

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 50 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). 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 unlikely to be used. 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. 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, resspreading topsoil, resspreading 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 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 equate to less than 1 man year. This will most likely be absorbed by the existing staff or by an additional employee at the Young Base.

3.6 External Infrastructure Requirements

3.6.1 Gas

Gas is to be supplied to the pipeline from Culcairn via the Wagga Wagga to Culcairn Pipeline or from the Moomba to Wilton Pipeline via the Young to Wagga Wagga Pipeline.

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 traffic during the construction phase will be associated with delivery of pipe, plant and equipment to site (refer Section 3.4).

The pipe transport would be predominantly by road; however the use of rail transport will be considered.

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 whole Project is anticipated to cost approximately \$80 - \$90 million although initial stages will be significantly less.

4.0 PLANNING PROVISIONS AND LEGISLATIVE REGIME

4.1 Planning Provisions

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

- Young Local Environmental Plan
- Cootamundra Shire Local Environmental Plan
- Harden Shire Local Environmental Plan
- Junee Shire Local Environmental Plan
- Wagga Wagga 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. Projects may be declared a major project under Clause 75B of the EP&A Act by either a State Planning Policy or Order of the

Minister published in the Gazette. In addition, where a part of a development is considered to be subject to Part 3A, then other parts of the development are also considered to be a project to which Part 3A applies.

Clause 6 of the *State Environmental Planning Policy (Major Projects) 2005* (Major Projects SEPP) provides that "... development that, in the opinion of the Minister, is development of a kind: (a) that is described in Schedule 1 or 2,... is declared to be a project to which Part 3A of the Act applies." Schedule 1, Clause 6 (2) (b) of the Major Projects SEPP provides that "Development for the purpose of Petroleum related works that has a capital investment value greater than \$A30 million."

With a total cost for development of approximately \$80-\$90 million the Young to Wagga Wagga Looping Pipeline meets 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 Water and Energy 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 minor working width with may need to 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 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 disturbance to existing land use will again only 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. Once construction activities are complete the pipeline would be buried and the vegetation re-established. Inspection of the pipeline, by air or ground during operations would occur on a regular basis in association with the 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 Traditional Owners 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.

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 concept design and assessment phase of the Project will be focused on State and local government authorities and on