

Young to Wagga Wagga Looping Pipeline

Stage 2

Bethungra to Young

Preliminary Environmental Assessment



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Executive Summary

INTRODUCTION

East Australian Pipeline Pty Ltd (EAPL), a wholly owned subsidiary of APA Group, is proposing to loop the existing 12" Young to Wagga Wagga Pipeline with an 18" Pipeline.

APA Group, comprised of Australian Pipeline Trust and APT Investment Trust, is a major ASX-listed energy transmission company in Australia with interests in almost 12,000 km of natural gas pipeline infrastructure, and over 2,300 km of gas distribution networks in Australia.

The existing pipeline is licensed by the Department of Industry and Investment as Licence 19. The new looping pipeline will be approximately 131 km in length and constructed in two stages.

This project is the second stage, connecting to a 61km section previously laid from Bomen near Wagga Wagga to Bethungra in 2010. The project will involve construction from Bethungra to Young with a length of approximately 70 km and a cost of approximately \$50m. It is intended to be laid entirely within the easement of the existing pipeline.

NEED FOR THE PROJECT

The pipeline will be bi-directional enabling Moomba gas from South Australia to flow to Victoria and Bass Strait gas from Longford to flow to Sydney. The existing Young to Wagga Wagga Pipeline provides gas to the towns in the central south of NSW including the Riverina, Cootamundra, Young and Wagga Wagga, whilst also providing an interlink between the NSW gas supply network through to Victoria.

More recently the pipeline has also operated as storage facility to enable the supply of natural gas high peak flow rates as a base fuel to a new power station at Uranquinty.

The new pipeline will expand the storage and throughput capability.

PROJECT OBJECTIVES

The initial requirement for the looping pipeline is to enable expansion of the operating capability of the pipeline, and the provision of more flexible transportation services in EAPL's pipeline network.

The installation of this Stage 2 project will increase the throughput of Young to Wagga Wagga pipeline which in conjunction with upgrades in Victoria will enhance the capability to move gas interstate between the New South Wales and the Victorian supply systems.

PROJECT DESCRIPTION

The pipeline will be a buried, high pressure (10.2MPa) gas transmission pipeline which initially would be operated at 8.5 MPa attached to the existing system. It will be designed, constructed and operated in accordance with AS 2885 and other relevant Standards. The pipe is expected to be supplied in 18m lengths which will be welded together on site and buried with at least 750mm depending upon terrain and prevailing land use.

PLANNING PROVISIONS AND LEGISLATIVE REGIME

Under clause 6(1) of the State Environmental Planning Policy (Major Projects) 2005, the project was determined to be subject to Part 3A by the Director-General of the Department of Planning on 16th April 2009.

The project was determined on the basis of being “development of a kind that is described in Schedule 1 of the State Environmental Planning Policy (Major Projects) 2005 – namely clause 26A “Development for the purposes of a pipeline in respect of which a licence was granted under the Pipelines Act 1967 before the commencement of clause 26A”, and is thus declared to be a project to which Part 3A of the Environmental Planning and Assessment Act 1979 applies for the purpose of section 75B of the Act”.

The project is not expected to cause a significant impact on matters of National Environmental Significance (NES) as the pipeline will be entirely located inside the existing easement. The pipeline construction will though require a working width slightly wider than the easement and as there exists the potential, however unlikely, to impact on threatened species a referral under the *Environment Protection and Biodiversity Act* (EPBC) will be made.

The relevant Local Environmental Plans and Regional Planning Instruments associated with the proposed pipeline route include the:

- Young Local Environmental Plan
- Cootamundra Shire Local Environmental Plan
- Harden Shire Local Environmental Plan
- Junee Shire Local Environmental Plan
- Western New South Wales Regional Environmental Plan.

PRELIMINARY ASSESSMENT

No key opportunities or constraints associated with Regional Strategies or Environmental Planning Instruments have been identified to date. This will be further investigated during the assessment process.

Re-use of the existing gas pipeline easement will simplify the environmental processes.



1.0 INTRODUCTION

1.1 Project Overview

Stage 1 of the Young to Wagga Looping Pipeline, involved a pipeline from Bomen to Bethungra and was approved by the Department of Planning on 25 January 2010. This project is the second and final stage extending that pipeline from Bethungra through to Young.

The existing pipeline is licensed by the Department of Industry and Investment as Licence 19. The Stage 2 pipeline will be approximately 70 km in length and is estimated to cost approximately \$50 million.

It is intended to be laid entirely within the easement of the original pipeline.

1.2 Proponent Overview

The Proponent, EAPL is a wholly owned subsidiary of APA Group. APA Group is comprised of Australian Pipeline Trust and APT Investment Trust, is a major ASX-listed energy transmission company in Australia with interests in almost 12,000 km of natural gas pipeline infrastructure and over 23,000, km of gas distribution networks.

APA manages and operates all its assets and also provides management and operation services to gas distribution and transmission company Envestra and other energy infrastructure companies.

APA employs over 1,100 people.

1.3 Purpose and Scope of the Document

The purpose of this document is to provide a description of the proposed section of Looping Pipeline to enable the NSW Government to determine the environmental assessment criteria to be applied to the Project as a Major Project for which Part 3A of the Environmental Planning and Assessment Act 1979 (EP&A Act) will apply.



2.0 NEED FOR THE PROJECT

2.1 Justification

The Young to Wagga Wagga Pipeline provides gas supply to the towns in the central south of NSW including the Griffith, Cootamundra, Young and Wagga Wagga. The pipeline is bi-directional also enabling Moomba gas from South Australia to flow to Victoria and Bass Strait gas from Longford to flow to Sydney.

More recently the pipeline has also operated as storage facility to enable the supply of natural gas high peak flow rates as a base fuel to a new power station at Uranquinty.

2.2 Objectives

The key objectives of this project are to:

- Provide increased capability to provide transportation services including that required by power stations.
- Facilitate the increased use of a cleaner burning fuel source for power generation in NSW.
- Enhancing the security of gas supply by strengthening the link between Victoria and New South Wales

The key objectives of the construction methodology will include:

- Construct a pipeline that has the minimum practicable impact on both the natural and built environment by utilising the existing easement;
- Utilise regional skilled labour in the construction and subsequent operation of the Project.

3.0 PROJECT DESCRIPTION

3.1 Route

The proposed pipeline will run north east from the Bethungra Valve Station towards the Young Compressor Station within an existing easement, extending the Stage 1 pipeline which ran from Bomen to Bethungra. The pipeline route traverses the Young, Cootamundra and Harden Shire Council areas in NSW. The area is predominantly used for grazing and cropping.

3.2 Route selection criteria

The strategic objectives in selecting the proposed pipeline route included:

- Economical construction;
- Operability considering environmental, access, stakeholder and cost impacts;
- Acceptable development costs; and

- Reduced environmental impacts by utilising an existing easement
- The location of the power station.

3.3 Pipeline

The pipeline would be a buried class 600, steel pipe with a proposed maximum allowable operating pressure 10.2MPa. The pipeline would be designed and built to AS2885 Pipelines Gas and Liquid Petroleum. It is anticipated that 18" pipe will be used throughout.

Above ground structures are expected to include a scraper station at Young end, two mainline valves (MLVs), marker posts and cathodic protection inspection points. The cathodic protection test points would most likely coincide with those of the existing pipeline.

3.4 Construction Activities

Pipeline construction is linear production-line-work with each crew targeting similar daily production rates for their specific activity, which for a Project of this size would be in the order of 2 km per day. To minimise the impact on local community, construction will be carried out 7 days a week generally from sunrise to sun set. Where construction may have a direct impact on the local residents, specific discussions will be held to minimise the impact upon them. Activities are carried out sequentially with each crew typically being separated by approximately 1 week.

Typical activities to be undertaken include:

Temporary Facilities - A range of temporary facilities will be required during pipeline construction. These include work areas for equipment, pipe delivery and storage and borrow pits to source additional fill material (if required). The location of the temporary facilities will be based upon logistical requirements.

Pipe haulage – Pipe will need to be transported to site and it is anticipated that this would be by road. Pipe is typically supplied in 18m lengths transported on extended semi-trailers with a capacity to carry around 0.5km of pipe per truck. Therefore 70 km of pipeline could involve approximately 140 loaded truck movements, however due to the linear nature of the development these truck movements would not be likely to all occur in one location.

Access - During construction, access tracks will be required to areas such as the pipeline easement and work areas. Existing roads, access tracks and disturbed areas will be utilised as far as practicable to minimise disturbance to the surrounding areas. The selection of access track routes will be based on the objectives for the pipeline route selection and subject to the conditions of a Construction Environmental Management Plan (CEMP).

Workforce Accommodation – A workforce of around 100 personnel at peak period would be anticipated for the Project. Pipeline construction activities, as set out below, require a variety of skills sets from general earthworks through to specialised welding techniques. There are a limited

number of companies that can provide the specialised techniques and therefore pipeline construction crews travel around the country from project to project and source generalised skills locally where appropriate. Accommodation of construction crews varies depending upon the size and location of the project. It is anticipated, due to the proximity to populated areas, that the construction crew for this Project would be able to be accommodated in existing local accommodation.

Clearing - An impact width of generally 30 metres will be required for construction through open country (refer Figure 3-1). The clearing will overlap the existing easement, reducing any impact on native vegetation. Breaks will be left in stockpiled vegetation to allow continued access for fence lines, tracks, stock and drainage lines. Gates will be installed where fence lines are required to be breached. Large mature trees will be preserved wherever practicable.

Grading - Topsoil will be removed, where required, and stockpiled separately for reuse during rehabilitation (Figure 3-1).

Trenching - Either a wheel trencher or an excavator will be used to dig the trench in which the pipe will be laid. In rocky terrain rock saws (a type of trenching machine) or excavators using rock picks are likely to be used. Blasting is possible where mechanical means are impractical. The length of trench left open at any given time will be the minimum practicable dependent on land use and prevailing conditions. Breaks in the trench will be left to facilitate stock and wildlife crossing, and methods will be adopted to prevent fauna entrapment.

Stringing - Pipe will be transported to site on trucks in 18 metre lengths. The pipe is laid out adjacent to the trench and held off the ground on skids (typically wooden blocks) that protect the pipe coating from damage.

Line-Up and Welding - Once the pipe has been strung a line-up crew will position the pipe using side boom tractors and internal line-up clamps. Pipes will be welded in several segments, typically into one kilometre lengths called pipe strings.

Radiography - Each weld will be subjected to a 100 percent non-destructive test (NDT) inspection to check for compliance to the specification, thus ensuring the integrity of each weld.

Lowering In and Backfilling – If the trench bottom does not contain any rocks or other material that may damage the pipe coating the pipe will be laid directly on the trench bottom. However, if there are rocks or other debris present sandbags or foam pillows will be placed on the trench bottom to support the pipe. Soft material, typically sifted spoil, will be placed around the pipe. The pipe will then be lifted off the skids and lowered into the trench using side-boom tractors. The trench will be backfilled, ensuring that topsoil is replaced last, and soil packed down to minimise the potential for subsidence.

Testing - The pipeline will be hydrostatically tested (hydrotest) for strength and potential leaks by being filled with water and increasing the pressure to a

minimum of 125% of the MAOP in accordance with AS 2885. Water resources for hydro testing will be identified during the environmental assessment process.

Crossings - Several different methods will be used when crossing rivers, roads, and major infrastructure corridors. The method used will be dependent on environmental factors and geotechnical constraints, which will be identified during the environmental studies. Typical methods used include open trenching, boring or directional drilling.

Clean up and Restoration - Clean up and restoration measures will be applied to the ROW, work areas and access tracks in consultation with the relevant landholder/owner. Generally clean up and restoration will involve removal of foreign material (construction material and waste), surface contouring, respreading topsoil, respreading vegetation and reseeding/revegetating (typically with native grass or other approved species). Restoration will be undertaken in accordance with the Australian Pipeline Industry Association (APIA) Code of Environmental Practice and will ensure that:

Topsoil cover is re-established and all land and waterways disturbed by project activities are returned to a stable condition as soon as possible after construction;

Land is left in a condition that will enable it to return as close as possible to its previous productivity;

- Stable landforms are re-established to original topographic contours;
- Natural drainage patterns are reinstated;
- Erosion control measures (e.g. contour banks, filter strips) are installed in erosion prone areas; and if required
- Disturbed habitats are recreated.

3.5 Operational Activities

Given that the pipeline will be buried, land users are encouraged to resume previous land use activities on top of the pipeline provided that the use does not include excavation activities. Whilst deep-rooted vegetation cannot be re-established directly across the pipeline (due to the potential to damage the pipeline) shallow root cropping and grassland re-establishment is encouraged and no long-term impacts would be expected to such areas.

Typical operational activities are:

General Operations – The routine operation and maintenance program associated with the original pipeline would be expanded to include the looping pipeline. The routine operation and maintenance program includes ground and aerial patrols, repair of equipment, pigging and cleaning of the pipeline, corrosion monitoring and remediation, and easement and lease area maintenance including access roads. Aerial and/or ground inspections will include detection of third party activities on or near the ROW, detection of

erosion, monitoring of rehabilitation success and detection and control of weed species.

Supervisory Control and Data Acquisition System (SCADA) - The pipeline will be connected to the Young Base SCADA system which will continually monitor pipeline conditions such as pressure, temperature, linepack, valve status, and cathodic protection. The SCADA system enables the Pipeline Controller to remotely open or close telemetered valves, alter operating pressures and start or stop equipment as required.

Prevention of Pipeline Damage – APA will operate the looped pipeline in conjunction with the existing Licence 19 pipeline. Prevention of damage due to third party activity will be achieved through appropriate depth of cover, signposting of the pipeline, one call "Dial Before You Dig" programs, regular inspection of the pipeline ROW to spot any construction or earthmoving activities in the area, and third party education on the potential dangers of carrying out activities in proximity to the pipeline. In some areas such as crossings, marker tape or concrete slabs may be buried above the pipeline to reduce risk of third party interference. Security fencing, gates and locks will be provided around all major above ground facilities (e.g. scraper stations and mainline valves) to inhibit accidental or unauthorised tampering.

Cathodic Protection - Pipeline corrosion will be prevented by the protective external coating and cathodic protection systems cross bonded to the existing pipeline. The cathodic protection system will be checked regularly to ensure that the protection voltages are within limits and to monitor any likely areas of corrosion activity. The cathodic protection system and external coating system work independently to protect the pipeline from corrosion.

Workforce – It is anticipated that the increase in operational duties will be absorbed by the existing staff or by an additional employee at the Young Base.

3.6 External Infrastructure Requirements

3.6.1 Gas

The pipeline will be bi-directional. Gas will be supplied to the pipeline from Victoria via the Wagga Wagga to Culcairn Pipeline or from NSW via the Moomba to Wilton Pipeline at Young.

3.6.2 Water

Water resources are required for hydro testing of the pipeline and dust suppression during construction. The selection of water sources and final disposal locations for hydro test water will be dependent on suitable sources, the hydro test program and method of disposal. These will be determined during subsequent detailed studies.

3.6.3 Road and Rail

The majority of impact to traffic during the construction phase will be

associated with delivery of pipe, plant and equipment to site (refer Section 3.4).

The pipe transport is anticipated to be by road.

3.6.4 Power

The Project will be self-sufficient for power needs with construction power being provided by diesel generators.

3.7 Estimated Project Cost

The development of the Project is anticipated to cost approximately \$50 million.



4.0 PLANNING PROVISIONS AND LEGISLATIVE REGIME

4.1 Planning Provisions

Local Environmental Plans associated with the proposed pipeline route within NSW are:

- Young Shire Local Environmental Plan
- Cootamundra Shire Local Environmental Plan
- Harden Shire Local Environmental Plan
- Junee Shire Local Environmental Plan

Regional Planning Instrument associated with the proposed pipeline route in NSW is:

- Western New South Wales Regional Environmental Plan.

The proponent will liaise with the relevant local authorities to ensure that the pipeline route does not create any conflicts with the Local or Regional Planning Instruments, Development Control Plans or other policies.

4.2 Legislative Regime

The Project will require approvals under Commonwealth and NSW legislation.

4.2.1 *Environment Protection and Biodiversity Conservation Act 1999*

It is anticipated that construction of the pipeline will not create a significant impact on any matters of National Environmental Significance. However a referral will be made to the Commonwealth Department of Environmental and Water Resources (DEWR).

It is proposed that the project will be assessed through two separate processes as follows:

1. Commonwealth EBPC Act – level of assessment still to be determined
2. New South Wales – Environmental Assessment under Part 3A of the EP&A Act.

To the greatest extent possible, the proponent proposes to manage these processes in parallel, and while preparing documents targeted to the specific requirements of each jurisdiction, ensuring that the information provided is consistent in terms of assessment completed and mitigation measures proposed.

4.2.2 *Environmental Planning and Assessment Act 1979*

Part 3A of the EP&A Act commenced in 2005 and consolidates the assessment and approval regime for all major projects requiring the approval of the Minister for Planning.

With a total cost for development of approximately \$80-\$90 million, the whole Young to Wagga Wagga Looping Pipeline (Stages 1 and 2) met the criteria

for assessment under Part 3A and has already been confirmed as a major project by the Minister.

4.2.3 Pipelines Act 1967

The Project will require an alteration to Licence 19 – Young to Wagga Wagga Pipeline by the Department of Industry and Investment for the construction and operation of the looping pipeline.



5.0 PRELIMINARY ASSESSMENT

5.1 Regional Strategy

No significant implications arising from the provisions of a Regional Strategy are anticipated. The Proponent will liaise with the relevant government planning authorities during the assessment of the proposed pipeline route.

5.2 Environmental Planning Instruments

No significant implications arising from the provisions of any Environmental Planning Instruments have been identified to date. The Proponent will liaise with the relevant government planning authorities during the assessment of the proposed pipeline route.

5.3 Location Characteristics

It is intended for the pipeline to be wholly located on the Licence 19 easement although a temporary working width will be negotiated with the landowners. There are no known opportunities or constraints related to past uses in the area. Land Officers consulting with landowners in relation to the route will be seeking to identify any sites of potential land contaminations (e.g. waste pits, cattle dips) that may affect construction activities along the proposed route.

Land characteristics are addressed in Section 5.4

5.4 Environment

5.4.1 Land Use and Tenure

The proposed route traverses land which is used for cropping and grazing. The land was disturbed in 1980/81 by the construction of the original Young to Wagga Wagga Pipeline and was reinstated to a good condition. The land has subsequently been farmed.

There will be no displacement of residents for the construction of the project and any disturbance to existing land use will be temporary. There may be a requirement for a working width outside of the current easement which will be reinstated as per the easement towards the end of the project. Each landholder will be consulted regarding the project to identify and discuss site specific issues and requirements.

5.4.2 Air and Noise

Air and noise impacts associated with the Project will only occur during the construction period. These would be associated with construction activities and transport of pipe, plant and equipment. The key air quality issue would be dust generation during construction. Noise issues would be typical of earthworks construction being predominantly graders, dozers and trenchers

although some blasting may be required in rock areas. As such the effects would be transient and short term. Inspection of the pipeline, by air or ground during operations would occur on a regular basis in association with the current regular fortnightly patrols of the Licence 19 Pipeline.

5.5 Social

5.5.1 Aboriginal and Cultural Heritage

Heritage is addressed under the *National Parks and Wildlife Act 1974* in NSW. The Project will engage with the relevant Land Council and work with them to study the route with the primary aim of avoiding items of cultural heritage value. In the event that full avoidance is not practicable the Project will seek to agree management strategies of any values that may be impacted. The assessment will be carried out in accordance with the requirements of the DECC document 'Guidelines for Aboriginal Cultural heritage Impact Assessment and Community Consultation'.

European heritage will be studied and the values determined and subsequently managed in accordance with the relevant legislation for each State.

5.5.2 Visual

The construction of the pipeline will create a cleared corridor approximately 30m in width partly on and partly adjacent to the existing easement. This area would be highly visible in pasture and grazing land until grasses and or crops are re-established. Depending on the season, this may take up to 6-9 months.

5.5.3 Traffic

The Project has the potential to impact roads and road users during the construction phase. As discussed in Section 3.4 loaded pipe trucks would need to access the route throughout the construction period. However these truck movements will be spread out along the route of the pipeline progressing at a rate of approximately 2 km per day.

In addition to the pipe trucks there would be the need to mobilise and demobilise construction plant and equipment to and from the pipeline route at the commencement and completion of construction.

Major construction plant will generally remain on the working width, but will need to cross roads on the route.

On a day to day basis there would be local traffic movements associated with the transport of workers to and from the construction area.

5.6 Views of Other Agencies, Local Councils and Community

Consultations during the assessment phase of the Project will be focused on State and local government authorities and on those stakeholders most likely

to be directly affected by the Project such as landowners and occupiers. A Planning Focus meeting covering this pipeline was held in June 2009.

5.7 Key Issues

This section provides a summary of the key issues associated with the construction and operation of a gas pipeline.

Key Issue	Proposed Assessment and/or Management
Vegetation Clearing	The key environmental issue with any pipeline is the clearing of vegetation during the construction phase. Assessment will identify key vegetation communities and their abundance and identify any key management measures required. This may include avoidance. Rehabilitation of the route post construction should enable the majority of the vegetation types to be re-established across the route.
Fauna Habitat Disturbance	Clearing of vegetation during construction has the potential to disturb fauna habitat. Assessment will identify key fauna species for the area, their potential to be present on the route, important habitats for breeding and key management measures required.
Erosion Control	Clearing of stabilising vegetation can lead to dust and erosion issues. Soil types and their management measures along the route will be identified.
Human Amenity	Key issues for human amenity are noise and dust generation, increased traffic movements, on-going land use and general inconvenience during construction. The operational pipeline will be buried and normal land use can resume post construction. Impacts should be short-term and only construction related.
Risk Management	Design of the pipeline will be in accordance with the requirements of AS2885 which requires a risk based design approach.
Infrastructure	The pipeline route will cross, road, powerline and rail easements. Where this occurs the relevant agencies and their permitting requirements will be identified and adhered to.