Australian Government
Department of the Environment and Energy

Title of Proposal - Western Slopes Pipeline

Section 1 - Summary of your proposed action

Provide a summary of your proposed action, including any consultations undertaken.

1.1 Project Industry Type

Energy Generation and Supply (non-renewable)

1.2 Provide a detailed description of the proposed action, including all proposed activities.

APA Western Slopes Pipeline Pty Limited, a wholly owned subsidiary of the APA Group (together referred to as APA), is proposing to construct a 400-450mm diameter, buried, steel, high pressure gas pipeline approximately 450 kilometres (km) in length to connect the Narrabri Gas Project (NGP) to the New South Wales (NSW) gas transmission network (refer Attachment 1).

The following terminology is used in this referral:

The Project: Western Slopes Pipeline Project

Study area: A 10km wide buffer from the preliminary pipeline alignment (20km wide total width).

Preliminary pipeline alignment: Preliminary alignment for a 30m wide of Right of Way (ROW). The preliminary pipeline alignment will be subject to further refinement as informed by detailed environmental studies and stakeholder consultation.

The Project involves the construction and operation of an approximately 450km buried, steel, gas transmission pipeline between the Narrabri Gas Project and the existing Moomba Sydney Pipeline (MSP). The pipeline is anticipated to have a CAPEX value in excess of $450M. The key characteristics of the proposed gas pipeline are set out below.

Length: Approximately 450km
Material: Epoxy coated high strength steel line pipe
Size Range: 400-450mm diameter
Indicative depth of cover (based on AS2885 requirements)
Generally: 900mm (min 750mm)
Deep Cultivated Areas: 1200mm
Road / Rail Crossings: 1200mm
Watercourse crossings: 1200mm to 2000mm
Nominal capacity: Up to 200 TJ/day
Easement: Nominally 30m wide. Additional working width will be required at various locations.
Gas Type: All gas transported will be of a standard compliant with AS 4564-2011

The proposal will also include above-ground infrastructure/facilities such as:
- Mainline valves, used to shut down the pipeline in emergency or upset conditions.
- Scraper stations, used for access to the pipeline for internal cleaning and inspection.
- Meter stations, for monitoring of gas flow for commercial purposes.
- Pressure let-down facilities for interconnection with the MSP.
- Communication towers.
- Marker signs that delineate the location of the pipeline.
- Temporary construction workforce campsites.
- Temporary laydown areas for pipe stockpiling.

In addition to the buried pipeline and above-ground infrastructure/facilities, there will be a requirement for buried ground beds to support the cathodic protection system for the pipeline.

Details of the pipeline design, construction, commissioning and rehabilitation process for the Project are available in the Preliminary Environmental Assessment lodged with the NSW Department of Planning and Environment - http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6456

1.3 What is the extent and location of your proposed action? Use the polygon tool on the map below to mark the location of your proposed action.

Area	Point	Latitude	Longitude
Study Area	1	-32.79902969497	146.16511495242
Study Area	2	-32.597100693951	146.03790708276
Study Area	3	-32.544709347082	146.20414394344
Study Area	4	-32.272564569896	146.46868099848
Study Area	5	-31.892859674954	147.23773762974
Study Area	6	-31.738086573681	147.49793503823
Study Area	7	-31.570734736012	147.59333760867
Study Area	8	-31.425291404034	147.65116687323
Study Area	9	-31.322850342807	147.68151657114
Study Area	10	-31.217831429808	147.80439870822
Study Area	11	-31.003711950461	147.94027220848
Study Area	12	-30.800293883215	148.0573727602
Study Area	13	-30.654904818768	148.13109092804
Study Area	14	-30.591467689987	148.30744902062
Study Area	15	-30.437038453721	148.46647601965
Study Area	16	-30.327299855763	148.55321312713
Study Area	17	-30.269887712201	148.66307640838
Study Area	18	-30.253661188319	148.79461026209
Study Area	19	-30.288613817148	148.93193936365
Study Area	20	-30.266139803745	149.10397147218
Study Area	21	-30.283621387846	149.37284817378
Study Area	22	-30.253661188319	149.4566874897
Study Area	23	-30.359737863142	149.72846181522

Area	Point	Latitude	Longitude
Study Area	24	-30.422082967222	149.7790538093
Study Area	25	-30.516774094225	149.61425888742
Study Area	26	-30.474422986581	149.5737742951
Study Area	27	-30.450748537401	149.42199814523
Study Area	28	-30.459473235579	149.38441117684
Study Area	29	-30.443278130007	149.09529234673
Study Area	30	-30.468197152517	148.92761346343
Study Area	31	-30.443278130007	148.81485255825
Study Area	32	-30.44700755219	148.73969236779
Study Area	33	-30.4731803078	148.6919841675
Study Area	34	-30.565326772072	148.62548943999
Study Area	35	-30.748141558915	148.42310754972
Study Area	36	-30.816441302073	148.28433642554
Study Area	37	-30.869817922588	148.26697800698
Study Area	38	-30.987607877146	148.19614371675
Study Area	39	-31.118879678559	148.13832819852
Study Area	40	-31.31421539665	148.00966447609
Study Area	41	-31.400620212154	147.92582499253
Study Area	42	-31.480785575363	147.91426182183
Study Area	43	-31.622447501224	147.8564463036
Study Area	44	-31.822874286318	147.71477755549
Study Area	45	-32.042472033978	147.41265353205
Study Area	46	-32.421543919607	146.66383928078
Study Area	47	-32.702981541214	146.39640451799
Study Area	48	-32.79901785832	146.16511495242
Study Area	49	-32.79901785832	146.1636729298
Study Area	50	-32.79902969497	146.16511495242

1.5 Provide a brief physical description of the property on which the proposed action will take place and the location of the proposed action (e.g. proximity to major towns, or for off-shore actions, shortest distance to mainland).

The preliminary pipeline alignment (Attachment 1) runs west from the proposed Santos central processing facility at Leewood (KP0) north of the Pilliga Forest through predominantly cleared grazing land to KP90 adjacent to the northwest corner of the Pilliga West National Park. This section of preliminary pipeline alignment avoids the Pilliga National Park and Pilliga and Pilliga West State Conservation Areas. Some dryland cropping occurs in this section. A small rural subdivision, which has only been partially settled, is traversed at approximately KP35.

At KP90 the preliminary pipeline alignment turns southwest to run through mixed grazing and cropping land to the Castlereagh Highway northwest of Coonamble (approximately KP150). Remnant vegetation persists as small patches and linear strips in road reserves and along watercourses. The preliminary pipeline alignment continues southwest to KP225 north of

Warren. Mixed grazing and dryland cropping occurs throughout this section, with more intensive cropping occurring along the major watercourses including the Castlereagh River.

Between KP225 and KP260 the preliminary pipeline alignment traverses the Macquarie-Bogan Irrigation Scheme and uppermost reaches of the extensive ephemeral floodplain wetland listed as a Nationally Important Wetland that drains to the Macquarie Marshes Nature Reserve and Ramsar wetland over 65km downstream. Selection of the preliminary pipeline alignment has sought to minimise impacts to irrigation infrastructure by considering the arrangement of irrigation channels and paddocks and this is expected to be further refined during landowner discussions.

Between the Macquarie (KP255) and Bogan Rivers (KP320), the preliminary pipeline alignment traverses mixed grazing and cropping land with more intensive cropping occurring along major watercourses.

South of the Bogan River, the preliminary pipeline alignment runs west-southwest to join the MSP (KP458) at the Bundure mainline valve (MLV) station, approximately 100km west of Condobolin. Land use in this section is predominantly grazing with some dryland cropping. A small area of intensive cell cropping north of the MSP is avoided. The area south of the Bogan River (KP330 to KP380) contains extensive gilgai. Areas of remnant vegetation associated with small hills and ranges are also traversed in this section. The Nangerybone State Forest is avoided at KP400.

1.6 What is the size of the development footprint or work area?

Estimated to be a minimum of 1,350 ha.

1.7 Is the proposed action a street address or lot?

Lot

1.7.2 Describe the lot number and title. The preliminary pipeline alignment traverses multiple lots.

1.8 Primary Jurisdiction.

New South Wales

1.9 Has the person proposing to take the action received any Australian Government grant funding to undertake this project?

No

1.10 Is the proposed action subject to local government planning approval?

Yes

1.10.1 Is there a local government area and council contact for the proposal?

No

1.11 Provide an estimated start and estimated end date for the proposed action.

Start date 02/2019

End date 02/2044

1.12 Provide details of the context, planning framework and State and/or Local government requirements.

The primary NSW planning legislation which applies to the project are the Environmental Planning and Assessment Act 1979 (EP&A Act) and the Pipelines Act 1967, as discussed below.

NSW Environmental Planning and Assessment Act 1979

The EP&A Act provides the general framework for planning and environmental assessment in NSW. The EP&A Act includes provisions to ensure the potential environmental impacts of a development are assessed and considered in the decision-making process.

Under the State Environmental Planning Policy (State and Regional Development) 2011, gas transmission pipelines that require a pipeline licence are identified as State Significant Infrastructure (SSI).

Under the State Environmental Planning Policy (Infrastructure) 2007, development for the purpose of a gas pipeline subject to a licence under the Pipelines Act 1967, may be carried out without development consent.

Under the Pipelines Act 1967, a pipeline licence is required for the pipeline thus the development can be carried out without development consent and is subject to the assessment and approval provisions of Part 5.1 of the EP&A Act. Approval of the Minister for Planning is required and the project must be assessed by an Environmental Impact Statement (EIS).

NSW Pipelines Act 1967

The Pipelines Act 1967 outlines the licensing application requirements for pipelines. Under the Pipelines Act 1967, a licence is required to:

Commence, or continue, the construction of a pipeline.

Alter or reconstruct a pipeline.

Operate a pipeline.

A licence under the Pipelines Act 1967 is required for the construction and operation of the proposed gas pipeline.

To grant a pipeline licence, the Minister must be satisfied that the lands, or the easements, specified in the application for the licence which relate to the alignment of the proposed pipeline, associated apparatus or works, and access areas are vested in the applicant or are available for compulsory acquisition. In relation to private lands, the latter may only take place if the Minister is satisfied that the applicant has taken all reasonable steps to enter into an agreement with the owner to acquire the lands or easements and those steps have not resulted in any such agreement.

Local Government Area Permissibility

The preliminary pipeline alignment traverses seven LGA as set out in Attachment 2. The pipeline traverses predominantly rural land use zones. The local environmental plans (LEP) for each LGA will be taken into consideration in the EIS:

- Bogan Local Environmental Plan 2011.

- Cobar Local Environmental Plan 2012.

- Coonamble Local Environmental Plan 2011.

- Lachlan Local Environmental Plan 2013.

- Narrabri Local Environmental Plan 2012.

- Walgett Local Environmental Plan 2013.

- Warren Local Environmental Plan 2012.

Generally, where an inconsistency with the requirement of the LEPs occurs, the State Environmental Planning Policy (State and Regional Development) 2011 will prevail (Section 7(1) of the Policy).

1.13 Describe any public consultation that has been, is being or will be undertaken, including with Indigenous stakeholders.

APA values and respects its relationships with stakeholders and communities within which our assets and operations exist. APA is committed to building and maintaining long term relationships with all stakeholders for the Project, as well as meeting all applicable regulatory and legislative requirements.

APA’s approach to stakeholder engagement will be guided by the following objectives:

- No surprises: Inform and engage community members and key stakeholders early in the

process, and ensure they remain fully informed.

- Be inclusive: Ensure the community has easy access to clear and concise information about the project, ensuring all communications use language (e.g. non-technical) appropriate for each audience.

- Be honest and act with integrity: Always use facts and speak the truth. If the answer is not known then the question will be taken on notice, the appropriate parties spoken with and a response provided promptly.

- Be responsive: Respond to all stakeholder contact in a timely manner and make every effort to resolve issues to the satisfaction of all involved.

- Be a part of the community: Use the Project to contribute to stronger local communities and provide economic and social benefit.

- Honour all obligations: Deliver on promises made to the community and stakeholders.

The information provided below includes, but is not restricted to, those stakeholders, areas of interest to be addressed and engagement channels that will form the basis for a comprehensive stakeholder communication and engagement program to underpin the proposal.

Preliminary Key Stakeholders (others to be identified through consultation)

- Landowners & Leaseholders.

- Various NSW and Federal Government agencies.

- Various NSW & Federal Government Ministers and elected representatives.

- Various LGA representatives.

- Native title claimants: Ngemba, Ngiyampaa, Wangaaypuwan and Wayilwan.

- Native title claimants Gomeroi People.

- Aboriginal Land Councils and other Registered Aboriginal Parties

- Special reference groups, including the Narrabri Community Consultative Committee.

- Various community groups, business chambers and special interest groups.

- Local, metropolitan and national media.

Likely Areas of Interest

- Project details including preliminary pipeline alignment, length, design, timeframe, etc.

- Direct impacts on property and land required for pipeline easement.

- Potential benefits for the NSW energy market and consumers.

- Regulatory approval processes.

- Landholder consultation plan.

- Community consultation plan.

- Environment / biodiversity management plan.

- Cultural heritage management plan.

- Potential economic and social benefits for regional communities.

- Potential risks and local impacts.

- Compliance with Australian Standards.

- Pipeline security.

Proposed Engagement Channels / Activities

- Formal consultation processes under the EP&A Act.

- Briefings /meetings as appropriate.

- Face-to-face discussions with landholders.

- Community information sessions.

- Attendance at various appropriate forums, e.g. Regional business forums.

- Website project page, 1800 information line and dedicated project email address

- Dedicated regional contact points.

- Media releases fact sheets and FAQs.

- Formal feedback channel.

1.14 Describe any environmental impact assessments that have been or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project.

The Project is required to be assessed through an EIS as required under Part 5.1 of the EP&A Act.

If the Project is determined to be a 'controlled action' under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) APA requests that the assessment of the Project is conducted under the bilateral assessment agreement between the Commonwealth Government and the Government of NSW.

1.15 Is this action part of a staged development (or a component of a larger project)?

No

1.16 Is the proposed action related to other actions or proposals in the region?

Yes

1.16.1 Identify the nature/scope and location of the related action (Including under the relevant legislation).

The proposed gas pipeline is related to Santos' Narrabri Gas Project (EPBC 2014/7376).

The Narrabri Gas Project seeks to develop gas wells, gas and water gathering systems, and supporting infrastructure southwest of Narrabri for the commercial production of gas. The natural gas produced is planned to be processed to a commercial quality at a centralised gas processing facility to be located southwest of Narrabri on the Leewood property.

The proposed gas pipeline is intended to transport gas from the Narrabri Gas Project to the New South Wales gas transmission network.

Section 2 - Matters of National Environmental Significance

Describe the affected area and the likely impacts of the proposal, emphasising the relevant matters protected by the EPBC Act. Refer to relevant maps as appropriate. The interactive map tool can help determine whether matters of national environmental significance or other matters protected by the EPBC Act are likely to occur in your area of interest. Consideration of likely impacts should include both direct and indirect impacts.

Your assessment of likely impacts should consider whether a bioregional plan is relevant to your proposal. The following resources can assist you in your assessment of likely impacts:

• Profiles of relevant species/communities (where available), that will assist in the identification of whether there is likely to be a significant impact on them if the proposal proceeds;

• Significant Impact Guidelines 1.1 – Matters of National Environmental Significance;

• Significant Impact Guideline 1.2 – Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies.

2.1 Is the proposed action likely to impact on the values of any World Heritage properties?

No

2.2 Is the proposed action likely to impact on the values of any National Heritage places?

No

2.3 Is the proposed action likely to impact on the ecological character of a Ramsar wetland?

No

2.4 Is the proposed action likely to impact on the members of any listed threatened species (except a conservation dependent species) or any threatened ecological community, or their habitat?

Yes

2.4.1 Impact table

Species	Impact
As described in Section 3, the following	A detailed assessment of risks and impacts

Species	Impact
threatened species are known to occur, likely to occur or have potential to occur within the study area: Flathead Galaxias (Critically Endangered, Known), Regent Honeyeater (Critically Endangered, Potential), Australasian Bittern (Endangered, Likely), Macquarie Perch (Endangered, Likely), Trout Cod (Endangered, Likely), Painted Honeyeater (Vulnerable - Known) , Superb Parrot (Vulnerable - Known), Koala (Vulnerable - Known), Pilliga Mouse (Vulnerable - Known), Corben's Long-eared Bat (Vulnerable - Likely), Murray Cod (Vulnerable - Likely), Malleefowl (Vulnerable - Potential), Red-lored Whistler (Vulnerable - Potential), Five-clawed Worm-skink (Vulnerable - Potential), Lepidium monoplocoides (Endangered, Known), Polygala linariifolia (Endangered, Known), Tylophora linearis (Endangered, Known), Eriocaulon australasicum (Endangered, Potential), Commersonia procumbens (Vulnerable, Known), Dichanthium setosum (Vulnerable, Known), Lepidium aschersonii (Vulnerable, Known), Acacia curranii (Vulnerable, Likely), Austrostipa metatoris (Vulnerable, Likely), Swainsona murrayana (Vulnerable, Likely), Bertya opponens (Vulnerable, Potential), Philotheca ericifolia (Vulnerable, Potential).	presented by the project to MNES will be undertaken as part of the EIS process. Development of appropriate measures to mitigate risks and impacts will occur as part of this process.
As described in Section 3, the following threatened ecological communities are known to occur, likely to occur or have potential to occur within the study area: Natural grasslands on basalt and fine-textured alluvial plains of northern New South Wales and southern Queensland (Critically Endangered, Potential), Brigalow Acacia harpophylla dominant and co-dominant (Endangered, Known), Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions (Endangered, Known), Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia (Endangered, Known), Weeping Myall Woodlands (Endangered, Known), the community of native species dependent on natural discharge of groundwater from the	The preliminary pipeline alignment is estimated to intersect the following areas of TECs as shown by catchment scale mapping (DEC 2006a, DEC2006b, OEH 2015) and based on a 30m ROW: Brigalow (Acacia harpophylla) dominant and co-dominant – 7.2ha; Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions – 15.6ha; Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia – 33.3ha; Weeping Myall Woodlands – 27.9ha. The presence of the natural grasslands TEC along the preliminary pipeline alignment will be determined by field surveys.

Species	Impact
Great Artesian Basin (Endangered, Potential).	

2.4.2 Do you consider this impact to be significant?

Yes

2.5 Is the proposed action likely to impact on the members of any listed migratory species, or their habitat?

Yes

2.5.1 Impact table

Species	Impact
As described in Section 3, the following migratory species are known to occur, likely to occur or have potential to occur within the study area: Fork-tailed Swift (Known), Glossy Ibis (Known), White-throated Needletail (Known), Latham's Snipe (Potential), Yellow Wagtail (Potential), Satin Flycatcher (Potential). These species are either (DoE 2015, BirdLife International 2016): Common and widespread globally as well as widespread in Australia (Glossy Ibis); widespread along the eastern and south-east seaboard of mainland Australia as well as Tasmania (Satin Flycatcher); non-breeding summer migrants which are predominantly or exclusively aerial and distributed throughout Australia (Fork-tailed Swift) or eastern Australia (White-throated Needletail); globally abundant but a rare vagrant in southern Australia (Yellow Wagtail); and, a summer non breeding wetland migrant (Latham's Snipe).	The study area does not intersect any known areas of important habitat for these species. The closest areas of important habitat are as follows: One site of international significance for the Latham's Snipe has been identified within Australia by Bamford et al. 2008 (Cedar Hill and Hexham Swamp). This site is some 330 km from the nearest point of the preliminary pipeline alignment. The Macquarie Marshes is known to support significant breeding colonies of the Glossy Ibis following flood events (Kingsford and Auld 2005, OEH 2012). The closest known glossy ibis colonial nesting sites, as described by the NSW Office of Environment (OEH 2012, pp33-35) are at least 60 km downstream of the preliminary pipeline alignment crossing of the Macquarie River. There is no known habitat within the study area which is utilised by these migratory species that supports an ecologically significant proportion of the population of the species. There is no known habitat within the study area which that is of critical importance to these species at particular life-cycle stages. There is no known habitat within the study area utilised by these migratory species which is at the limit of the species range or habitat within an area where the species is declining.

2.5.2 Do you consider this impact to be significant?

No

2.6 Is the proposed action to be undertaken in a marine environment (outside Commonwealth marine areas)?

No

2.7 Is the proposed action likely to impact on any part of the environment in the Commonwealth land?

No

2.8 Is the proposed action taking place in the Great Barrier Reef Marine Park?

No

2.9 Will there be any impact on a water resource related to coal / gas / mining?

No

2.10 Is the proposed action a nuclear action?

No

2.11 Is the proposed action to be taken by the Commonwealth agency?

No

2.12 Is the proposed action to be undertaken in a Commonwealth Heritage Place Overseas?

No

2.13 Is the proposed action likely to impact on any part of the environment in the Commonwealth marine area?

No

Section 3 - Description of the project area

Provide a description of the project area and the affected area, including information about the following features (where relevant to the project area and/or affected area, and to the extent not otherwise addressed in Section 2).

3.1 Describe the flora and fauna relevant to the project area.

Biodiversity values for the preliminary alignment and broader study area were desktop assessed by Eco Logical Australia Pty Ltd (Eco Logical, 2017). The desktop assessment involved review and interrogation of the following data sources:

Databases:

- Bionet/NSW Atlas of Wildlife (OEH 2016a).

- Protected Matters Search Tool (PMST - DotEE 2016a – Attachment 7).

- Species Profile and Threats Database (DotEE 2016b).

- Fisheries database (DPI 2016a).

Mapping:

- Vegetation mapping:

- Namoi Catchment Vegetation Mapping (OEH 2015).

- Central West Catchment Vegetation Mapping (DEC 2006a).

- Lachlan Catchment Vegetation Mapping (DEC 2006b).

- Freshwater threatened species distribution maps (DPI 2016b).

- Ramsar and Directory of Important Wetlands in Australia (DIWA) wetlands (DEWHA 2008a, 2008b).

- Drainage mapping (LPI 2015).

- National Parks and Wildlife Services Estate.

- State Forests.

- Travelling Stock Reserves (TSRs) as managed by relevant Local Land Services (LLS).

Threatened species, populations and ecological communities listed under the EPBC Act were identified and data was filtered for relevance based on the occurrence, or likelihood of occurrence of particular biodiversity values within, or in close proximity to the preliminary pipeline alignment.

Those species and ecological communities which were determined to be ‘known’, ‘likely’ or ‘potential’ occurrences in the study area are listed in Table 2.4.1 above. The likelihood assessment is provided in Attachment 6.

Detailed flora and fauna studies have not been undertaken at this early stage of the Project. Detailed flora and fauna surveys will be undertaken for the EIS.

3.2 Describe the hydrology relevant to the project area (including water flows).

The proposed gas pipeline is located within the Namoi, Castlereagh, Macquarie-Bogan and Lachlan catchments (as shown in Attachment 3).

The Namoi catchment borders the Gwydir and Castlereagh catchments and is bounded by the Great Dividing Range in the east, the Liverpool and Warrumbungle Ranges in the south and the Nandewar Ranges to the north. Elevations range from over 1500m in the south and east, to just 100m on the alluvial floodplain of the lower catchment west of Narrabri, where the proposed gas pipeline is to be located. The preliminary pipeline alignment runs south of the Namoi River and does not intersect any major rivers within the Namoi catchment although multiple named creeks will be crossed. Major water uses within the catchment include dryland and irrigated agriculture, livestock grazing and water supply for local councils (NSW Office of Water, 2011).

The Castlereagh catchment is bordered by the Namoi catchment to the east and Macquarie-Bogan catchment to the west. Elevations range from 850m in the east to less than 200m on the floodplains in the northwest of the catchment, generally where the proposed gas pipeline is located. The preliminary pipeline alignment crosses the Castlereagh River near Coonamble. Major water uses within the catchment are for stock watering and dryland agriculture as well as a number of local water utilities, particularly in the upper catchment. Surface water within the catchment is highly connected to the alluvial aquifers along the river bed, which provide an important source of groundwater.

The proposed pipeline is located within the north-western reaches of the Macquarie-Bogan catchment, intersecting the Macquarie River and associated broad floodplains and wetlands northwest of Warren and the Bogan River north of Tottenham.

The Ramsar listed Macquarie Marshes are located on the Macquarie River between Warren and Carinda, approximately 65km downstream of the preliminary pipeline alignment, and 35km west of the preliminary pipeline alignment at its closet point. Major water users within the catchment include local councils, water utilities, dryland agriculture, livestock grazing and irrigated agriculture.

The preliminary pipeline alignment traverses sections of the Marthaguy, Tenandra and Trangie-

Nevertire irrigation schemes which are located along either side of the Macquarie River near Warren. Several major channels are crossed along with a number of distributor channels. The preliminary pipeline alignment also crosses the Albert Priest Channel west of Warren near the pipeline crossing of Beleringar Creek.

The final 50km of the preliminary pipeline alignment is located within the northern area of the Lachlan catchment, approximately 50km north of the Lachlan River, at the closest point. No major watercourses are intersected by the preliminary pipeline alignment in the Lachlan catchment. Major water uses within the catchment include water utilities and local councils as well as agricultural uses.

Hydrological investigations will be undertaken as part of the EIS.

3.3 Describe the soil and vegetation characteristics relevant to the project area.

General descriptions of the soil and vegetation characteristics of the study area are available from assessments of bioregions and subregions which are traversed by the preliminary pipeline alignment. Bioregions are large, geographically distinct areas of land with common characteristics such as geology, landform patterns, climate, ecological features and plant and animal communities (DotEE 2017). Bioregions are further divided into subregions, based on finer differences in biophysical attributes including geology and vegetation and because they provide more detailed information about the landscape they can be used for finer scale planning (OEH 2016b).

The preliminary pipeline alignment crosses three bioregions and seven subregions:

- Brigalow Belt South Bioregion: Pilliga Outwash subregion

- Darling Riverine Plains Bioregion: Castlereagh-Barwon subregion, Bogan-Macquarie subregion.

- Cobar Peneplain Bioregion: Cambelego subregion, Nymagee Downs subregion.

Soils

Geology and soils of the subregions intersected by the study area are as follows (NSW National Parks and Wildlife Service 2003):

- Pilliga outwash. Quaternary alluvial fans largely derived from Jurassic quartz sandstone. Deep texture contrast soils with harsh clay subsoils, grey clay with gilgai.

- Castlereagh-Barwon. Extensive plains on overlapping low angle alluvial fans of several rivers. Sediment derived from Jurassic sandstones on the Castlereagh fan and from basalts on the Namoi fan. Typical soils are grey and brown clays on the plains and depressions. Brown loamy sands, pale yellow or red sands, and texture contrast soils on the low rises of former levees and channels.

- Bogan-Macquarie. Bogan and Macquarie River alluvial fans of Quaternary age. Alluvial sediments from mixed Palaeozoic bedrock bury basement rock to 100m. Underlying sediments of Cretaceous and Jurassic age form part of the Great Artesian Basin. Typical soils are grey and brown clays on the plains and depressions with texture contrast soils on the low rises of former levees and channels.

- Cambelego. Shallow red loams or stony loams on crests merging to red earths on slopes, plains and through the valley floors. Minor sand deposits along streams, yellow texture contrast soils in swamps.

- Nymagee Downs. Ordovician to Devonian granites, quartzose sandstones, phyllites, slates and acid volcanics. Quaternary aeolian sands and alluvium. Typical soils include gritty red and yellow earthy sands on granite. Stony red earths and texture contrast soils on sedimentary rocks. Calcareous red earths in sandplains, minor earths and grey clays in alluvium.

Over the preliminary pipeline alignment the soil characteristics vary considerably but can be collated into key groups to assist in the identification of management measures. The predominant soil types are vertosols and sodosols. These soil groups cover over 50% of the preliminary pipeline alignment with vertosols the most frequently occurring soil group in the northern part of the preliminary pipeline alignment (Attachment 4).

Vertosols are highly productive soils occurring on the alluvial plains of the Macquarie, Castlereagh and Bogan rivers. The Macquarie River irrigation schemes derive their productivity from the vertosol soils. Sodosols are variable soils that can be highly dispersive when exposed to water. They are interspersed with the vertosols and occur mostly in the vicinity of the Pilliga West National Park and south of the Bogan River.

South of the Bogan River, Sodosols give way to Chromosols which give way to Rudosols and Tenosols and finally Kandasols which are the predominant soil type in the last 50 km of the proposed pipeline. Characteristics of key interest for pipeline construction are salinity, dispersiveness and potential for erosion.

See section 3.5 for a description of native vegetation relevant to the study area.

3.4 Describe any outstanding natural features and/or any other important or unique values relevant to the project area.

There are no World Heritage properties within the study area. The closest World Heritage properties are the Willandra Lakes Region (330km south west of KP 250), the Greater Blue Mountains Area (300km south east of KP 350) and the Gondwana Rainforests of Australia (200km east of KP 0 at Oxley Wild Rivers National Park). No direct or indirect impacts on World Heritage properties are expected.

With respect to protected areas, there are two Nature Reserves, three State Conservation Area and two National Parks partially located within the study area. However, the preliminary pipeline alignment does not intersect any of these reserves. Similarly, there are 13 State Forests within

the study area all of which are not intersected by the preliminary alignment.

No Ramsar wetlands are intersected by the study area. The closest Ramsar wetland is the Macquarie Marshes Ramsar site, which is approximately 35km to the west of the preliminary pipeline alignment at the closest point. This is a direct overland measurement so does not represent the closest distance of potential hydrological connection between the preliminary pipeline alignment and the Macquarie Marshes Ramsar site.

The broader mapped extent of the Macquarie Marshes wetland (Macquarie Marshes (NSW009) DIWA Wetland) extends from within the study area to over 168 km to the north-west and includes the Macquarie Marshes Ramsar site and Macquarie Marshes Nature Reserve (refer Attachment 3). The Macquarie Marshes Adaptive Environmental Management Plan (DECCW, 2010) identifies the ecological assets and values of the Macquarie Marshes wetland as defined from a review of the ecological system, ecological outcomes and the water requirements to achieve them. The plan identifies the southern extent of the wetland as being on the Macquarie River immediately upstream of Marebone Weir (refer Attachment 3). Downstream of Marebone Weir the Macquarie River forms a complex series of interconnected streams, lagoons, distributary creeks and anabranching channels (Paijmans, 1981).

At the crossing point of the Macquarie River the preliminary pipeline alignment is located approximately 19km upstream from Marebone Weir and approximately 65km upstream of the Macquarie Marshes Ramsar site. The distance from the crossing point of the Macquarie River to the Macquarie Marshes Ramsar site is approximately 112km if the meandering path of the main channel of the Macquarie River is followed.

An assessment of the risks to the Macquarie Marshes presented by the project is provided below following the EPBC Act significant impact criteria for wetlands of international importance:

- areas of the wetland being destroyed or substantially modified

Given the significant distance between the preliminary pipeline alignment and the Macquarie Marches Ramsar site there is no real chance or possibility that the Project will result in areas of the wetland being destroyed or substantially modified.

- a substantial and measurable change in the hydrological regime of the wetland, for example, a substantial change to the volume, timing, duration and frequency of ground and surface water flows to and within the wetland

The hydrological regime of the Macquarie Marshes Ramsar site is primarily controlled by intermittent flood events (Kingsford and Auld 2005, OEH 2012). The Macquarie Marshes Ramsar site is dependent on the extent and condition of the greater area of the Marshes being maintained by regular floods (OEH 2012).

The primary anthropogenic impact on the natural hydrological regime of the Macquarie Marshes Ramsar site is regulation of the Macquarie River system by nine major dams or weirs to supply irrigated cropping schemes on the lower Macquarie floodplain (Kingsford and Auld 2005, OEH 2012). This regulation has altered the quantity and timing of flows into the Macquarie Marshes

and reduced flooding (Kingsford and Thomas, 1995).

There is no plausible risk that the project will cause a substantial or measurable change to either the characteristics of intermittent flood events or the water regulation regime of the Macquarie River. As such there is no plausible risk that the project will cause a substantial or measurable change to the hydrological regime of the Macquarie Marshes Ramsar site.

- the habitat or lifecycle of native species, including invertebrate fauna and fish species, dependant upon the wetland being seriously affected

Given the significant distance between the preliminary pipeline alignment and the Macquarie Marches Ramsar site there is no real chance or possibility that the Project will seriously affect the habitat or lifecycle of native species dependent upon the wetland.

- a substantial and measurable change in the water quality of the wetland – for example, a substantial change in the level of salinity, pollutants, or nutrients in the wetland, or water temperature which may adversely impact on biodiversity, ecological integrity, social amenity or human health, or

Potential localised impacts to water quality as a result of project activities upstream of the Macquarie Marshes Ramsar site could occur from transfer of sediment from the ROW to a watercourse due to erosion, and spills of fuel or chemicals during construction.

Erosion and sedimentation risks will be managed by the installation and maintenance of appropriately designed erosion and sediment controls. Controls will align with the APGA Environment Code and will be detailed as part of the Construction Environmental Management Plan (CEMP) for the project.

The preferred construction technique for each watercourse crossing will be selected following detailed site investigations and comprehensive risk assessment, considering the environmental, social and financial benefits and impacts. Site-specific factors for determining the crossing methodology can include safety requirements, hydrology, watercourse substrate and geology, hydrogeology, environmental sensitivities, engineering feasibility, availability of land for suitable pipe launch and retrieval sites and cost (APGA, 2013).

The application of the above criteria is likely to result in the adoption of horizontal directional drilling (HDD) for the construction of major watercourse crossings, including the Macquarie River. The installation of a pipeline crossing by HDD is an industry standard technique which involves drilling a hole at a shallow angle beneath the surface, then pulling the welded pipe string back through the drill hole. Drilling is conducted by a specially designed drill rig, operated by a specialist contractor. Specific drilling plans which consider local geotechnical conditions will be developed for each HDD crossing.

The HDD crossing method provides environmental benefits by avoiding direct disturbance to the watercourse channel associated with clearing and trenching, and associated risks of erosion and sedimentation. Some additional disturbance will be required at the HDD entry and exit points. Appropriate management of fuels and drilling fluids will be implemented to reduce the

risk of accidental releases.

Industry standard controls are available and will be implemented to mitigate effects to water quality due to risks of sedimentation and spills of fuels and chemicals. Given these controls, the short term nature of construction activities and the significant distance between the preliminary pipeline alignment and the Macquarie Marches Ramsar site, it is considered that there is no real chance or possibility that the Project will cause a substantial and measurable change in the water quality of the wetland.

- an invasive species that is harmful to the ecological character of the wetland being established (or an existing invasive species being spread) in the wetland.

Biosecurity controls for the project will align with the APGA Environment Code and will be detailed as part of the CEMP. With such controls in place, and given the significant distance between the preliminary pipeline alignment and the Macquarie Marches Ramsar site, there is no real chance or possibility that the Project will cause an invasive species that is harmful to the ecological character of the wetland being established.

The next closest Ramsar sites are the Hattah-kulkyne lakes near Mildura, Victoria, and the Riverland Ramsar site near Renmark, South Australia. Both of these Ramsar sites are more than 400km from the study area.

3.5 Describe the status of native vegetation relevant to the project area.

The northern section of the preliminary pipeline alignment is located within the Brigalow Belt South Bioregion, to the north of the intact stands of native vegetation associated with the Pilliga and Pilliga West National Parks and State Conservation Areas and adjacent State Forests. Within this section of the preliminary pipeline alignment, dry sclerophyll forests are the dominant vegetation formation.

As the preliminary pipeline alignment travels south, it intersects the Darling Riverine Plains bioregion, where native vegetation has been largely cleared. Intact native vegetation dominated by semi-arid woodland tends to be associated with the broad floodplains and watercourses located within the region, with some scattered areas of grassy woodlands. Areas of forested wetlands are present, particularly those associated with the Macquarie River.

The southern section of the preliminary pipeline alignment crosses the Cobar Peneplain Bioregion. Within this bioregion the vegetation along the preliminary pipeline alignment appears to be dominated by semi-arid woodland, with scatted areas of grassy woodland and dry sclerophyll forests.

A desktop assessment of NSW catchment-wide vegetation mapping identified a total of 72 vegetation communities within the study area. The desktop assessment (Ecological, 2017) indicates approximately 60% of the total study area as being vegetated. The preliminary pipeline alignment traverses approximately 271km of mapped native vegetation (Attachment 5).

An initial roadside review of the preliminary pipeline alignment indicates that the extent of native vegetation is significantly less than the NSW catchment-wide vegetation mapping indicates. The preliminary pipeline alignment traverses a number of ecological communities which vary from highly degraded to degraded to relatively intact, generally where they persist in road reserves, travelling stock routes, Crown land and as large patches on freehold land.

Six EPBC listed TECs are known to occur, or have potential to occur, in the study area as listed below;

- Natural grasslands on basalt and fine-textured alluvial plains of northern New South Wales and southern Queensland

- Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions

- Brigalow (*Acacia harpophylla* dominant and co-dominant)

- Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia

- Weeping Myall Woodlands

- The community of native species dependent on natural discharge of groundwater from the Great Artesian Basin

Detailed field survey and assessment will be undertaken to confirm the extent of threatened communities directly impacted by the preliminary pipeline alignment.

3.6 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

The topography of the study area is typically flat with average slopes less than 1%. Elevation ranges from approximately 153m (KP 160) to 347m (KP400).

3.7 Describe the current condition of the environment relevant to the project area.

The current condition of the environment along the preliminary pipeline alignment is largely a result of historic land use patterns. The preliminary pipeline alignment traverses a mixture of land uses most of which are of a rural nature. The most dominant land uses are grazing and dryland cropping. More intensive cropping activities are generally limited to the areas fed by irrigation schemes north west and south west of Warren (see Section 7.1.3).

Population centres within proximity of the preliminary alignment include Narrabri, Pilliga, Coonamble and Warren. Pilliga is the only one of these localities within 10km of the preliminary pipeline alignment.

3.8 Describe any Commonwealth Heritage Places or other places recognised as having heritage values relevant to the project area.

There are no National Heritage places within the study area. The closest National Heritage places are the Myall Creek Massacre and Memorial Site (130 km north east of KP 0), Moree Baths and swimming pool (115 km north of KP 0) and the Warrumbungle National park (80km east of KP 195).

No direct or indirect impacts on National Heritage Places are expected.

3.9 Describe any Indigenous heritage values relevant to the project area.

Engagement with relevant parties and provisions to manage potential impacts on Aboriginal cultural heritage will be undertaken as part of the EIS.

3.10 Describe the tenure of the action area (e.g. freehold, leasehold) relevant to the project area.

The preliminary pipeline alignment traverses both freehold and leasehold tenures. Overlapping resource tenures have sought to be avoided across the length of the preliminary pipeline alignment where practical. The preliminary pipeline alignment intersects limited petroleum and mineral exploration tenements.

The PMST identified three (3) parcels of Commonwealth land as lying within the study area.

These parcels are identified as:

- Commonwealth Land - Australian Telecommunications Commission

- Commonwealth Land - Commonwealth Trading Bank of Australia

- Commonwealth Land - Telstra Corporation Limited

The preliminary pipeline alignment does not intersect any of these parcels of Commonwealth Land. The project does not expect to have any direct impacts on Commonwealth Land and will not impact on any physical infrastructure on Commonwealth Land.

The Siding Spring Observatory is located on Commonwealth Land approximately 95km southeast of the preliminary pipeline alignment at its nearest point. The NSW Government has introduced the Dark Sky Planning Guideline (DoPE 2016) which defines land within a 200 km radius of the Siding Spring Observatory (125,664 km2) as a dark sky region. The management of light in the dark sky region is important because the telescopes at Siding Spring Observatory require clear dark nights to operate effectively.

Approximately 74% of the preliminary pipeline alignment is located within this dark sky region. As such, the Dark Sky Planning Guideline must be considered by the NSW consent authority when assessing the project.

Project activities with potential to affect viewing conditions within the dark sky region include generation of dust during construction earthworks and light emissions from construction camps and night time construction activities. Operation of the pipeline is not considered to present any credible risks to viewing conditions within the dark sky region.

Standard dust control measures will be implemented during the construction phase of the project, in general accordance with the APGA Environment Code. These measures will include application of water to exposed soils as required and implementation of speed limits along the ROW.

Night time construction activities, though unlikely to be required, would be limited to discrete sections of the PPA. Lighting requirements for any night time construction works would be similar to that used for localised roadworks.

It is not considered that there is any real chance or possibility of the project significantly affecting environmental values associated with Commonwealth Land upon which the Sighting Spring Observatory is located given that:

- Construction activities are short term

- Standard dust control measures will be applied

- The likelihood of night time construction activities is low

- Any required night time construction activities would be limited to discreet areas

- Lighting of temporary construction camps will be designed in accordance with the requirements of the Dark Sky Planning Guideline

- The distance between the preliminary pipeline alignment and the Siding Spring Observatory is significant

- Operation of the pipeline is not considered to present any credible risks to viewing conditions within the dark sky region.

3.11 Describe any existing or any proposed uses relevant to the project area.

See section 3.7

Section 4 - Measures to avoid or reduce impacts

Provide a description of measures that will be implemented to avoid, reduce, manage or offset any relevant impacts of the action. Include, if appropriate, any relevant reports or technical advice relating to the feasibility and effectiveness of the proposed measures.

Examples of relevant measures to avoid or reduce impacts may include the timing of works, avoidance of important habitat, specific design measures, or adoption of specific work practices.

4.1 Describe the measures you will undertake to avoid or reduce impact from your proposed action.

A detailed assessment of risks and impacts presented by the project to environmental and socio-economic values will be undertaken as part of the EIS process. Development of appropriate measures to mitigate risks and impacts will occur as part of this process in accordance with the general provisions of the APGA Code, adapted as appropriate for the Project.

4.2 For matters protected by the EPBC Act that may be affected by the proposed action, describe the proposed environmental outcomes to be achieved.

A detailed assessment of risks and impacts presented by the project to environmental and socio-economic values will be undertaken as part of the EIS process. Development of appropriate measures to mitigate risks and impacts will occur as part of this process in accordance with the general provisions of the APGA Code, adapted as appropriate for the Project.

Section 5 – Conclusion on the likelihood of significant impacts

A checkbox tick identifies each of the matters of National Environmental Significance you identified in section 2 of this application as likely to be a significant impact.

Review the matters you have identified below. If a matter ticked below has been incorrectly identified you will need to return to Section 2 to edit.

5.1.1 World Heritage Properties

No

5.1.2 National Heritage Places

No

5.1.3 Wetlands of International Importance (declared Ramsar Wetlands)

No

5.1.4 Listed threatened species or any threatened ecological community

Listed threatened species and communities - Yes

5.1.5 Listed migratory species

No

5.1.6 Commonwealth marine environment

No

5.1.7 Protection of the environment from actions involving Commonwealth land

No

5.1.8 Great Barrier Reef Marine Park

No

5.1.9 A water resource, in relation to coal/gas/mining

No

5.1.10 Protection of the environment from nuclear actions

No

5.1.11 Protection of the environment from Commonwealth actions

No

5.1.12 Commonwealth Heritage places overseas

No

5.2 If no significant matters are identified, provide the key reasons why you think the proposed action is not likely to have a significant impact on a matter protected under the EPBC Act and therefore not a controlled action.

A significant impact on threatened ecological communities has been identified as likely to occur.

Section 6 – Environmental record of the person proposing to take the action

Provide details of any proceedings under Commonwealth, State or Territory law against the person proposing to take the action that pertain to the protection of the environment or the conservation and sustainable use of natural resources.

6.1 Does the person taking the action have a satisfactory record of responsible environmental management? Please explain in further detail.

APA has satisfactorily constructed multiple pipeline projects, including those listed in section 6.4.1.

APA has a dedicated in house team of environment and approvals expert as well as drawing on specialist environmental contractors as and when required.

In October 2016 APA received the Golden Gecko Award for a program that monitored the endangered small marsupial, the Sandhill Dunnart, during development of the Eastern Goldfields Pipeline. The award is presented by the Western Australian Department of Mines and Petroleum to recognise excellence and leadership, and acknowledge the outstanding contribution recipients have made to develop WA's resources in a responsible manner.

6.2 Provide details of any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against either (a) the person proposing to take the action or, (b) if a permit has been applied for in relation to the action – the person making the application.

Two Penalty Infringement Notices (PIN) were issued to East Australian Pipeline Pty Ltd (which is a related company of the proponent) under the Environmental Planning and Assessment Act 1979 (NSW) in January 2017 in relation to sediment controls following the Victorian and NSW rain events in late 2016.

6.3 Will the action be taken in accordance with the corporation's environmental policy and planning framework?

Yes

6.3.1 If the person taking the action is a corporation, please provide details of the corporation's environmental policy and planning framework.

An outline of APA’s environmental commitment and framework can be found at

https://www.apa.com.au/about-apa/sustainability/environment/.

6.4 Has the person taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?

Yes

6.4.1 EPBC Act No and/or Name of Proposal.

APA has undertaken a number of projects that have been referred to the Department under the EPBC Act. They include:

2017/7888 Reedy Creek to Wallumbilla Pipeline.

The Reedy Creek to Wallumbilla Pipeline (RCWP) involves the construction and operation of a high pressure, buried steel, gas transmission pipeline from the Australia Pacific LNGs (APLNGs) Reedy Creek gas processing plant (which is connected to the APLNGs export pipeline system) and APA's existing facility at Wallumbilla, located in southern Queensland. The pipeline will be approximately 50 kilometres (km) in length with a diameter of approximately 460mm.

An EPBC referral for the Reedy Creek to Wallumbilla Pipeline has recently been submitted and is undergoing assessment.

2015/7580 - Victorian Northern Interconnect Expansion (VNIE) Looping 6 -7

The project consists of the installation of a second pipeline (looping) or several sections of the existing Wollert to Wodonga pipeline. The 300mm Wollert to Wodonga gas transmission pipeline was constructed in 1975 and runs in an approximately north easterly direction from the Wollert Compressor Station on the northern outskirts of Melbourne through to Wodonga, a total distance of approximately 269km.

Looping 6 commences on the north side of Strath Creek Road to the east of Broadford and the Hume Freeway. It then heads north to pass under the Goulburn River and diverts to the east of Seymour to finish about 50m south of Back Mountain Road (about four kilometres north-east of Seymour).

Looping 7 commences on the north side of the Glenrowan-Boweya Road about 3km west of Glenrowan and skirts the north side of the township before crossing the Hume Freeway. It then heads in a north easterly direction, crossing the Hume Freeway twice more, as it passes to the east of Wangaratta. Keeping to the east of the Freeway, the pipeline then heads in a northerly direction before crossing the Freeway a fourth time to the south west of Chiltern. The easement then heads around the northern side of Chiltern township, passing through the eastern side of the Chiltern section of the Chiltern - Mt. Pilot National Park, before heading in a north-easterly

direction to finish at Barnawartha at about KP184.6.

2014/7186 - Victorian Northern Interconnect Expansion (VNIE) Looping 2-5 Project

The existing 300NB Wollert to Wodonga gas transmission pipeline runs in an approximate north easterly direction from the Wollert Compressor Station on the northern outskirts of Melbourne through to Wodonga West; a total distance of approximately 269km. The project commenced in October 2014 and was completed in June 2015. The project was deemed as not a controlled action if undertaken in a particular manner, conditional to appropriate mitigation measures to avoid impacts to matters of NES. A CEMP, SEMP and Flora and Fauna Management Plan were prepared prior to commencement of construction to meet the obligations under the EPBC Act.

2011/6159 - Sunbury Pipeline Looping Project

The 8.4km Sunbury pipeline runs from Brooklyn Lara Pipeline at the corner of Hopkins and Middle Roads, Truganina to the Plumpton Pressure Regulating Station at Taylors Road, Plumpton. The entire pipeline route is located within the 2010 expanded Melbourne Urban Growth Boundary and was constructed in 2012 prior to the recent declaration of the Biodiversity Conservation Strategy. However removal of native vegetation was offset in accordance with the prescriptions for native vegetation loss.

2009/5036 - Wollert Compressor Station

APA owns a 193 hectare property at Wollert approximately 27 kilometres north of Melbourne. The project in 2009 involved upgrading the Natural Gas Compressor station at Wollert and the building of two additional compressors behind the existing compressors to expand the supply of gas to the north of Victoria.

The property contains Natural Temperate Grasslands of the Victorian Volcanic Plain and also has a significant population of Golden Sun Moths. The EPBC referral was ‘NOT a controlled action if undertaken in a particular manner’ due to the protection measures applied to the Golden Sun Moth population and ongoing protection of this population.

2006/3093 Brooklyn to Lara Pipeline Project

This 57 kilometre gas pipeline was constructed from October 2007 to March 2008 utilising previously disturbed easement as well as a “Greenfield section”. The route included the crossing of two native grassland sections through private property as well as the crossing of the Derrimut Grasslands. Management plans were in place to minimise the impact on the grasslands. An offset property was secured and an approved land management plan set up to satisfy net gain obligations. In addition, APA entered into a three year plan with Parks Victoria for the improvement of native vegetation within the vicinity of the pipeline crossing of the Derrimut Grasslands. The environmental performance was monitored and audited during and after construction. The Department of Primary Industries (DPI) also monitored the environmental performance against the CEMP. The project was completed without any major environmental incidents and to the satisfaction of DPI.

2006/2930 - Bonaparte Gas Pipeline

The 286km Bonaparte gas pipeline runs from Wadeye to Ban Ban Springs, through aboriginal land and pastoral leases and was constructed from April 2008 to October 2008. The EPBC referral decision placed conditions for the protection of a number of threatened and migratory species. Audits and regular inspection reports were carried out by environmental consultants, fauna monitors and an independent auditor against the CEMP during construction. An independent audit immediately following construction determined that there had been no effect on the EPBC listed species. A detailed report on fauna mortality and the types of species identified was forwarded to the NT Government and Commonwealth Government following construction.

Section 7 – Information sources

You are required to provide the references used in preparing the referral including the reliability of the source.

7.1 List references used in preparing the referral (please provide the reference source reliability and any uncertainties of source).

Reference Source	Reliability	Uncertainties
Bamford M, Watkins D, Bancroft W, Tischler G and J Wahl. 2008. Migratory Shorebirds of the East Asian - Australasian Flyway; Population Estimates and Internationally Important Sites. Wetlands International - Oceania. Canberra, Australia.	The information is the most current available and has been the subject of technical, scientific, public and peer review, as well as quality controls. The information is recent and reliable.	The information is the most current available and has been the subject of technical, scientific, public and peer review, as well as quality controls. The information is recent and reliable.
BirdLife International. 2016. Plegadis falcinellus. The IUCN Red List of Threatened Species 2016: http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T22697422A86436401.en. Downloaded on 22 February 2017.	As above	As above
DEC 2006a. Reconstructed and extant distribution of native vegetation in the Central West Catchment. NSW Department of Environment and Conservation, Dubbo	As above	As above
DEC 2006b. Reconstructed and extant distribution of native vegetation in the Lachlan Catchment. NSW Department of Environment and Conservation, Dubbo.	As above	As above
DECCW 2010. Macquarie Marshes Adaptive Environmental Management Plan - Synthesis of information projects and actions. NSW Department of Environment,	As above	As above

Reference Source	Reliability	Uncertainties
Climate Change and Water, Sydney South.		
DoE 2015. Draft referral guideline for 14 migratory birds listed under the EPBC Act. Department of the Environment. Commonwealth of Australia 2015.	As above	As above
DEWHA 2008a. Ramsar Wetlands in Australia. Australian Government Department of the Environment, Water, Heritage and the Arts, Canberra.	As above	As above
DEWHA 2008b. Directory of Important Wetlands in Australia (DIWA) Spatial Database. Australian Government Department of the Environment, Water, Heritage and the Arts, Canberra.	As above	As above
DotEE 2016a. Protected Matters Search Tool. Commonwealth Department of the Environment and Energy. Retrieved from http://www.environment.gov.au/epbc/protect/index.html	As above	As above
DotEE 2016b. Species Profile and Threats Database. Available at: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl.	As above	As above
DotEE 2017. Australia's Bioregion Framework. http://www.environment.gov.au/land/nrs/science/ibra/australias-bioregion-framework. Accessed 20 Feb 2017.	As above	As above
DPI 2016a. What is currently listed: Key threatening processes. Retrieved from http://www.dpi.nsw.gov.au/fisheries/species-protection/conservation/what-current#Key-threatening-processes on 26 September	As above	As above

Reference Source	Reliability	Uncertainties
2016		
Ecological 2017. Biodiversity Input for PEA. Report to APA Group by Eco Logical Australia Pty Ltd.	As above	As above
Kingsford, RT & Thomas, RF 1995. The Macquarie Marshes in arid Australia and their waterbirds: a 50-year history of decline. Environmental Management. vol. 19, no. 6, pp. 867–878.	As above	As above
Kingsford, RT and Auld, K 2005, 'Waterbird breeding and environmental flow management in the Macquarie Marshes, arid Australia', River Research and Applications21: 187–200.	As above	As above
LPI 2015. Digital Topographic Database (DTDB). NSW Land and Property Information, Sydney.	As above	As above
NSW National Parks and Wildlife Service 2003. The Bioregions of New South Wales: their biodiversity, conservation and history NSW National Parks and Wildlife Service Hurstville	As above	As above
NSW Office of Water, 2011. Water resources and management overview by catchment http://www.water.nsw.gov.au/water-management/basins-and-catchments.	As above	As above
OEH 2012. Ecological character description – Macquarie Marshes Nature Reserve and U-block components. Office of Environment and Heritage. Sydney.	As above	As above
OEH 2015. Border Rivers Gwydir / Namoi Regional Native Vegetation Map Version 2.0.	As above	As above

Reference Source	Reliability	Uncertainties
NSW Office of Environment and Heritage, Sydney South		
OEH 2016a. NSW BioNet Atlas of NSW Wildlife. NSW Office of Environment and Heritage. Retrieved on 26 September 2016 from http://wildlifeatlas.nationalparks.nsw.gov.au/wildlifeatlas.watlas.jsp	As above	As above
OEH 2016b. What is a bioregion? Retrieved from http://www.environment.nsw.gov.au/bioregions/BioregionsExplained.htm	As above	As above
Paijmans, K. 1981. The Macquarie Marshes of inland northern NSW. CSIRO Division of Land Use Research Technical Paper No. 40.	As above	As above
AGPA. 2013.Code of Environmental Practice - Onshore Pipelines. Australian Pipeline Industry Association Ltd. October 2013.	As above	As above

Section 8 – Proposed alternatives

You are required to complete this section if you have any feasible alternatives to taking the proposed action (including not taking the action) that were considered but not proposed.

8.0 Provide a description of the feasible alternative?

There are no feasible alternatives to the project however, a number of alternative alignments have been considered. The strategic objectives in selecting potential alignments included:

- Ongoing operational viability considering access, environmental, stakeholder and cost impacts.

- Minimising impacts on areas of environmental or cultural heritage sensitivity.

- Economically feasible construction and operation.

- Ability to connect emerging gas markets into the Moomba-Sydmey Pipeline which is the nearest pipeline with viable capacity.

The preliminary pipeline alignment has been selected as the most suitable location when all of the guiding criteria were taken into consideration, including environmental values, complexity of the terrain, the number of land parcels and landowners affected, and land use considerations. The preliminary pipeline alignment will be refined through comprehensive landholder, community and other stakeholder consultation and detailed environmental studies during the EIS process.

The issues that have been considered in selecting the preliminary pipeline alignment are as follows:

- Alignment length. Balance the total alignment length against constructability (e.g. geotechnical and topographic constraints), land use, future economic development and potential environmental and cultural heritage impacts.

- Pipeline constructability. The alignment selection needs to consider all construction aspects and potential impacts including access, terrain difficulty, watercourses and infrastructure crossings.

- Pipeline operability. The alignment needs to provide for low impact and safe access for routine maintenance and integrity monitoring.

- Extent of areas of environmental and cultural heritage sensitivity. Minimise, to the extent practicable, the expected impacts on remnant vegetation, threatened flora and fauna and their habitat and cultural heritage values.

- Number of land parcels and landowners. Minimise, to the extent practicable, the number of affected land parcels and landowners.

- Avoidance of non-compatible land uses. Avoidance of sensitive receptors and incompatible land uses such as dwellings, towns and industry. Avoidance of incompatible tenures including conservation estate (national park, state forest, nature reserve).

8.1 Select the relevant alternatives related to your proposed action.

8.27 Do you have another alternative?

No

Section 9 – Contacts, signatures and declarations

Where applicable, you must provide the contact details of each of the following entities: Person Proposing the Action; Proposed Designated Proponent and; Person Preparing the Referral. You will also be required to provide signed declarations from each of the identified entities.

9.0 Is the person proposing to take the action an Organisation or an Individual?

Organisation

9.2 Organisation

9.2.1 Job Title

Manager Access and Approvals

9.2.2 First Name

Jim

9.2.3 Last Name

Fjeldsoe

9.2.4 E-mail

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9.2.8 Organisation E-mail

westernslopespipeline@apa.com.au

9.2.9 I qualify for exemption from fees under section 520(4C)(e)(v) of the EPBC Act because I am:

Not applicable

Small Business Declaration

I have read the Department of the Environment and Energy's guidance in the online form concerning the definition of a small a business entity and confirm that I qualify for a small business exemption.

Signature: N/A Date: .....

9.2.9.2 I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the EPBC Regulations

No

9.2.9.3 Under sub regulation 5.21A(5), you must include information about the applicant (if not you) the grounds on which the waiver is sought and the reasons why it should be made

Declaration

I, JIM FJELDSOE, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf of or for the benefit of any other person or entity.

Signature: JF Date: 17/03/2017

I, JIM FJELDSOE, the person proposing the action, consent to the designation of APA WESTERN SLOPES PIPELINE as the proponent of the purposes of the action describe in this EPBC Act Referral.

Signature: JF Date: 17/03/2017

9.3 Is the Proposed Designated Proponent an Organisation or Individual?

Australian Government
Department of the Environment and Energy

Organisation

9.5 Organisation

9.5.1 Job Title

Manager Access and Approvals

9.5.2 First Name

Jim

9.5.3 Last Name

Fjeldsoe

9.5.4 E-mail

jim.fjeldsoe@apa.com.au

9.5.5 Postal Address

580 George Street
Sydney NSW 2000
Australia

9.5.6 ABN/ACN

ABN

99615958748 - APA WESTERN SLOPES PIPELINE PTY LIMITED

9.5.7 Organisation Telephone

+61 402 847 367

9.5.8 Organisation E-mail

Westernslopespipeline@apa.com.au

Declaration

I, JIM FJELDSOE, the proposed designated proponent, consent to the designation of myself as the proponent for the purposes of the action described in this EPBC Act Referral.

Australian Government
Department of the Environment and Energy

Signature:..... Date: 17/03/2017

9.6 Is the Referring Party an Organisation or Individual?

Organisation

9.8 Organisation

9.8.1 Job Title

Manager Access and Approvals

9.8.2 First Name

Jim

9.8.3 Last Name

Fjeldsoe

9.8.4 E-mail

jim.fjeldsoe@apa.com.au

9.8.5 Postal Address

580 George Street
Sydney NSW 2000
Australia

9.8.6 ABN/ACN

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99615958748 - APA WESTERN SLOPES PIPELINE PTY LIMITED

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+61 402 847 367

9.8.8 Organisation E-mail

westernslopespipeline@apa.com.au

Declaration

Australian Government
Department of the Environment and Energy

I, JIM FJELDSOE, I declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence.

Signature: JF Date: 17/03/2017

Appendix A - Attachments

The following attachments have been supplied with this EPBC Act Referral:

1. attachment_1_preliminary_pipeline_alignment.pdf
2. attachment_2_lgas.pdf
3. attachment_3_catchments.pdf
4. attachment_4_soils.pdf
5. attachment_5_vegetation.pdf
6. attachment_6_mnes_likelihood_assessment.pdf
7. attachment_7_protected_matters_search.pdf
8. attachment_8_apa_hse_policy.pdf
9. attachment_1_preliminary_pipeline_alignment.pdf