Jemena Northern Gas Pipeline Pty Ltd

Northern Gas Pipeline

Supplement to the Draft Environmental Impact Statement

APPENDIX C
ENVIRONMENTAL COMMITMENTS REGISTER

Public

November 2016

Jemena Northern Gas Pipeline Pty Ltd
ABN 12 607 728 790
Level 16, 567 Collins Street
Melbourne VIC 3000

Postal Address

PO Box 16182
Melbourne VIC 3000
Ph: (03) 9713 7000
Fax: (03) 9173 7516

Yellow = Commitment has been added or amended

Environmental Comittments Register

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
CH 1-3	**GENERAL**			
1.5	Jemena will ensure that NGP Project-specific environmental management documentation is developed, which will identify risks, control measures, roles and responsibilities, assurance activities, training and reporting.	✓	✓	✓
9.13	Jemena will invest in a variety of social and economic development initiatives including: training programs, Indigenous apprenticeships and a social enterprise in Tennant Creek. These initiatives are focused on creating positive social outcomes and long term legacy benefits.	✓	✓	✓
2 - throughout	The Project will be designed, constructed, tested and operated in accordance with AS2885	✓	✓	✓
2.5	Pre-clearance environmental surveys of the construction ROW will be conducted in order to flag[1] the proposed clearing footprint and identify any specific controls required as per management plans and commitments outlined in this EIS.		✓	
2.5	Regional Ecosystem mapping will be undertaken in the Queensland section of the construction footprint in accordance with the conditions of the Environment Authority issued by Queensland DEHP.	✓		
2.2.1	All surveys and alignment adjustments will be completed prior to the commencement of construction.	✓		
2.6	The construction ROW and all temporary facilities, temporary access tracks and works areas will be progressively decommissioned and rehabilitated on completion of the construction phase; the only components to be retained long term are access tracks to the permanent above-ground facilities (i.e. compressor stations, MLV and CP stations) and any access tracks or dams requested by the landholder.		✓	✓
Supplement	If additional quarry material is required for padding or tack maintenance, applications and approvals will be sought from the landowner and relevant authorities as required.	✓	✓	

[1] Pre-clearance environmental surveys refers to all surveys undertaken during the Project planning phase (some of which were completed at the time of EIS submission, and others remain as a commitment to be completed prior to commencement of the works. The term 'flag' refers to digital mapping of the clearing footprint. GPS tracking software is used to delineate the clearing footprint for the clear and grade equipment operators. No on-ground flagging is required.

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
3 - throughout	The Project will obtain all approvals required under Commonwealth, Northern Territory and Queensland legislation and will comply with all applicable legislation, policies, Australian Standards and conditions of approvals, permits and licences.	✓	✓	✓
Supplement	DoH will be consulted prior to the commencement of construction in order to discuss the Department's Requirements for construction camps, such as the registration of food premises, provision of private water supply, solid waste management and on-site wastewater management.	✓	✓	
Supplement	All workers accommodation will be constructed with sufficient fire breaks around the perimeter in accordance with regulatory requirements.			
2.16 13.13	A detailed decommissioning or abandonment plan and rehabilitation program will be developed and implemented in consultation with landholders and the regulator at the time of abandonment. If a decision is made to abandon the pipeline, all above-ground infrastructure will be disposed of appropriately in accordance with the legislative requirements applicable at the time.	N/A		
CH4	**STAKEHOLDER ENGAGEMENT**			
4.4	Jemena will continue to facilitate and engage in stakeholder communications and engagement strategies throughout the life of the Project to keep all potentially impacted stakeholders informed of Project activities, and provide avenues for stakeholder participation and feedback.	✓	✓	✓
CH6	**BIODIVERSITY**			
6.4.2	Jemena will implement the Weed Management Procedures (Planning Phase) for driving within the Project area during the planning phase, including the requirement for all vehicles before leaving from Tennant Creek or Mount Isa to undergo weed hygiene inspections carried out by a trained Weed Hygiene Inspector in compliance with the Queensland Government Biosecurity Queensland Checklists (in lieu of the Northern Territory Government having equivalent procedures). Vehicles are also required to stay on existing roads and tracks; in situations where this is unavoidable, procedures are described for reducing weed seed transportation and vehicle cleaning.	✓		
6.5.1	Clearing will only be undertaken within the specified construction footprint, and clearing boundaries will be delineated prior to clear and grade activities being undertaken.		✓	
6.5.1	The Construction Contractor will develop a Vegetation Clearing Procedure prior to commencing construction that describes best practice vegetation clearing procedures to minimise harm to wildlife during land clearing activities.		✓	
6.5.4	The trench will be progressively backfilled after the pipe is installed.		✓	

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
6.5.4	The Construction Contractor will develop a Trench Inspection Procedure prior to commencing construction that provides for the presence of qualified fauna spotter-catchers (FSC's) to minimise harm to wildlife during trenching activities by promptly relocating healthy animals, and preventing the suffering of injured animals.		✓	
6.5.4 Supplement	The Construction Contractor will install the following measures within any length of open trench: • To aid fauna that may have fallen into the trench, ramps will be installed at a maximum of 3 km intervals. • Wherer the fauna spotter-catchers identify hotspots for fauna entrapment, additional ramps will be installed. • Earth plugs will be installed at property owner requests where cattle are required to access across the trench to reach water sources. • Fauna shelters will be installed at least every 500 m, and wherever the fauna spotter-catchers who are undertaking the trench inspections identify hotspots for fauna entrapment. • To ensure that fauna does not enter the pipe end caps will be fitted to welded pipe strings at the end of each day's construction.		✓	
6.7	The Construction Contractor will implement an approved Biodiversity Management Plan.		✓	
6.5.8	The Construction Contractor will implement an approved Weed Management Plan.		✓	
6.6.1	Jemena will develop and implement an Operations Weed Management Plan.			✓
Supplement	Prior to any significant ground disturbance, the following revisions to the Weed Management Plan will occur, for the purpose of addressing specific comments received from DPIR and DENR: • Weed monitoring and control to occur during the early wet season for at least 2-years after construction has ceased • For the Objective: No new weed species introduced • Add: Performance indicator - Disturbed areas have less than or equal to the weed species present compared to the pre-clearing condition • Add: Corrective Action - Treat new weeds prior to maturity and seed set • Add: Recording and Reporting - Weed treatment records' • For the Objective: No proliferation of existing weeds as a result of construction • Add: Performance indicator - Disturbed areas have less than or equal to the percentage cover of weed species present compared to the pre-clearing condition • Add: Corrective Action - Treat new weed infestations prior to maturity and seed set • Add: Recording and Reporting 'Weed treatment records'	✓	✓	✓

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
CH7	**WATER**			
7.6.1	All hazardous substances and fuels will be transported, stored and handled in accordance with Australian standards, legislation and safety data sheets (SDS), including AS 1940:2004 and NOHSC 1015:2015.		✓	✓
7.6.1, WMP Section 5.1	All hazardous substances will be stored in dedicated, bunded or self-bunded, signed and covered areas as required for the product. Storage and refuelling on the ROW will not be undertaken within 200m of a wetland or spring, 100m of a watercourse and 200m of a sinkhole.		✓	✓
7.5.2, WMP Section 5.3	A soil survey of the construction ROW will be undertaken prior to construction to identify, and map, areas of problematic soils, and inform specific management plans for problematic soils (if identified). Testing will be undertaken in accordance with the IECA Guidelines for Erosion and Sediment Control, and relevant guidelines for problematic soils.	✓		
7.5.1, WMP Section 5.5	A survey of watercourse crossings will be undertaken prior to construction to inform the Progressive ESCP for watercourse crossings.	✓		
7.5.1, WMP Section 5.6	Prior to construction, the location of permanent pools in the Ranken, James and Georgina rivers in relation to the construction ROW crossings will be identified and mapped.	✓		
7.6.2, Appendix P	The Construction contractor will develop Progressive ESCP's for the construction phase of the Project, in accordance with the guidance provided in the Primary ESCP submitted with the EIS. Erosion and sediment controls will be installed and maintained as per ESCP.	✓	✓	
Supplement	All ESCP's will be developed by a suitably qualified person, as defined in the IECA Guidelines, and will be reviewed and approved by Certified Professional in Erosion and Sediment Control (CPESC). The CPESC will inspect works and provide written approval that all works have been undertaken in accordance with the approved plan.		✓	
Supplement	Copies of endorsed ESCP's and inspection records will be provided to the Department of Environment and Natural Resources who, as the Authority, will ensure that all erosion and sediment control planning, implementation and auditing is undertaken to their satisfaction.		✓	
7.6.2, WMP Section 5.2	Construction will be undertaken with progressive reinstatement to minimise the area of exposed soils.		✓	
7.6.7, WMP Section 5.2	An exclusion zone will be established 100 m either side of a watercourse; only linear construction activities to be undertaken within the exclusion zone.		✓	

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
Supplement	Water will be sourced and extracted from existing dams and bores where possible by agreement with suppliers and/or landholders. Where insufficient supplies exist, new bores may be drilled. No water will be extracted from surface watercourses.		✓	✓
Supplement	Jemena will not take surface water or construct new bores on Aboriginal Land Trust land unless via agreement with the landholders.		✓	
7.6.6, WMP Section 5.6	Prior to extraction, the sustainable yields from all groundwater sources will be determined. Extraction will be restricted to within the identified sustainable yield for each relevant bore. Standing water levels in existing bores will be recorded prior to extraction as baseline data for comparison with monitoring data collected during the construction and operations phase. Standing water levels will be measured prior to, during, and after extraction to monitor groundwater drawdown.		✓	✓
7.6.5, WMP Section 5.4	Hydrostatic testing will be conducted in accordance with Australian Pipeline Industry Association (APIA) *Code of Environmental Practice: Onshore Pipelines (2013)* and an approved Hydrostatic Testing Management Plan, which will include requirements for pre-cleaning, flushing, water storage, water quality monitoring and water disposal.		✓	
7.6.5, WMP Section 5.4 Supplement	~~A Waste Discharge Licence will be sought prior to discharging hydrostatic test water in the Northern Territory and discharges will be undertaken in accordance with conditions of the licence~~. Discharges will be in accordance with Territory/State Government regulatoryequirements.	✓	✓	
7.6.5, WMP Section 6.2.4	Hydrostatic test water will be tested and results analysed prior to discharge. Water treatment will be undertaken as required to ensure discharge water meets approved guideline values for discharge. Subject to compliance with water quality guidelines water will be discharged to land at approved locations, via erosion and sediment controls. If water quality guidelines cannot be met alternative disposal options will be implemented such as evaporation ponds, the details of which will be developed with the relevant regulators.		✓	
7.6.4, WMP Section 5.4 and 6.2.6	Wastewater from construction camps will be treated onsite and irrigated in accordance with relevant licence conditions. Irrigation of treated wastewater will be designed and operated in accordance with the *Guidelines for Wastewater Works Design Approval of Recycled Water Systems* (DoH 2013) including obtaining a *Wastewater Works Design Approval* from DoH prior to installation of the systems, and undertaking a Land Capability Assessment for each site or assessing on-site soil characteristics.	✓	✓	
7.6.4, WMP Section 5.4 and 6.2.6	Irrigation areas for wastewater will not occur on areas of limestone or dolomite outcrop, within 100m of a sinkhole, 200m of a spring or wetland, or 100m of a watercourse. Irrigation will be designed and managed such that no surface water runoff will occur.		✓	
Supplement	Jemena will ensure all construction camps and wastewater disposal fields are within culturally cleared areas.		✓	

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
7.6.4, WMP Section 5.4	Vehicle washdown bays will be designed to capture and recirculate all water; no discharge will occur from washdown bays. Sludge will be captured in sumps and pumped out as required by a licenced contractor.	✓	✓	
7.6.2, WMP Section 5.4	Any required trench dewatering will discharge via sediment filtration media (socks or filter fence).		✓	
Water Management Plan (Construction) Primary ESCP Supplement	Construction of watercourse crossings is to be undertaken in accordance with the Water Management Plan (Construction) and a Progressive ESCP (to be developed prior to construction), which will outline: • details of crossing construction, including treatment of soils and vegetation • pre-construction survey requirements • controls to minimise impacts of crossings • reinstatement requirements. • monitoring requirements.		✓	
7.6.7 WMP Section 5.5	Watercourse crossings will be constructed in the following order of preference: • firstly, in times when there is no water present • secondly in times of no flow • thirdly, in times of flow, but in a way that does not impeded low flow.		✓	
Supplement	Criteria for selection of the method of watercourse crossing will be developed and adhered to during construction subject to seasonal weather conditions. This will determine whether flow diversion (dam and pump method) is required or that works will cease until flows have receded.		✓	
7.6.7, WMP Section 5.5	Information on the nature, location, extent and timing of watercourse crossings works in the Northern Territory will be submitted to DLRM prior to works commencing. If watercourse flows commence during works in the Northern Territory a *Permit to Construct or Alter Works* will be sought from DLRM.	✓	✓	
7.6.7, WMP Section 5.5	All crossings in Queensland will be undertaken in accordance with the *Code for Temporary Waterway Barrier Works* and the *Activities in a watercourse, lake or spring associated with a resource activity or mining operation* guideline.		✓	
7.6.5, WMP Section 6.2.5	The consequence category of dams will be assessed in accordance with the Qld Manual for Assessing Hazard Categories and Hydraulic Performance of Dams (DEHP 2013) prior to design and construction. Only low consequence dams will be constructed. A consequence assessment	✓	✓	

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
	report will be prepared for each dam in Queensland and submitted to DEHP, and all structures will be certified as required under the guidelines. This will be completed by the Construction Contractors progressively throughout the construction phase.			
7.6.5, WMP Section 6.2.5	The location and capacity of water storage dams will be confirmed prior to construction. Dams will be engineered and sited to: • represent a low risk of overtopping or uncontrolled release to surface watercourses • represent a low risk of seepage to groundwater aquifers • be hydraulically and structurally sound • accommodate projected quantities • include sufficient free board to accommodate additional filling during rainfall events.	✓		
Supplement	All dams will be lined to prevent leakage, and will have safety measures to minimise hazards to people, livestock and fauna, including signage, perimeter fencing and escape ramps.		✓	
7.6.5	All dams will be backfilled and reinstated upon completion, unless landholders have requested they remain.		✓	
7.7.2	Operational activities will include monitoring and maintenance of the reinstated construction footprint for erosion issues			✓
7.7.4	The location and volume of groundwater extraction for PCCS operational supplies will be informed by an assessment of the sustainable yields of the aquifer, in consultation with a hydrogeologist as required. Any new bore will be drilled by a driller licenced under the Water Act *(NT).*			✓
7.7.5	All produced water at PCCS will be directed to an onsite evaporation pond for disposal. The evaporation pond will be lined to prevent leakage. The pond will be leak tested prior to commissioning and leakage detection will be installed.	✓		✓
7.7.5	Residues from the evaporation pond at the PCCS will be removed by licenced contractors and disposed of at a licenced facility in accordance with the OEMP.			✓
WMP Section 6	Water quality monitoring will be undertaken during the construction phase in accordance with the Water Management Plan submitted with the EIS.		✓	
7.7	Water quality monitoring requirements for the operational phase will be detailed in the OEMP developed prior to operation of the pipeline and facilities.			✓
CH8	**HISTORIC AND CULTURAL HERITAGE**			

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
Cultural Heritage Management Plan	All workers will undergo inductions that will include the specific requirements of the Cultural Heritage Management Plan (CHMP), including access restrictions, sacred sites restrictions and requirements, and archaeological considerations.	✓	✓	✓
8.4	All works will be carried out as detailed in the Cultural Heritage Management Plan.		✓	✓
13.7.3	Where possible, plan construction footprint, including access tracks, to avoid areas of identified cultural heritage significance.	✓		
13.7.3	Prior to construction commencement, cultural heritage sites, places or objects near construction footprint may be pegged and flagged off and marked as no-go zones on construction maps.	✓		
13.7.3	In Restricted Work Areas, Traditional Owners may participate in monitoring of initial clearance of treed areas in clear and grade team ahead of construction.	✓	✓	
8.5.1	No low impact ground disturbing works to be undertaken without Sacred Site clearance by Aboriginal Parties.		✓	
Cultural Heritage Management Plan	Construction activities will not commence prior to the issue of an AAPA Authority Certificate.		✓	
8.4.1	All conditions of the Aboriginal Area Protection Authority (AAPA) Authority Certificates will be complied with.		✓	✓
8.4.1	Conditions of Authority Certificates will be incorporated into the CHMP, CEMP and OEMP including: • Project activities in Restricted Work Areas only undertaken in accordance with agreed conditions • exclusion Zones being designated as “No-Go Zones” • any No-Go Zones in close proximity to the Project footprint y be cordoned off if necessary • the conditions of the Authority Certificate, when granted, will form a part of the contractual conditions of all contractors and subcontractors on the Project • all workers on the Project will undergo inductions that will include information regarding the Sacred Sites protection.		✓	✓
8.4.2, 8.4.3	Jemena will make the required applications, considering the recommended site management conditions, to the Heritage Branch (Northern Territory) for Work Approvals, in accordance with the Heritage Act (NT).	✓	✓	✓
8.4.2	All requirements of Works Approvals will be incorporated into the CEMP and OEMP, which may include: • site protection, e.g. through marking out and fencing off heritage site areas in close proximity to construction activities, i.e. the establishment of No-Go Zones		✓	✓

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
	• relocating and/or reinstating heritage objects • destruction of sites.			
8.4.2	In relation to areas already surveyed, land clearing may expose shallow sub-surface material or cultural materials that were previously obscured by vegetation. With the exception of skeletal remains discovery, such previously undiscovered heritage places or objects will be managed in accordance with any Work Approvals granted.		✓	✓
8.4.2	In relation to additional work spaces, as these are identified and prior to any non-low impact disturbance to the land, they will undergo archaeological survey and as required, they will be located to avoid areas of high archaeological significance or Work Approvals will be sought in accordance with the Heritage Act.		✓	
8.4	No low impact ground disturbing works to be undertaken without cultural heritage sites survey by archaeologist.	✓	✓	
8.5.5	If any skeletal remains are discovered, the following will be implemented: • Immediate cessation of work in the area. • Establishment of a 50m radius exclusion zone for all personnel and activities. • Immediate notification of the Northern Territory Police. • Immediate notification of the NT Heritage Branch Director.. Works in the area will only recommence upon receipt of a Works Approval from the Heritage Branch and on advice from the NT Police.		✓	
CH9	**SOCIO-ECONOMIC ASPECTS**			
SIA Scoping Study	An Aboriginal Land access agreement will be developed between Jemena and the Central Land Council. Requirements of this agreement will be incorporated into a Project access permit system for construction and operational land access.		✓	✓
9.11.2	Aboriginal living areas will be designated as No-Go Zones during the construction and operations phases of the Project, except for specifically authorised personnel.		✓	✓
9.14.1	Establishment of Community Reference Groups (CRG) at both Tennant Creek and Mount Isa.	✓	✓	
9.14.1	Establish a freecall number for complaints to be registered and inquiries made.	✓	✓	✓

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
9.14.1	Provide communications at relevant points of gathering, e.g. roadhouses for the provision of information.	✓	✓	
10.5	Establish a project Security Plan in consultation with local police which will include the secure storage and monitoring of petrol and other aromatic fuels on the project.	✓	✓	✓
9.1	Jemena will develop and implement an Economic and Social Impact Management Plan (ESIMP) to mitigate and monitor any negative impacts of the project and maximise the opportunities to local and regional communities. The ESIMP will be prepared in accordance with the framework submitted with the EIS.	✓	✓	✓
9.13	Design and deliver an Indigenous cultural awareness training course for senior management/supervisors and all workers involved in the Project.	✓	✓	
9.14.4.1	Ensure that all 1st and 2nd tier contracts have local content requirements included.	✓		
9.14.3	Jemena will develop and implement the Project's Regional Employment Plan.	✓	✓	✓
9.14.3.1	Jemena will develop and implement the Regional Recruitment strategy.	✓		
9.14.3.2	Jemena will develop and implement Project Ready Training Programs.	✓		
Supplement	Jemena's Project Ready Training Program will give preference to local Aboriginal participants and appropriately support their applications and completion. The Program will have workplace language and literacy modules designed to assist ESL speakers achieve success in the workplace.	✓		
9.14.3.1	Jemena and the construction contractor will utilise the NGP Jobs Portal.	✓	✓	✓
9.14.3.3	Jemena will initiate the Jemena Gas Operator Apprenticeship Program.		✓	✓
9.14.3.4	Jemena will develop and implement the Tennant Creek Social Enterprise Opportunity.	✓	✓	
9.14.4.1	Jemena will install process to ensure that local content contractual provisions are incorporated in contracts (where applicable) to ensure that sub-contractors maximise opportunities for local business and people.	✓	✓	✓
9.14.4.1	Jemena and its construction contractor will continue to engage with the Industry Capability Network to support local vendor screening, communicating tendering opportunities, and other relevant Project information.	✓	✓	
9.14.4.2	Jemena will implement the SME Business Growth Program.	✓	✓	

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
9.14.4.2	Jemena will implement SME Business Briefings	✓	✓	
9.14.4.2	Implement the SME Business Investment Fund	✓	✓	
9.14.5.1 Supplement	Jemena will develop and implement a Remote Community Social Investment Program. The details of the Program will be further developed through consultations with the relevant community organisations, including Land Councils and other NGOs working in the field of community development.	✓	✓	✓
9.14.5.2	Jemena intends to undertake a high level study on economic opportunities for remote communities, outside of the Project.	✓	✓	
Supplement	Jemena commits to further consult with the Department of Chief Minister and other stakeholders in developing the ESIMP, and associated monitoring and reporting arrangements.	✓	✓	✓
CH10	**HUMAN HEALTH AND SAFETY**			
10.4.6, 10.5.1	An NGP Emergency Response Plan (ERP) will be developed for the construction and operational phases of the Project which will outline the requirements for likely emergency situations. Jemena will work with the NT DoH, NT Police, Fire and Emergency Services and local health and emergency service providers to ensure the ERP aligns with medical service requirements and external response arrangements.	✓	✓	✓
Supplement	Jemena (and its contractors) will undertake regular consultation with emergency services during days of High Fire Danger and will have water carts, dozers and graders available if required to supplement local resources.			
Supplement	A formal analysis of safety risks posed by additional traffic will occur as part of a TIA in accordance with the AUSTROADS Guide to Traffic Management Part 12: Traffic Impacts of Development.			
Supplement	A Road Safety Audit will be undertaken prior to main pipeline construction activities. There will be no public access to the construction right of way with measures in place where the pipeline crosses public roads including fencing and signage.			
Supplement	Jemena will engage with the Alpurrurulum Community with respect to Road Safety Education prior to main pipeline construction activities in the region.			
10.4.1	A Traffic Management Plan will be implemented during construction that outlines the approach taken to traffic planning in order to minimise human health and safety risks associated with Project activities. This will include implementing approved Traffic Guidance Schemes (TGS), which will include sign posting requirements, traffic controls and speed limits.	✓	✓	

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
10.4.2, 10.4.3, see also CH11	The Air Quality Management Plan and Noise Management Plan will be implemented to minimise impacts on human receptors.		✓	✓
10.4.1	Access to active construction or operational areas will be restricted by fencing, signage and security plans to minimise unauthorised access to work areas or facilities.		✓	✓
10.4.7, see also CH9	Jemena and the Construction Contractor will establish a Workers Accommodation Plan that manages the interaction between the community and the workforce.		✓	✓
10.4.7, see also CH9	All staff will be required to comply with the Project Code of Conduct, Camp Rules, and Drug and Alcohol Policy which will clearly stipulate behavioural expectations of the workforce, and include pre-employment and ongoing drug and alcohol testing for all workers. These will be strictly enforced and breaches may result in instant dismissal.		✓	✓
10.4.6	The Construction Contractor and Jemena will provide first aid facilities and trained first aiders for construction and operational workers respectively. This will include an on-site paramedic during construction.		✓	✓
10.4.6	Jemena and the construction contractor will liaise with regional health service providers regarding potential impact of any extra demand on existing services, so that adequate safeguards can be implemented to avoid burdening existing health services and potentially impacting residents' access to health services.	✓	✓	✓
10.4.3, 10.4.5, EMP Section 13.9	Community awareness programs will be implemented to inform residents of the Project activities and the location of infrastructure. Communication will be maintained with residents potentially affected by Project activities (e.g. construction dust or noise emissions).	✓	✓	✓
EMP Section 13.9, see also CH11	A dedicated contact will be provided for receipt and follow-up of community complaints or queries.		✓	✓
10.6.2	All vehicles and equipment will be equipped with fire extinguishers and water carts will be located in the proximity of high fire risk activities on high fire danger days. There will be dedicated places for smoking and butt collection bins. Construction activities with the potential to generate sparks will occur within cleared areas.		✓	✓
10.4.5	The pipeline alignment will be registered on Dial Before You Dig and signed to mark its location to reduce the risk of accidental third party interference. Signage will be maintained as required to ensure that it remains visible.		✓	✓

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
10.4.4, see also CH7	Facilities for storage of hazardous materials will be designed in accordance with the requirements of the *Australian Dangerous Goods Code and Australian Standard (AS) 1940 Storage and handling of flammable and combustible liquids*. Storage and handling will comply with the requirements of the *National Standard NOHSC: 1015 (2001) Storage and Handling of Workplace Dangerous Goods*.		✓	✓
10.4.5	During operations, routine monitoring via aerial surveys will be undertaken, and automated fire and leak detection systems, and alarm systems, will be installed and maintained. Compressor stations will be monitored through CCTV and the Jemena Control Centre will monitor and control gas flow.			✓
13.3	Specific management plans will be developed as required to address health, safety and environmental requirements that arise through the approvals processes, and to deliver on Jemena's commitments to the community.		✓	✓
13.9	'Alternative arrangements' will be negotiated with those stakeholders who may be impacted by noise. These arrangements may include notifications prior to works, restriction of work hours, alternative accommodation or other noise abatement arrangements as agreed.		✓	
10.6.9	Jemena has appointed a Construction Contractor which is responsible for providing and implementing a Construction Health and Safety Management Plan (CHSMP), which meets or exceeds the requirements listed by Jemena in its Health and Safety expectations documents. The Construction Contractor's CHSMP and other plans, as identified during the Construction Hazards Identification (HAZID), will be submitted for review and approval by Jemena prior to the commencement of work.		✓	
CH11	**AIR, NOISE AND VIBRATION**			
11.4.1	The noise, air and vibration modelling undertaken to inform the risk assessment and allocation of controls will be revised if the Project details change to ensure that the modelling and mitigation measures are accurate. All modelling is to be undertaken by a suitably qualified person.	✓		
Section 11.5, 11.6 Appendix U, Appendix W.	Construction will be undertaken in accordance with the following plans, which will include specific measures to minimise and mitigate potential air quality, noise and vibration impacts: • Construction Environmental Management Plan • Traffic Management Plan • Blasting Management Plan • Air Quality Management Plan • Noise Management Plan.	✓	✓	

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
11.5	All potentially impacted residents and sensitive receptors will be kept informed of construction activities and blasting activities that may result in noise, air or vibration impacts.	✓	✓	
11.5 and 11.6	Avenues will be provided for feedback and complaints, which will be investigated and findings incorporated into management plans and construction and operational procedures. A dedicated contact will be provided for receipt and follow-up of community complaints or queries.		✓	✓
11.6	An OEMP will be developed and implemented for the operations phase which will outline controls and management measures to minimise potential air quality and noise impacts, including those on sensitive receptors and those related to emissions.			✓
11.6	A maintenance and inspection program will be implemented for the pipeline, facilities and compressor stations to ensure that all equipment is running efficiently, reducing unnecessary air or noise emissions.			✓
11.6, Chapter 13 Section 13.11	Except in emergency situations, gas venting and flaring will be restricted to daytime activities at compressor stations and MLV facilities.			✓
11.6.2 Chapter 13 Section 13.11	Jemena will implement the following additional measure at the MICS for the operational phase of the Project as recommended in the Noise Assessment Report: • provision of silencer or alternative nozzle at MICS facility venting to achieve a sound power level of 130 dB(A) or less.			✓
11.5.1, 11.6.1, Chapter 13 Section 13.10	Routine air quality management measures will be implemented to prevent air quality impacts (nuisance or health related) during the construction and operations phases of the Project. The measures comprise dust suppression, construction equipment and facilities maintenance programs and emissions monitoring.		✓	✓
11.6.2	Further detailed design will be carried out to confirm operating noise levels for the MLV sites and any silencers. These issues will be addressed at the detailed design phase of the project when specific plant information is available.	✓		✓
11.7	Greenhouse gas emissions will be reduced during the Project construction phase by: • minimising clearing of vegetation along the pipeline ROW • reinstating and rehabilitating the majority of the areas cleared during the construction phase to achieve the rehabilitation acceptance criteria prescribed in the NGP Environmental Authority issued under the *EP Act (Qld)*		✓	

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
	• minimising the use of fuel by selecting fuel efficient plant and equipment, operating vehicles and machinery in a fuel efficient manner e.g. turning off idling equipment, and selecting construction techniques that utilise lower amounts of fuel. • sourcing supplies locally (thereby minimising transportation emissions to get product to site).			
11.7	Greenhouse gas emissions will be reduced during the Project operations phase by: • implementation of a regular maintenance regime to minimise the potentials for gas leakage along the pipeline and at facilities • investigate the use of biofuels in plant and equipment • implementation of a regular maintenance regime for gas engine alternators and compressor turbines to ensure they are operating at peak efficiency.			✓
11.7	Jemena will report GHG emissions in accordance with the NGER framework requirements.			✓
CH12	**MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE**			
12.5.4	To allow trapped Carpentarian Antechinus to cross and/or escape the trench, for every 50 m of rocky habitat and every 100 m of intervening habitat in the section of the construction ROW between KP 609.5 and KP 622, the Construction contractor will ensure that hessian (or similar material) will be draped from the top of one side of the trench, down along the side and bottom of the trench, and up the other side to the top of the opposite side of the trench.		✓	
CH13	**ENVIRONMENTAL MANAGEMENT**			
13.5, 13.6, 13.13, Appendix H & Appendix O	Pre-construction surveys and monitoring will be undertaken for the following: • Soil survey to identify and map problematic soils (i.e. acid sulfate, dispersive or contaminated) • Weed survey to map the location and extent of existing weeds within the construction footprint - A weed survey will be undertaken of the construction footprint, including proposed roads and access tracks, to map the location and extent of existing weed species and define weed management zones. • Watercourse crossing assessments for major watercourse crossings to inform the Progressive ESCP, including identifying the location of permanent pools on the Ranken, James and Georgina Rivers, and in relation to the construction ROW. • Determine the sustainable yields of proposed groundwater sources, and use this information to inform groundwater extraction locations and volumes.	✓		

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
	• Collect a snapshot of standing water levels in existing bores that will be used for construction water, to provide comparison data for water levels post extraction. • Pre-construction environmental assessments, including photographs and GPS references, will be undertaken as required to establish as pre-construction baseline information and/or identify analogue sites for comparison during rehabilitation monitoring. • Habitat quality surveys will be undertaken to inform specific requirements for construction activities.			
13.3	A Construction Environmental Management Plan will be developed and implemented by the Construction Contractor. The CEMP will include the specific controls in chapters 6 to 13 of the EIS and subsequent revisions of the approvals EMP, approval conditions, monitoring requirements, performance indicators and corrective actions, auditing and reporting.		✓	
13.3.3	The CEMP will include management procedures / standard operating procedures relating to air quality management, blasting, contaminated land management, dangerous goods and hazardous substances management, noise and vibration, reinstatement, soil management, trench inspection and fauna removal, vegetation clearing procedure, vegetation management, waste management procedure, water quality (ground and surface) management procedure, weed and pest management		✓	
13.3.3	An Operational Environmental Management Plan will be developed and implemented by Jemena. The OEMP will include the specific controls in Ch13 of the EIS and subsequent revisions of the approvals EMP, approval conditions, monitoring requirements, performance indicators and corrective actions, auditing and reporting.			✓
Appendices E, H, J, O, P, Q, U and W	The Construction contractor will implement the following management plans provided with the EIS: Traffic Management Plan, Biodiversity Management Plan, Weed Management Plan, Water Management Plan (Construction), Primary Erosion and Sediment Control Plan, Cultural Heritage Management Plan, Air Management Plan, Noise Management Plan. The management plans will be revised to incorporate any changes/additions incorporated in response to comments received during the EIS public comment phase and/or approval recommendations/conditions from NT EPA and DoE. Monitoring during construction will be undertaken in accordance with these plans.		✓	
13.5 through to 13.13	Jemena and/or the Construction contractor will develop the following management plans prior to commencement of works; Construction Health and Safety Management Plan, Hydrostatic Testing Management Plan, Progressive Erosion and Sediment Control Plans, Dangerous Goods and Hazardous Substance Management Procedure, Blasting Management Plan, Waste Management Plan, Rehabilitation Management Plan, Construction Safety Management Plan, Emergency Response Plan, and Workers Accommodation. Works will be undertaken in accordance with the approved management plans.	✓	✓	✓
13.13	The majority of the construction footprint will be reinstated to achieve the rehabilitation acceptance criteria prescribed in the NGP Environmental Authority issued under the EP Act *(Qld)*.		✓	

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
13.13.3	Rehabilitation monitoring will be undertaken during the operational phase of the Project. Rehabilitation monitoring will target: • Revegetation success monitoring; comparison between rehabilitation monitoring sites and pre-disturbance or analogue sites • Soil erosion monitoring • Weed monitoring • Integrity of watercourses monitoring Operational monitoring of rehabilitation will be undertaken in accordance with the OEMP, which will capture rehabilitation requirements outlined in the EMP. The methods of rehabilitation monitoring will be further detailed in a Rehabilitation Monitoring Plan.			✓
13.3.5	An Incident and Complaints Register will be maintained for each phase of the project to track incidents, complaints and remedial actions. Any complaints received, and the outcomes of them, will be reported annually as part of the Annual Return required under the EA.		✓	✓
13.3.5	Any incidents that occur during the Project will be investigated, reported and remediated as appropriate. Any incidents that cause, or may cause, pollution resulting in material or serious environmental harm (as defined under the Waste Management and Pollution Control Act *(NT)*, or that require reporting under the Queensland Environmental Authority (EA), will be reported to the NT EPA pollution hotline or Queensland Pollution hotline respectively.		✓	✓
13.12	A site waste register will be maintained and waste streams will be separated into recyclables, general wastes, organic and inert wastes, and listed wastes. Labelled bins or collection areas will be provided for each stream adequate for the volume produced at peak production. Contractors will be engaged to regularly remove waste from site.		✓	✓
13.12	Waste, including waste fluids, must be transported off-site for lawful re-use, remediation, recycling or disposal unless the waste is specifically authorised by conditions of the environmental authority to be disposed of or used on-site.		✓	✓
13.12	Waste storage areas will be designed such that there is no sediment or rainfall runoff, or dust generation. The waste storage areas to be established are to be located at least 100 m from watercourses and generally distanced away from any storm water or other drainage line.		✓	✓
13.12	During maintenance activities all waste will be collected and transported to a licenced facility. The ROW and facilities will be maintained free of waste.			✓
13.4.1 and 13.4.2	Inspections and auditing will be undertaken as follows: • Daily and weekly site inspection checklists by the Construction Contractor; during construction • Regular environmental audits during construction • Routine maintenance and inspections of the operational footprint during operations as per OEMP		✓	✓

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

EIS SECTION	COMMITMENT	PROJECT PHASE		
		P	C	O
	• Rehabilitation and weed inspections during operations as per OEMP Databases will be developed for storage of inspection and audit data and tracking against performance criteria.			
13.4.3	Internal reporting will be undertaken to track and report on performance, measuring against the performance criteria in Chapter 13.		✓	✓
13.14	Decommissioning will be undertaken in accordance with an approved Decommissioning Management Plan (if and when the NGP is decommissioned)	N/A		

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

This page has been intentionally left blank

Public—November 2016 © Jemena Northern Gas Pipeline Pty Ltd

Jemena

bringing energy to life