



Title of Proposal - Tanami Gas Pipeline

Section 1 - Summary of your proposed action

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

1.1 Project Industry Type

Energy Generation and Supply (non-renewable)

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

DDG propose to construct and operate the Tanami Gas Pipeline (TGP), connecting the existing Amadeus Gas Pipeline to the Granites and Dead Bullock Soak mines, operated by Newmont Mining. Operation of the Tanami Gas Pipeline will facilitate transition of the power to the two mines from diesel to natural gas.

The pipeline alignment ties-in to the Amadeus Gas Pipeline adjacent to the Tanami Road Scraper Station and follows a north westerly route to the two mines, for the most part following the north-eastern side of the Tanami Road (the alignment will be outside of the road reserve which is nominally 50 m from the road centreline). The pipeline will be buried and require above ground infrastructure including: metering station, mainline valves, and tie-in stations.

Construction of the pipeline will require clearing of a 30 m Right of Way (RoW) and access tracks to the RoW from the Tanami Road. For assessment and approval purposes the RoW will be established within a 300 m wide pipeline corridor, to accommodate deviations in the alignment required to address site constraints (this may necessitate placing the pipeline on the south-western side of the Tanami Road for short distances).

Project components

The project components include clearing of a 30 m pipeline RoW within which the pipeline will be buried, construction of temporary access tracks to the RoW, establishment of temporary construction camps for the workforce, additional clearing for ancillary activities such as turn-around points, and above ground facilities for the operation of the pipeline (metering station, mainline valves and tie-in stations). Five above ground facilities are proposed:

- Tanami metering station (at tie in with the Amadeus Gas Pipeline)
- Two mainline valves located along the pipeline
- Granites Mine Tie-in Station
- Dead Bullock Soak Mine Tie-in Station.

The project components and the associated temporary and permanent footprints are set out in 'Attachment A – Section 1.2'. Construction of the Tanami Gas Pipeline will require clearing of up to 1348.5 ha of native vegetation along its 439 km length, of which 1125 ha (83%) will be rehabilitated (Table 1). Much of the disturbance footprint will be allowed to return to woody native vegetation over time. The total permanent disturbance footprint will be up to 223.5 ha, which is required for a 5 m wide permanent access track along the length of the alignment to enable ongoing access for maintenance of the pipeline, for the permanent above ground facilities, and for permanent access tracks from the Tanami Road to the pipeline.



Schedule

Construction of the pipeline is scheduled to begin in February 2018 and to be completed by December 2018. Construction will be progressive and commence at the tie-in with the Amadeus Gas Pipeline and finish at the Dead Bullock Soak Mine.

Pipeline construction

The pipeline will be constructed and operated in accordance with the requirements of AS 2885 Pipelines - Gas and Liquid Petroleum, and the Australian Pipelines and Gas Association: Code of Environmental Practice Onshore Pipelines (2013).

Construction will typically be carried out within a 30 m wide RoW using a production line approach. A number of turnaround points and potentially some water course crossings will require a wider disturbance width. 'Turkey nest dams' will be constructed to temporarily store hydro-test and construction water.

Construction of the pipeline will be undertaken by a number of specialised teams that will fabricate and install the pipeline along the RoW. The construction RoW will be progressively rehabilitated as construction activity moves along the alignment. A 5 m wide permanent access track within the RoW will be maintained for the period of pipeline operation. A description of the pipeline construction activities is provided in 'Attachment A – Section 1.2'.

Other construction requirements

The following components are described in ' Attachment A – Section 1.2

- Construction camps
- Water
- Power
- Waste
- Pipeline operation
- Pipeline decommissioning

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
TGP	1	-20.530276827319	130.34031856556
TGP	2	-20.549084432676	130.3727625658
TGP	3	-20.645497292751	130.44365871448
TGP	4	-20.753567683157	130.53206432362
TGP	5	-20.857229810939	130.60570705433
TGP	6	-20.885299376376	130.664758568
TGP	7	-20.983581642945	130.71574199696
TGP	8	-21.099417136106	130.78045833607
TGP	9	-21.17018774898	130.82320201893
TGP	10	-21.209081165347	130.82921016712
TGP	11	-21.237724497651	130.84603298206



Area	Point	Latitude	Longitude
TGP	12	-21.352082248688	130.89924800892
TGP	13	-21.395562786568	130.91744411487
TGP	14	-21.459001985042	130.97357738514
TGP	15	-21.478970833933	130.98816860218
TGP	16	-21.53439000133	131.01202953358
TGP	17	-21.592661119432	131.05477321644
TGP	18	-21.705783721665	131.12824428577
TGP	19	-21.776260921643	131.16171825428
TGP	20	-21.803677087298	131.20909679432
TGP	21	-21.84240144683	131.23124111194
TGP	22	-21.895451124923	131.25081050892
TGP	23	-21.957715495597	131.29630077381
TGP	24	-22.017565489411	131.32805812855
TGP	25	-22.038570667216	131.34865749378
TGP	26	-22.070390754515	131.35397899647
TGP	27	-22.095364504608	131.37475002308
TGP	28	-22.131465234324	131.45096767444
TGP	29	-22.153725391447	131.46676052112
TGP	30	-22.166284926453	131.51001918812
TGP	31	-22.177094767301	131.55533779163
TGP	32	-22.196168928982	131.56615245838
TGP	33	-22.228747961428	131.77180278797
TGP	34	-22.27466359259	131.8423556139
TGP	35	-22.325963231287	131.92149150867
TGP	36	-22.344382031054	131.92904460926
TGP	37	-22.398036721556	132.01041210193
TGP	38	-22.41231998542	132.02723491688
TGP	39	-22.417715503008	132.04955089588
TGP	40	-22.500843419356	132.18224514026
TGP	41	-22.570923954168	132.28575695057
TGP	42	-22.668374934291	132.43578899402
TGP	43	-22.683580558478	132.4560450365
TGP	44	-22.749927016833	132.50720012684
TGP	45	-22.792821305594	132.63268459339
TGP	46	-23.007880037288	132.74941432972
TGP	47	-23.129173930025	132.87438381214
TGP	48	-23.170843419819	132.78786647815
TGP	49	-22.964895589981	132.59972560901
TGP	50	-22.857691074373	132.54376400013
TGP	51	-22.747235781987	132.42051113147
TGP	52	-22.694428419214	132.34363509988
TGP	53	-22.694428419214	132.34363509988
TGP	54	-22.283319777273	131.73526717996
TGP	55	-22.226125068644	131.56085922098
TGP	56	-22.123751900675	131.34456588602
TGP	57	-21.902856433398	131.20174362039



Area	Point	Latitude	Longitude
TGP	58	-21.423609502982	130.90373947
TGP	59	-21.209960385792	130.77739669657
TGP	60	-21.162582965932	130.76984359598
TGP	61	-20.916489570924	130.63251449442
TGP	62	-20.873509830622	130.57277633524
TGP	63	-20.568451270959	130.34618331766
TGP	64	-20.544020105155	130.26121093607
TGP	65	-20.53598268379	130.11804534769
TGP	66	-20.55462885438	130.05006744242
TGP	67	-20.53501816484	129.93059112406
TGP	68	-20.512510996543	129.93677093363
TGP	69	-20.530276827319	130.34031856556

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 proposed Tanami Gas Pipeline traverses a 439 km route from tie-in with the Amadeus Gas Pipeline to the Granites and Dead Bullock Soak mines (Map package, Figure 1). The pipeline alignment ties-in to the Amadeus Gas Pipeline adjacent to the Tanami Road Scraper Station and follows a north westerly route to the two mines, for the most part following the north-eastern side of the Tanami Road (the alignment will be outside of the road reserve which is nominally 50 m from the road centreline).

The pipeline alignment passes through Aboriginal Freehold, Pastoral Land and Crown Land tenures. Most of the pipeline alignment occurs within the Central Desert Regional Council, with a small section near the tie-in with the Amadeus Pipeline, located within the MacDonnell Regional Council. The nearest town to the pipeline alignment is Yuendumu (population approximately 800), located approximately 2 km north-east of the alignment.

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

Total disturbance – up to 1348.5 ha, rehabilitation – 1125 ha, total permanent disturbance – 223.5 ha.

1.7 Is the proposed action a street address or lot?

Street Address



Tanami Road
Yuendumu NT 0872
Australia

1.8 Primary Jurisdiction.

Northern Territory

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 02/2018

End date 12/2038

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

The Tanami Gas Pipeline will be constructed and operated in accordance with a range of Northern Territory and Commonwealth laws relating to environmental assessment and management, cultural heritage management, and protection of public and worker health and safety. Legislation governing the primary environmental approvals required for the project are set out in Table 3. Details of legislation governing secondary approvals and regulation of the project are provided in Table 4.

Securing consent for access to lands traversed by the pipeline is dealt with through a range of legislation including:

- *Aboriginal Land Rights (Northern Territory) Act (Cwlth)*
- *Native Title Act (Cwlth)*
- *Aboriginal Land Act (NT)*
- *Crown Lands Act (NT)*



- *Pastoral Lands Act (NT)*

Primary environmental approvals for Tanami Gas Pipeline

Commonwealth legislation

Environment Protection and Biodiversity Conservation Act

Assessment under this Act is required for actions that are likely to have a significant impact on a matter of national environmental significance. If the project is likely to have a significant impact on a Matter of National Environmental Significance (MNES), then referral to the Commonwealth Environment Department is required. If the pipeline project is subsequently declared a controlled action further assessment and subsequent approval by the Commonwealth Minister for the Environment will be required. The NT bilateral agreement may be used to facilitate the assessment process.

Northern Territory legislation

Environmental Assessment Act & Environmental Assessment Administrative Procedures

If the NT EPA consider the pipeline project has potential to cause a significant impact to the environment, the project will require the preparation of an Environmental Impact Statement (EIS) or Public Environment Report (PER).

Energy Pipelines Act & Energy Pipeline Regulations

The *Energy Pipelines Act & Energy Pipeline Regulations* require that the survey, construction, testing and operational activities of the pipeline be permitted and licenced. A pipeline licence under the *Energy Pipelines Act* is required before construction or operation of a pipeline can commence. It is understood that environmental conditions, including those arising from recommendations flowing from the assessment under the EA Act, are placed on the pipeline licence. A Construction Environmental Management Plan (CEMP) and Operation Environment Management Plan (OEMP) is required for the licence.

Secondary environmental approvals and regulation for Tanami Gas Pipeline



Dangerous Goods Act and Dangerous Goods Regulations

Handling and storage of hazardous and explosive materials will need to conform to the requirements of the Act

Heritage Act

All sites of Aboriginal archaeology are protected and will require pre-clearance survey and permit if materials are to be disturbed. Declared heritage places are protected and will need to be avoided or consent obtained if site is to be disturbed.

Northern Territory Aboriginal Sacred Sites Act

Provides for the identification and protection of Aboriginal sacred sites. Consultation on sacred sites will occur through the Central Land Council and an Authority Certificate will be sought from the Aboriginal Areas Protection Authority to ensure that sacred sites are protected.

Public and Environmental Health Act

Operation of construction camps, particularly on-site disposal of sewage will need to comply with the provisions and codes called up in the Act.

Soil Conservation and Land Utilisation Act

Addresses soils conservation, erosion and land capability. Erosion and Sediment Control Plans prepared for the project will need to be consistent with objects of the Act.

Territory Parks and Wildlife Conservation Act

Protects native wildlife (flora and fauna) and establishes the Northern Territory listing of threatened species. Surveys and any removal or relocation of threatened species arising from the project will require a permit.

Waste Management and Pollution Control Act

Establishes general environmental duty and regulates offsite solid and hazardous waste disposal, licenses some landfill operations and applies the National Environment Protection Measure for Air Quality.

Water Act

Extraction of surface and ground waters, and discharge into waterways will require licensing.

Weeds Management Act



Declares weeds, specifies management requirements and adopts management plans providing detailed management measures. The Weed Management Plan prepared for the project will need to be consistent with the management objectives and measures specified in the Act for weeds present along the alignment.

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

DDG has consulted with the following stakeholders as a part of the initial round of engagement. Additional more intensive engagement will occur post the final investment decision being made.

- The Central Land Council
- Department of Trade, Business and Innovation
- Chamber of Commerce and Industry- Alice Springs
- Department of Planning and Lands
- Aboriginal Areas Protection Authority
- Local business owners and suppliers.

DDG has commissioned the Central Land Council to undertake the appropriate consultation with Aboriginal traditional owners to identify sacred sites along the pipeline alignment. When completed, the required processes under the *Northern Territory Aboriginal Sacred Sites Act* will be commenced with a view to obtaining an Authority Certificate for the pipeline works.

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 proposed action has been referred to the Northern Territory Environment Protection Authority for a determination on whether formal environmental assessment is required under the Northern Territory *Environmental Assessment Act*.

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?

No



Section 2 - Matters of National Environmental Significance

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

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

- [Profiles of relevant species/communities](#) (where available), that will assist in the identification of whether there is likely to be a significant impact on them if the proposal proceeds;
- [Significant Impact Guidelines 1.1 – Matters of National Environmental Significance](#);
- [Significant Impact Guideline 1.2 – Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies](#).

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

No

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

No

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

No

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

Yes

2.4.1 Impact table

Species	Impact
Dwarf Desert Spike-rush (<i>Eleocharis papillosa</i>)	• Loss of habitat • Loss of individuals •



Species	Impact
- TPWC Act Vulnerable, EPBC Act Vulnerable Likely to occur	Reduction of seed bank • Direct damage to underground tubers during trenching (Increased competition from weeds, particularly couch grass (<i>Cynodon dactylon</i>)) • Hydrological changes
Great Desert Skink (<i>Liopholis kintorei</i>) – TPWC Act Vulnerable, EPBC Act Vulnerable, likely	• Loss and disturbance of habitat • Loss of individuals • Trenching equipment killing animals that are burrowed underground • Mortality resulting from trenchfall • Change to fire regime resulting from introduction/spread of weeds • Noise and vibration displacing individuals from the work areas
Greater Bilby (<i>Macrotis lagotis</i>) - TPWC Act Vulnerable, EPBC Act Vulnerable, likely	• Loss and disturbance of habitat • Loss of individuals • Trenching equipment killing animals that are burrowed underground • Mortality resulting from trenchfall • Mortality from vehicle strike • Change to fire regime from introduction/spread of weeds • Noise and vibration displacing individuals from the work areas
Australia Painted Snipe (<i>Rostratula australis</i>) – TPWC Act Vulnerable, EPBC Act Endangered, potentially occurring	• Loss and disturbance of habitat • Mortality from vehicle strike • Loss of active nests through clearing • Loss of suitable nesting habitat
Night Parrot (<i>Pezoporus occidentalis</i>) – TPWC Act Critically endangered, EPBC Act Endangered, potentially occurring	• Loss and disturbance of habitat • Loss of individuals • Mortality from vehicle strike • Change to fire regime resulting from introduction/spread of weeds (particularly loss of mature spinifex)
Princess Parrot (<i>Polytelis alexandrae</i>) – TPWC Act Vulnerable, EPBC Act Vulnerable, potentially occurring	• Loss and disturbance of habitat • Fragmentation of habitat • Loss of individuals • Loss of active nests through clearing • Loss of suitable nesting habitat • Mortality from vehicle strike • Change to fire regime resulting from introduction/spread of weeds (particularly loss of native seed-bearing grasses)

2.4.2 Do you consider this impact to be significant?

No

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



Yes

2.5.1 Impact table

Species	Impact
Fork-tailed Swift (<i>Apus pacificus</i>), likely	No important habitat or ecologically significant proportions of the population Reduction in availability of insect prey due to construction disturbance
Common Greenshank (<i>Tringa nebularia</i>), Potential	No important habitat or ecologically significant proportions of the population Loss and disturbance of habitat Loss of individuals
Glossy Ibis (<i>Plegadis falcinellus</i>), Potential	No important habitat or ecologically significant proportions of the population Loss and disturbance of habitat Loss of individuals
Oriental Plover (<i>Charadrius veredus</i>), Potential	No important habitat or ecologically significant proportions of the population Loss and disturbance of habitat Loss of individuals
Oriental Pratincole (<i>Glareola maldivarum</i>), Potential	No important habitat or ecologically significant proportions of the population Loss and disturbance of habitat Loss of individuals

2.5.2 Do you consider this impact to be significant?

No

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

No

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

No

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

No

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

No



2.10 Is the proposed action a nuclear action?

No

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

No

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

No

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

No



Section 3 - Description of the project area

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

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

The pipeline corridor passes through the Burt Plain, Great Sandy Desert and Tanami bioregions (Attachment C - Map package Figure2).

Threatened flora

A desktop assessment of Northern Territory and federal databases including (the NT Flora Atlas, the Atlas of Living Australia (ALA), and the Protected Matters Search Tool) was conducted by Biodiversity Assessment and Management Pty Ltd (BAAM, 2016), and reviewed by Mattiske Consulting Pty Ltd (Mattiske 2017). The search recovered 3 species that are listed as threatened under the EPBC Act and/or TPWC Act. In preparing this referral, the likelihood assessment conducted by BAAM (2016) and Mattiske (2017), were reviewed and adopted. The likelihood assessment concluded the following:

- Dwarf Desert Spike-rush (*Eleocharis papillosa*) is likely to occur within the project area
- MacDonnell Ranges Cycad (*Macrozamia macdonnellii*) is unlikely to occur

Threatened fauna

A desktop assessment of Northern Territory and federal databases (including the NT Fauna Atlas, the ALA and the Protected Matters Search Tool) was conducted by Biodiversity Assessment and Management Pty Ltd (BAAM, 2016), and reviewed and updated by Mattiske (2017). The search recovered 19 species that are listed as threatened under the EPBC Act and/or the TPWC Act. The Curlew Sandpiper (*Calidris ferruginea*) was added to the species considered on the basis of a more recent Protected Matters Search. The likelihood assessment conducted by BAAM (2016) and Mattiske (2017), were reviewed and adopted, or modified (the likelihood of the Pale Field-rat occurring was reassessed as 'unlikely', and an assessment of the Curlew Sandpiper was undertaken. The likelihood assessment concluded the following:

- The Great Desert Skink (*Liopholis kintorei*), Greater Bilby (*Macrotis lagotis*), Grey Falcon



(*Falco hypoleucos*), and Southern Marsupial Mole (*Notoryctes typhlops*) were considered likely to occur,

- The Australian Painted Snipe (*Rostratula australis*), Night Parrot (*Pezoporus occidentalis*) and the Princess Parrot (*Polytelis alexandrae*) were considered potentially occurring, and
- The Black-footed Rock-wallaby (*Petrogale lateralis*), Central Rock-rat, (*Zyomys pedunculatus*), Common Brushtail Possum (Southern NT), (*Trichosurus vulpecula vulpecula*), Crest-tailed Mulgara, (*Dasycercus cristicauda*), Curlew Sandpiper, (*Calidris ferruginea*), Desert Sand Skipper, (*Croitana aestiva*), Golden Bandicoot, (*Isodon auratus*), Mallee Fowl, (*Leipoa ocellata*), Masked Owl , (mainland Top End), (*Tyto novaehollandiae kimberli*), Pale Field-rat, (*Rattus tunneyi*), Red Goshawk, (*Erythrorchis radiatus*), and the Spencers Land Snail, (*Bothriembryon spenceri*) were considered unlikely to occur.

Weeds and feral animals

The NT weed dataset includes 11 weed species listed under NT Weeds Management Act and/or identified as Weeds of National Significance (WONS) in the project region. Their presence will be confirmed during detailed survey.

The NT Fauna database includes records of 10 introduced fauna species, including three that are associated with Key Threatening Processes identified by the Department of the Environment and Energy.

Declared weeds

(NT classifications: Class A: To be eradicated, Class B: spread to be controlled; Class C: not to be introduced to the Northern Territory)

- *Alternanthera pungens*, Khaki weed, NT Classification: Class B and C
- *Calotropis procera*, Rubber bush, NT Classification: Class B and C
- *Cenchrus echinatus*, Mossman river grass, NT Classification: Class B and C
- *Cenchrus setaceus*, Fountain grass, NT Classification: Class B and C
- *Parkinsonia aculeata* ,Parkinsonia, Weed of national significance, NT Classification: Class B and C
- *Prosopis pallida* ,Mesquite , Weed of national significance, NT Classification:Class A and C
- *Ricinus communis*, Castor oil plant, NT Classification: Class B and C



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- *Senna occidentalis*, Senna - Coffee, NT Classification: Class B and C
 - *Tamarix aphylla* Athel pine, Weed of national significance, NT Classification: Class B and A
 - *Tribulus terrestris*, Caltrop - *terrestris*, NT Classification: Class B and C
 - *Xanthium spinosum*, Burr - Bathurst, NT Classification: Class B and C

Introduced fauna in the project area

- Camel (*Camelus dromedarius*)
- Cat (*Felis catus*) - Key threatening process: Predation by feral cats
- Cattle (*Bos taurus*)
- Donkey (*Equus asinus*)
- Fox (*Vulpes vulpes*) - Key threatening process: Predation by European red fox
- Horse (*Equus caballus*)
- House Mouse (*Mus musculus*)
- House Sparrow (*Passer domesticus*)
- Rabbit (*Oryctolagus cuniculus*) - Key threatening process: Competition and land degradation by rabbits
- Swamp Buffalo (*Bubalus bubalis*)

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

Watercourses crossed by the pipeline alignment are shown in 'Attachment C - Map package' Figure 3 and comprise ephemeral creeks, holding water during periods of significant rainfall. A number of watercourse crossings in the south-eastern section of the alignment are associated with drainage into Lake Lewis which is a large ephemeral saline lake fed by Napperby Creek and other small ephemeral creeks. The lake system comprises areas of saltpans, claypans and associated saline lakes. When inundated Lake Lewis is relatively deep and standing water may last up to six months (DNRETAS 2017). At its closest, the pipeline alignment passes approximately 5 km from Lake Lewis.

Groundwater in the region comprises palaeozoic and pre-cambrian fractured rock aquifers with



low permeability (BoM 2010).

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

A desktop assessment conducted by WorleyParsons has indicated that the majority of the pipeline alignment is underlain by soil formations including aeolian (mobile dune) sands, alluvial deposits of clay, silt and sands (ephemeral creeks and rivers); and red earth (colluvium and sheetwash) comprising silt, sand clay and minor gravel. Bedrock outcrop or subcrop is likely to be present along several sections of the pipeline alignment. The rock types vary from sedimentary (sandstone, mudstone and conglomerate), igneous (granite and granodiorite) and metamorphic (schist, gneiss and migmatite).

Land systems traversed by the pipeline alignment are shown in Map Package Figure 4 and set out in Table 7.

Land systems traversed by Tanami Gas Pipeline

- Alluvial floodplains - Alluvial floodplains, swamps, drainage depressions and alluvial fans; sandy, silty and clay soils on Quaternary alluvium
- Desert dunefields - Dunefields with parallel linear dunes, reticulate dunes and irregular or aligned short dunes; red sands
- Desert sandplains - Level to undulating sandplains with red sands
- Granite hills - Low hills and hills mostly on granite, gneiss, rhyolite and some schist; common rock outcrop and surface stone with shallow gritty or stony soils
- Granite plains and rises - Gently undulating to undulating plains with rises and low hills on granite, schist, gneiss (deeply weathered in places); coarse grained sandy, earthy and texture contrast soils
- Granite ranges - Rugged mountain ranges on gneiss, schist and granite; outcrop with shallow, gritty and stony soils
- Lateritic plains and rises - Plains and rises associated with deeply weathered profiles (laterite) including sand sheets and other depositional products; sandy and earth soils
- Limestone plains and rises - Plains, rises and plateaux on weathered and unweathered Cambrian limestone, dolomite, chalcedony, shale, sandstone and siltstone with associated sand sheets; sandy and earth soils
- Salt pans - Salt pans with waterlogged saline clays and fringing dunes



- Sandstone hills - Low hills, hills and stony plateaux on sandstone, siltstone, quartzite and conglomerate (deeply weathered in places); outcrop with shallow stony soils
- Sandstone ranges - Rugged ranges on quartzite, sandstone and conglomerate; outcrop with shallow, stony sandy soils
- Sandstone plains and rises - Plains, rises and plateaux on mostly on sandstone, siltstone, claystone, shale and some limestone; commonly shallow soils with surface stone and rock outcrop

Vegetation

Eight broad vegetation communities occur in the region of the pipeline (Attachment C - Map package Figure 5). Of these, four occur within the 30 m RoW, including 10 vegetation subtypes (classified to National Vegetation Inventory System (NVIS) level 4) (below). The communities mapped are not threatened or locally restricted, as they extended well beyond the proposed alignment or occur in the region, and no Threatened Ecological Communities protected under the EPBC Act occur (or have the potential to occur) in the region. Inland salt lakes also occur near the alignment and there are a range of floodplains, swamps, depressions and alluvial fans.

Intersection of vegetation communities with Tanami Gas Pipeline

- Hummock grassland - Acacia mid open mallee woodland\Acacia mid sparse shrubland\Triodia low hummock grassland
- Hummock grassland - Eucalyptus low open mallee woodland\Acacia mid sparse shrubland\Triodia low hummock grassland
- Hummock grassland - Eucalyptus low open woodland\Acacia mid open shrubland\Triodia low hummock grassland
- Open hummock grassland - Eucalyptus low isolated trees\Acacia tall sparse shrubland\Triodia low open hummock grassland
- Open shrubland - Acacia tall open shrubland\Eragrostis low tussock grassland
- Open shrubland - Corymbia low woodland\Acacia tall open shrubland\Eragrostis low open tussock grassland
- Open woodland - Acacia low open woodland\Acacia mid sparse shrubland\Enneapogon low sparse tussock grassland
- Open woodland - Eucalyptus low open woodland\Acacia mid open



shrubland\Chrysopogon low open tussock grassland

- Open woodland - Eucalyptus low open woodland\Acacia mid sparse shrubland\Triodia mid hummock grassland
- Woodland - Acacia low open woodland\Melaleuca mid open shrubland\Triodia low hummock grassland

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

Sites of Conservation Significance

The Northern Territory Government has identified 67 sites of conservation significance SoCS across the NT. These sites represent some of the most important areas for biodiversity conservation. The intersection of the pipeline alignment with the Sites of Conservation Significance is shown in Map Package Figure 6. The Tanami Gas Pipeline would pass through the following sites of conservation significance:

Lake Lewis and surrounds (site number 54): Lake Lewis is a large ephemeral saline lake that is periodically an important site for waterbirds, and probably also for shorebirds. The Site supports endemic and restricted range plant species and has an unusual geomorphological setting in arid Australia (DNRETAS SoCS Factsheet).

South-west Tanami Desert (site number 43): The South-west Tanami Desert provides habitat for 11 threatened species, and is considered a stronghold for some as well as other rare or declining species in the Northern Territory. One plant species is known only from the site and other species endemic either to the Tanami bioregion or to the NT are also found at the Site (DNRETAS SoCS factsheet).

The Greater MacDonnell Ranges SoCS (site number 55) occurs in the regions but does not intersect the RoW.

National Parks, Conservation Reserves and Indigenous Protected Areas

The western portion of the pipeline passes through the Southern Tanami Indigenous Protected Area (IPA), this is the largest declared IPA and is managed by the Warlpiri Ranger group (Map Package Figure 7). The nearest national park is the West MacDonnell National Park, approximately 50 km to the south of the tie-in with the Amadeus Gas Pipeline.

Sites of Botanical Significance

The Northern Territory Government has identified Sites of Botanical Significance. These sites are considered important for plant conservation generally and specifically for conserving significant plant taxa both nationally and within the Northern Territory.



The pipeline corridor intersects four sites of botanical significance: Lake Lewis, Yuendumu South, Dead Bullock Soak, and Western Tanami Paleodrainage Systems (Attachment C - Map package Figure 8). The Central Mount Wedge and Tanami Paleodrainage System Extension sites of botanical significance occur in the region but do not intersect the RoW.

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

The vegetation communities mapped within the study area are not threatened or locally restricted, as they extended well beyond the proposed alignment or occur in the region. No Threatened Ecological Communities protected under the EPBC Act occur (or have the potential to occur) in the region.

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

Ground elevation across the length of the pipeline varies from 355 m to 680 m AHD. Major topographic features in the vicinity of the pipeline include Stuart Bluff Range, Mt Doreen and the Granites Hills.

Trenching for construction of the pipeline will be to a depth of 1.2 m.

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

The pipeline alignment passes through Aboriginal Freehold, Pastoral Land and Crown Land tenures and is located close to the Tanami Road. While for the most part, the pipeline will not be located within the road easement, its proximity means that the pipeline will pass through the 'disturbance corridor' established by the road. Condition of the land is to be confirmed during further survey, however pressures resulting from higher presence of weeds are likely, along with those arising from grazing by both stock and feral animals. Land contamination is considered unlikely and there are no sites along the alignment known to the NT EPA that have been assessed as potentially contaminated and requiring a statement of environmental audit.

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

There are no Commonwealth Heritage Places near the pipeline alignment. The nearest heritage place declared under the Northern Territory *Heritage Act* is Iron Building No.1 at Yuendumu (approximately 2 km from the pipeline alignment). This site will not be affected by the proposed action.

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



Aboriginal archaeological material is protected under the Northern Territory *Heritage Act* and a permit is required to disturb or destroy archaeological sites.

An archaeological survey of the pipeline alignment has not yet been undertaken but will be commissioned as part of further technical studies. Given the location of the pipeline alignment in a region of occupancy by Aboriginal people, it is very likely that archaeological material will occur within the pipeline corridor. This will be documented through the archaeological survey and should any sites not be avoided, the appropriate permits under the *Heritage Act* will be obtained by the proponent.

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

The pipeline alignment passes through Aboriginal Freehold, Pastoral Land and Crown Land tenures (below).

Land tenures traversed by the Tanami Gas Pipeline

- Land parcel: CUFT 814/294, Registered proprietor/controlling agency: Anthony Woodley Davis and Pamela Ruth Davis, Title reference: 727/7536, Tenure: Perpetual Pastoral Lease 1019
- Land parcel: NT Portion 4284, Registered proprietor/controlling agency: Crown - Northern Territory Government, Title reference: 4284
- Land parcel: NT Portion 5165, Registered proprietor/controlling agency: Crown - Northern Territory Government, Title reference: 5165
- Land parcel: CUFT 652/345, Registered proprietor/controlling agency: Hiraji Pty. Limited (ACN 009 591 664), Title reference: 747, Tenure: Perpetual Pastoral Lease 1178
- Land parcel: CUFT 639/281, Registered proprietor/controlling agency: Telstra Corporation Limited (ACN 051 775 556), Title reference: 3971, Tenure: Estate in Fee Simple
- Land parcel: CUFT 814/313, Registered proprietor/controlling agency: Ngurratjuta/Pmara Ntjarra Aboriginal Corporation (ICN 414), Title reference: 7256, Tenure: Estate in Fee Simple
- Land parcel: CUFT 812/121, Registered proprietor/controlling agency: Kumanji Pty Ltd (ACN 098 097 002) as trustee for the Counterfeit Superannuation Fund, Title reference: 7257,



Tenure: Estate in Fee Simple

- Land parcel: CUFT 626/309, Registered proprietor/controlling agency: Ngalarurtju Aboriginal Land Trust, Title reference: 3271, Tenure: Estate in Fee Simple
- Land parcel: CUFT 655/232, Registered proprietor/controlling agency: Yalpirakinu Aboriginal Land Trust, Title reference: 3038, Tenure: Estate in Fee Simple
- Land parcel: CUFT 750/18, Registered proprietor/controlling agency: Yuendumu Aboriginal Land Trust, Title reference: 1373-1633, Tenure: Estate in Fee Simple
- Land parcel: NT Portion 4264, Registered proprietor/controlling agency: Crown - Northern Territory Government,
- Land parcel: CUFT 781/450, Registered proprietor/controlling agency: Braitling Nominees Pty Ltd (ACN 009 598 958), Title reference: 1947, Tenure: Perpetual Pastoral Lease 1035
- Land parcel: CUFT 300/92, Registered proprietor/controlling agency: Australian and Overseas Telecommunications Corporation Limited, Title reference: 3968, Tenure: Estate in Fee Simple
- Land parcel: CUFT 499/156, Registered proprietor/controlling agency: Meercantie Aboriginal Corporation, Title reference: 4871, Tenure: Estate in Fee Simple
- Land parcel: CUFT 664/694, Registered proprietor/controlling agency: Central Desert Aboriginal Land Trust, Title reference: 1740, Tenure: Estate in Fee Simple
- Land parcel: CUFT 664/702, Registered proprietor/controlling agency: Mala Aboriginal Land Trust, Title reference: 3745, Tenure: Estate in Fee Simple
- Crown - Northern Territory Government

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

The major economic activity within the region traversed by the Tanami Gas Pipeline is mining, pastoral enterprise and conservation activity. Mining activity occurs at the Granites and Dead Bullock Soak Mines operated by Newmont Mining. Gold is mined using underground methods and the workforce of approximately 750 permanent and contract employees, operate on a fly-in, fly-out basis. In 2015 the mines contributed nearly \$375 million to the Australian economy.

Pastoral enterprises in the region include Mt Doreen and Napperby pastoral stations. Conservation activity is centred around the South Tanami Indigenous Protected Area, managed by the Warlpiri Rangers.

The closest population centre to the Tanami Gas Pipeline is Yuendumu with a population of



approximately 800 mostly indigenous people (ABS 2008).



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.

Impact mitigation measures that have been identified from the available information are listed in Table 10. These measures will continue to be refined as detailed design characteristics are finalised and as results of surveys (including ecological, water and aboriginal heritage) are received.

Impact mitigation measures

Vegetation clearing

- Flora and fauna survey and avoidance where feasible of known occurrences and important habitat for threatened species.
- Progressive rehabilitation of the RoW, construction camps and temporary access tracks through active measures (Rehabilitation Management Plan) and natural regrowth
- Revegetation of disturbed areas where they do not respond to the initial rehabilitation treatment, as evaluated by monitoring
- Potential use of horizontal directional drilling to avoid disturbance of significant riparian vegetation
- Weed management measures as per Weed Management Plan
- Sediment controls in place during and post construction
- Potential use of horizontal directional drilling to avoid disturbance in close proximity to significant watercourses



-
- Progressive revegetation of the RoW and other disturbed areas (Rehabilitation Plan)
 - Specific rehabilitation measures for watercourses that are open trenched
 - Sacred sites identified with Restricted Work Areas
 - Archaeological sites identified through survey
 - Fencing and signage
 - Recording on project GIS
 - Consultation with Aboriginal traditional owners
 - Work procedures (including land access protocol) and induction
 - Safety management plans including work procedures, job hazard analysis, risk assessment and management and emergency response

Excavation/trenching

- Progressive rehabilitation of trench
- Climbing aids inside the trench
- Continuous monitoring of trench by wildlife handlers and removal of affected wildlife
- Archaeological assessment during pegging of RoW and trenching (Cultural Heritage Management Plan)
- Trench clearly marked

Water use/ groundwater extraction

- Monitoring of water extraction and adaptive management arrangements where extraction may approach sustainable yield
- Consultation with Aboriginal traditional owners

Physical presence of infrastructure



-
- Landholder engagement, communication and agreements – focussing on safe activities within close proximity to pipeline and above ground infrastructure.
 - Signage
 - Measures incorporated into Weed Management Plans

Vehicle movements

- Measures included in Weed Management Plan
- Measures in Traffic Management Plan including speed limits – appropriate signage, induction for workforce drivers.
- Agreed arrangements to assist in avoiding deterioration of Tanami Road during construction

Fire ignition

- Bushfire Management Plan, with training and induction for all workers and effective response personnel, equipment and procedures for immediate extinguishing of inadvertent fires

Liquid and solid waste disposal

- Hydrotest water is discharged consistent with measures in CEMP and within waste discharge licence conditions
- Consultation and agreement with local government on acceptance of solid/commercial wastes
- Treatment of sewage from construction camps, consistent with requirements of *Public and Environmental Health Act* and the Code of Practice for On-site Wastewater Management

Spills and leaks

- Measures contained in CEMP including documented inventory of hazardous materials, spill response procedures and equipment, servicing of equipment in workshops



Atmospheric emissions (including dust)

- Measures contained in CEMP including efficient use of vehicles, vehicle maintenance, periodic inspection of pipeline for leaks.
- Dust management measures including watering, traffic management, minimising land clearing, active rehabilitation, adherence to speed limits

Light emissions

- Measures contained in CEMP to limit lighting to critical areas.

Noise and vibration

- Measures in CEMP including screening or enclosing stationary equipment, turning mobile equipment off when not in use (where practicable)

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.

Performance based outcomes to be achieved during the conduct of the proposed action will be developed during further assessment. Indicative outcomes and associated measures are as follows:

Listed threatened flora and fauna

Outcome: Removal of suitable habitat will be avoided and reduced as far as possible during detailed design and pre-clearance project phases.

Measure: Assessment of actual vegetation clearance against mapped habitat values

Outcome: Mortality or injury to individuals will be avoided and reduced as far as possible during construction project phase.

Measure: Recording and assessment of actions taken in implementing trench clearing procedure and Traffic Management Plan



Outcome: The ongoing presence and maintenance of the pipeline will not prevent the ongoing use of suitable habitat by threatened fauna.

Measure: Re-establishment of native vegetation within most of the pipeline ROW after construction.

Outcome: There will be no significant loss of threatened flora species

Measure: Assessment of mapped presence of individual plants against actual vegetation clearance

Listed migratory species

Outcome: Removal of suitable habitat will be avoided and reduced as far as possible during detailed design and pre-clearance project phases

Measure: Assessment of actual vegetation clearance against mapped habitat values



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.

The impact assessment (see attached supporting document Appendix A) has concluded that there exists the potential for significant impacts to some threatened species. However, this is a precautionary approach based on a lack of ground-truthed data. Once this data has been gathered, detailed design measures will be implemented to avoid impacts as far as possible and other effective mitigation measures will be put in place to minimise unavoidable impacts. It is considered that following the implementation of avoidance, minimisation and mitigation measures, the action will not have a significant impact on MNES. Key considerations include:

- The pipeline alignment closely follows the existing disturbance corridor created by the Tanami Road, avoiding impacts arising from habitat fragmentation
- Construction is limited to a 10 month period
- The area of permanent disturbance is not large (223.5 ha) compared to the availability of remnant vegetation and habitat surrounding the action
- Operationally there will be no ongoing impacts
- A range of avoidance and impact reduction measures have been identified, that will be further developed in the detailed design phase, and implemented during construction
- All disturbance areas (except for small areas required for permanent infrastructure) will be rehabilitated post construction
- Much of the disturbance footprint will be allowed to return to woody native vegetation over time
- There are a range of best practise management and mitigation measures that will be employed to further reduce impacts
- Additional on-ground surveys will be undertaken prior to construction to reduce any



uncertainty and support mitigation measures that will ensure impacts are avoided or minimised.



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.

Yes

DDG has been engaged in a range of construction and operational projects associated with its assets located across Western Australia in recent years. DBP, which provides labour support to DDG, owns and operates the 1500 km DBNGP pipeline and several associated spur lines. Most of the activities have been regulated with respect to approval of 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.

No

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

Yes

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

The Proponent 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 EMS. All planning, construction and operation activities will be conducted in accordance with the DDG Environmental Policy, which outlines a commitment to sound



management of environmental aspects of the proposed action.

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

The key elements of the EMS include:

- a corporate environmental policy
- assessing environmental risk and identification of legal requirements
- developing objectives and targets for improvement
- training, operational control, communication, emergency response, corrective and preventative actions audits and review

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.

DDG/DBP has referred five proposals for assessment under the EPBC Act. The following table lists the proposal names and associated EPBC Act reference numbers of these previous DDG/DBP referrals.

- Title: DDG FR Pty Ltd / Energy generation and supply (non-renewable) / Pilbara Region / WA / Fortescue River Gas Pipeline, Pilbara Region, WA; EPBC Act reference: 2014/7118
- Title: DDG Development Group Nominees Pty Ltd / Commercial development / Onslow / WA / Construct 110km buried natural gas pipeline from Onslow, connecting to Dampier-Bunbury natural gas pipeline; EPBC Act reference: 2013/7039
- Title: DBNGP (WA) Nominees Pty Limited / Energy generation and supply / Dampier to Bunbury / WA / Natural Gas Pipeline Stage 5 Expansion; EPBC Act reference: 2006/2813



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- Title: DBNGP (WA) Nominees Pty Limited / Energy generation and supply / Kemerton / WA / Kemerton Lateral Gas Pipeline Project; EPBC Act reference: 2005/2388
 - Title: DBNGP (WA) Nominees Pty Limited / Energy generation and supply / Karratha to Gingin / WA / Northern Looping project, Karratha to Gingin; EPBC Act reference: 2005/2251
 - Title: DBNGP (WA) Nominees Pty Limited / Energy generation and supply / Kwinana to Hopelands / WA / 'Looping 10' gas transmission pipeline from Kwinana to Hopelands; EPBC Act reference: 2005/2212



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
WorleyParsons. 2016. Tanami Gas Pipeline FEED: Project definition report. Report prepared for Power & Water.	High – based on expert opinion	Requires on-ground confirmation
Mattiske Consulting Pty Ltd. 2017. Tanami Gas Pipeline Terrestrial Ecology Desktop Assessment: Tanami Desert, Northern Territory – Flora, Vegetation and Fauna Values. Report prepared for DDG.	High – based on expert opinion	Requires on-ground confirmation
Biodiversity Assessment and Management Pty Ltd. 2016. Tanami Gas Pipeline terrestrial ecology desktop assessment. Report prepared for Advisan	High – based on expert opinion	Requires on-ground confirmation
NT Atlas and Spatial Data Directory (http://www.ntlis.nt.gov.au/imfPublic/imf.jsp?site=nt_atlas)	Authoritative	NA
Bureau of Meteorology (http://www.bom.gov.au/water/geofabric/)	Authoritative	NA
Data held by the Department of Environment and Natural resources available from NR Maps (nrmaps.nt.gov.au)	High	May include old records
Protected Matters Report	Moderate	Inferred species distributions are very broad, does not take into account habitat preferences
Atlas of Living Australia (ALA)	Moderate	Includes records with high spatial uncertainty and unconfirmed ID
NRM InfoNet	Moderate – based on point data	Low specificity of results



Reference Source	Reliability	Uncertainties
(http://www.ntinfo.net.org.au)	and grid cells	



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 only alternative to the Tanami Gas Pipeline proposal is the 'do nothing' option. The implications of the 'do nothing' option would ultimately be the loss of economic benefits for the local, regional and national economies, including the loss of local, regional and national employment and business opportunities in both the short and longer term. The continued use of existing diesel fuel at the Granites and Dead Bullock Soak Mines will result in higher greenhouse gas emissions intensity and higher air emissions (compared to gas generated power).

There are no alternative locations, time frames or activities that form part of the proposed action. Location of the Tanami Gas Pipeline adjacent to the Tanami Road places impacts within an existing landscape scale 'disturbance corridor' and minimises additional disturbance from access tracks that would otherwise need to be considerably longer under any other alternative alignment.

Minor deviations in the alignment will be considered during detailed design, to accommodate any environmental or cultural heritage constraints and to provide the best engineering option.

8.1 Select the relevant alternatives related to your proposed action.

8.27 Do you have another alternative?

No



Section 9 – Contacts, signatures and declarations

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

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

Organisation

9.2 Organisation

9.2.1 Job Title

Land Manager

9.2.2 First Name

Neil

9.2.3 Last Name

Parry

9.2.4 E-mail

neil.parry@dbp.net.au

9.2.5 Postal Address

PO Box Z5267

St Georges Terrace
Perth WA 6831
Australia

9.2.6 ABN/ACN

ABN

76166900170 - DDG OPERATIONS PTY LTD

9.2.7 Organisation Telephone



+61 8 9223 4300

9.2.8 Organisation E-mail

landmanagement@DDG.net.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 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: 27/07/2017.....

I, Neil Parry, the person proposing the action, consent to the designation of DDG OPERATIONS PTY LTD as the proponent of the purposes of the action describe in this EPBC Act Referral.

Signature:.......... Date: 27/07/2017.....



9.3 Is the Proposed Designated Proponent an Organisation or Individual?

Organisation

9.5 Organisation

9.5.1 Job Title

Land Manager

9.5.2 First Name

Neil

9.5.3 Last Name

Parry

9.5.4 E-mail

landmanagement@DDG.net.au

9.5.5 Postal Address

PO Box Z5267

St Georges Terrace

Perth WA 6831

Australia

9.5.6 ABN/ACN

ABN

76166900170 - DDG OPERATIONS PTY LTD

9.5.7 Organisation Telephone

+61 8 9223 4300

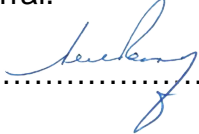
9.5.8 Organisation E-mail

landmanagement@DDG.net.au

Proposed designated proponent - Declaration



I, Neil 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: 27/07/2017

9.6 Is the Referring Party an Organisation or Individual?

Organisation

9.8 Organisation

9.8.1 Job Title

Senior Environmental Consultant

9.8.2 First Name

Andrew

9.8.3 Last Name

Buick

9.8.4 E-mail

AndrewB@ecoaus.com.au

9.8.5 Postal Address

PO Box 7537
Cloisters Square WA 6850
Australia

9.8.6 ABN/ACN

ABN

87096512088 - ECO LOGICAL AUSTRALIA PTY LTD

9.8.7 Organisation Telephone

1300 646 131

9.8.8 Organisation E-mail



admin@ecoaus.com.au

Referring Party - Declaration

I, Andrew Buick, 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: Andrew Buick Date: 27/07/2017



Appendix A - Attachments

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

1. attachment_a_-_section_1.2.pdf
2. attachment_b_-_impact_assessment.pdf
3. attachment_b_-_impact_assessment.pdf
4. attachment_c_-_map_package.pdf
5. pl_pipeline_alignment_ln.shp