation will prepare a Bushfire Risk Management Sub Plan based on the guidelines Planning for Bushfire Protection (RFS, 2001 or its latest edition). The sub plan will include:</p> <ul style="list-style-type: none"> (a) details of the bushfire hazards and risks associated with the Development; (b) mitigation measures including contingency plans; (c) include the mitigation measures in Chapter 5 of the EA. (d) procedures and programs for liaison and regular drills with the Local Rural Fire Service; and (d) procedures for regular fire prevention inspections by the Local Rural Fire Service and implementation of any recommendations.
<p>Waste Management and Re-use Sub Plan</p>	<p>As part of the CEMP and OEMP, Macquarie Generation will prepare a Waste Management and Re-use Sub Plan to address the management of wastes during the Construction and Operation stages respectively in accordance with the NSW Government's Waste Reduction and Purchasing Policy. The Sub Plan will identify requirements for:</p> <ul style="list-style-type: none"> (a) the application of the waste minimisation hierarchy principles of avoid/reduce/reuse/recycle/dispose; (b) waste handling and storage; (c) disposal of wastes. Specific details must be provided for cleared vegetation, contaminated materials, glass, metals and plastics, hydrocarbons (lubricants and fuels) and sanitary wastes; and (d) any waste material that is unable to be re-used, re-processed or recycled must be disposed at a facility approved to receive that type of waste; and will include the mitigation measures in Chapter 5.
	<p>Macquarie Generation's project design is based on the layout shown in Figures 3.2 to 3.7 and the project description in Chapter 3 of the EA. Actual project design may vary slightly dependent on the final site conditions and equipment specification. The final design will be subject to Consent Authority review as part of the Construction Certificate Application process.</p>
	<p>Macquarie Generation will require the design of the substation to incorporate provision for containment of any oil spillage or leakage from the transformer(s) including secondary containment.</p>
	<p>Macquarie Generation will require the design of the LP Pumping Station to incorporate containment of oil that complies with relevant standards.</p>

Issue or Section No.	Commitment
	The site access from public roads will be via the Bayswater Power Station River Road. The existing lockable gate will be maintained at the entrance point.
	In the case of areas of oil or fuel storage on-site, Macquarie Generation will provide sufficient containment to contain any spillage that may occur at the location. Such sites will be monitored periodically for integrity of containment and adequacy of handling procedures. For the substation, containment measures will also include a secondary containment pond down-slope of the substation.
	In consultation with the neighbouring landowners and Jerrys Plains community, during construction selected tree planting may be undertaken by Macquarie Generation to reduce the visibility of certain elements of the project. The preferred types of plants for screening will be local native varieties.
	If a noise nuisance is reported after the pumping station is commissioned, Macquarie Generation will review the nature of the noise impact and assess the potential sources. If necessary, testing will be conducted to confirm that equipment performance is in accordance with the required noise specification.
	If the pumping station operation is resulting in noise in excess of the DEC requirements for the relevant receivers, then Macquarie Generation will vary operation of the pumping station to achieve noise compliance.
5.5.2	A Soil and Water Management Plan (SWMP) including an Erosion and Sediment Control Plan (ESCP) will be prepared which will describe detailed control measures and management strategies for potential erosion and sedimentation control during construction
5.5.2	No spoil will be stored adjacent to existing waterways or drainage lines
5.5.2	Surface flows will be diverted around and areas of disturbed ground or soil stockpiles
5.5.2	Sediment fences and other similar measures, such as control berms, will be constructed downstream of all disturbed areas to minimise the influx of sediment and other pollutants into local waterways
5.5.2	Rehabilitation techniques will be employed as necessary to ensure the ongoing stability of the banks of the Hunter River and less drainage lines for the Saltwater Creek catchment. These techniques will be detailed in the construction contractor's rehabilitation plan
5.7.3 & 5.7.4	To eliminate risk to the Endangered Ecological River-Flat Eucalypt Community and Platypus population, Macquarie Generation will locate the new pumping facility adjacent to the existing pumping facility. The new pumping facility will be confined to the heavily disturbed section of riverbank immediately upstream of the existing pumping facility. The Endangered Ecological River Flat Eucalypt Community are outside and away from the proposed construction site.
5.7.3	Existing trees will be retained where possible to maintain current foraging and roosting areas for common fauna and connectivity of existing fauna movement corridors
5.7.3	Vegetation along the pipeline route will be rehabilitated and revegetated (representing ground cover, understorey and tree canopy) following construction of the Project
5.7.3	A Vegetation Management Plan will be prepared detailing restoration works, including weed management and re-establishment of native understorey species along the Hunter River

Issue or Section No.	Commitment
5.6.1 & 5.7.4	<p>Excavation of the banks within 10 metres of the stream and to stream level should be carried out with light equipment and inspected to prevent the killing of any platypus in residence at the time excavations commence.</p> <p>Advice received from Dr Tom Grant (author of Platypus study) explains that if site preparation work can commence prior to September, any platypus present will not be breeding, and will move away from the construction area. Work can continue through the September-March breeding period as the platypus will not be able to re-enter the site.</p> <p>Macquarie Generation will prepare the site for construction before September and maintain the site in such a way that the platypus cannot move back into the construction area. Macquarie Generations Environment Officers will conduct visual inspections prior to commencement of construction, during construction and post construction.</p> <p>Consistent with the advice of Dr. Grant initial excavation will involve the careful removal of the top metre of soil to uncover any existing burrows, enabling the platypus to escape.</p> <p>If any platypus are found in the riverbank construction site during this time, Macquarie Generation will cease construction until the platypus can be relocated back into the nearby river.</p>
5.6.1	Explosions and blasting should be avoided if possible
5.7.3 & 5.7.4	Macquarie Generation will develop a long term Management Strategy for the Platypus population and Endangered River-flat Eucalypt Ecological Community identified in the EA in consultation with DEC and to the satisfaction of DoP. This Plan will be included in the ISO 14001 accredited Bayswater Power Station Environmental Management Plan
5.7.4	No oil or other chemicals should be stored on the stream bank below maximum stream height to minimise the potential for contamination of the river
5.6.2	The Project Construction Environmental Management Plan (CEMP) will detail measures to protect the water quality of the Hunter River
5.10	The construction of the pump station, control building and pipeline would be undertaken in a staged and timely manner to minimise impact on local visual amenity
5.10	The location of the pipeline route, pump station and control building will be chosen to minimise the extent of tree and shrub removal and to minimise destabilising the banks of the Hunter River, and to eliminate any risk to the Endangered River-Flat Ecological Community upstream of the existing pumping facility.
5.10	Following completion of the construction works, the disturbed areas (ie. working width) will be rehabilitated with native and locally endemic species robust to local climatic conditions. It is anticipated that this will improve the visual amenity when compared with the pre-construction condition of the area
5.10	Painting of steel structures would be undertaken to minimise their visibility
5.12	Provide 'all weather' surfaces on construction haul routes and establish and enforce appropriate vehicle speed limits
5.12	All vehicle loads entering and departing construction areas will be covered
5.12	Exposed stockpiles and unsealed construction areas will be sprayed with water from watering carts as appropriate, or stabilised with seeding and planting
5.12	Vehicles and machinery will be regularly serviced and maintained to optimum working conditions to minimise potential emissions

Issue or Section No.	Commitment
5.12	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.
5.12	Vehicles will be confined to work areas to prevent any inadvertent encroachment or otherwise into exposed and stripped areas of ground
5.12	All emission controls used on vehicles and construction equipment would comply with relevant DEC standards as provided under Section 124 of the Protection of the Environment Operations Act
5.11	Equipment with low noise emission to be used, if required, wherever possible
5.11	A Construction Noise Management Plan would be prepared and implemented during the construction phase by the construction contractor
5.11	Noise control in the vicinity of the Hunter River may be required during construction. Temporary noise controls, if required, would be detailed in the Noise Management Plan
5.8	If an item of indigenous cultural heritage is uncovered during construction, work in the affected area will cease immediately so as to avoid any potential damage/disturbance to the artefact/relic of interest
5.8	In the event of an indigenous find, the construction contractor is to notify the nominated Macquarie Generation Environment Officer immediately to arrange for a DEC officer to attend the site
5.8	Appropriate 'rescue-record' measures would be implemented for uncovered indigenous heritage, in accordance with appropriate guidelines under the National Parks and Wildlife Act 1974 and the advice received from DEC
5.9	Should any item be encountered during pipeline construction that is considered to be of (non-indigenous) heritage value, all work will cease immediately. The construction contractor's Environment Manager would be notified immediately who would then be responsible to make appropriate arrangements for a representative from the NSW Heritage Office or other suitably qualified person to be consulted
5.9	All site personnel would be made aware of the proximity of any identified items of indigenous or non-indigenous cultural heritage significance
5.13	A Resource and Waste Management Plan will be prepared
5.13	Handling, storage and transport of all hazardous materials and waste shall be in accordance with the National Code of Practice and the relevant Material Safety Data Sheets (MSDS) for the product
5.13	Any wastes will be classified correctly in accordance with the Environmental Guidelines: Assessment, Classification & Management of Liquid and Non-liquid Wastes, produced by the EPA in July 1999 (the Waste Guidelines) to accurately identify management, transportation and disposal requirements
5.6.3	Establish a comprehensive protocols to ensure pumping is managed in accordance to Licence allowances and rules
5.7.3	Develop and implement a long-term management plan and monitoring program targeting the health of the River Flat Eucalypt Forest prior to commencement of site works, in conjunction with platypus studies at this locality.
5.8	Ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance
5.8	No development works will occur within 20 metres of the isolated indigenous artefact found on site, and it will be fenced off
5.7.6	The new pumping station will be located as close as practicable to the heavily disturbed section of bank immediately upstream of the existing LP pumping station

Issue or Section No.	Commitment
5.7.6	Water pumped from the coffer dam should be diverted to settling pond(s) before returning the water to the river, downstream of the weir to prevent sedimentation within the weir pool
5.7.6	Undertake excavation for the new LP pumping station in conjunction with a platypus management plan to avoid any impacts on the breeding activity of the local platypus population
5.7.6	Pumping station excavation to occur during the period of mid-March to mid-September or following relocation of local platypus population
5.7.6	Where there is insufficient ground clearance to allow fauna passage, install over- or underpass structures, such as earth bridges or tunnels, at strategic points along the pipeline route to allow fauna to cross over the pipeline structure
5.7.6	Provide habitat niches for insects (which in turn provide food resource for vertebrate species) by distributing any cleared vegetation along the pipeline
5.7.6	Ensure the pipeline design avoids hollow-bearing trees
5.7.6	Clear only the minimum area of vegetation, to minimise soil erosion and removal/modification of flora and fauna habitat
5.7.6	Maximise the retention of food resources, particularly sap-feeding trees and understorey species such as wattles
5.7.6	Retain hollow-bearing trees and recruitment (juvenile) trees
5.7.6	Where felling of hollow-bearing trees is required, engage a suitably qualified ecologist to undertake a pre-clearance survey 24 to 48 hours prior to felling to ensure gliders are not present within any of the hollows
5.7.6	Engage an ecologist to inspect felled trees for injured fauna. Handle carefully any shocked, immature or injured fauna
5.7.6	No equipment, machinery or vehicles to be placed or left within the drip line of trees
5.7.6	Detail erosion and sediment control measures in the Environmental Management Plan (EMP)
5.7.6	Develop a Site Rehabilitation and Weed Management Plan prior to commencement of on-site works. It is anticipated that this Plan would be in force for a minimum period of one to two years following completion of works to ensure the work site has been successfully rehabilitated
5.7.6	Undertake post-construction rehabilitation of the study area using locally indigenous species
5.7.6	Compensate for native vegetation loss resulting from the pipeline by replanting at a ratio of two to one for each plant lost. This should result in a net increase in vegetation biomass and thus habitat
5.7.6	Stockpile all topsoil (ie the first 10 centimetres of the soil profile) and store separately from subsoil in areas designated stockpiles
5.7.6	Progressively rehabilitate exposed soil areas throughout the construction period
5.7.6	Progressively re-lay stockpiled spoil, topsoil and vegetation in the order that work progresses
5.7.6	Establish sandbags, linear silt fencing, or other suitable material between disturbed surfaces and aquatic or riparian habitats, to capture any sediment mobilised during wet weather
5.7.6	Maintain silt fences until the site has been revegetated, stabilised and is no longer prone to erosion
5.7.6	Inspect and maintain (re-erect, de-silt etc) erosion/siltation control devices weekly and after rainfall event