

Part 3A Environmental Assessment (Project Application 08_0061)

Gas Pipeline (North-South Route),
Liddell Power Station

Submission Report

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1 Introduction

This document has been prepared in response to a request from the Director-General in accordance with section 75H of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act) that Macquarie Generation prepare a response to the issues raised during the public exhibition period for the Gas Pipeline (North-South Route), Liddell Power Station Project (Project) environmental assessment report (EAR). This report provides Macquarie Generation's response to submissions and focuses on the issues raised.

A total of eight (8) submissions were received during the Environmental Assessment (EA) exhibition period. Submissions were received by the Department of Planning from the Department of Water and Energy, Department of Primary Industries, Roads and Traffic Authority, Department of Environment and Climate Change, the Hunter-Central Rivers Catchment Management Authority, Xstrata Coal, Muswellbrook Shire Council and a single landholder. Of these submissions, one (1) submission objected to the proposed Project on the grounds that they did not wish to have the pipeline cross through their property and that there was no consultation during the pipeline route selection process.

For each submission, the theme of the matters raised is noted in bold, followed by a response by Macquarie Generation in normal type.

2 Department of Water and Energy

2.1 Watercourse crossings

The Department of Water and Energy (DWE) has reviewed the Environmental Assessment. The proposed pipeline crossing locations on the Hunter River and Wollombi Brook are on potentially geomorphically unstable points. The risk of destabilisation of the sand infill channels of these rivers due to trenching instalment of the pipeline is unacceptable to DWE. The proponent must utilise alternate means to install the pipeline, which should focus on directional boring beneath the mobile infill sand bed of the two rivers.

The proponent should be required to include a report on river crossings in its project approval conditions. This must include geomorphic justification of the crossing point, locations of controls on river bed and banks, thalweg and inflexion points, vegetation type and extent of cover and protection controls to the rivers during and after installation of the pipeline.

Macquarie Generation will utilise horizontal directional drilling (HDD) techniques for both the Hunter River and Wollombi Brook (EAR Section 2.8.1, Commitment 3.5) so as to minimise the direct impact on the watercourses.

If for some unforeseen reason HDD was to fail at these locations, open cut crossing techniques would be required to complete the pipeline and Macquarie Generation will consult DWE to provide justification for changing the crossing technique, including providing an activity-specific water crossing construction method statement prior to construction for their consideration (EAR 5.4.3, Commitment 3.6).

2.2 Pipeline Licence

The proponent must apply for a licence under the Pipelines Act 1992 to DWE. DWE will outline details of the licence requirements with the proponent upon application.

Macquarie Generation will apply for the Pipeline Licence (as per EAR Table 4) for the Project as required by the *Pipelines Act 1967*. Macquarie Generation will work with the DWE to meet all licence requirements during the application stage.

3 Department of Primary Industries

3.1 Agricultural Issues

Review of Table 1 (Land ownership details; page 6) indicates that the pipeline will affect a number of land parcels that are defined as agricultural land. Some of the parcels are grazing land on the floodplain of Wollombi Brook and based on satellite images, a small number appear to be irrigated. The property owned by RW Moses P/L & Wandewoi P/L (Lot 101, DP1017998) contains a centre pivot irrigation system and the pipeline corridor is in close proximity to this high value property.

Evidence of consultation and subsequent agreement between parties on affected land is considered a key issue for agricultural properties in this location. For instance, the "clean-up and restoration" of the ROW will be by natural regrowth or broadcasting appropriate seed and fertiliser based on consultation with landholders and specialist advice.

Macquarie Generation will enter into land access agreements with all directly affected landholders along the pipeline corridor. The land access agreements will ensure that all concerns raised by the landholders are specifically addressed and agreed prior to construction commencing. The land access agreements will also include provisions for compensation where appropriate.

Furthermore, Macquarie Generation will consult with landholders as part of the clean-up and restoration program to ensure that appropriate methods to restore the land are used for each landholder/land use (EAR Section 2.7.10 and Commitment 1.7).

Crossing of the Hunter River and Wollombi Brook (most significant watercourses on the route) will involve Horizontal Directional Drilling unless some geological feature makes this impractical (and open trenching would then be required). Mitigation measures to prevent impact on waterways are proposed.

Additional Agricultural issues are listed as follows

Additional issues	Recommended mitigatory measures	Macquarie Generation Response
Retaining access to farming properties and within farming properties during construction. Construction activities and	Need to ensure primary access routes for farm vehicles, feed supply and livestock transport vehicles can be kept open at all times, or alternative access	Management outlined in EAR Section 2.7 Individual land access agreements will be in place for

Additional issues	Recommended mitigatory measures	Macquarie Generation Response
<p>burial of the pipeline may temporarily isolate parts of properties, especially during wet weather. They may also isolate livestock in one part of a paddock from vital water supplies, shade or shelter.</p>	<p>options created.</p> <p>Requires negotiation with individual landholders, may also need to create a Right of Way and compensation where ongoing access is required.</p>	<p>the Project, including provisions for compensation where appropriate.</p>
<p>Spread of noxious and environmental weeds from property to property during construction and during follow up pipeline inspections.</p> <p>Additional weed growth following pipeline construction</p> <p>The control of weeds in crops and pastures are a significant cost factor for farming businesses. Site disturbance associated with the pipeline construction creates added risk and the need for additional control measures.</p>	<p>The local council will need to be consulted as to the likely weed problems along the routes and required mitigation and control actions.</p> <p>Policies and procedures will need to be developed to ensure:</p> <ul style="list-style-type: none"> • effective training of contractors and staff • advance identification of potential weed problems species along the route • preventative control measure in conjunction with the landholder/local council • decontamination of vehicles (eg wash off mud, seeds etc) before leaving a property with known weed issues. <p>Monitoring and remediation strategies need to be developed in conjunction with landholders along the routes and local councils</p>	<p>Management outlined in EAR Section 5.1.3 and 7.5.</p>
<p>Impacts on farm security and also the safety and security of livestock during pipeline construction and any follow up</p>	<p>Need protocols as to what is to happen and provide timely advance notice to landholders to enable livestock to be relocated, temporary fencing</p>	<p>Management outlined in EAR Section 4.1, 4.4 and 7.5.</p>

Additional issues	Recommended mitigatory measures	Macquarie Generation Response
monitoring	erected etc. Will also need policies and procedures to ensure farm security and that gates are shut/kept open as relevant during construction and monitoring activities.	
Construction activities may also prevent or delay the sowing of crops. The scale of such impacts will depend on the timing and duration of operations and local climatic conditions at the time.	Time operations to minimise impacts as best as possible and develop policies and procedures to: negotiate appropriate compensation for any loss of productive capacity and opportunities.	Management outlined in EAR Section 4.1 and 4.4.

3.2 Minerals Issues

3.2.1 Coal Resources

The Department acknowledges that discussions with DPI – Mineral Resources (the Coal Advice section based in Maitland) identified that the pipeline should avoid potential conflict with any current or future open cut mining. In this regard, the route by enlarge seems to have taken into account the constraint guidelines proposed in the consultation. However, it is recommended that significant consideration be made for adequate design specifications near any open cut operation which uses blasting techniques. Further consultation with the Department may be required to determine if there are any areas that this may apply according to the current proposed route. If there are areas of blasting affectation, the Department recommends the proponent enter into consultation with the relevant titleholders to ascertain what constraints may exist now or in the future.

The possibility of subsidence should be factored into the design of the pipeline. A significant portion of the pipeline lies within the area of the Patrick Plains Mine Subsidence District, and as such the Department recommends that the Mine Subsidence Board be consulted on the design parameters for the pipeline.

As a large proportion of the pipeline route covering known coal resources, potential Coal Seam Methane resources also exist within these areas. In fact, exploration 'sweetspot' areas have been identified in the region, and the proposed Liddell Power Station North- South Supply Pipeline traverses one of these identified areas.

Macquarie Generation will continue to consult all stakeholders during the Project (EAR Section 4.5 and Commitment 12).

3.3 Other Mineral Resources

The pipeline passes through Geothermal EL and Petroleum Titles PEL's as well as a sand extraction operation.

Macquarie Generation will continue to consult all stakeholders during the Project (EAR Section 4.5 and Commitment 12).

4 Roads and Traffic Authority

4.1 RTA Approvals

The submission has been reviewed and the Authority does not object to the proposed alignment with respect to the assets the RTA maintains. The proponent is required to submit detailed plans when seeking approval. As mentioned the general inclusion of the need to obtain approval from the Roads and Traffic Authority (as per the *Roads Act 1993*) should suffice with the response you compile.

Macquarie Generation will apply for all approvals required under the *Roads Act 1993* for the Project. This will include appropriate traffic management plans for RTA prior to construction (as per EAR Table 4, Section 5.5.3 and Commitment 4.1).

5 Department of Environment and Climate Change

5.1 Threatened Species Conservation

The EAR states that approximately 1.59 Hectares of native vegetation that is potential habitat for threatened species, particularly woodland birds, will be cleared as a result of this project. This area comprises 1.02 Hectares of Central Hunter Box-Ironbark Woodland and 0.57 Hectares of Central Hunter Ironbark-Spotted Gum-Grey Box Forest. Given the vegetation of the project area is already highly disturbed and fragmented, the clearing will likely reduce the area of available habitat for threatened species, particularly those that are reliant on trees for hollows or roost sites or less mobile species.

DECC also notes that the project area includes potential habitat for the Pine Donkey Orchid (*Diuris tricolour*) and this species has been recorded within 6km of the project area. This species is undetectable except when in flower between September and November, depending on: prevailing climatic conditions. The surveys undertaken for EA were completed during 4-8 August 2008 and 25-27 August 2008 and consequently outside the normal flowering period for this species.

To mitigate against the loss of such habitat, the EA proposes a number of specific mitigation measures such as induction of site employees, clearly delineated paths of travel for machinery to minimise impacts on vegetation and preparation of an erosion and sediment control management plan. DECC does not consider that these mitigation options alone are an adequate offset for the loss of 1.59 hectares of threatened species habitat.

If the application is determined by granting approval DECC recommends that the proponent provide adequate offset areas that are consistent with DECC's Principles for the use of biodiversity offsets in NSW' (DECC 2008) which can be found on the DECC website at: <http://www.environment.nsw.gov.au/biocertification/offsets.http>

The extensive changes to the southern route to avoid stands of native vegetation, following the initial surveys, demonstrates Macquarie Generation's low impact approach. Macquarie Generation believes that the project will not significantly impact on the biodiversity of the Project area during construction (See EAR Section 5.1). Therefore Macquarie Generation has not planned for a biodiversity offset as part of the Project.

Furthermore, in assessing the Project Macquarie Generation took into consideration the principles of the *Native Vegetation Act 2003*. Due to avoidance measures undertaken during the route selection process Macquarie Generation was able to ensure that only a small area (1.59 ha) of native vegetation disturbance will occur during construction. The 1.59 ha is not one large contiguous area but a number of small patches of vegetation which have been disturbed over long periods of time through agricultural practices including clearing and grazing.

Macquarie Generation therefore concluded that no offset program would be required as the Project would not significantly impact on the native vegetation once the proposed mitigation measures had been followed (EAR Section 5.1.3). For example, utilising a reduced Right-of-Way for construction through native vegetation, avoiding large mature trees, utilising HDD crossing techniques at the Hunter River and Wollombi Brook watercourse crossings, undertaking appropriate restoration with locally sourced native vegetation where it is disturbed and an ongoing maintenance program to ensure successful restoration of the pre-existing land systems.

5.2 Aboriginal Cultural Heritage

5.2.1 Undetermined Site Impact

The cultural heritage report within the EA inconsistently lists how many sites are to be impacted by the proposed pipeline. For example, page 4 states there are 34 sites, on page 18 there are 44 sites within 200m of the pipeline, page 19 lists 20 sites, Table 5 lists 31 sites, page 42 lists 32 sites and Table 6 lists 33 sites. Confirmation of the exact number of sites to be impacted is required.

The cultural heritage assessment discusses sites that have been subject to previous impact permits and do not require further work, however, some sites in the report listed as destroyed by a permit appear on AHIMS as valid (no permits issued) and other sites which are only partially impacted (some parts of the sites remain). The DECC recommends that the assessment is reviewed to confirm exactly which sites are still valid or only partially impacted.

Subject to the proponent providing accurate information about the number and condition of sites, Condition 1 of the attached recommended conditions of approval requires the proponent to accurately record and map all sites as the project proceeds.

The clarification of perceived inconsistency in the cultural heritage data reported in the EAR.

EAR Page 4 – Executive Summary – during the field surveys 28 new sites and 8 previously recorded sites were identified within the assessment corridor.

EAR Page 18 – lists 44 sites within 200m of the pipeline – the impact area has a maximum width of 20m and the pipeline assessment corridor is 50m. These 44 sites are the recorded sites as identified by the AHIMS search which occur within 200m of the pipeline corridor not all were identified during the assessment therefore not all are likely to be impacted by the pipeline corridor.

EAR Page 19 – This is a list of recorded sites that may be impacted from the desktop review for the pipeline assessment corridor (20 sites i.e. a portion of the 44 above).

EAR Table 5 – Presents the survey data (Liddell NS 3 and Liddell NS 28 have been accidentally omitted from the table) making the number of sites 33.

EAR Page 42 – States 32 sites and one scarred tree, therefore 33 sites.

EAR Table 6 – Lists 33 were recorded in the field, this is correct.

A total of 36 sites will be potentially impacted by the pipeline taking into accounts previously recorded sites (8) and newly recorded sites (28) this is outlined in EAR Tables 10 and 11.

The review of the validity of sites will be undertaken in the field. Salvage works associated with permits are project specific and may have retrieved the total or part of a site. The permit information was supplied by the permit holders, and from the site cards DECC have no reliable system of assessing what permits have been issued and what salvage has taken place that is accessible by consultants. At the time of this report the AHIMS system was inaccessible due to scanning of reports. Inconsistencies here also reflect timing of salvage works undertaken, some of the sites had collections occur in the 1980s and this is not reflected on the site cards.

The project has the potential to impact on 36 sites, some of which will be avoided where possible. Once the line is surveyed and pegged and the extent of sites in relation to the pipeline is known and the adjustment of the pipeline route to avoid sites where feasible the final number of impacts will be known. At this time the known sites are 36 with additional area of PAD as shown in the report.

5.2.2 Survey Reporting

The survey did not assess all sites or areas that will be impacted by the pipeline, therefore, the assessment is incomplete. In addition, the sites that were identified (new) or inspected (known) along the route were not defined according to the site location and extent. As a result, Macquarie Generation does not have sufficient site data to determine if the pipeline could be moved to avoid impacting Aboriginal sites. This is further compounded by the poor quality maps which fail to show sufficient detail of the sites such as their size or accurate placement along the impact footprint of the pipeline. DECC therefore recommends that additional survey work is conducted, to consider the impact footprint, and record the extent and location of each site along the route.

Macquarie Generation has made a commitment to (See Section 9.1, Commitment 2.4) and outlined mitigation measures (EAR Section 5.2.3) to manage known and unknown sites within the assessment corridor.

5.2.3 Project Planning

The assessment of how many sites are to be impacted is compounded by the fact that the exact alignment has yet to be finalised. In addition, the assessment has not considered the broader impact footprint (pipeline, associated infrastructure and access points) required for the

emplacement and ongoing maintenance of the pipeline. The assessment considered the currently known route of the pipeline only, and is therefore incomplete. On this basis it is recommended that additional project mapping is conducted by the proponent to establish the extent of their footprint to address this shortcoming.

As outlined in EAR Section 2, a 50 m wide pipeline corridor was assessed for the Project. This assessment area covers all auxiliary requirements for pipeline construction and operations.

5.2.4 Consultation

The report provides extremely limited evidence that the Aboriginal stakeholders support the cultural heritage assessment and recommendations. Only 3 of the 13 groups involved in the project provided a response. There is no evidence in the report that the consultant attempted to elicit a response to the report from the additional 10 Aboriginal interest groups. The consultation process is extremely limited and the low response rate is considered to be insufficient. In addition, the community has been provided with inadequate data (as outlined above) on which to form a comment or opinion.

The community were given the opportunity to comment in accordance with the DECC guidelines.

Additional consultation will be undertaken with all stakeholders at the time of construction. The stakeholders will be involved in the re-survey of the route once it is pegged and the reassessment of sites located along the route, the development of the Cultural Heritage Management Plan (CHMP) and the implementation of mitigation measures as outlined in EAR Section 5.5.3.

5.2.5 Consent Conditions

Subject to the proponent demonstrating an appropriate level of consultation, Conditions 2, 3, 4, 5 and 6 of the attached recommended conditions of approval requires the proponent undertake consultation with Aboriginal stakeholders throughout the project life.

ATTACHMENT A

RECOMMENDED CONDITIONS OF APPROVAL – LIDDELL POWER STATION NORTH-SOUTH GAS PIPELINE (MPO8_0061)

- 1. The extent of all sites along the proposed route must be recorded and mapped (for extent and exact location) to ensure the proponent has sufficient information on which to plan avoidance of sites wherever feasible. Once the pipeline is complete, the proponent is to provide DECC with data relating to the extent (conservation, partial or whole impact) and the nature (maps showing exact level of impact at each site with descriptions of the remaining site) of impact to the sites.**
- 2. The proponent must develop an Aboriginal Cultural Heritage Management Plan (ACHMP) or similar for the project area. The ACHMP should be developed and implemented in consultation with the relevant Aboriginal stakeholders. The plan must include:**
 - procedures for ongoing Aboriginal consultation and involvement**
 - management of any recorded sites within the project area**
 - details of proposed further archaeological investigations and/or salvage projects prior to impact**

- identification and management of previously unrecorded sites (excluding human remains)
- identification and management of any proposed conservation area(s)
- details of an appropriate keeping place agreement with local Aboriginal community representatives for any Aboriginal objects salvaged through the development process.

3. If human remains are located during the project, all works must halt in the immediate area to prevent any further impacts to the find or finds. The local police, the Aboriginal community and DECC are to be notified. If the remains are found to be of Aboriginal origin and the police consider the site not an investigation site for criminal activities, DECC should be contacted and notified of the situation and works are not to resume in the designated area until approval in writing is provided by DECC. In the event that a criminal investigation ensues works are not to resume in the designated area until approval in writing from the Police and DECC.

4. If Aboriginal cultural objects are uncovered due to the development activities, all works must halt in the immediate area to prevent any further impacts to the find or finds. A suitably qualified archaeologist and Aboriginal community representatives must be contacted to determine the significance of the find(s). The site is to be registered in the AHIMS (managed by DECC) as per s.91 of the National Parks and Wildlife Act 1974, and the management outcome for the site included in the information provided to the AHIMS database. It is recommended that the Aboriginal community representatives are consulted in developing and implementing management strategies for all sites, with all information required for informed consent being given to the representatives for this purpose.

5. All reasonable efforts must be made to avoid impacts to Aboriginal Cultural Heritage values at all stages of the development works. If impacts are unavoidable, mitigation measures are to be negotiated with the Aboriginal community and DECC.

6. An Aboriginal Cultural Education Program must be developed for the induction of personnel and contractors involved in the construction activities on site. The program should be developed in collaboration with the Aboriginal community.

Macquarie Generation is committed to ongoing consultation with all relevant aboriginal stakeholders for the life of the Project (EAR Section 4.4). In addition Macquarie Generation will develop and implement an Environmental Management Plan (EAR Section 7.5) that will include the Mitigation Measures set out in EAR Section 5.5.3. These mitigation measures were developed in consultation with the Aboriginal stakeholders.

6 Hunter-Central Rivers Catchment Management Authority

6.1 Project Support

The CMA supports the collection and use of methane gas that would otherwise be vented to the atmosphere and in general it appears the proposal has been designed to minimise impact on the environment. However, there are some issues that should be addressed in more detail to ensure all aspects and potential impacts of the proposal have been considered.

6.2 Conservation Agreements

There are no known Property Vegetation Plans over the lots identified in the environmental assessment, however the proponent should ensure that the pipeline does not cross any land with other forms of conservation agreements. These could include Voluntary Conservation Agreements and covenants for converted Crown Land. Details of land subject to such agreements can be obtained from the Department of Environment and Climate Change.

Macquarie Generation is not aware of any Voluntary Conservation Agreements over land traversed by the Pipeline Corridor.

6.3 Native Vegetation

It is acknowledged that only an estimated 1.59 ha of native vegetation is to be removed and that this proposal is being assessed under Part 3A of the *Environmental Planning and Assessment Act, 1979* and that the *Native Vegetation Act 2003* does not apply in this circumstance. Nevertheless, the CMA considers that the principles of the *Native Vegetation Act, 2003* should still apply. Specifically, the CMA recommends that a suitable offset be established to compensate for the loss of native vegetation.

The *Native Vegetation Regulation, 2005* sets out an Environmental Outcomes Assessment Methodology that the CMA uses to assess whether clearing proposals will improve or maintain environmental outcomes. The CMA recommends that this method be used to assess the impact of vegetation clearing and potential offsets associated with the proposal. The CMA can be contacted to assist in this if required

The environmental assessment states that some upgrading of access roads to the pipeline 'right of way' may be necessary. It is not clear if this possible upgrade is part of the Part 3A assessment. If not, it is important to refer to the *Native Vegetation Act, 2003* and any approval that may be required to remove native vegetation, particularly if the access track is upgraded beyond the maximum width allowed under the routine agricultural management activities under the *Native Vegetation Regulation, 2005*.

Appropriate restoration for disturbed areas should aim to enhance existing vegetation where possible. Restoration work for non-pasture areas should use indigenous native vegetation and tubestock, not seed and fertiliser.

Refer to Section 5.1 for response comments.

6.4 Weeds

The vegetation assessment lists several noxious weeds. It is important that these weeds are controlled at all times. An ongoing weed management plan should be a component of the environmental management plans for the pipeline. The CMA is particularly concerned about the serrated tussock, which is listed as a level 3 noxious weed and is also a Weed of National Significance. Currently the Hunter Valley appears to be both the southern and northern containment line for this weed, hence it is very important that it is not allowed to spread and must be controlled.

Macquarie Generation will develop and carry out a weed management program prior to, during and post construction activities for the Project (EAR Section 5.1.3, Section 7.5 and Commitment 1.6, 10.7 and 10.8).

6.5 Waterway Crossings

The proposed stream and river crossings appear to be appropriately designed and it is acknowledged that more detailed plans for each crossing will be developed prior to implementation. However, the CMA would like to emphasize the importance of taking all possible precautions and care in establishing and maintaining these crossings.

The Wollombi Brook and tributary junctions are categorised as planform controlled, low sinuosity sandy waterways based on the RiverStyles™ classification system. This reach of the Wollornbi Brook is a strategic reach in moderate condition. Being a sand-based system it is also very fragile and susceptible to failure from even small alterations in bank or bed stability. As well as protecting the banks before, during and after trenching, it is essential that the bed of the stream is restored to the same level and condition and no depressions are left or formed post trenching. A depression can lead to head cuts forming which erode the bed of the stream and often travel several kilometres up stream before stopped by a natural structure or human intervention.

Macquarie Generation will be utilising HDD crossing techniques for the main Wollombi Brook watercourse crossing and will implement appropriate mitigation measures at all other open trench watercourse crossing locations (EAR Section 2.8). Ongoing maintenance and operations will ensure that any exposure of the pipeline or subsidence will be picked up and rectified to maintain the integrity of the pipeline and surrounding land (EAR Section 2.11 and Section 5.4.3).

7 Xstrata Coal

Xstrata Coal NSW (XCN) supports the project, subject to the issues outlined below being addressed by the Department.

The proposed gas pipeline traverses land associated with our United Collieries Mine near Warkworth Village and the Bulga and Beltana Mines near Bulga. The pipeline could therefore be subjected to impacts from mine subsidence and blasting which may adversely affect the operation and integrity of the pipeline.

Whilst these issues are considered in the EA Report, we request that the Project Approval or Statement of Commitments include a requirement for the proponent to:

- 1. Ensure that the pipeline is designed and constructed to withstand maximum predicted subsidence and blasting impacts specific to each operation; and**
- 2. Prior to commissioning of the pipeline in the areas adjacent to our operations, develop a management plan covering the on-going operation of the pipeline (for each XCN operation affected by the pipeline) to the satisfaction of XCN.**

Macquarie Generation will work with local mine operators to ensure that the pipeline meets all detailed design criteria for the safe operation, including subsidence and blasting as well as ongoing operations and maintenance (EAR Section 5.3, Commitments 7 and 12).

8 Muswellbrook Shire Council

“That the applications submitted by Macquarie Generation for the proposed installation of a low pressure coal gas seam pipeline as identified under projects 08_0061 (north-south route) and 07_0028 (east-west route) be supported subject to the following issues being resolved:

- 1. the provision of appropriate drainage points along the pipeline to provide a satisfactory means to drain residual and contaminated water**
- 2. the identification of waste water disposal methods**
- 3. the protection of waste water disposal methods**
- 4. appropriate measures being in place to protect the installation from industry blasting**
- 5. satisfactory maintenance to the affected road corridors**
- 6. the retention of adequate widths of road reserve for future road widening”.**

To ensure that appropriate design measures are incorporated into the Project, Macquarie Generation will address issues 1 to 3 and 6 during the detailed design phase.

Issue 4 – was address in EAR Section 5.3 and considered in Appendix E. Blasting will be address in the detail design phase of the Project.

Issue 5 – all works within a road reserve will be carried out in accordance with RTA requirements. Where a road reserve is required for construction restoration and maintenance of the pipeline corridor within the any affected area will be carried out in accordance with the measures detailed in EAR Sections 2.7.10, 2.8.2, 2.11 and 5.5. During construction bitumen roads will be under bored and therefore will lead to no impact on the road surface (refer EAR section 2.8.2.).

9 Landholder

9.1 Consultation

We make application that supports the construction of the pipeline because of its use of resources that are currently being wasted. However as effected land owners we totally disagree with the pipelines route in the area from Bulga to Wambo Mine land.

We live at corridor sequence 17 DP571290 on an 11 hectare property. Consultation by Macquarie Energy has consisted of a letter sent to us which stated the preferred route was across our property and if this did not suit then State Legislation would allow for a construction easement and they (Macquarie Energy) would just do it. After receiving this letter we contacted (telephone discussion) Macquarie Energy (as per the letter) and suggested a much better route would be along the road easement of Wallaby Scrub Road. The pipe line could be built in the road easement or along the edge of the road on Coal and Allied's land.

This would give access to gas from this mine (Warkworth) as well as land where the construction would have minimal effect on residents. The response from this phone call was it was too difficult for them to come to agreement with Coal and Allied.

We note that the Environmental Assessment states the pipeline needs to be kept away from the Warkworth Sands Woodlands Area but observation from Wallaby Scrub road shows that there are existing cleared roads , on mine land, next to Wallaby Scrub Road on which the pipeline could be constructed. As Wallaby Scrub Road will not be impacted by any future mining at Warkworth Mine (Environmental Assessment for the expansion of Warkworth mine) a pipeline constructed here would have a life in excess of that required for this project.

To construct this pipe line across our property will greatly impact our ability to use our property. The pipeline route goes through to middle of our bottom paddock (1.2 hectares). As the property only contains eight one hectare paddocks the taking out the ability to use one of these paddocks for a minimum of three months is not acceptable.

The EIS states there is approx eight weeks duration of construction, at any one point. After allowing pasture to grow again we would be lucky to be able to use the paddock for at least three months.

For a shorter period we would have no access to our pump on the Wollombi Brook.

To say (in this application) that they have consulted the community is clearly false. Before designing the route through our property you would have expected some one to talk to us.

For these reasons we are making submissions against the route of the pipeline. We will vigorously oppose Macquarie Energy gaining access to our land.

Macquarie Generation undertook a detailed route selection process in sighting the final pipeline corridor (EAR Section 2.5) that included consultation with directly or indirectly affected landholders (EAR Section 4).

On the above mentioned property the pipeline corridor traverses adjacent to the property boundary and Wollombi Brook. This route was chosen to avoid future land use and mining operations and ensure that a minimal footprint on the affected property (See Appendix F Figure F2).

Macquarie Generation will continue to consult with all stakeholders throughout the Project to ensure minimal interruption to their day to day activities occurs (EAR Section 4.4 and Commitment 12).

10 Conclusions

This submission report has been prepared in accordance with Section 75H of the EP&A Act 1979 to respond to the submissions by various stakeholders, and Macquarie Generation.

Overall the majority of submissions support the Project subject to the implementation of the Mitigation Measures and Statement of Commitments set out in the EAR.

Macquarie Generation believes that the highly disturbed nature of the pipeline corridor significantly reduces the likelihood of adverse environmental impacts. Where the pipeline construction activities have the potential to cause minor short term environmental impacts, the proposed mitigation measures will reduce that impact to as low as is reasonably practical.

Since the Project is unlikely to significantly affect the environment and a number of benefits have been identified, it is therefore recommended that the Project receive approval, subject to the implementation of the final statement of commitments (Section 10.1).

10.1 Final Statement of Commitments

Section 75F(6) of the EP&A Act states that the Director-General may require the proponent to include in an EAR a statement of the commitments by the proponent for environmental management and mitigation and management measures on the site.

The statement of commitments is designed to effectively manage and mitigate the environmental effects of the Project. These commitments will form part of the contractual documentation for the contractor undertaking the pipeline installation.

Table 1 shows the final commitments and identifies the desired outcomes, actions and timing of the stated commitments. Changes and additional commitments on the draft statement of commitments are highlighted in **bold** type.

Notwithstanding the commitments made in Table 1, Macquarie Generation is committed to implementing all mitigation measures set out in Section 5 and 6 of the EAR.

Table 1: Final Statement of Commitments

#	Outcomes		Action	Timing	EAR Reference
1	Ecological Management				
	Minimise impacts on flora and fauna across the Project corridor and surrounding area.	1.1	Maintain strict control on clearance envelope. Ensure no clearing occurs outside of surveyed pipeline corridor. A No Impact Zone of twice the radius of the tree canopy would be maintained around River Red Gums.	Prior to and during corridor preparation	2.6 and 5.1
		1.2	Minimise extent of vegetation clearance where possible.	During corridor surveying and clearing activity	
		1.3	Avoid unnecessary removal of hollow bearing trees identified during corridor surveying.	During corridor surveying and clearing activity	
		1.4	Retain all topsoil, understorey and groundcover vegetation from within the pipeline corridor to ensure retention of natural seed stocks to facilitate rehabilitation program.	During corridor preparation	
		1.5	The areas of the proposed pipeline corridor which have not	Prior to construction	

#	Outcomes		Action	Timing	EAR Reference
			been assessed should be before construction begins.		
		1.6	Undertake weed monitoring and management program along pipeline corridor.	Post rehabilitation	
		1.7	Consult with landholders regularly to ensure rehabilitation objectives are being achieved.	Ongoing (periodic)	
2 Cultural Heritage					
	Employees and contractors aware and respectful of Aboriginal heritage values of Project Site and surrounding area	2.1	Include specific Aboriginal heritage awareness items in Project induction program.	Site induction process	5.2.3
	Protect Sites of Aboriginal and non-aboriginal heritage significance	2.2	Ensure pipeline corridor observes an adequate buffer surrounding sites and items of significance, and known sites are clearly marked on the ground prior to and during construction.	Corridor surveying	
		2.3	CEMP to include specific action should unknown sites or items be discovered during corridor creation or any other period. Consult with DECC and stakeholders as required.	Construction period	
		2.4	Undertake pre-clearance Aboriginal heritage surveying where moderate to high significance has been identified (Section Error! Reference source not found.) or where the corridor of the pipeline corridor is amended for any reason.	Prior to and including clearance activity	
			Ongoing consultation with relevant Aboriginal Stakeholders throughout the Project	Ongoing	4.4
3 Surface and Groundwater Management					
	Maintenance of soil value for rehabilitation and minimisation of soil loss through erosion	3.1	Observe strict controls over the stripping, stockpiling and protection of topsoils and trench spoil during pipeline installation.	All stages	2.8.1 and 5.4
		3.2	Replace trench spoil and topsoils as soon as practicable.	Completion of backfilling	

#	Outcomes		Action	Timing	EAR Reference
				activities	
		3.3	Install silt fencing or similar to protect topsoil stocks where delays prevent replacement.	Construction period	
		3.4	Re-establish soil conservation systems (where applicable) on freehold lands to agreed condition.	Rehabilitation period	
		3.5	HDD the Hunter River and Wollombi Brook.	Construction period	
		3.6	Prepare activity specific water crossing construction method statements.	Prior to construction	
4	Traffic Management				
	Minimise the impact of the Project on the areas of normal traffic flow	4.1	Prepare a Traffic Management Plan to appropriate NSW RTA standard. Remediate any damage to roads/access tracks caused by the construction of the pipeline.	Planning stages	5.5
	Traffic safety considerations	4.2	Erect appropriate road signage along Project Site as per NSW RTA requirements.	Construction period	
		4.3	Minimise overall impacts of Project on major traffic flows along Golden Highway.	Construction period	
		4.4	Inform all potentially affected residents adjoining the gas pipeline corridor of proposed traffic arrangements. Provide alternate access to landholders where access is disrupted.	Construction period	
5	Air Quality				
	Complete proposed development without exceeding DECC air quality criteria objectives	5.1	Suppress dust along unsealed site access roads. Restrict project vehicle speeds along the ROW.	When required	6.1
		5.2	Limit topsoil stripping and trenching during high winds.	When required	
6	Documentation				
	Documents governing planning, construction and operation	6.1	Prepare and implement a CEMP and OEMP for the Project.	Pre-commencement	7.2
		6.2	Encourage strict observation of published construction plans and	All stages	

#	Outcomes		Action	Timing	EAR Reference
			site specific work procedures.		
		6.3	Ensure all construction and operating conditions are available to personnel.	Pre-commencement	
7	Overall Project				
	All approved activities to occur within the defined corridor boundaries.	7.1	Survey and clearly mark the boundary of the pipeline construction corridor.	Prior to commencement of disturbances	2.6
		7.2	Construction plans and induction program should clearly state responsibilities of contractors to observe disturbance limitations.	During tender process and contractor inductions	
		7.3	Construct and operate in accordance with Australian Standard AS2885 series and the Australian Pipeline Industry Association (APIA) Code of Environmental Practice 2009.	During construction and operations	
8	Operating Hours				
	Management of construction activities in accordance with approved operating hours.	8.1	Undertake all construction activities associated with the project that would generate an audible noise at any residential premises between 7am-6pm Monday to Friday; 8am to 1pm on Saturday; No work on Sunday.	Duration of construction period	6.4
		8.2	Limit construction materials deliveries along gas pipeline to operating hours as above.	Duration of construction period	
9	Noise and Vibration				
	All construction activities undertaken in appropriate manner to minimise noise and vibration impacts on surrounding environment	9.1	Publish working hours clearly in all site induction documents.	Pre-commencement	6.4
		9.2	Observe stated operating hours.	Construction period	
		9.3	Encourage all employees and contractors to drive in courteous manner and avoid undue generation of traffic noise.	All stages	
		9.4	Ensure all equipment is in good working order and noise attenuation equipment installed on all machinery.	All stages	

#	Outcomes		Action	Timing	EAR Reference
		9.5	Ensure deliveries of construction materials and equipment occur within operating hours.	Construction period	
10	Rehabilitation				
	Rehabilitation of gas pipeline corridor as soon as practicable post construction.	10.1	Ensure topsoil and trench spoil are clearly segregated within pipeline corridor.	Duration of construction period	2.7.10, 5.1 and 6.3
		10.2	Ensure topsoil is not placed back across working area until trench is adequately compacted to avoid settling.	Rehabilitation period	
		10.3	Stabilise topsoil with retained vegetation as soon as practicable to encourage natural regeneration of disturbed corridor.	Rehabilitation period	
		10.4	Re-establish previous land uses as soon as practicable after trench backfilling.	As area becomes available	
		10.5	Ensure land profile is re-established to previous or agreed condition.	Ongoing with periodic monitoring	
		10.6	Conduct ongoing monitoring and maintenance of disturbed lands and subsidence.	Ongoing	
		10.7	Monitor corridor for weed species growth.	Ongoing	
		10.8	Undertake weed control and eradication where needs identified.	Ongoing/Project life	
		10.9	Consult with landholder on the final restoration requirements	Construction	2.7.10
11	Waste Management				
	Management of waste materials produced during construction phase.	11.1	Waste generated during construction is collected at staging points for regular removal by contractor.	Duration of construction period	6.6
		11.2	Waste materials collected for recycling where possible.	Duration of construction period	
	Management of waste materials during operational phase.	11.3	Condensate collected and disposed of appropriately.	Ongoing	

#	Outcomes		Action	Timing	EAR Reference
12	Consultation				
	All stakeholders are satisfied with the outcomes of consultation.	12.1	Establish a 24 hour toll-free complaints telephone line.	Prior to construction period	4
		12.2	Advertise to the community that construction is going to commence and provide regular updates of Project details.	Duration of construction period	
		12.3	Put the Project as an Agenda item for the Community Consultative Committee.	Ongoing	4.4.1
		12.4	Consult with all directly affected stakeholders prior to construction to ensure their issue are appropriately address and managed.	Prior to construction period	4.4