

Title of Proposal - Pluto-North West Shelf Interconnector (PNI)

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.

The onshore components of the North West Shelf (NWS) Project and Pluto Liquefied Natural Gas Plant (Pluto LNG Plant) are located on the Burrup Peninsula of the Pilbara Region in Western Australia. The NWS Project, also known as the Karratha Gas Plant (KGP), was originally commissioned in 1984 with feed gas coming from the North Rankin Platform. The KGP is operated by Woodside Energy Limited (Woodside) on behalf of the North West Shelf Joint Venture (NWSJV). The Pluto LNG Plant was commissioned in 2006 and is operated by Woodside on behalf of the Pluto LNG Joint Venture.

DDG Operations Pty Ltd (DDGO) (a company forming part of the Australian Gas Infrastructure Group (AGIG)) has been engaged by Woodside to investigate and provide a Front-End Engineering Design (FEED) proposal to design and construct an interconnector pipeline, connecting the Pluto Interconnector Compressor Station (PICS) located on the external boundary of the Pluto LNG Plant adjacent to the Burrup Road and the KGP. The pipeline is known as the Pluto-NWS Interconnector (PNI). The proposed action or the PNI will connect the Pluto LNG Plant and the KGP, enabling transfer of gas to the KGP for processing thereby maintaining feed gas supply to KGP, particularly should there be fluctuations in the volume of gas supplied to the KGP via the subsea trunklines from the North Rankin Platform.

The PNI is a 3.3 kilometre (km) long, buried steel natural gas pipeline, connecting the PICS to the KGP, located on the Burrup Peninsula in North Western Australia.

From the PICS, the PNI will traverse the Dampier to Bunbury Natural Gas Pipeline (DBNGP) corridor (DBNGP Corridor) and extend north for approximately 2.2 km to the DBNGP Dampier Facilities before traversing the NWS buffer zone lease (I123605) granted to the NWS Project participants (Buffer Zone Lease) for approximately 400 metres (m) and then into the KGP lease (I123606) granted to the NWS Project participants (KGP Lease) for approximately 700 m (Appendix A).

Within the DBNGP Corridor, the PNI will be constructed at a minimum safe distance of 6.5 m from the existing DBNGP pipeline, which is also located within the DBNGP Corridor. Within the KGP Lease and the Buffer Zone Lease, the PNI could be constructed closer than 6.5 m to the existing DBNGP pipeline subject to appropriate risk assessments, safety cases and approvals between the relevant parties. The existing DBNGP Corridor has been disturbed historically during the original construction, and at sections along the DBNGP Corridor for subsequent inspection, maintenance and expansion activities.

The PNI will be constructed within a 30 m wide construction right of way (known as the Indicative Disturbance Footprint) which will be located within the KGP Lease, Buffer Zone Lease and the DBNGP Corridor, together with an area of approximately 0.6 hectare (ha) located adjacent to the existing DBNGP Dampier Facilities and two 10 m wide tracks to facilitate access

between the Indicative Disturbance Footprint and Burrup Road. The size of the Indicative Disturbance Footprint is approximately 21.1 ha, however there is only 10.69 ha of vegetation clearing proposed.

DDGO will be seeking a pipeline easement under the Petroleum Pipelines Act 1969 for the section of the PNI located within the KGP Lease and Buffer Zone Lease and an access right under the Dampier to Bunbury Natural Gas Pipeline Act 1997 for the section of the PNI located within the DBNGP Corridor.

At this stage, the proponent is DDGO. AGIG may however register a new company (related to DDGO) to build, own and operate the PNI, which will also be the pipeline licence holder and the grantee of all relevant land tenure and other licences or permits required for the project.

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
Indicative Disturbance Footprint	1	-20.619312514735	116.76919345887
Indicative Disturbance Footprint	2	-20.619272348504	116.76919345887
Indicative Disturbance Footprint	3	-20.619031350898	116.7690217975
Indicative Disturbance Footprint	4	-20.6170631895	116.77159671815
Indicative Disturbance Footprint	5	-20.612604607367	116.77498703035
Indicative Disturbance Footprint	6	-20.609591977992	116.77640323671
Indicative Disturbance Footprint	7	-20.60493232724	116.77708988221
Indicative Disturbance Footprint	8	-20.599228078048	116.77914981874
Indicative Disturbance Footprint	9	-20.596737423423	116.78215389283
Indicative Disturbance Footprint	10	-20.596456217925	116.78215389283
Indicative Disturbance Footprint	11	-20.596496390171	116.78060894044
Indicative Disturbance Footprint	12	-20.596094667237	116.78060894044
Indicative Disturbance Footprint	13	-20.596134839578	116.78249721559
Indicative Disturbance Footprint	14	-20.596817767756	116.78249721559
Indicative Disturbance Footprint	15	-20.599348592563	116.77936439546

Area	Point	Latitude	Longitude
Indicative Disturbance Footprint	16	-20.604972497251	116.77734737428
Indicative Disturbance Footprint	17	-20.609752653063	116.77661781343
Indicative Disturbance Footprint	18	-20.612684943335	116.77524452241
Indicative Disturbance Footprint	19	-20.617384523711	116.77172546418
Indicative Disturbance Footprint	20	-20.619312514735	116.76919345887

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 PNI will be constructed on land adjacent to the KGP and Pluto LNG Plant, located on the Burrup Peninsula in the Pilbara Region in Western Australia.

The PNI will traverse the DBNGP corridor and extend north for approximately 2.2 km to the DBNGP Dampier Facilities before traversing the NWS buffer zone lease (I123605) granted to the NWS Project participants (Buffer Zone Lease) for approximately 400 metres (m) and then into the KGP lease (I123606) granted to the NWS Project participants (KGP Lease) for approximately 700 m (Appendix A).

1.6 What is the size of the proposed action area development footprint (or work area) including disturbance footprint and avoidance footprint (if relevant)?

21.1 ha (10.69 ha clearing)

1.7 Is the proposed action a street address or lot?

Lot

1.7.2 Describe the lot number and title. Lease I123605 and Lease I123606. DBNGP Corridor.

1.8 Primary Jurisdiction.

Western Australia

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?

No

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

Start date 03/2019

End date 12/2020

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

The proposed action will be subject to the State regulatory framework outlined below:

Environmental Protection Act 1986 (WA) (EP Act);

Environmental Protection (Noise) Regulations 1997 (WA);

Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (WA);

Aboriginal Heritage Act 1972 (WA);

Heritage of WA Act 1990 (WA) (AH Act);

Rights in Water and Irrigation Act 1914 (WA) (RIWI Act);

Biodiversity Conservation Act 2016 (WA);

Biosecurity and Agriculture Management Act 2007 (WA) (BAM Act);

Wildlife Conservation Act 1950 (WA) (WC Act); and

State Agreement: North West Gas Development (Woodside) Agreement Act 1979 (relevant to the NWS).

The PNI will require the following approvals and permits:

- Assessment and approval under Part IV of the EP Act;
- Native Vegetation Clearing Permit (if not assessed under Part IV of the EP Act);
- Environmental Plan under the Petroleum Pipelines Act 1969;
- 5C License to Take Water under the Rights in Water and Irrigation Act 1914 (if required);

and

· Pipeline easement granted under Petroleum Pipelines Act 1969, Access Right granted under Dampier to Bunbury Pipeline Act 1997.

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

From the commencement of planning studies associated with the PNI, consultation has been undertaken with various parties including:

Representatives from the Yaburara Mardudhunera group, Wong-Goo-tt-oo group, Murujuga Aboriginal Corporation and the Ngarluma Yindjibarndi group;

Woodside Energy Limited (Woodside);

Department of Jobs, Tourism, Science and Innovation;

Department of Planning, Lands and Heritage;

Environmental Protection Authority;

Main Roads Western Australia;

Department of Water and Environmental Regulation; and

Department of Mines, Industry Regulation and Safety.

Further consultation as required will take place as design progresses.

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 EP Act requires all proposed actions that are likely to have a significant impact on the environment be assessed by the Environmental Protection Authority (EPA) to determine whether the proposed action can be managed to meet the EPA's environmental objectives and whether conditions should be placed on a proponent to provide an added level of certainty that appropriate environmental management will be undertaken.

DDGO prepared an Approvals Strategy to provide an initial assessment of the potential environmental and heritage values of the area, assess the significance of these potential impacts and define the approvals required for the proposed action. The Approvals Strategy involved a desktop assessment of environmental aspects and impacts, site investigations and an assessment of native vegetation clearing and heritage.

The results of the Approvals Strategy, assessments, site investigations and initial consultation

with the EPA indicates that there is minimal potential for the proposed action to have a significant environmental impact.

The Approvals Strategy determined that impacts could occur to the following EPA factors, however these impacts are unlikely to be significant:

Flora and Vegetation;

Terrestrial Fauna;

Social Surroundings.

A referral under the EP Act has been prepared and submitted to the EPA in parallel with this EPBC Act referral. A pre-referral meeting has been held with EPA Services (now part of DWER).

DDGO is awaiting the outcome of the assessment of the referral under S38 of the EP Act. Should the PNI not be assessed, DDGO will prepare a Native Vegetation Clearing Permit which will be submitted under Part V of the EP Act.

The PNI, which is the focus of this referral is unlikely to have a significant impact on the mentioned EPA factors. However, if it is determined that the action is a Controlled Action, it is requested that assessment be undertaken under the provisions of the bilateral agreement made under section 45 of the EPBC Act or an accredited assessment process.

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).

Pipeline easement granted under Petroleum Pipelines Act 1969, Access Right granted under Dampier to Bunbury Pipeline Act 1997 and pipeline licence under the Petroleum Pipelines Act 1969.

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 have ANY direct or indirect impact on the values of any World Heritage properties?

No

2.2 Is the proposed action likely to have ANY direct or indirect impact on the values of any National Heritage places?

No

2.3 Is the proposed action likely to have ANY direct or indirect impact on the ecological character of a Ramsar wetland?

No

2.4 Is the proposed action likely to have ANY direct or indirect impact on the members of any listed species or any threatened ecological community, or their habitat?

Yes

2.4.1 Impact table

Species	Impact
Northern Quoll (EPBC Act and WC Act listed as Vulnerable) Pilbara Olive Python (EPBC Act and WC Act listed as Vulnerable)	A known single record of this species occurs within 500 m of the survey area. Direct disturbance to this location will not occur.

Species	Impact
	<p>Additional individuals may be present in suitable habitat within the Indicative Disturbance Footprint. It is considered likely that that northern quoll uses the survey area for foraging or dispersal purposes only. The habitats within the survey area are not suitable as denning, breeding or shelter habitat. A known single record of this species occurs within 6 m of the northern boundary of the survey area. Direct disturbance to this location will not occur. Additional individuals may be present in suitable habitat within the Indicative Disturbance Footprint. It is considered likely that the Pilbara olive python will utilise the survey area for foraging or dispersal purposes only. The habitats within the survey area are not suitable as shelter habitat and are not considered critical habitat.</p>

2.4.2 Do you consider this impact to be significant?

No

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

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 to be taken on or near Commonwealth land?

No

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

No

2.9 Is the proposed action likely to have ANY direct or indirect 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 have ANY direct or indirect 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.

No State or Commonwealth listed Threatened flora were recorded within the survey area (Astron, 2018). Two State Listed Priority (P) flora species were identified; *Terminalia supranitifolia* (P3) and *Rhynchosia bungarensis* (P4). These species are considered widespread on the Burrup Peninsula (Astron, 2018).

No weed species listed as a Weed of National Significance (Australian Weeds Committee 2012) or declared pest plant in Western Australia under the Biosecurity and Agriculture Management Act 2007 (BAM Act) were recorded in the survey area. Two introduced species *Aerva javanica* (Kapok) and *Cenchrus ciliaris* (Buffel Grass) were recorded in the survey area. *C. ciliaris* was identified as a key species in disturbed vegetation of the survey area (Astron, 2018).

The desktop assessment (Astron 2018) identified 59 species that may occur within the vicinity of the Indicative Disturbance Footprint. Of these, two Threatened fauna species have a high likelihood of occurrence (Northern Quoll (*Dasyurus hallucatus*) and Pilbara Olive Python (*Liasis olivaceus barroni*). Three species have a moderate likelihood of occurrence (Lined soil-crevice skink - *Notoscincus butleri* (Priority 3), Fork-tailed swift - *Apus pacificus* (migratory) and Peregrine Falcon - *Falco peregrinus* (Other Specially Protected Fauna). The remaining species we considered to have a low likelihood of occurrence (Astron, 2018).

The field survey (Astron 2018) recorded a total of three vertebrate species in the survey area. These were:

Euro (*Osphranter robustus erubescens*);

Short-beaked echidna (*Tachyglossus aculeatus acanthion*); and

Corella (*Cacatua sanguinea*).

Feral and pest animals that are likely to occur within the survey area are the Rock Pigeon, House Sparrow, Eurasian Tree Sparrow, Domestic Dog, Horse, Domestic Cat, House Mouse, Rabbit, Black Rat and the Red Fox (Astron, 2018).

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

The Burrup Peninsula and the wider Pilbara region predominantly relies on the wet season for

surface freshwater supplies. Freshwater flows tend to be highly variable and high flow, short period (duration) events often occur. During the dry period surface water supplies are limited with stream flow and recharge of deep water holes and gorges becoming restricted (Woodside, 2006).

Groundwater aquifers are present across the Burrup Peninsula, occurring as localised systems with regional flow of isolated pockets in rock fractures, joints and cavities of rock mass. The Burrup Peninsula contains soils and underlying weathered bedrock that are highly permeable enabling groundwater recharge from rainfall events. The presence of granophyre governs the rate and nature of groundwater movement. At shallow depths, there is limited potential for long-term subsurface water storage and at lower depths it is expected to be generally tight, solid rock mass, with limited open fractures/joints. Perched water tables are expected to have little groundwater flow, where presence of water is temporary and is subjected to gradual drainage and evaporation. Groundwater aquifers are not used for commercial or domestic abstraction purposes (Woodside, 2006).

The natural topography has been modified and historically disturbed from the existing DBNGP Corridor and KGP and Pluto LNG Plant adjacent to the proposed action location. No permanent natural bodies of fresh surface water exist on site however an ephemeral creekline crosses the site to the east of the Pluto LNG Plant. An ephemeral creekline runs to the east of the Burrup Road emptying into King Bay. Several minor tributaries of this creekline cross the Indicative Disturbance Footprint.

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

The Burrup Peninsula comprises of Archaean igneous rocks that includes granophyres, gabbros and small granite exposures and relatively shallow, heavily weathered red soils reaching a maximum depth of 2.0 m in the lower alluvial slopes. The adjacent Pluto LNG soils are thin and develop between outcrops of rhyodacite. The soils consist of clayey sandy gravels, as a result of erosion from underlying rhyodacite with a transition between soil to very strong rock, with irregular soil-rock interface (Woodside, 2006). The surface geology of the proposed action area is comprised of the Gidley Granophyre unit. Surface soils have historically been disturbed/ and modified through the original trenching, blasting and filling during construction of the DBNGP.

The vegetation condition of the survey area ranges from completely degraded in disturbed areas to very good to excellent in undisturbed vegetation. Vegetation association, 117 (Abydos Plain – Roebourne), is the only pre-European vegetation unit mapped within the Indicative Disturbance Footprint. The vegetation association is described as hummock grassland, grass steppe; soft spinifex *Triodia* species. Nineteen vegetation types exist within the Indicative Disturbance Footprint and are well presented within the Burrup Peninsula, with the exception of vegetation types corresponding with Trudgen (2002) vegetation type TcBaTe. Outstanding Natural Features and/or any Other Important or Unique Values.

3.4 Describe any outstanding natural features and/or any other important or unique

values relevant to the project area.

The Indicative Disturbance Footprint is located on the Burrup Peninsula and is adjacent to but outside of the Murujuga National Park (Appendix B). The Burrup Peninsula is listed on the National Heritage List and contains a number of recorded and listed Aboriginal Heritage Sites and a large collection of rock art (petroglyphs).

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

No Threatened Ecological Communities (TEC) and no Priority Ecological Communities (PEC) were recorded within the survey area, although the Indicative Disturbance Footprint is found to be adjacent to the buffer of two PECs: the Burrup Peninsula rock pile communities; and the Burrup Peninsula Rock pool communities (Astron, 2018). The occurrence of native vegetation ranges from completely degraded to disturbed and undisturbed, where native vegetation regrowth displayed in disturbed area has been limited. The Trudgen (2002) TcBaTe vegetation type is considered locally significant due to its limited occurrence on the Burrup Peninsula. Approximately 8% (1.65ha) of the survey corridor consists of the TcBaTe vegetation type (Astron, 2018).

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

Not relevant to the PNI

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

The majority of the PNI will be constructed within either an industrial zoned area or adjacent to an existing pipeline where the native vegetation is significantly disturbed. The surrounding Burrup Peninsula is listed on the National Heritage List however will not be impacted by the PNI.

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

There were no Commonwealth Heritage Places in the project area in 2006 at the time of the Pluto LNG development; the nearest were located at Dampier, 7.5 km away (Woodside 2006). A search of the WA Heritage Council database (23/05/18) indicates two closest registered sites to the east of the project area: Watering Cove and Hearson's Cove, both on the eastern coastline of the Burrup Peninsula and at least 5km from the Indicative Disturbance Footprint.

A search of the Department of the Environment and Energy (DotEE) Databases identified no Commonwealth Heritage Places intersect the Indicative Disturbance Footprint.

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

The Western Pilbara Region and the Dampier Archipelago contain a vast number of Aboriginal heritage sites and objects. The Dampier Archipelago is found to have a range of 17 to 76 registered sites per square kilometre (National Trust, 2006) and at least 1 million rock art images known as petroglyphs (Woodside, 2006).

An initial search of the Aboriginal Heritage Inquiry Service database (21/05/18) indicates the presence of approximately 40-50 heritage values within the Indicative Disturbance Footprint, including both individual features and larger areas. A heritage survey conducted in July 2018 and subsequent consultation with stakeholder groups will enable sensitive locations to be avoided through the pipeline routing and design.

Horizon Heritage Management and the Yaburara Mardudhunera and Wong-Goo-tt-oo Traditional Owners with support from Woodside, DDGO and Integrated Heritage Services conducted a survey in 2018. Consultation with these main groups and other traditional owner groups is ongoing with further construction specific surveys planned in 2019. Traditional owner groups will be engaged during the construction process and form part of the work team to monitor works that may be in case proximity to sensitive ethnographic and archaeological areas.

DDGO has developed a Cultural Heritage Management Plan to guide and assist with the maintenance of heritage values during works

Seven Aboriginal sites; 9843 Surveyors Valley, 9854 LNG Scatter, 23333 Woodside Pluto Area B 46, 23340 Woodside Pluto Area B 68, SRS002, SRS004 and WPIC 001 were physically located within the survey area. These sites are previously identified Department of Planning, Lands and Heritage (DPLH) and Woodside Database Archived sites. No new Aboriginal (archaeological or ethnographic) heritage sites were identified during this survey (Horizon, 2018).

After the survey, the Indicative Development Footprint was revised down to a nominal 30 m wide corridor and subsequently now also avoids site 23340 Woodside Pluto Area B 68, leaving only six heritage sites within the Indicative Disturbance Footprint. The six remaining heritage sites within the Indicative Development Footprint will be avoided.

It is the intent of DDGO to avoid impacting any heritage sites or values during construction and the measures referred to in section 4.1.1 below have been proposed to manage and mitigate the potential impacts to the social surroundings.

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

The PNI and associated facilities will traverse a number of different land tenures including:

- (a) Lease I123605, being a Crown lease over Lot 199 on DP 216680 granted by the State to the NWSPJV for the Karratha Gas Plant (KGP Lease);
- (b) Lease I123606, being a Crown lease over Lot 197 on DP 30713 granted by the State to the NWSPJV (Buffer Zone Lease); and

(c) Various parcels of land either reserved or taken for the DBNGP Corridor.

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

The area of the proposed action is industrial-zoned area, as defined by the Burrup Land Use Plan and Management Strategy (BPMAB 1996) (Woodside, 2006). Adjacent land is used for the operation of the KGP and Pluto LNG Plant. A significant portion of the Indicative Disturbance Footprint is within area of the existing DBNGP (approx. 2.2 km of the length of the PNI), which was constructed in 1982 using blasting and conventional excavation techniques. The DBNGP Corridor has therefore already been significantly disturbed. The DBNGP was subject to various WA State approvals when it was constructed in 1982. The Dampier to Bunbury Pipeline Act 1997 novated these approvals to the DBNGP Land Access Minister, under which DDGO has rights to access, operate and maintain the DBNGP.

The remaining 1.1 km of the PNI will be located within the existing KGP and adjacent KGP Lease and Buffer Zone Lease. No new or additional land uses are proposed.

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.

DDGO has extensive experience in the construction and operation of underground gas pipelines on the Burrup Peninsula, having constructed the DBNGP in 1984 and currently operating both the DBNGP and the Burrup Extension Pipeline located on the Burrup Peninsula.

While other routes were investigated (including across the NWS Southern Expansion Lease and also aligning the new pipeline adjacent to the Burrup Extension Pipeline), the preferred route was selected as it was historically disturbed during the original construction and expansion of the DBNGP, as well as for the ongoing inspection and maintenance of the DBNGP. Developing the PNI on routes other than the DBNGP corridor is likely to impact Aboriginal heritage sites located on the Burrup Peninsula.

The following measures have been proposed to manage and mitigate the potential environmental impacts:

- The objective is to position the Indicative Disturbance Footprint in an area which will avoid disturbance of environmental values;
- The Indicative Disturbance Footprint is designed to maximise the use of areas with degraded vegetation (installed within the existing DBNGP corridor);
- The artificial drainage line created at the base of the Karratha LNG plant will be avoided;
- Vehicles will be inspected for weeds and seeds prior to mobilisation to site;
- The Indicative Disturbance Footprint alignment has been designed to minimise the removal of Pilbara Olive Python and the Northern Quoll habitat by avoiding the drainage line;
- Construction will be managed in accordance with the Construction Environmental Management Plan (CEMP). Management measures will include:
 - marking out the boundaries of areas to be cleared;
 - speed limits will be implemented and enforced;

- daily trench inspections and removal and relocation of trapped fauna;
- bell holes and the trench will include fauna escape ramps;
- bell holes will be fenced to exclude fauna; and
- injured fauna managements procedures.

The following measures have been proposed to manage and mitigate the potential impacts to heritage and social values of the area:

- Avoidance of Aboriginal heritage sites during earthworks, excavation and construction of the proposed action;
- Avoidance of culturally and socially valuable granophyre outcrops found within and around the proposed action;
- Barriers will be erected when construction occurs within 10 m of a known heritage site; and
- Construction will be managed in accordance with the Cultural Heritage Management Plan (CHMP) which includes cultural monitors being present during works being undertaken in the vicinity of cultural sensitive areas.

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.

The environmental outcomes to be achieved are stated below:

- Construction will occur over the majority of the degraded or disturbed vegetation, within the existing DBNGP Corridor.
- To preserve Aboriginal heritage sites and cultural values, heritage sites will be avoided during earthworks, excavation and construction of the proposed action.

The review of potential impacts against the Matters of National Environmental Significance (MNES) indicates that impacts to these are unlikely. DDGO will continue to construct the PNI in line with the relevant management plans and operating standards and procedures in order to manage potential impacts to as low as reasonably practicable.

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

No

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.

DDGO believe the construction of the PNI is not a controlled action for the following reasons:

- There are no impacts to threatened flora or fauna;
- There are no impacts to Threatened Ecological Communities;
- There are no impacts to the National Heritage Place;
- Construction will be of a short-term duration and reinstatement of topsoil will return the area to a condition similar to that currently existing; and
- The proposed action will be managed to avoid impacts to Aboriginal heritage, Northern Quoll and the Pilbara Olive Python.

The proponent requests that the PNI be assessed by Bilateral Assessment via Native Vegetation Clearing Permit if it is a controlled action.

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.

DDGO has for many years conducted business and implemented strategic and operational decisions with environmental sustainability as the core principle that is an integral part of our business agenda. We are reaffirming our commitment to integrate environmentally friendly policies and practices into our organisation by operating in a manner that promotes energy and materials conservation, as well as waste reduction.

DDGO has been supporting Landcare and the Yaburara and Coastal Mardudhunera Aboriginal Corporation (YACMAC) to eradicate feral cats in the Fortescue River Mouth region. AGIG's support is delivering trapping and baiting supplies to assist YACMAC to relieve the threat of predation on nesting turtles and threatened Northern Quolls in the area. Additional support has been provided through similar projects across WA in the Mid West, Wheatbelt and Peel regions to assist local landholder groups.

DDGO has been engaged in a range of construction and operational projects associated with its assets located across Western Australia in recent years. Dampier Bunbury Pipeline (DBP), which provides labour support to DDGO, owns and operates the 1,500 km DBNGP pipeline and several associated spur lines. Most of the activities have been regulated with respect to potential environmental impacts and management under both State and Federal environmental legislation. These approvals have been subject to a range of compliance audits and environmental performance reviews that demonstrate a good record of responsible environmental management. None of the construction and operational activities have resulted in any environmental impacts beyond that which was approved. Copies of audit reports can be made available if requested.

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.

DDGO has not been subject to any proceedings, either past or present, under a Commonwealth or State law for the protection of the environment or the conservation and sustainable use of natural resources.

6.3 If it is a corporation undertaking the action will the action be taken in accordance with the corporation's environmental policy and 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.

DDGO is committed to responsible environmental management of the proposed action and believes that all potential adverse environmental effects can be effectively managed in accordance with the Environmental Management System (EMS). All planning, construction and operation activities will be conducted in accordance with the DDGO Environmental Policy, which outlines a commitment to sound management of environmental aspects of the proposed action.

DDGO has adopted an EMS that includes the DDGO Health, Safety and Environment Policy, the Construction Environmental Management Plan, and other subsidiary environmental documentation including DDGO environmental procedures. The purpose of the EMS is to ensure proactive planning, sustainable development and continuous environmental improvement.

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.

DDGO has referred no proposals for assessment under the EPBC Act. Related entities however have submitted numerous proposals in the last 5 years.

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
Astron Survey, 2018, Burrup Peninsula Interconnector Pipeline Flora and Fauna Survey Report Department of Indigenous Affairs, 2008, Aboriginal Heritage Procedure Manual: Section 5. Department of Planning, Lands and Heritage (DPLH), 2018a, inherit, http://inherit.stateheritage.wa.gov.au Department of Planning, Lands and Heritage (DPLH), 2018b, Aboriginal Heritage Inquiry System, https://maps.daa.wa.gov.au/AHIS/ Ethnographic Research and Aboriginal Community Consultation, Department of Aboriginal Affairs. Available from: http://www.dia.wa.gov.au/Heritage--Culture/Sites--Surveys/Aboriginal-Heritage-Procedure-Manual/08-Ethnographic-Research-and-Aboriginal-Community-Consultation/ , 17 April 2008. Horizon Heritage Surveys, 2018, Aboriginal Heritage Site Avoidance Survey Report National Trust, 2006, Archaeology and rock art in the Dampier Archipelago, http://www.nationaltrust.org.au/wp-content/uploads/2015/10/ArchaeologyandrockartintheDampierArchipelago-1.pdf Woodside 2006, Pluto LNG Development Draft Public Environment Report /	Some limitations were identified in the Astron report, in particular around priority flora which has the potential to occur in the area but was not identified due to the dry season survey timing. However, this does not impact on assessment to impacts of MNES. The information sources used to inform this referral are both recent and reliable. Database searches and field surveys were undertaken in 2018. Field surveys followed regulatory requirements set out in published guidance material. Additional information was sourced from technical publications from recognised experts in the field of study	There are no uncertainties in the information sources.

Reference Source	Reliability	Uncertainties
Public Environmental Review, EPBC Referral 2006/2968, Woodside, December 2006.		

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?

The PNI is considered the only feasible alternative.

Not implementing the PNI would result in the inability to transfer gas between Pluto LNG Plant and the KGP. To allow for processing and transfer of future gas reserves additional onshore or offshore processing facilities would need to be constructed.

While other routes were investigated (including across the NWS Southern Expansion Lease and also aligning the new pipeline adjacent to the Burrup Extension Pipeline), the PNI was selected as the preferred alignment given that the route has been historically disturbed during the original construction and expansion of the DBNGP, as well as the ongoing inspection and maintenance of the DBNGP. Developing the PNI on routes other than what has been proposed is likely to impact heritage sites located in the Burrup Peninsula.

The DBNGP Corridor is owned and controlled by the State of Western Australia. Its purpose is to facilitate the supply of domestic gas to the south west of the state and this proposal is entirely consistent with achieving that aim.

8.1 Select the relevant alternatives related to your proposed action.

Timeframes

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

Start 03/2019

End 12/2020

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

Land Development Manager

9.2.2 First Name

Neil

9.2.3 Last Name

Parry

9.2.4 E-mail

neil.parry@agig.com.au

9.2.5 Postal Address

Level 6/7

12-14 The Esplanade

Perth WA 6000

Australia

9.2.6 ABN/ACN

ABN

76166900170 - DDG OPERATIONS PTY LTD

9.2.7 Organisation Telephone

+61 8 8227 1500

9.2.8 Organisation E-mail

neil.parry@agig.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:..... 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

Person proposing the action - Declaration

I, NEIL DAWSON PARRY, 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: ..... Date: 17/12/2018.....

I, NEIL DAWSON PARRY, the person proposing the action, consent to the designation of ODG OPERATIONS PTY LTD as the proponent of the purposes of the action describe in this EPBC Act Referral.

Signature: ..... Date: 17/12/2018.....

9.3 Is the Proposed Designated Proponent an Organisation or Individual?

Organisation

9.5 Organisation

9.5.1 Job Title

Land Development Manager

9.5.2 First Name

Neil

9.5.3 Last Name

Parry

9.5.4 E-mail

neil.parry@agig.com.au

9.5.5 Postal Address

Level 6/7

12-14 The Esplanade
Perth WA 6000
Australia

9.5.6 ABN/ACN

ABN

76166900170 - DDG OPERATIONS PTY LTD

9.5.7 Organisation Telephone

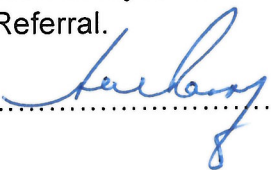
+61 8 8227 1500

9.5.8 Organisation E-mail

neil.parry@agig.com.au

Proposed designated proponent - Declaration

I, NEIL DAWSON PARRY, 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.

Signature:  Date: 17/12/2018

9.6 Is the Referring Party an Organisation or Individual?

Organisation

9.8 Organisation

9.8.1 Job Title

Land Development Manager

9.8.2 First Name

Neil

9.8.3 Last Name

Parry

9.8.4 E-mail

neil.parry@agig.com.au

9.8.5 Postal Address

Level 6/7

12-14 The Esplanade
Perth WA 6000
Australia

9.8.6 ABN/ACN

ABN

76166900170 - DDG OPERATIONS PTY LTD

9.8.7 Organisation Telephone

+61 8 8227 1500

9.8.8 Organisation E-mail

neil.parry@agig.com.au

Referring Party - Declaration

I, NEIL DAWSON PARRY, 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:  Date: 17/12/2018

Appendix A - Attachments

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

1. Appendix_A.pdf
2. Appendix_B.pdf
3. Appendix_C_1_reduced.pdf
4. Appendix_C_2_reduced.pdf
5. Appendix_C_3_reduced.pdf
6. Appendix_D_1_reduced.pdf
7. Appendix_D_2_reduced.pdf
8. PNI_Footprint_Rev_2.zip