

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 however blasting is a possibility but would probably be very limited. 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, 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 able 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 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 have a SCADA system which will continually monitor pipeline conditions such as pressure, temperature, gas flow in and out, linepack, valve status, cathodic protection and gas quality. All information will be relayed back to a central control room. The SCADA system will enable the pipeline controller to instantly open or close valves, alter operating pressures and start or stop equipment as required at sites on the pipeline.

Prevention of Pipeline Damage - 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. 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 Accommodation— An operational workforce of approximately 4 to 5 personnel would be anticipated for the pipeline. APA currently operates the Roma Brisbane Pipeline, the Carpentaria Pipeline and the Moomba Sydney Pipeline Network and as a result already has operational resources and infrastructure in the

Wallumbilla and Cobar areas. APA will leverage off these existing resources and supplement as required. Any new personnel will be sourced and housed locally if practicable.

3.6 External Infrastructure Requirements

3.6.1 Gas

Coal seam gas is to be supplied to the pipeline via Wallumbilla or directly from the Newstead gas storage facility.

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 final selection of the transport option will be heavily dependent on the availability of pipe within the required timeframe but it is likely that the pipe will be available within Australia (NSW) and transport would be predominantly by road, however investigation into the use of rail transport will be undertaken during studies and costing reviews.

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 \$500 million, depending upon the pipe diameter ultimately adopted.

4.0 PLANNING PROVISIONS AND LEGISLATIVE REGIME

4.1 Planning Provisions

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

- Brewarrina Local Environmental Plan
- Bourke Shire Local Environmental Plan
- Cobar 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, NSW and QLD legislation. It is intended to conduct the approvals process in parallel in each jurisdiction.

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).

As the pipeline will pass through two State jurisdictions, it is not possible for the Commonwealth to assess the project via bilateral agreements. Therefore it is proposed that the project will be assessed through three separate processes as follows:

- Commonwealth EBPC Act – level of assessment still to be determined
- Queensland – level of assessment to be determined
- New South Wales – Environmental Assessment under Part 3A of the EA Act.

To the greatest extent possible, the proponent proposes to manage these three 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 \$500 million the Proponent the Newstead to Bulla Park 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 licences to construct and operate a prescribed pipeline under the *Pipelines Act 1967*.

5.0 PRELIMINARY ASSESSMENT

5.1 Regional Strategy

No significant implications arising from the provisions of a Regional Strategy have been identified to date. 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

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 Biophysical

Land Use and Tenure

The proposed route traverses predominantly leasehold land (>95%) which is predominantly used for cropping and grazing. There will be no displacement of residents for the construction of the project and disturbance to existing land use will only be temporary. Each landholder will be consulted regarding the project to identify and discuss site specific issues and requirements.

The route is subject to various native title interests and the Project will engage with all interests. Within NSW the native title issues are dealt with by the government as part of the pipeline licence process.

The proposed pipeline route crosses petroleum (3) and mineral (6) exploration permits, but avoids mining leases and petroleum production leases.

Protected Areas

The proposed pipeline route does not intersect any National Parks or Conservation areas (refer to Figure 1-1).

Flora and Fauna

The alignment crosses the Darling River flood plain to the west of Bourke which may contain the NSW listed community "Coolibah-Black Box

woodland of the northern riverine plains in the Darling Riverine Plains and Brigalow Belt South bioregions". The presence and/or extent of this community would be verified through a detailed field review of the pipeline route.

South of Bourke, the alignment traverses mulga woodlands on low hills and sandplains. This area has been disturbed through grazing activities which have reduced the conservation significance of the area. Other listed threatened ecological communities in NSW, such as Myall woodlands, Buloke woodlands and Neila Shrublands tend to occur further to the south and east of the proposed alignment and are not expected to be impacted. This will be confirmed through additional survey work.

Nine EVR flora species are listed by the EPBC Protected Matters report as occurring within the area of the proposed pipeline route. The location of site records from the Qld and NSW Herbaria will be reviewed to determine the geographical range of these species and potential for occurrence on the proposed alignment.

Twelve EVR fauna species 12 species are listed by the EPBC Protected Matters report for the alignment, and some of these may occur in the area. It would be anticipated that impacts on these would be limited due to the nature of the disturbance and location of the proposed line, however some consideration would be required on a species-by-species basis to confirm this.

The Darling River floodplain may be an important habitat for tree-nesting or tree-dwelling species (including two bat species listed under the EPBC Act). It is anticipated that with appropriate mitigation measures, impacts on these species would be limited.

The potential impacts on flora and fauna will be minimised through the refinement of the proposed route to avoid areas of significant flora (including remnant native vegetation) and fauna habitat. Where the clearing of vegetation is necessary, the area cleared will be minimised and the vegetation stockpiled. Rehabilitation methods will be developed to rehabilitate the area as soon as practicable, to minimise the potential for erosion and invasion by weed species.

Through the route selection process, loss of habitat resulting from clearance of the pipeline ROW will be small compared to the available habitat in the region. Fauna in the vicinity of the pipeline alignment will be temporarily disturbed by the construction activities. The disturbance will however, be of short duration and should not impact on breeding or foraging patterns.

Weed control measures will be applied to the construction activities to reduce the risk of noxious weed transfer. Measures such as weed surveys and treatment, vehicle wash downs and training of workers will be implemented. The Local Council will be consulted prior to construction and appropriate control measures incorporated into the CEMP.

Comprehensive ecological surveys are proposed as part of the environmental assessment process for the pipeline. It is proposed that these

will be completed via a staged process involving:

- Background research to identify potential flora and fauna species & communities associated with the proposed route;
- Identification of preferred habitats;
- Completion of targeted surveys along the route to determine whether any of the listed species are present or likely to be present;
- Assessment of the potential impacts of the proposed route;
- Consideration of route refinements to avoid or reduce impacts where possible; and
- Development of comprehensive mitigation measures to manage identified potential impacts.

Watercourses

A number of watercourse crossings will be required for the construction of the pipeline, with the most significant river system in NSW being the Culgoa and Darling River systems which will be intersected to the west of Bourke. The actual location of all crossings will be dependent on the final alignment of the pipeline and the subject of detailed studies including ecological and cultural heritage.

The construction of the pipeline will not permanently modify any watercourses, although there is the potential for temporary disruption during actual crossings. The construction method for watercourse crossings will be depended on site factors (e.g. hydrology, stream substrate and geology, environmental sensitivities and engineering feasibility), with the aim to minimise environmental impacts during construction and the need for future remedial work during the operation of the pipeline.

Assessment of water course crossings will be included as part of the environmental assessment of the pipeline route with particular emphasis on selecting stable crossing locations to assist in minimising potential environmental impacts.

A number of wetlands are associated with the general pipeline route. It appears that none of the EPBC-listed wetlands occur along the route, although sediment flows from pipeline construction may enter these areas. It considered unlikely that such flows would constitute a significant impact, since they would contribute a very minor proportion of the sediment already flowing into these areas as a result of general sheet erosion due to overgrazing and land degradation.

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