

***MAJOR PROJECT ASSESSMENT:
Young to Wagga Wagga Looping
Pipeline***



Director-General's
Environmental Assessment Report
Section 75I of the
*Environmental Planning and Assessment
Act 1979*
May 2010

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EXECUTIVE SUMMARY

East Australian Pipeline Pty Ltd has submitted an Environmental Assessment (EA) to the Director-General for the partial looping of the existing Young to Wagga Wagga gas pipeline. The pipeline and associated infrastructure would be located between Bomen (Wagga Wagga) and a point approximately seven kilometres north of Bethungra, passing nearby Harefield, Wantiool and Illabo in the south western region of NSW. This pipeline project (Bomen to Bethungra) does not intend to entirely loop the pipeline from Young to Wagga Wagga, it only pertains to the first stage of a proposal that is eventually planned to loop the entire Young to Wagga Wagga pipeline. The project is situated within the Wagga Wagga and Junee local government areas.

The aim of the project is to expand the current capacity of the line so that gas-fired electricity generators located in NSW can increase continuous operational capacity during times of peak demand. The annual Statement of Opportunities (2009) produced by the National Electricity Market Management Company has recognised that a need exists to increase energy generation capacity in order to service the State's growing energy demands. This project would also facilitate the increased use of a cleaner burning fuel source for power generation in NSW as well as enhancing the security of the existing gas supply link between NSW and Victoria.

The project involves the construction and operation of a gas pipeline and associated infrastructure that loops 61 kilometres of the existing Young to Wagga Wagga pipeline from Bomen to just north of Bethungra. The pipeline would increase capacity of the pipeline by 30 terrajoules (TJ) per day. The current line capacity is 72 TJ per day. The current 12 inch pipeline would be duplicated with an 18 inch pipeline which would be placed below ground (trenched). Above ground infrastructure would include four scraper stations at each end of the four mainline valves, marker posts and cathodic protection inspection points.

On 16 April 2009, the Director-General as delegate for the Minister for Planning formed the opinion that the project is a development of a kind described in Schedule 1 of NSW *State Environmental Planning Policy (Major Developments) 2005* namely development for the purpose of a pipeline in respect of which an application for a licence is made under the NSW *Pipelines Act 1967*. It is therefore a project to which Part 3A of the *Environmental Planning and Assessment Act 1979* applies. Consequently, the Minister for Planning is the approval authority for the project. The existing pipeline is licensed by the NSW Department of Industry and Investment.

The Proponent's Environmental Assessment was publicly exhibited from 11 February 2010 until 15 March 2010. The Department received a total of five submissions on the project. One submission was from a member of the public whilst the other four submissions were from NSW public authorities including: the NSW Department of Environment, Climate Change and Water, NSW Office of Water, Roads and Traffic Authority and Wagga Wagga City Council. No submission specifically stated a position on the proposal, however issues were raised for the Department's consideration.

The key issues raised by submissions included:

- Heritage - potential impacts to indigenous heritage items and sites along the pipeline route;
- Flora and fauna impacts - removal of native vegetation and risks to native fauna species, the need for a compensatory habitat package that addresses all impacts on threatened species and endangered ecological communities;
- Pipeline water crossings, water supply and licensing - impacts on the 29 watercourses the pipeline is expected to cross, water supply during construction and need for a temporary dam required for hydrostatic pipeline testing;
- Noise - potential for construction noise to impact nearby receivers and livestock; and
- Hazards and risks - the risk of volatile gas being transferred through and stored in the pipeline.

The Department has assessed the Proponent's Environmental Assessment, Submissions Report and Statement of Commitments and submissions received from public agencies and the community regarding the project. On balance, the Department considers the project to be justified and in the public's interest. The Department has drafted a recommended instrument of approval incorporating stringent and comprehensive environmental mitigation and management requirements to enhance commitments made by the Proponent in its Statement of Commitments. The Department considers that the project should be approved subject to the Department's recommended conditions of approval and the Proponent's Statement of Commitments.

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1. BACKGROUND

The original Young to Wagga Wagga gas pipeline was assessed in 1975 as part of the NSW Western Laterals, Moomba to Sydney Natural Gas Pipeline under the Commonwealth *Environmental Protection (Impact of Proposals) Act 1974*. The proposal was approved and granted a licence (licence 19) by the Commonwealth Pipeline Authority. A 12 inch gas pipeline was installed within the current easement.

The current proposal involves the looping (duplication) of a 61 kilometre section of the existing 131 kilometre Young to Wagga Wagga gas pipeline with an 18 inch pipeline in order to supplement power station gas supply. The project is estimated to have a capital cost of up to \$30 million and will operate entirely within the existing pipeline easement. The Proponent expects to eventually loop the entire Young to Wagga pipeline. However this is not included in the current project application.

The Proponent has prepared an Environmental Assessment to satisfy the legislative requirements of the NSW *Environmental Planning and Assessment Act 1979*. The Environmental Assessment responds to the Director-General's Requirements that were issued on 4 July 2009 and the adequacy review issued on the 3 February 2010. The Proponent has sought project approval from the Minister for Planning for the construction and operation of the proposal.

5.1 Location

The proposal is located on land in the south western region of NSW, approximately 435 kilometres southwest of Sydney (Figure 1). The project is situated within the Wagga Wagga and Junee local government areas. The nearest regional centre to the pipeline is Wagga Wagga. The looping pipeline would commence at the present pipeline meter and scrapper station in the township of Bomen approximately 6 kilometres northeast of the city. The looping pipeline continues along the present easement in a northeast direction from Bomen passing the townships of Harefield, Wantiool, Illabo and terminates approximately 7 kilometres northeast of Bethungra. At its approximate midpoint the pipeline easement passes the township of Junee, located 6 kilometres northwest of the existing easement. In this vicinity the pipeline intersects with another of the Proponent's gas pipelines which originates in Griffith. The looping pipeline is expected to cross 29 watercourses between Bomen and Bethungra.

5.2 Surrounding Land Use

The project is located on land predominantly used for dry-land agricultural industries of livestock grazing and cropping (Figure 2). The pipeline alignment is located adjacent to the Main Southern Railway and intercepts the railway south of Bethungra. The looping pipeline also crosses various road structure including the Olympic Highway and Gundagai Road.

The beginning of the looping pipeline corridor at Bomen will be an emerging industrial area spreading from North Wagga Wagga. Approximately 75 receivers are located two kilometres of the pipeline corridor with a greater majority of these located near Bomen.

Wagga Wagga is the largest regional centre, its population is 57,015 based on the Australian Bureau of Statistics 2006 census. The next largest town is Junee with a population of 3744 based on 2006 census data.

Figure 1: Project Location

Figure 1 – Locality of Stage 1 of the Young – Wagga natural gas pipeline

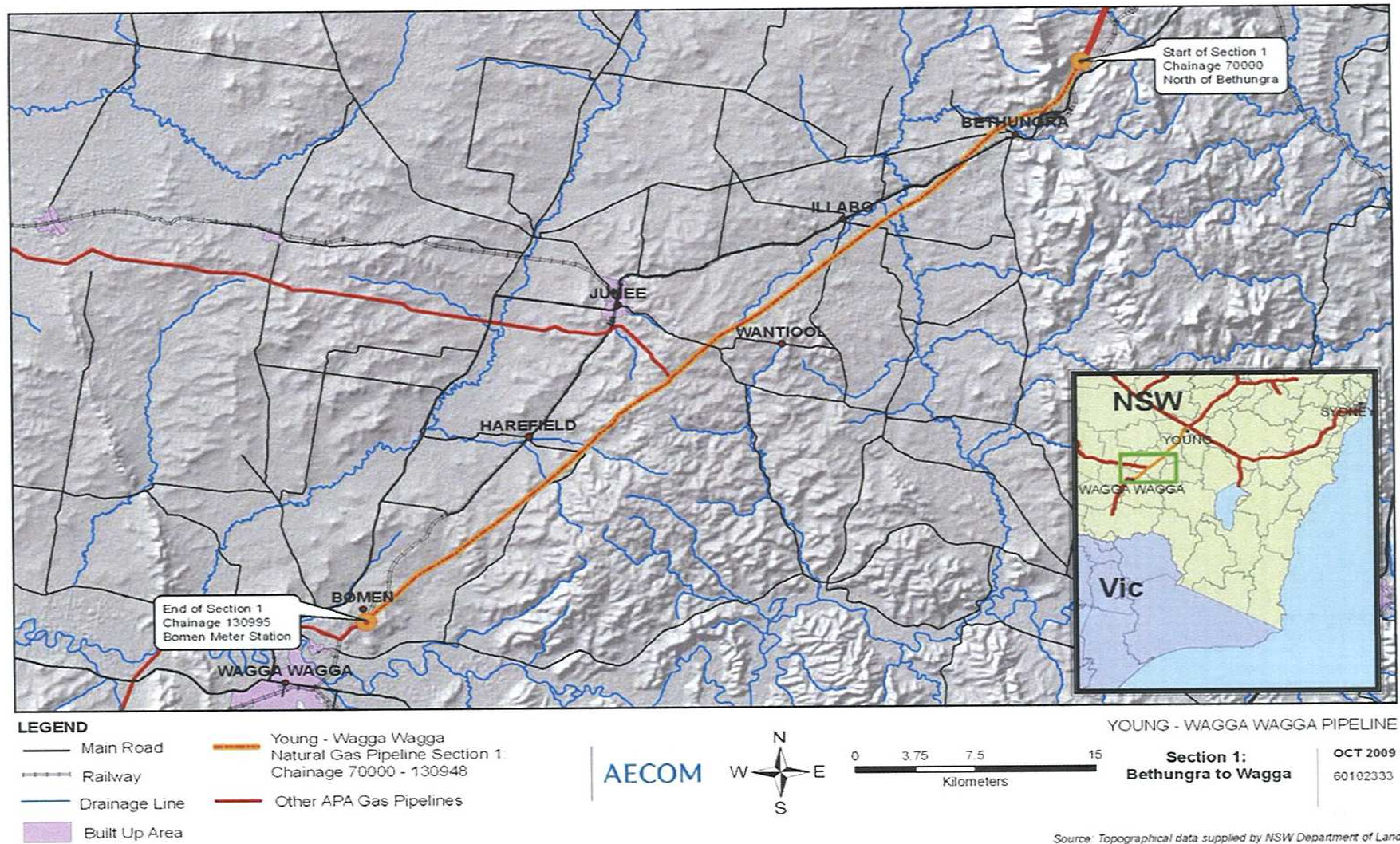
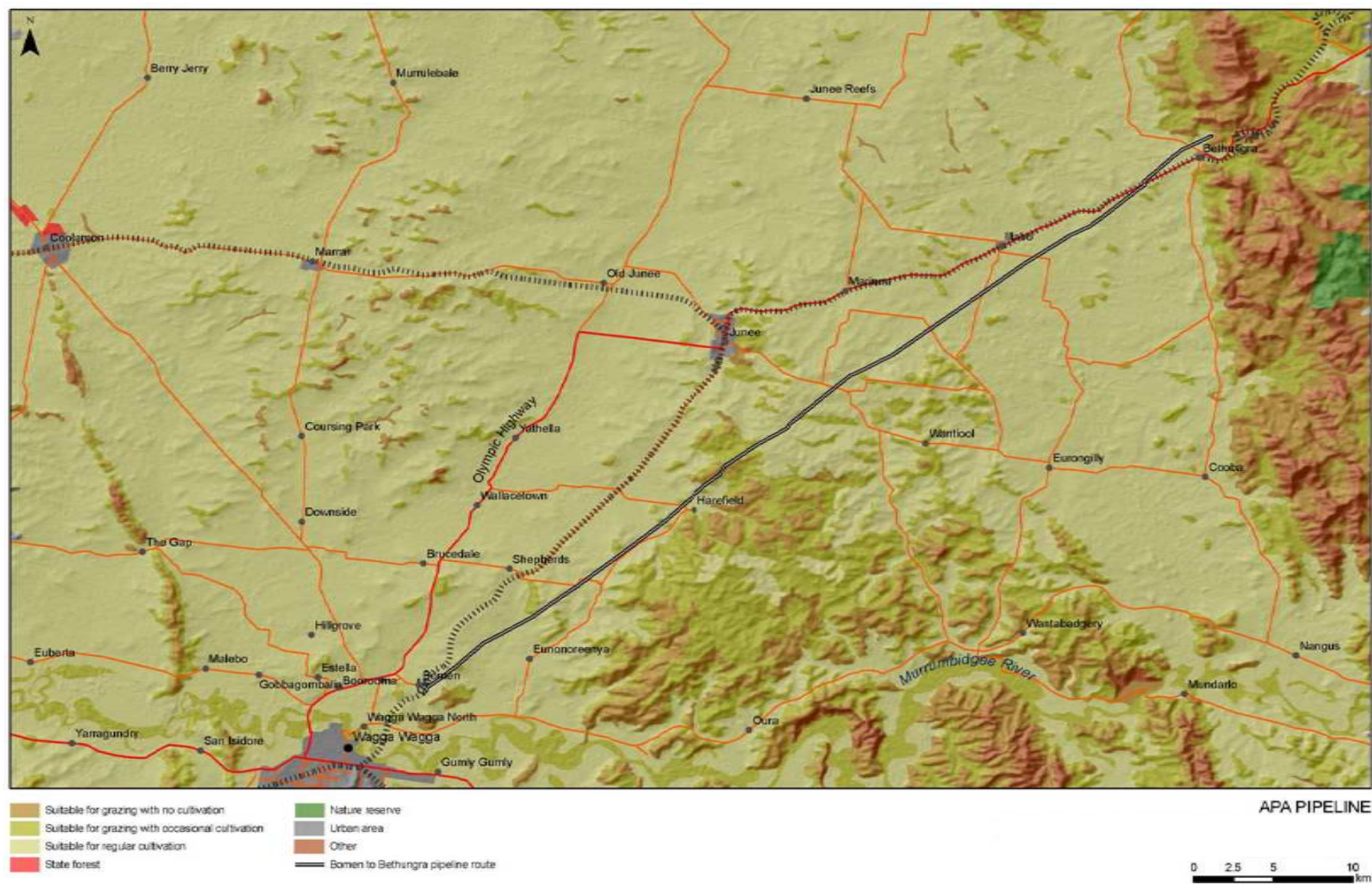


Figure 2: Surrounding Land Use



2. PROPOSED DEVELOPMENT

5.1 Project Description

The project involves the construction and operation of infrastructure to loop and increase the capacity of the existing gas pipeline by up to 30 terrajoules (TJ) per day. The pipeline is approximately 61 kilometres in length from Bomen (Wagga Wagga) to just north of Berthunga (Figure 1).

The pipeline would be buried in trenches up to 1.5 metres deep with approximately 0.75 metres of fill on top. The pipeline is a class 600 high pressure, 10.2 Mega Pascal gas transmission pipeline. The pipeline would be designed and built to Australian Standard 2885 Pipelines Gas and Liquid Petroleum. Other associated infrastructure associated with the project includes the following:

- four mainline valves;
- marker posts; and
- cathodic protection inspection points.

Construction

The total construction period is expected to be 4 months. The pipeline will be supplied in 18 metre lengths that would be laid down at a rate of approximately two kilometres a day (Figure 3). A peak workforce is expected of 50 individuals. The workforce will be accommodated in existing local accommodation. Construction activities will involve the following:

- establishment of temporary facilities for equipment storage and personnel;
- establishment of a temporary dam that holds water for hydrostatic testing;
- establishment of site access tracks;
- site clearing of a 30 metre construction corridor along the existing easement that will vary in width depending on surrounding constraints;
- trench excavation in order to lay pipe;
- stringing of pipe segments, line-up, welding and strength testing;
- lowering of pipeline, backfilling and hydrostatic testing for potential pipeline leaks and strength. Water from the dam will be necessary for this construction component;
- crossings of rivers, roads, railways and any other infrastructure will be conducted using various methods including, thrust boring, open trenching and directional drilling; and
- once construction is complete the site will be regraded and revegetated with native grasses, allowing for grazing to recommence.

Figure 3: Pipeline Construction**Operation**

The pipeline will carry gas along the NSW to Victoria pipeline link. It will also store gas for use during peak electricity generation demand in NSW. One individual will be required to operate the pipeline. Operation and maintenance of the pipeline will include:

- aerial and ground inspections of easement;
- equipment repair;
- pigging and cleaning of pipeline;
- corrosion monitoring and remediation; and
- easement, lease area and access road maintenance and weeding.

The pipeline will be connected to the Young base, Supervisory Control and Data Acquisition System (SCADA). The system will remotely monitor pipeline conditions including temperature, linepack, valve status and cathodic protection. Valve release will occur intermittently during times of pipeline cleaning and in case of emergency release.

Prevention of pipeline damage by a third party will be mitigated through a series of measures including public education, signpost and markings, call “dial before you dig” programs and security fencing. Coating and monitoring of cathodic protection systems will prevent any pipeline damage resulting from corrosion.

5.2 Amendments to the Proposal

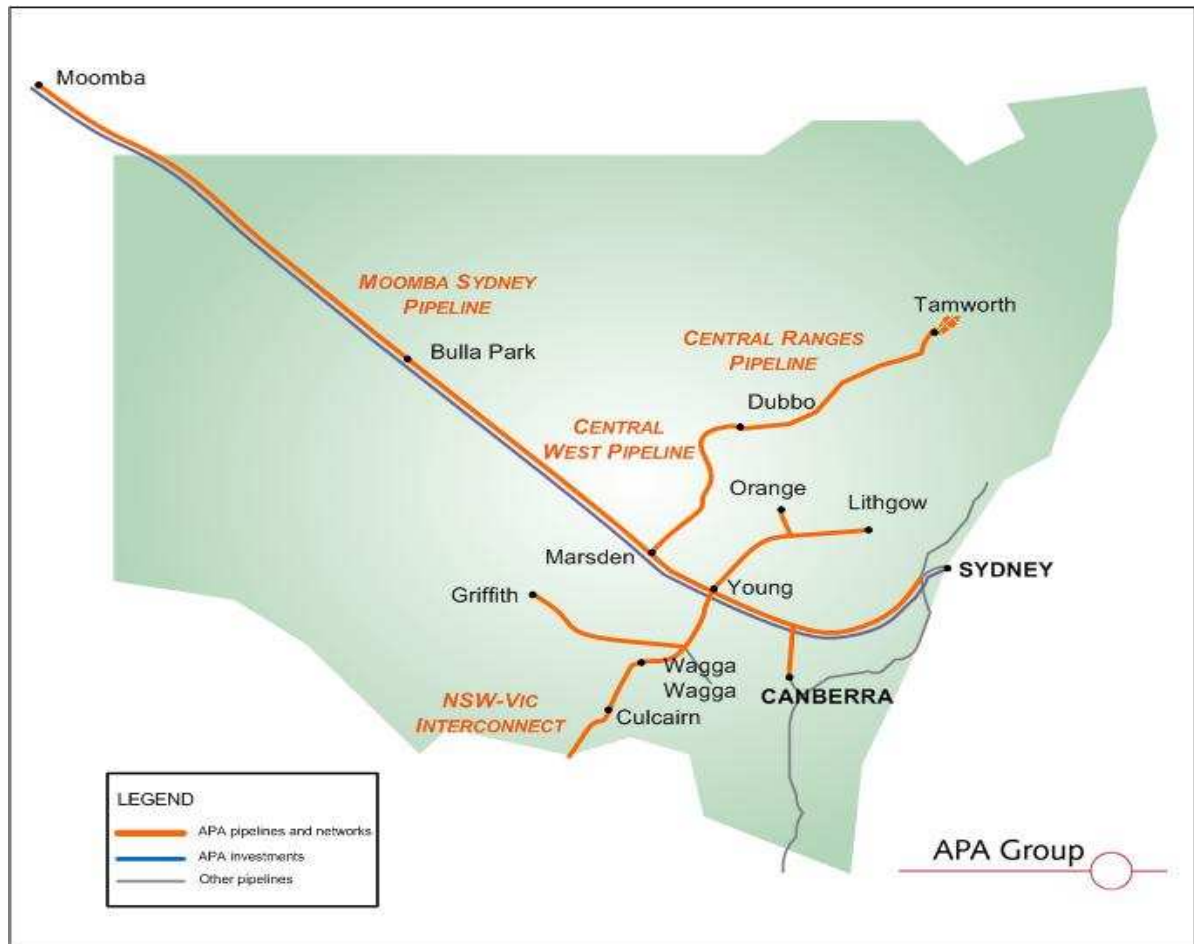
The original project application dated 11 June 2009 was to loop the entire 131 kilometre Young to Wagga pipeline. On 11 December 2009 the Proponent amended the application to loop 61 kilometres of the Young to Wagga pipeline as an initial stage to the entire looping of the pipeline. A stage 2 project proposal will be submitted sometime in the future to loop the remaining section of the pipeline.

5.3 Project Need

The current expansion of the State's energy generating capacity as recommended by the 2007 Owen Report into electricity supply has seen the development of gas-fired power stations in various locations around NSW. The choice of gas as a fuel source is based on its ability to provide timely energy supply during times of peak generation demand. Gas also produces less greenhouse gas emissions than traditional coal fuel sources used within the state and is therefore in line with the NSW State Plan to reduce the State's emissions by 60% by 2050. The continuing growth of gas demand for the abovementioned reasons has seen an increase in the related need for infrastructure to service such demand. The Proponent's proposal will add additional capacity to the NSW gas network, thereby supplementing supply for increasing demand.

In addition this proposal is the first linkage in increasing the capacity of gas flow between NSW and Victoria. The current Young to Wagga Wagga pipeline provides gas supply to towns in the central south of NSW including Griffith, Cootamundra, Young and Wagga Wagga. The pipeline also connects to the Moomba to Sydney pipeline system at Young. To the south the pipeline connects to the Culcairn to Longford, Victoria line at Wagga Wagga. It therefore provides a link between the Victorian pipeline network and the network that supplies NSW (Figure 4). The Young to Wagga proposal would increase the existing pipeline capacity by 30 TJ per day. In the future the remaining NSW to Victoria network would be similarly strengthened. This would provide operational flexibility to suppliers and users that would assist in ensuring a reliable gas supply to the State in light of increasing demand.

Figure 4: NSW Gas Pipeline System



3. STATUTORY CONTEXT

5.1 Major Project

The project is declared to be a Major Project under *State Environmental Planning Policy (Major Development) 2005* (Schedule 1, clause 26(a)) because it is development for the purpose of a pipeline in respect of which a licence was granted under the *Pipelines Act 1967*. The project is therefore subject to Part 3A of the *Environmental Planning and Assessment Act 1979* (the EP&A Act) and the Minister for Planning is the approval authority.

On 25 January 2010, the Minister delegated his powers and functions under 75J of the EP&A Act to the Deputy Director-General, Development Assessment and Systems Performance, in cases where there are fewer than 25 public submissions objecting in respect of the project. The subject application complies with the above criteria. Consequently, the Deputy Director-General, Development Assessment and Systems Performance, may determine the application under delegated authority.

5.2 Permissibility

The project is located in the Wagga Wagga and Junee local government areas. Within Wagga Wagga the looping pipeline is situated on land identified as No.1 (Rural) zone under the *Wagga Wagga Rural Local Environmental Plan 1991*. Within Junee the looping pipeline is situated on land identified as No. 1(a) General Rural Zone under the *Junee Local Environmental Plan 1992*. The proposal is considered permissible with consent in these zonings as it is a "public utility undertaking" within the respective Local Environmental Plans. Notwithstanding these zonings the project is also considered permissible with consent under Section 53 of the *State Environmental Planning Policy (Infrastructure) 2007*.

The pipeline was granted a licence (licence 19) under the *Pipelines Act 1967*. The existing licence requires a variation by the Minister of Energy to address the increase in capacity of the pipeline. Any such variation requires prior planning approval under Part 3A of the EP&A Act.

5.3 Environmental Planning Instruments

There are no environmental planning instruments that substantially govern the carrying out of the project. However the *State Environmental Planning Policy (Infrastructure) 2007* and the *State Environmental Planning Policy (Development) 2005* are relevant as they enable the project to be considered a Major Project.

5.4 Director-General's Requirements and Adequacy of Environmental Assessment

The Director-General's Requirements for the preparation of an Environmental Assessment for this Project were issued on 4 July 2009 in accordance with 75F of the EP&A Act. The Environmental Assessment was deemed to be adequate for exhibition on 3 February 2010 in accordance with section 75H of the EP&A Act.

5.5 Exhibition of the Environmental Assessment

The Young to Wagga Wagga Gas Looping Pipeline Environmental Assessment was placed on public exhibition from 11 February 2010 to 15 March 2010. The Department invited submissions in accordance with Section 75H of the Act. The exhibition locations were:

- Department of Planning's Information Centre in Sydney;
- Nature Conservation Council of NSW;
- City of Wagga Wagga offices; and
- Junee Shire Council offices.

The Environmental Assessment was also provided for download on the Department's internet site. Notification of the exhibition period was made through separate advertisements in the *Wagga Wagga Advertiser*, *Junee Southern Cross* and the *Wagga Riverina Leader* newspaper publications.

Following the exhibition period, the Director-General directed the Proponent to respond to the issues raised in submissions. The Submissions Report (see Appendix C) prepared by the Proponent was subsequently made publicly available on the Department's website.

The Department has met all its legal obligations so that the Minister can make a determination on the project.

4. CONSULTATION AND ISSUES RAISED

5.1 Public Submissions

The Department received a single public submission on the project, which did not state a specific position however raised issues/ comments for the Department's consideration. This included concerns that the Environmental Assessment had not identified the submitter's properties along the pipeline route and concerns regarding the hazard impacts of the project.

5.2 Submissions from Public Authorities

Four submissions were received from public authorities: the Department of Environment, Climate Change and Water; NSW Office of Water, the Roads and Traffic Authority and Wagga Wagga City Council. None of the agencies objected to the proposal, however raised issues for the Department's consideration.

Department of Environment, Climate Change and Water (DECCW)

- highlighted the issue of native vegetation clearance and recommended the Proponent develop an offset package to compensate for areas of native vegetation to be cleared, including areas of Ecological Endangered Communities;
- required the rehabilitation of impacted water courses; and
- raised concerns over potential noise and blasting impacts during construction.

NSW Office of Water

- raised concerns regarding water supply and temporary water storage for construction and hydrostatic testing;
- highlighted the need for water licensing requirements in relation to the *Water Act 1912* and *Water Management Act 2000*; and
- highlighted potential impacts to watercourse crossings from the construction of the looping pipeline.

Roads and Traffic Authority

- raised concerns regarding potential impacts during construction and operation of the looping pipeline to the road reserve of the classified road network;
- recommended construction mitigation management measures for the classified road network; and
- raised concerns that the looping pipeline will impact any future road widening.

Wagga Wagga City

- raised an issue with the proposed pipeline alignment and the close proximity of an indigenous heritage site; and
- required clarification of flora and fauna survey results conducted along the pipeline easement.

5.3 Submissions Report

Upon review of the submissions received the Department directed the Proponent to prepare a Submissions Report. The report (including finalised Statement of Commitments) was made publicly available on the Department's website and copies provided to relevant agencies for comment.

5.4 Department's Consideration

The Department's consideration of issues raised in public and agency submissions is summarised in Table 2.

Table 2: Department's consideration of issues raised in Submissions

Issue	Department's Consideration
Flora and Fauna	Section 5.1
Noise	Section 5.4
Indigenous Heritage	Section 5.2
Other issues: hazard analysis, water, air quality/ dust, traffic, safety and road works and project description in Environmental Assessment.	The Department has recommended conditions of approval incorporating the following issues; hazard and risk management in accordance with relevant Australian Standards and State policies that ensure pipeline safety and the safety of adjacent land users; surface and groundwater management and design of waterway crossings; the location and management of temporary construction facilities including a temporary dam to supply water for hydrostatic testing; management of dust generation during construction; and traffic management, including design of road crossings by the pipeline. The Department is satisfied that all other matters have been adequately addressed in the Proponent's Preferred Project Report and / or final Statement of Commitments

5. ASSESSMENT OF ENVIRONMENTAL IMPACTS

After consideration of the Environmental Assessment, submissions, Submissions Report and Statement of Commitments, the Department has identified the following key environmental issues associated with the proposal:

- impacts to flora and fauna;
- construction noise impacts; and
- indigenous heritage.

All other issues are considered to be adequately addressed by the Proponent's Submissions Report and Statement of Commitments.

5.1 Impacts to Flora and Fauna

Issue

Impacts to native terrestrial flora and fauna resulting from the construction and operation of the pipeline were examined by the Proponent in the Environmental Assessment. Endangered Ecological Communities of White Box Yellow Box Blakely's Red Gum Woodland were identified along the pipeline easement. Native vegetation was found to occur primarily adjacent to the Bethungra mountain area, Billabung Creek and along road reserves that cross the easement. Impacts are expected to result in the need for some vegetation clearing as the easement width is to be increased by 10 metres.

The Proponent has committed to minimise its development footprint in order to avoid where feasible, impacts to these communities. No threatened flora species were recorded during site surveys. The Proponent expects impacts to flora from the project will be minimal with approximately 7 hectares of native vegetation to be removed.

The Proponent assessed that vegetation affected by the project could provide suitable foraging habitat for up to 22 threatened fauna could occur at the site from time to time. Surveying of the site identified 6 threatened species including the White-browed Woodswallow (preliminary determination as threatened), Superb Parrot, Little Pied Bat, Eastern- Bentwing-bat, Brown Treecreeper and the Barking Owl. The Proponent considers the quantity of native vegetation expected to be removed is unlikely to significantly affect the foraging resource for any threatened species. However the habitat value of this native vegetation is acknowledged in the assessment. Particularly, the removal of tree hollows and other nesting habitat could impact threatened species and lead to greater species competition for available nesting habitat. The Proponent has proposed mitigation measures that will maintain the habitat value of vegetation to be removed in order that threatened species are not impacted by the proposal.

Submissions

Submissions regarding terrestrial flora and fauna focused on the potential impacts to Endangered Ecological Communities and threatened species known to reside within the development footprint. Concerns were raised that no consideration was provided to offset areas of cleared native vegetation consisting of Endangered Ecological Communities.

Consideration

The Ecological Communities identified by the Environmental Assessment are defined under the *Threatened Species Conservation Act 1995* as endangered, that is, they are likely to become extinct or in immediate danger of extinction. The Environmental Assessment identified areas of Endangered Ecological Communities that are to be impacted by the proposal. Submissions questioned the ability of the Proponents mitigation measures to maintain or improve the ecological value of these areas into perpetuity. The Proponents mitigation measures included the following:

- narrowing where feasible the pipeline easement in order to avoid impacts to these communities and threatened species;
- fencing adjacent native vegetation to avoid intrusion during construction;
- rehabilitation of disturbed areas within the development footprint to be undertaken by a suitably qualified expert. Rehabilitation of the easement would be restricted to the planting of native groundcover vegetation. Rehabilitation of nearby open areas within road reserves would utilise native tree and shrub species;
- compensatory tree planting at Billabung Creek and Bucks Creek to replace the trees removed;
- rehabilitated areas would be protected from damage during construction and operation;
- hollow bearing trees that are removed would have their hollows preserved and utilised within the immediate area or compensatory nest boxes would be utilised;
- cleared native vegetation would be suitably relocated to surrounding areas in order to minimise habitat impacts;
- removal of native vegetation would aim to avoid peak breeding periods for threatened species;
- cleared trees shall not be removed for at least 48 hours, to allow for any impacted fauna to relocate; and
- investigation of possible offset strategies as a compensatory measure for the removal of Endangered Ecological Communities in consultation with the appropriate government agencies

The Proponent responded to submission concerns regarding native vegetation clearing by way of a Submissions Report that committed to discussions with appropriate government agencies such as the Department of Environment, Climate Change and Water in order to determine the requirement and contents of a compensatory habitat package to offset the ecological value of flora and fauna to be impacted by the proposal.

The Department considers that impacts to native vegetation should be avoided wherever practicable and where unavoidable, the impacted biodiversity values should be mitigated or otherwise offset to ensure an overall "maintain or improve" outcome. The pipeline is to be constructed along an existing easement that is already highly disturbed, however would require up to seven hectares of vegetation clearing within the easement due to the need to expand the existing pipeline corridor in the easement to accommodate the duplicate (looping) pipeline adjacent to the existing pipeline. The Department accepts that location of the duplicate pipeline outside of the existing easement (to avoid vegetation clearing within the easement) would not be technically or economically desirable and may not necessarily achieve an outcome of avoiding vegetation clearing as a route outside of the existing easement has the potential to impact on new areas of native vegetation rather than limiting impacts to already disturbed and fragmented vegetation within the existing easement. The Department is therefore satisfied the Proponent has avoided impacts to native flora and fauna to the maximum feasible extent through the proposed location of the looping pipeline within the existing easement. Notwithstanding, some native vegetation clearance is expected to occur as a result of the project (i.e. seven hectares under worst case). Although the total amount of native vegetation expected to be removed is relatively small, the Department considers the Proponent's mitigation measures and updated commitments to be insufficient in themselves to achieve an overall "maintain or improve" outcome.

In order to achieve such an outcome the Department recommends the Proponent develop a compensatory habitat package to offset the proposed flora and fauna impacts resulting from this project. The package should provide an offset ratio of 2:1 of vegetation communities to be removed or otherwise disturbed on-site. The Proponent has identified that this offset target would likely be achieved through a combination of strategies including revegetation and enhancement of retained vegetation within the easement width; revegetation and rehabilitation of surplus land made available through property acquisition; financial contributions to existing biodiversity enhancement programs (such as Landcare or Catchment Management Authority programs) or research measures; and/ or BioBanking measures. The Department is satisfied that these represent achievable measures to offset the biodiversity impacts of the project. The package should be developed in consultation and to the satisfaction of the Director-General and the Department of Environment Climate Change and Water and importantly should be maintained in perpetuity. Once secured the sites will effectively no longer be available for any future development, instead they will be secured for conservation so that local biodiversity values are maintained and improved. By applying such a compensatory package the Department considers the "maintain or improve" principle can be upheld.

Notwithstanding the need for a compensatory habitat package, the Department is supportive of the proposed mitigation measures included in the Environmental Assessment as they will also significantly assist in minimising adverse flora and fauna impacts. However the manner in which they will occur should be made

apparent. The Department therefore recommends the details of these mitigation measures be included in a Construction Environment Management Plan. Such a Plan should outline environmental management practices and procedures to be followed during construction of the project so that actual avoidance can be determined.

In addition the easement contains habitat likely to support threatened species that are known or have the potential to inhabit the site. In order to mitigate against potential adverse impacts, the Department supports the Proponents commitment to minimise the extent of native vegetation clearing during construction to the maximum extent feasible. If habitat containing hollow-bearing trees is required to be removed then these should be checked for the presence of any native species and the hollows re-located or nesting boxes installed. Tree removal should also occur outside of the known breeding periods of threatened species so as to reduce likely impacts. Methods for the implementation of such mitigation measures should be included in the Construction Environment Management Plan. By undertaking such measures the Department believes that adverse impacts to threatened species populations can be avoided.

By including such details of mitigation measures into a Construction Environmental Management Plan as well as the compensatory habitat package described, the Department is satisfied that the biodiversity impacts of the project can be appropriately minimised, mitigated or offset consistent the “maintain and improve” principles.

5.2 Noise Impacts

Issue

The Proponent's noise modelling found that construction of the pipeline is likely to exceed the “noise affected” noise goals under the *NSW Interim Construction Noise Guidelines 2009* (i.e. background noise levels + 10 dB(A), which in this case equals 40 dB(A)) by five to 15 dBA at approximately 54 residential receivers. No receivers are expected to exceed the *highly noise affected level* (75 dB(A) and above contained in the guidelines.

The total construction period for the project is expected to be four months. Pipe would be laid at a rate of two kilometres a day for the 61 kilometre pipeline. Works would occur during the recommended standard work hours contained in the *NSW Interim Construction Noise Guidelines 2009*. The Proponent also indicated some work may occur outside of these standard hours.

The Proponent has identified a number of measures to mitigate against construction noise which will be included in a construction noise and vibration management sub plan.

Submissions

Submissions raised the following issues relating to noise impacts:

- construction noise and its adverse impact on residential receivers and livestock; and
- the possibility of noise and vibration impacts resulting from blasting.

Consideration

The Department is satisfied that the Proponent's noise assessment has been undertaken in accordance with the *NSW Interim Construction Noise Guidelines (July 2009)*. Based on the rate of pipe lay down, the Proponent considers receiver exposure to construction noise will be temporary and will not occur over the entire construction period of four months. Based on a pipeline lay down period of two kilometres a day it is possible receivers would be exposed to a noise affected level of construction noise for up to 16 hours during the entire construction period. This is based on a best case construction works scenario that includes no delays. Nevertheless, even under a worst case scenario it is unlikely that receptors at single location would be exposed to continuous construction activities for more than approximately one week. Notwithstanding, the expected short duration of exposure to construction activities, the Proponent has proposed noise mitigation measures to minimise potential noise impacts as far as practicable, including procedures to address noise complaints, noise monitoring and advanced notification to potentially noise affected receivers.

The Department considers the exposure of 54 residences to a noise effected level to be acceptable subject to construction works occurring during standard construction hours under the *NSW Interim Construction Noise*

Guidelines, July 2009 and incorporating the noise mitigation measures identified in the Proponent's Environmental Assessment to further minimise noise impacts wherever possible. Whilst up to 15 dBA exceedances of noise goals are predicted, the Department notes that no residence is expected to be exposed to a highly noise effected level (i.e. >75 dBA). In addition, noise exposure is expected to be for short duration only (i.e. approximately one week). Given the short duration and finite nature of impacts (i.e. total construction period of four months), the Department is satisfied that the construction noise generated by the project would not result in an unacceptable noise impact to surrounding receptors and landuse (including to livestock and rural activities).

The Proponent also indicated construction would possibly need to occur at one location (Billabung Creek) for 24 hours over a period of 1-2 weeks. The Proponent has undertaken a preliminary noise assessment of these works, indicating that nearest sensitive receptors located approximately one kilometre away would be exposed to noise levels of approximately 35-40 dBA, which is an up to five dBA exceedance of the noise goals for works outside of standard hours under the *NSW Interim Construction Noise Guidelines 2009* (i.e. background + 5dBA, which in this case is 35dBA). The Department considers that this assessment should be confirmed at construction stage once detailed construction methodology and available mitigation options has been confirmed for this location (including confirming whether there are any alternative to construction 24 hours a day or options for reducing the duration of 24 hour works to less than the maximum two weeks identified). On this basis, the Department has recommended a condition that requires the Proponent to specifically request permission from the Director-General for any construction works outside of standard work hours. Such a condition would also provide flexibility for the Proponent to seek approval for any other unforeseen out of hours works. Each request would be considered on a case by case basis accompanied by details of the need for the works and site-specific mitigation measures proposed to ensure non unreasonable noise impacts at nearest receptors. If permission is granted by the Director-General, notification would then be provided to affected receivers. In this manner the Department considers noise impacts to affected receivers from out of standard hours construction works can be managed.

In order to coordinate the effective implementation of the Proponent's proposed mitigation measures the Department recommends a construction noise and vibration management plan be developed. This plan is to be provided to the Director-General for approval prior to construction. The construction noise and vibration management plan would detail the procedure for notifying receivers of any construction activities that are likely to affect their noise amenity. Contact to affected receivers would be provided within a reasonable timeframe to when the activity is scheduled to take place. A complaints procedure would also be implemented by the Proponent in order to deal with any potential noise complaints arising from construction of the project. Any non-compliance would be dealt within a contingency plan that should be contained in the construction noise and vibration management plan.

In relation to concerns over blasting noise, it is expected that blasting will not be required for the construction of this project as the existing Young to Wagga Wagga Gas pipeline is located within the same easement as the proposed pipeline. In the event that blasting is required, it is recommended the Proponent comply with noise and vibration criteria contained in the *Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration (ANZEC 1990)*. These measures along with adequate notification to potentially affected receivers will minimise adverse noise impacts and annoyance to adjacent receivers.

Subsequent to inclusion of the Proponent's proposed noise mitigation measures, the Department is satisfied that any construction noise associated with the proposal can be managed so as to not result in unacceptable noise impacts at nearest sensitive receptors. By incorporating the Departments recommendations related to the provision of a construction noise and vibration management plan, standard construction hours and blasting, the Department considers that construction noise resulting from the project can be appropriately managed.

5.3 Indigenous Heritage

Issue

The Proponent's Aboriginal Cultural Heritage Assessment was based on information derived from archaeological and environmental literature, register searches including the Aboriginal Heritage Information Management System (AHIMS database), ethno-historical research, archaeological site surveying that involved predictive modelling and Aboriginal community consultation. Community consultation was undertaken in

accordance with the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (DEC, 2005). A total of 36 Aboriginal sites recorded during the field survey, all of which were stone artefacts. Of these, 13 comprised previously recorded aboriginal sites. A total of 29 sites are expected to be impacted by the proposal. The Proponent considers no significant Aboriginal heritage values would be affected by the proposal as the sites to be impacted are primarily scattered stone artefacts of low archaeological heritage value that have been subject to significant disturbance associated with the initial pipeline construction and maintenance of the existing easement. The Proponent has committed to the following management commitments:

- Should human remains be encountered during construction, work will cease immediately and the relevant authorities will be contacted; and
- Construction crews will be made aware of the potential for cultural heritage items to occur outside the easement. Ground impacts outside the easement, particularly within 50 metres of watercourses will be avoided.

Submissions

A submission from Wagga Wagga Council was concerned the project would possibly impact a culturally significant axe quarry site within the Wagga Wagga Local Government Area.

Consideration

Rather than surveying the entire easement for evidence of Aboriginal occupation the Proponent conducted predictive modelling based on associations between environmental features and Aboriginal sites identified in local and regional studies. These areas were referenced during community consultation in order to identify any variances. These areas were then surveyed to verify sites and identify any new sites. The Department considers this method of modelling was satisfactory to identify the indigenous heritage value along the easement.

The Department notes the project site already contains an existing pipeline easement. An optic cable installation was also completed along sections of the easement in 2006. Based on the disturbed nature of the site, the archaeological value of any heritage items identified is reduced. Site surveying that identified predominantly scattered stone artefacts and the results of a register search on the Aboriginal Heritage Information Management System database confirm this view.

Notwithstanding the Department notes that all heritage items would have socio-cultural significance to the local indigenous community. A single Aboriginal stakeholder provided comment during the indigenous heritage assessment. Aside from this no other comments were made by aboriginal stakeholders regarding the indigenous heritage value of any of the identified artefacts along the easement. Spread of impacts to the single site (stone artefact scatter) that did receive comment would be minimised as far as possible by ensuring that the pipeline trench converges as close as possible to the existing pipeline. The Department considers this an adequate management measure based on the low archaeological value these artefacts contain.

A submission also raised concerns that an axe quarry site may be impacted by the proposal. This site was not described by the Environmental Assessment. The site is located some 250 metres from the pipeline easement and is therefore not expected to be directly impacted. However the easement does cross an access road to the site. In order that construction works would not unduly restrict access to this road the Department recommends the Proponent be required to consult with the relevant owner of the road and agree on suitable construction methods. Any temporary road closures should also be notified to the owner of the road and advertised publicly. As a further precautionary measure, the Department recommends the pipeline avoid the site itself such that it does not destroy, modify or otherwise physically affect it. In this manner the Department considers adverse impacts to the axe quarry site and its access will be avoided.

Based on the information provided in the assessment the Department agrees with the Proponent's conclusion that impacts to the heritage value of the area where the pipeline crosses will be negligible. Whilst all artefacts have value to the aboriginal community the Department noted that none of the items predicted to be impacted have been identified as representative of rare or unique archaeological value in a local or regional context but rather examples of items which are relatively common in the landscape. The Department also notes that most

of the items are either already disturbed or located within a disturbed context (i.e. existing easement). The Department is satisfied the management measures put in place by the Proponent will ensure no impacts to items outside of the existing disturbed easement. The Department has reflected these measures in its recommended conditions of approval. Further, recommendations made by the Department regarding the axe quarry site will avoid impacts to the site and its access road. The Department is therefore satisfied the proposal will not significantly impact on indigenous heritage values.

6. CONCLUSIONS AND RECOMMENDATIONS

The Department has assessed the Proponent's Environmental Assessment, Submissions Report and Statement of Commitments on the Young to Wagga Wagga Looping Pipeline. The Department has also assessed submissions received from public agencies and the community pertaining to this project. The looping of the existing Young to Wagga Wagga pipeline between Bomen and Berthungra will occur on an existing easement. The easement is already highly disturbed and the Department considers that the additional impacts associated with the additional length of pipeline within this largely disturbed context would not be significant.

Based on its assessment, the Department is satisfied that the Proponent has provided a robust and conservative assessment of potential impacts. The Department considers the project to be on balance, justified given its benefits to the broader community in securing future gas supply for the region. Adverse impacts identified in this report can be mitigated to acceptable levels with the mitigation measures proposed in the Proponent's Statement of Commitments and implementation of the recommended conditions of approval. The Department therefore recommends the approval of this project subject to the Department's recommended conditions of approval.

APPENDIX A – RECOMMENDED CONDITIONS OF APPROVAL

APPENDIX B – STATEMENT OF COMMITMENTS

APPENDIX C – RESPONSE TO SUBMISSIONS

APPENDIX D – ENVIRONMENTAL ASSESSMENT
