



Bridging Document to the

DBNGP MINOR PROJECTS CONSTRUCTION ENVIRONMENT PLAN

PLUTO METER STATION Compression

E-PLN-025

PUBLIC SUMMARY DOCUMENT

December 2017

DOCUMENT CONTROL

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1. INTRODUCTION

DBNGP (WA) Nominees Pty Ltd (DBP, the Proponent) is proposing to upgrade its existing Pluto Meter Station (Pluto MS) through the construction of a compressor unit and associated infrastructure to allow delivery of gas from Woodside's Pluto Gas Plant into the Dampier to Bunbury Natural Gas Pipeline (DBNGP) (the Project).

This document has been prepared as a Bridging Document to the DBNGP Minor Projects Generic Construction Environmental Management Plan (Generic CEMP) (TEB-001-0066-01, Rev 4.2, Nov 2014) in order to cover the impacts of the Project. It outlines the scope and construction requirements for the proposed works associated with the project.

1.1. Proponent

DBNGP (WA) Nominees Pty Limited (ABN 78 081 609 289) is the instrument holder of PL40 and DBNGP (WA) Transmission Pty Limited (ABN 69 081 609 190) is the nominated Operator.

Dampier Bunbury Pipeline (DBP) is the trading name of the DBNGP group of companies.

All Public enquiries regarding the DBNGP may be directed to DBP via:
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PO Box Z5267
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1.2. Project Description

Woodside, as the Operator of Pluto Gas Plant has commissioned DBP to construct a compression unit and associated infrastructure to allow gas to flow in both directions from the existing Pluto MS to enable the delivery of gas to the domestic market via the DBNGP.

The project shall extend the existing Pluto MS by approximately 80m including an extension to the gabion wall, installation of a compressor and engine, relocation of the current remote transmitter unit and associated cabling, electrical, mechanical and piping works.

Access to the site shall be through the existing road to Pluto MS. Accommodation for work crews will be through commercially available accommodation in Dampier or Karratha. The nearby DBNGP Dampier Facility will be used as required for the temporary laydown of equipment.

A description of the new works is diagrammatically represented below in Figure 1.

1.3. Project Location

The Pluto MS is located adjacent to the Pluto Gas Plant on the Burrup Peninsula, at approximately Kilometre Point (KP) 2 on the DBNGP (refer Figure 2). Although the upgraded footprint will require expansion of the fenced boundary around the Pluto MS, all works shall be contained within the existing authority area of Pipeline Licence (PL) 40.

1.4. Project Schedule

Construction is proposed to commence in January 2017 and be completed in June 2018. Due to the small scale of construction proposed it is anticipated that all works will be completed in 4 - 6 months. Site clean-up and reinstatement activities shall be undertaken immediately following commissioning.

1.5. Project Approvals

Variation of PL 40 in respect of application STP-PLV-0077 was issued by the DMIRS on 9 November 2017. A bridging document to the DBNGP Minor Projects Construction Environment Plan (this document) shall require approval by the DMIRS prior to commencing of work.

As the Project will not impact upon any registered sites of Aboriginal Heritage significance, there is no requirement for approval under S18 of the *Aboriginal Heritage Act 1972*.

Associated with the Project, approximately 0.2 ha of degraded vegetation adjacent to the existing Pluto MS will be cleared (refer Figure 3). All vegetation clearing conducted under either an approval or valid exemption shall be reported within the DBNGP Annual Environmental Report and managed under the internal Authorisation to Clear Vegetation Process (ACV).

Based on the absence of significant flora, fauna or water resources, the Project has not triggered a requirement for referral to any agency other than DMIRS.

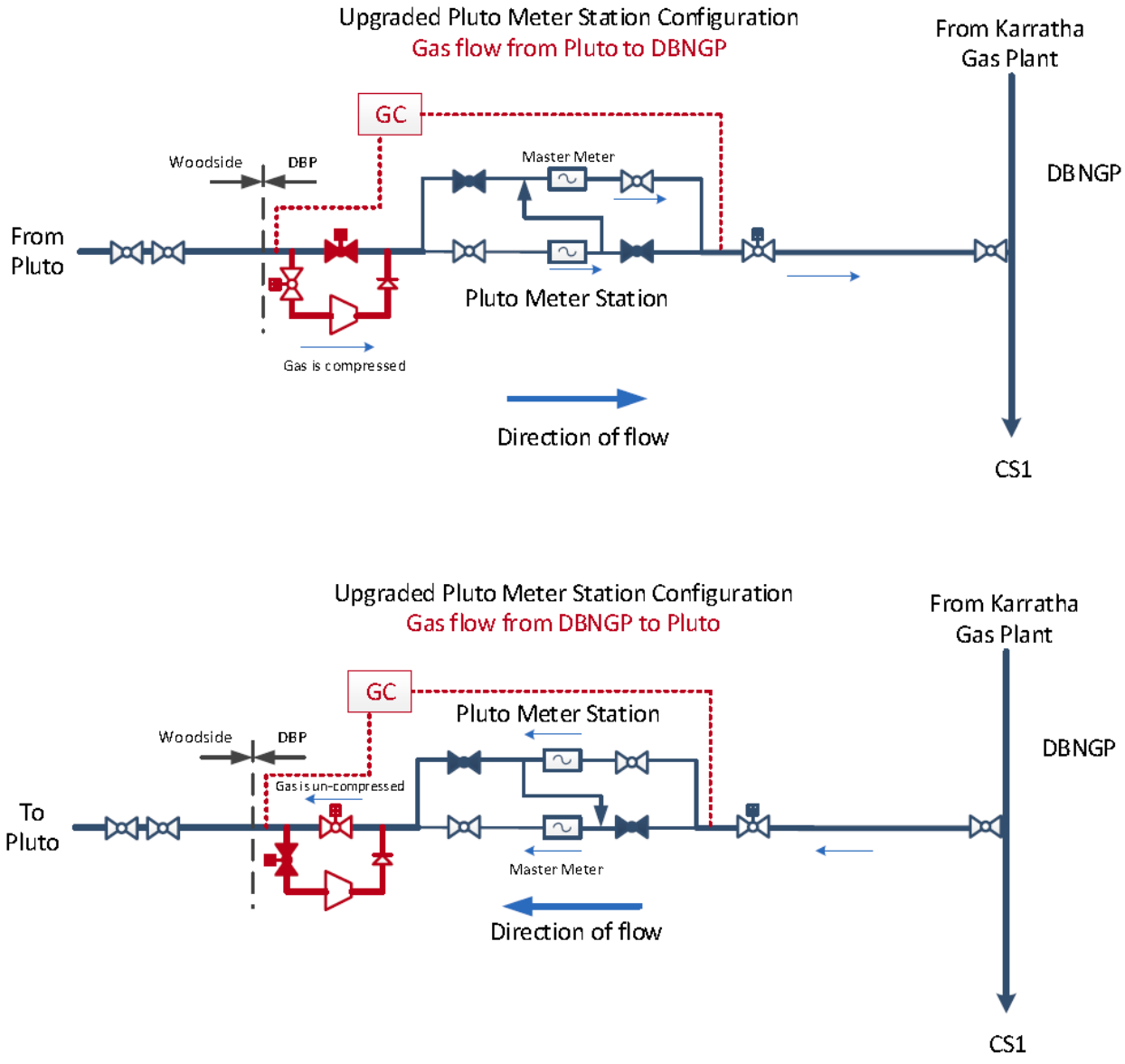

Figure 1 Upgraded Pluto Meter Station Configuration

Figure 2 Project Location

Figure 3 Clearing area

2. EXISTING ENVIRONMENT

The Project will be situated in the Pilbara Bioregion of the wider Pastoral Region as defined within Section 3 of the Construction EP. Section 3 of the Construction EP describes the environmental setting of the areas traversed by the DBNGP (as well as the land use and socio-economic setting of the areas located along the pipeline route) in broad scale groups.

Table 1 includes details of the existing environment specific to the Project site.

Table 1: Existing Environment

Environmental Factor	Description
Climate	The Pilbara Region has an arid climate with summer rainfall that is strongly influenced by tropical cyclones. The mean annual rainfall in Karratha is 289.3 mm (BOM 2013). Mean maximum temperatures range from 26.2°C to 36.1°C. Mean minimum temperatures range from 13.7°C to 26.8°C (BOM 2013).
Vegetation and flora	Approximately 0.2 ha of degraded vegetation will be cleared and incorporated into the permanent disturbance footprint.
Rare and priority flora	There are no declared rare or priority listed flora recorded within 500 m of the Project footprint.
Threatened and Priority Ecological Communities (TECs/PECs)	There are no TEC or PEC recorded within 500 m of the Project footprint.
Environmentally Sensitive Area (ESA)	There are no ESAs recorded within 500 m of the Project footprint.
Fauna	There are no records of conservation significant fauna sightings within 500 m Project area.
Areas of Conservation Value	A State Conservation reserve – Murujuga National Park exists approximately 350m to the east of the Project location, on the opposite side of Burrup Peninsula Road.
Soils and Terrain	The Pilbara Region consists of mountainous ranges and plateaus, alluvial plains, granite and basalt plains (LAWA 2001). The bioregion can be divided into three geographic sub-regions: • Plateaus and Tableland • Coastal Plain • Transitional Zone
Acid sulphate soils (ASS)	Based upon a desktop assessment against the Atlas of Australian Acid Sulfate Soils (ASS) (CSIRO 2013) the Project lies within an area of low to extremely low probability of ASS occurring. Acknowledging the location, avoidance of wetlands and short duration of open excavation, the disturbance and oxidation of ASS during construction of the Project is considered highly unlikely.

Environmental Factor	Description
Contamination	A search of the Department of Water and Environmental Regulation (DWER) contaminated sites database conducted on 20 November 2017 provided no indication of site contamination within 500 m of the Project location.
Water resources and Wetlands	An unnamed creek lies approximately 200 m to the west of the Project, on the opposite side of Burrup Peninsula Road. There are no other watercourses in the vicinity of the Project.
Groundwater	Depth to groundwater at the project site is anticipated to be approximately 20 mbgl.
Heritage	All works will be undertaken within the existing DBNGP pipeline licence area, which has been subject to heritage surveys and clearances in the past, including on ground heritage investigations in the 80's when the initial pipeline was installed. The Department of Aboriginal Affairs (DAA) have undertaken a desktop assessment which confirmed no registered heritage sites will be impacted by the works. Two registered aboriginal heritage sites were identified outside but adjacent to (within 50 m of) the Project footprint (refer Figure 4): Demarcation of the Project area will ensure that these sites remain off limits. All Personnel will be inducted regarding the importance of remaining within the spatial limits of the approved Project area.
Land usage	The project is located in the Shire of Roebourne / City of Karratha. Land uses adjacent to the site include the Woodside Gas Plant to the north west and Burrup Road to the South East.

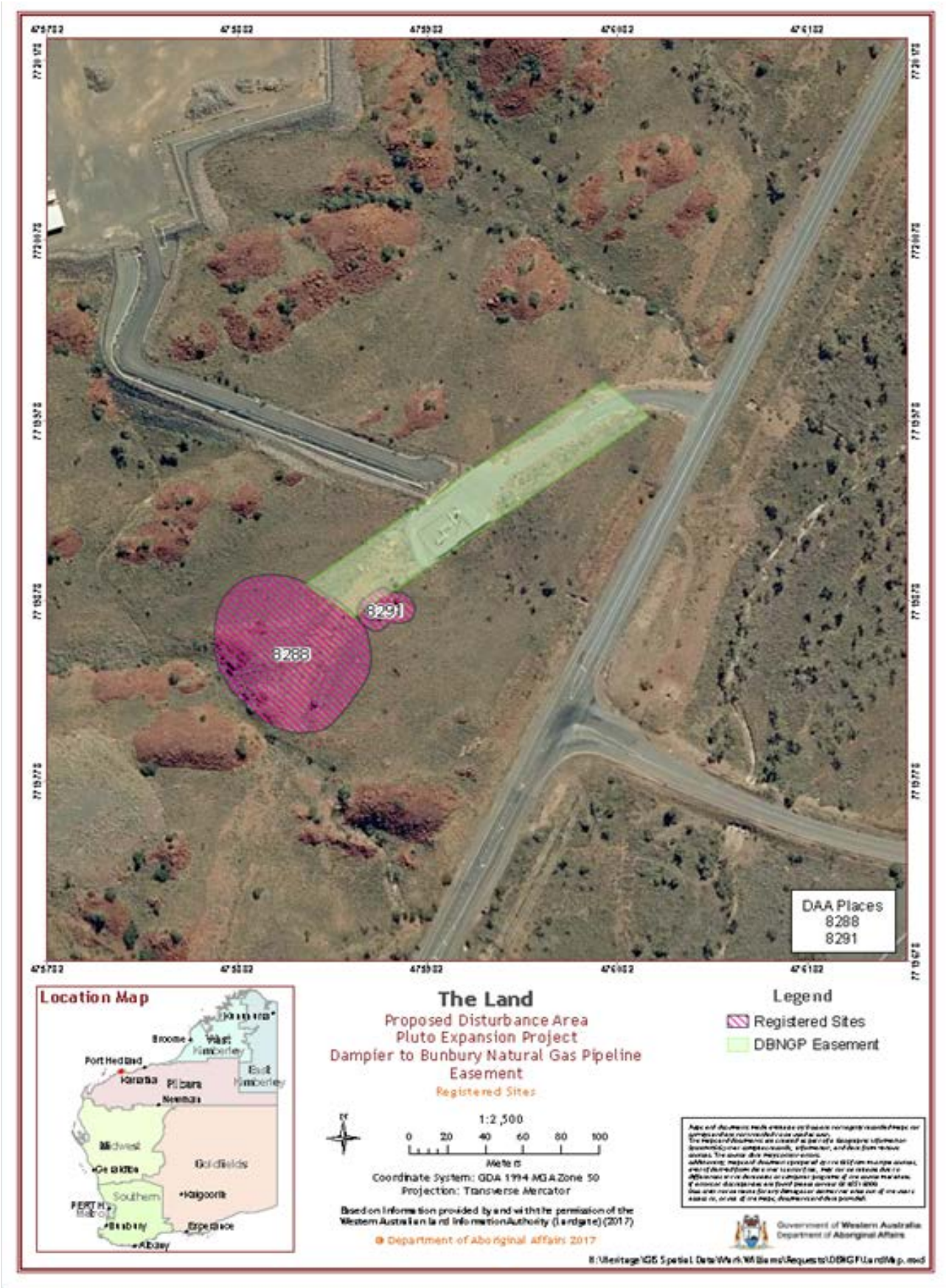

Figure 4 Locations of nearby Aboriginal Heritage

3. ACTIVITY DESCRIPTION

The scope of works associated with the Project are typical of meter station construction, as described within Table 4-1 of the Construction EP (Section 4). Although at a high level all activities required for construction of the Project are completely contained within the scope of the Construction EP, there are some key specifics including the addition of a compressor unit and small Gas Engine Alternator (GEA). To address this, Table 2 below presents the generic activity description from the approved CEMP and also provides where relevant a more specific description of the Project construction activities.

Table 2 Typical meter station construction activities

Activity	Generic CEMP Description	Detailed Description
Survey and peg out site	Engineering and, if necessary, environmental and cultural heritage surveys are used to select the site and to determine if any special construction techniques or mitigation measures are required. Once the preferred site has been determined, the station boundary, hot tap location, custody transfer point and engineering aspects are finalised. Marker points are placed to identify the project area.	Once the preferred site has been determined, marker points are placed to identify the project area. All of the works for the Pluto MS extension shall be within the existing easement.
Clear and grade	Graders and/or bulldozers are used to clear an access track, site facilities area and lay down area. The clearing is mostly within the DBNGP corridor; however some area may also be cleared outside the corridor. Topsoil is stripped for the width and length of the meter station pad. The pad is then in-filled with imported, free draining soil and compacted and filled to the design level.	Removal of road section and minor vegetation (<0.2ha)
Install temporary infrastructure	Temporary infrastructure may include, but is not limited to, rubbish bins, ablutions, site office and lay down area.	
Set up small mechanical workshop/work area	A small area away from the meter station pad is cleared to allow for use as a workshop for welding, non-destructive testing, hydrostatic testing and sandblasting. The workshop may be located next to the site sea containers with tarpaulins extended to offer shade.	No new areas will be cleared, a temporary workshop will be located within the existing site.
Install meter station foundations, cables and conduits (electrical and fibre optic) and electrical earthing	Excavate for meter station foundations and cable trenches: Foundations are compacted and tested for compaction. Smaller pre-cast foundations are installed, however larger foundations may be site poured. In this case formwork, reinforcing and a concrete truck is used. Electrical cables are typically installed in conduits to avoid the requirement for termite treatment and are backfilled. However, if direct cable burial cannot be avoided termite treatment is used before backfilling.	
Install meter skid, filtration and pressure reduction valves if required	The meter skid, filter and pressure reduction valves are installed onto the foundations. Pipe supports and filter are levelled and grouted.	Installation of compressor, Gas Engine Alternator (GEA), Diesel Engine Alternator (DEA) and associated pipework and cabling.
Install remote terminal unit (RTU), communications mast, instrumentation and control equipment	RTU, communications mast (if required), instruments and control equipment are installed.	RTU, communications mast, instruments and control equipment are installed.

Activity	Generic CEMP Description	Detailed Description
Complete electrical installation	Termination of electrical wiring in the control hut or box.	Termination of electrical wiring in the control hut, RTU or box.
Install dewatering (if required)	Excavation dewatering may be required in areas of shallow groundwater. To minimise the cone of depression, multiple dewatering spears will be inserted around the excavation.	Not anticipated
Excavation for tie-in line	A trench (minimum 1.5 m deep) is dug for the tie-in line in accordance with DBP Excavation Procedure and Permit to Work System. Trench spoil is stockpiled within the corridor usually on the non-working side.	There is no below ground tie in to the pipeline. All tie-ins are flanged and above ground
Complete fitted welds	The tie-in and site field welds are completed in-situ or in the temporary workshop. During welding a humpy or tent is used to cover the weld and welder.	
Non-destructive weld testing	The pipe welds are inspected using Magnetic Particle Inspection (MPI), X-ray, gamma or ultrasonic equipment.	
Hydrostatic testing	Pipework integrity is verified using hydrostatic testing in accordance with ASME B31.3 Code – Process Piping. During hydrostatic testing the pipework is capped or blind flanged, filled with water and pressurised up to 150% of design maximum operating pressure for a minimum of two hours. A minimum 24 hour duration leak test then follows. In general it is expected that no chemicals will be added to the test water as the pipeline is internally coated. However, in some locations chemicals may need to be added if there is danger of aggressive water affecting the integrity of the internal coating. In these cases and where necessary, the water will be treated to neutralise alkaline elements to an appropriate standard before discharge. Should chemicals be required, details of these chemicals will be included in Bridging Documents submitted to DMP for approval. Where possible pipe spools are moved away from the meter station pad for hydrostatic testing.	No chemicals will be added to the test water as the piping will be drained and dried after testing.
Touch up paint/wrapping	Minor paint chips etc are touched up with a paintbrush. Larger areas to be painted are spray painted with careful consideration to the wind direction and intensity, proper masking of nearby pipe and equipment and storage of paint. All below ground field joints are wrapped in denso tape. All below ground pipe is jeep tested to ensure paint integrity. Jeep testing involves placing an electrical charge on the steel pipe then using a steel brush on the pipe coating. If a jeep noise is heard then it is an indicator of electrical continuity between the brush and the steel pipe and indicates a paint defect (i.e. crack).	

Activity	Generic CEMP Description	Detailed Description
	Any below ground paint defects are wrapped.	
Backfill	Imported clean sand is used around and 200 mm below any below ground piping. Common fill is used for the remaining fill. Common fill will be certified weed and disease free as well as non acid sulphate soil.	Common fill will also be used for the expansion of the site footprint.
Remove dewatering (if installed)	Turn off pump and remove dewatering spears. Pump settling pond dry and remove plastic liner. Ensure that any settled material remains in the liner and is disposed of at an approved location.	Not anticipated
Fencing	Fencing is installed around meter station and blue metal is placed on ground in meter station compound.	
Commission meter station	The station piping is vented with natural gas to ensure cleanliness. A vent pipe with an outlet 2.2m above ground level is used. Estimated volumes of natural gas to be vented to the atmosphere will be included in project specific Bridging Documents submitted to DMP for approval. The station pipe work is pressurised to line pressure, pressure reduction valves set (if installed) and electrical equipment energised and tested. Following successful commissioning first gas to the client can be delivered.	Commission compressor and full meter station operation. DBP estimate that approximately 185 GJ of gas may be vented during commissioning.
Site clean up and rehabilitation	Removal of site office, ablutions, workshop and surplus materials. Any areas outside that are not to remain permanently will be rehabilitated. Areas which may remain include the access track and meter skid. Where necessary ground is re-contoured and topsoil re-spread.	Road surface shall also be reinstated to ensure safe access to the site. The extended compound shall be fenced and secured.

4. ENVIRONMENTAL RISK IDENTIFICATION AND ASSESSMENT

A project specific environmental risk assessment was undertaken on 10th November 2017 in accordance with the methodology documented in Section 4.1 of the Construction EP, which determined that all activities required for construction of the Project, are completely contained within the scope of the Construction EP. All risks associated with the activity are included in and will be managed in accordance with management measures outlined in the Construction EP.

Table 3 shows the potential environmental impacts and associated risk ratings that were identified for works related to the Project.

Table 3 Potential Environmental Impacts of the Project and Associated Risks

	EP Reference	Activity	Potential Environmental Impact	Controls	Consequence	Likelihood	Risk Level
1	6.14, 6.15	Refuelling and servicing	Contamination of local environment.	Preferentially refuel at public fuel station; Use a drip tray for minor refuelling required; No refuelling within 100 m of surface waters (Creek approximately 200 m away from the work front) Refuelling trailer shall be self bunded. Spill kits shall be available.	Minor	Unlikely	Low
2	6.14, 6.15	Chemical storage and handling	Contamination of local environment.	Bulk volumes shall remain stored within a dedicated bunded area; Signage and labelling; Separation as required; Appropriate training; Licenced contractors	Severe	Remote	Low
3	6.16	Waste management	Contamination of local environment.	DBP Waste Procedure. Waste shall be segregated for offsite disposal by Licenced contractor's. Washdown of concrete agitators and plant offsite at concrete batch plant.	Minor	Unlikely	Low
4	6.2	Clear and Grade	Impacts on vegetation and flora (including fauna habitat)	Clearing footprint shall be clearly demarcated. Topsoil shall be salvaged for later respreading.	Minor	Unlikely	Low
5	6.5		Impacts on fauna.	Check for fauna under machinery prior to start up.	Trivial	Occasional	Low
6	6.3		Spreading of weeds to detriment of native vegetation.	No access into COE areas required under work scope.	Minor	Occasional	Low
7	6.6		Cultural heritage disturbance.	Induction to reinforce the importance of remaining within the demarcated Project area – no off site movements allowed. Stop work if cultural material found.	Severe	Remote	Low
8	6.9		Noise	Use and maintain proper equipment;	Trivial	Unlikely	Negligible

	EP Reference	Activity	Potential Environmental Impact	Controls	Consequence	Likelihood	Risk Level
9	6.8		Generation of dust that will impact flora/fauna and local amenity.	Small scale earthworks only. Short term disturbance timeframe. Minimise earthworks in windy conditions; Use water sprays and other suppressants if required	Minor	Unlikely	Low
10	6.1	Cable Trenching and back fill activities	Alteration to hydrological regimes (surface drainage) and sedimentation.	Construction activities avoid surface waters and wetlands; restore landform following reinstatement. Design has included an extension to the existing drainage to take into account the additional length of gabion wall.	Minor	Remote	Negligible
11	6.1, 6.12		Soil erosion	Minimise length and timeframe of stockpile exposure. Reinstate gabion wall as per design. Excavations and trenching beyond 300mm are not expected to occur.	Trivial	Unlikely	Negligible
12	6.5		Fauna impacts (entrapment).	Excavations and trenching (beyond 300mm are not expected to occur	Trivial	Occasional	Low
14	6.13		Disturbance of acid sulphate soils.	Small, shallow, short term cable trench (<300mm) excavation within area of low probability of ASS, risk not deemed credible.	Minor	Remote	Negligible
16	6.4		Major explosion (fire and gas release)	Permit to Work System, established no go zones; positive ID of adjacent pipework. No lifting over live pipe.	Severe	Remote	Low
17	6.6		Cultural heritage disturbance.	Site surveys conducted. Registered sites identified. No sites within Project footprint. Induction to reinforce the importance of remaining within the demarcated Project area – no off site movements allowed.	Severe	Remote	Low

	EP Reference	Activity	Potential Environmental Impact	Controls	Consequence	Likelihood	Risk Level
	6.3	Back fill	Spread of weeds, Pests or Pathogens	Clean fill to be weed and seed certified from local quarries.	Severe	Remote	Low
20	6.5	Welding	Fauna impacts (entrapment).	Inspect pipe prior to welding and cap welded pipe ends.	Trivial	Occasional	Low
21	6.4		Fire	Spotter, fire extinguisher, Screens / humpies, Dedicated hot work zones	Minor	Unlikely	Low
22	6.1	Hydrotesting	Erosion	Manage hydrotest discharge water velocity to prevent erosion, consider disposal to vegetated area or geofab.	Minor	Unlikely	Low
23	6.10, 6.14, 6.15, 6.16		Contamination of local environment	No introduction of chemicals into hydrotest water unless approved by DMIRS	Minor	Unlikely	Low
	4.1	Spray painting / abrasive blasting	Contamination of local environment	Pipework painted prior to delivery to site. Mechanical preparation to eliminate / minimise blasting. Spray painting to be minimised on site.	Minor	Remote	Low
24	6.8	Venting	Air emission - GHG	Continuous monitoring and cessation of venting as soon as practicable in order to minimise vent volume; estimate and report on vented volume.	Trivial	Frequent	Low
25	6.17	Clean-up and rehabilitation	Lack of vegetation can lead to erosion, sedimentation, visual amenity and alterations in hydrological regimes. Disturbance to existing vegetation and fauna habitat.	Clean-up site prior to departure Respread topsoil over disturbed areas not required for further use	Minor	Unlikely	Low
26	6.3	Vehicle Use	Spread of weeds, pests and pathogens, destruction to native vegetation	Stick to established tracks; no COE entry required	Minor	Occasional	Low
27	6.4		Fire	Avoid parking in tall grass; Regularly check under vehicle for build-up of combustible matter	Minor	Unlikely	Low
28	6.5		Fauna injury or death	Enforce speed limits; Avoid dawn and dusk driving where practicable	Frequent	Trivial	Low

5. IMPLEMENTATION STRATGEY

Each hazard and associated impact identified during the risk assessment has been attributed to at least one of the below environmental interactions:

- Soils and Sediment
- Flora
- Weeds, Pests and Pathogens
- Fire
- Fauna
- Cultural Heritage
- Land Users
- Dust
- Noise
- Surface and Ground Water
- Hazardous Materials Storage and Handling
- Spill Response
- Waste
- Rehabilitation

This section provides a summary of the relevant environmental controls from the Construction EP.

5.1. Soil and Sediment

Control Measure
Vehicle movements shall be restricted to the work site, established access tracks and sealed roads except in case of emergency.
Temporary and/or permanent soil erosion berms, drains and sediment barriers shall be installed, where required, for erosion protection.
Design of erosion and sediment control measures shall consider site conditions such as wind, rainfall frequency and intensity, soil type, infiltration rates, gradient, catchment area, vegetation cover and condition.
Soil and surface stability shall be maintained at all times (e.g. cut and fill excavation shall be shaped to maintain slope stability and temporary erosion control berms, drains and sediment barriers shall be installed as necessary and maintained until final construction clean-up is completed).
Soil stockpiles shall be placed such that they do not impact on surface water flows.
Soil shall not be stockpiled where it has the potential to result in sedimentation of land or surface water (e.g. on slopes that drain immediately to a watercourse). Topsoil containment measures e.g. berms and sediment fencing shall be used as necessary.
To prevent erosion, hydrostatic test water shall be discharged on to a diffuser (or suitable vegetated area) at a rate of less than 32 L/s.

5.2. Flora

Control Measure
Maintain a GIS Environmental Database to present up to date publically available information regarding the location of conservation significant and environmentally sensitive areas.
Utilising the GIS Environmental Database, conduct pre clearing checks to ensure the proposed clearing is in compliance with an existing permit or approval and not at strong variance with the 10 clearing principles defined under Schedule 5 of the EP Act.
Vegetation clearing shall be kept to the minimum amount necessary to allow access or approved works.
Previously cleared areas shall be utilised where possible for laydown and turn around points.

Control Measure
Records shall be kept to document the details of clearing conducted in order to facilitate reporting in accordance with relevant approvals.

5.3. Weeds, Pests and Pathogens

Control Measure
When sourcing imported soil, priority shall be given to materials sourced from the immediate area.
Any imported soil shall be certified as free of weed and pathogens.
All vehicles shall stick to designated roads and access tracks.

5.4. Fire

Control Measure
All construction activities shall be conducted in accordance with the requirements of regulatory and local fire authorities. In particular, operations shall comply with relevant fire restrictions, notification requirements and permitting procedures.
Fire weather warnings will be monitored daily through local government sources and other relevant authorities and communicated to construction crews daily during toolbox meetings.
All equipment shall be maintained and operated to comply with relevant fire safety standards.
Defective machinery shall be shut down until the defect is rectified and the machine made safe for operations.
Specific work procedures for all hot works (i.e. welding and grinding) shall include provisions to minimise risk of ignition.
Cleared vegetation shall be stockpiled away from hot work activities.
Machinery and vehicles not in use shall be parked in areas of low fire risk (e.g. not parked over shrubs, tall grass or cleared vegetation residue).
Where flammable or combustible chemicals are required to be stored on-site, appropriate fire-fighting equipment shall be available. Incompatible chemicals shall not be stored together.
All fires must be immediately reported to a supervisor.
Relevant personnel shall be trained in the use of fire fighting equipment.
The following is prohibited in hazardous areas: ▪ smoking ▪ the presence of matches, lighters and naked flame ▪ the access of any sources of ignition to the area (e.g. spark-ignition engines, motor vehicles etc.).
Open fires (barbecues, campfires, rubbish or brush burning) shall be prohibited at all times.

5.5. Fauna

Control Measure
Vehicles movements shall be restricted to established tracks and sealed roads, except in emergencies.
As far as practicable, restrict driving to within daylight hours and avoid driving at dusk and dawn.
During construction, resources shall be made available with fauna handler training who will undertake all fauna handling responsibilities.
Fauna handling equipment shall be made available for use by trained fauna handlers.
Pipes shall be inspected prior to welding and observed fauna removed by trained fauna handlers.
Welded pipeline sections shall be capped at end of shifts to prevent fauna entry.

Control Measure
Fauna shall not be fed and direct contact with fauna shall be avoided.
Domestic waste shall be maintained within sealed bins and collected for appropriate disposal.
Records shall be kept of all trapped or injured/fatal fauna interactions to document the date, location (KP), species, habitat, and any notes such as the form of encounter and details regarding release. These shall be recorded as incidents as required.
Report and respond to all fauna injuries and fatalities as an incident.

5.6. Cultural Heritage

Control Measure
All personnel working on or near an Aboriginal site shall be made aware of their responsibilities under the Aboriginal Heritage Act 1972.
No ground disturbing activity shall be conducted outside the spatial limits of the corridor.
If a previously unidentified cultural site is identified, the following must be undertaken: ▪ stop all work within 30 m of potential Heritage site ▪ report the location and nature of the site to the Senior Advisor – Environment and Heritage ▪ establish a 30 m buffer around the site, outside which work may continue.
Notify the relevant regulatory body and Aboriginal group regarding any previously unidentified potential sites encountered during works, as soon as practicable.
All personnel shall be inducted regarding the cultural significance of the DBNGP corridor.

5.7. Land users

Control Measure
All work areas and access tracks required on land outside the construction area in the pipeline corridor shall be identified.
Impact on local roads or other infrastructure and maintenance or management of access shall be agreed with relevant authorities.
Affected stakeholders shall be consulted to ensure that necessary action is taken to address concerns throughout and after construction.
All construction activities shall be restricted to the construction area within the pipeline corridor unless otherwise agreed to with landowner and described in the environmental approval documentation.
Agreed management of interaction with other infrastructure shall be adhered to.
Personnel shall enter and exit the corridor on designated roads and access tracks.
Appropriate signage, shall be installed during construction and operation to clearly identify the presence of construction vehicles and the pipeline.

5.8. Dust

Control Measure
BOM forecasts shall be consulted during construction planning to avoid undertaking earthworks during high wind events or when prevailing winds are toward sensitive receptors.
The construction schedule shall be planned to minimise the elapsed time between clearing, grading and completion.
The clearing footprint shall be minimised to the maximum extent practicable.
Local stakeholders (within 200 m of construction area) shall be advised of the likely duration, impacts, potential health risks and mitigation measures to be undertaken whilst construction is occurring in their vicinity.
Unnecessary movement of vehicles shall be avoided.

Control Measure
Vehicle movements shall be restricted to remain within dedicated access tracks and the construction footprint.
Stockpiles shall be lower than the average height of surrounding structures, with a maximum height of 2 m.
Where excessive airborne dust is generated or a substantiated landholder complaint received, any combination of one or more of the following shall be implemented as required: • application of water or stabilisers via water trucks and sprayers to dampen down soil. No run-off should be generated from application. Applications shall be frequent enough to provide persistent dust suppression. • Cover vehicles with dust emitting loads (except when loading and unloading). • Use of dust stabilisers, tarps or geo-textile materials to suppress dust generated from stockpiles.

5.9. Noise

Control Measure
Equipment shall be selected in consideration of its noise emissions. Where practicable, equipment should be selected that is likely to result in the lowest noise impact whilst still completing the required task.
Equipment shall be fitted with appropriate noise abatement devices (e.g. mufflers, silencers and screens) and maintained in good working order.
Semi-fixed noise generating equipment (e.g. generators, compressors and campsite equipment) shall be located as far as practicable from surrounding premises.
Report and respond to all noise complaints as an incident.

5.10. Surface and Ground Water

Control Measure
Maintain a GIS Environmental Database to present up to date publically available information regarding the location of all surface water systems in the vicinity of the corridor.
Disposal of dewater product or hydrostatic test water shall comply with Department of Water (DoW) (now DWER) requirements as set out in *Water Quality Protection Note 13 Dewatering of Soils at Construction Sites (DoW 2012)*.
Chemical additives to hydrostatic test water shall not be used unless approved following written notification to DMIRS.
Disposal of dewater or hydrostatic test water to ground shall occur in a manner that ensures that standing water does not remain present for a period of more than 3 days. This will involve consideration of the volume to be discharged, aquifer capacity and the permeability of the receiving medium.
Disposal of dewater or hydrostatic test water to ground shall not occur within conservation significant areas (including reserves, ESA's wetlands and threatened flora habitat).
Disposal of dewatering or hydrostatic test water to surface water shall not be undertaken.
Records shall be kept of the dates of abstraction for hydro-testing water, volumes abstracted and location of disposal.

5.11. Hazardous Materials Storage and Handling

Control Measure
All chemicals used during operations shall be transported, stored, handled and disposed of in accordance the requirements of the relevant legislation and industry standards.
All personnel involved in hazardous materials handling shall be adequately trained.
All chemicals and hazardous substances on site shall be on the project SDS register and SDS shall be available on site.
Hazardous materials shall be stored in containment facilities (e.g. bunded areas, leak proof trays) designed to hold 110% of the capacity of the largest tank and be impervious to prevent the release of spilt substances to the environment.
Additional spill containment facilities such as compacted pads or drip trays are to be provided at refuelling stations, oil and chemical storage sites and vehicle maintenance areas.
Hazardous materials are to be provided, stored and maintained in a sealed condition, without leaks.
Hazardous materials shall be stored in labelled and lidded containers.
Fuels and chemicals shall not be stored or handled within 100 m of natural or built waterways or water storage areas (e.g. streams, canals, dams, lakes etc.).
Refuelling tanks, lines, hoses, pumps, couplings, valves and associated equipment are to be provided and maintained in good working order.
Major servicing of plant and equipment shall be undertaken off-site in appropriately equipped areas.
A drip tray will be used at all times when re-fuelling or lubricating.

5.12. Spill response

Control Measure
Appropriate spill response equipment, including containment and recovery equipment, shall be available on site where there is the potential for fuel or chemical spillage.
All spills must be addressed immediately in accordance with the Spill Prevention and Response Procedure (DBP 2012).
Spills shall be stopped at source as soon as practicable.
Spilt material shall be contained to the smallest possible area.
Spilt material shall be recovered as soon as possible, using appropriate equipment.
All spills shall be recorded as an incident requiring reporting on the: ▪ date, time, location ▪ quantity and material spilled ▪ circumstances that caused the spill ▪ size and type of affected area ▪ damage / harm caused ▪ description of clean-up activities
All contaminated material must be removed and disposed of at a licenced facility.

5.13. Waste management

Control Measure
All waste shall be disposed of in accordance with signage and site specific procedures. If unsure consult your supervisor.
All waste shall be disposed of in dedicated, labelled and lidded bins.

Control Measure
Do not overfill waste bins.
All waste will be transported to a licenced waste disposal facility by a licensed waste contractor.
All general wastes, including materials such as wood, vegetation, rags, paper and domestic scraps shall be properly disposed of at a Shire or other approved waste facility.
Good housekeeping shall be maintained at all times.
Chemical waste shall be stored in a labelled, lidded container within a bunded area for collection and offsite disposal by a licenced contractor.
Timber skids, pallets, rope spacers, drums and scrap metal shall be stockpiled separately for salvaging or recycling.
Temporary portable sanitary or ablution facilities shall be provided on-site (in the laydown areas) where existing facilities are not present.
Ablution facilities shall be regularly cleaned and maintained.
Sewage collected within portable sanitary or ablution facilities shall be removed by a licensed contractor and disposed of to a licensed facility.

5.14. Rehabilitation

Control Measure
All waste materials (e.g. bags, pegs, skids, pillows) and equipment shall be removed from the construction areas once backfilling and tie-ins are completed.
All flagging and bunting installed for other than environmental or safety reasons shall be removed from the construction areas once backfilling and tie-ins are completed.
All temporary gates shall be removed (unless required for operational reasons) and the fence reinstated to at least as good as the pre-construction condition. Gates removed from the fence line shall be returned.
Any infrastructure disturbed during construction shall be restored to the landholder's satisfaction.
Photos shall be taken to document the site conditions once reinstated.
Public roads and tracks used during construction shall be returned to their pre-construction state, or to a condition agreed to with the landholder.

5.15. Air Emissions

Control Measure
Venting during commissioning shall be continuously monitored (visually) and ceased as soon as practicable in order to minimise vent volume.

6. CONSULTATION

DBP will be undertaking the Project scope of works entirely within the DBNGP corridor. DBP has access to the DBNGP corridor by virtue of the Access Right instrument dated 20 March 1998 issued under Section 34 of the *Dampier to Bunbury Pipeline Act 1997*. As such, there is no further landholder consent required prior to undertaking works.

Table 4 below provides the details regarding consultation with landowners and local authorities identified as stakeholders in the proposed construction activities.

Table 4 Details of Consultation

Stakeholder	Timing
City of Karratha	November 2017
Woodside	Ongoing
Main Roads	November 2017
Murujuga Aboriginal Corporation	May 2017

7. REFERENCES

Bancroft W. and Bamford M. J. (2006). *Fauna Values of Stage 5 of the Dampier to Bunbury Natural Gas Pipeline (DBNGP),* unpublished report prepared for Strategen.

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DBP (2013). DBNGP Minor Projects Construction Environment Plan Revision 4.2.