

Statement of Reasons

DDG OPERATIONS PTY LTD – TANAMI GAS PIPELINE

PROJECT

DDG Operations Pty Ltd (the Proponent) submitted a Notice of Intent (NOI) for the Tanami gas pipeline (the Project) to the Northern Territory Environment Protection Authority (NT EPA) on 25 July 2017 for consideration under the *Environmental Assessment Act* (EA Act).

The Proponent proposes to construct and operate a gas pipeline, approximately 439 km long, connecting the existing Amadeus gas pipeline to the Granites and Dead Bullock Soak mines, operated by Newmont Mining in the Tanami desert. The gas pipeline would facilitate transition of 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, generally following the north-eastern side of the Tanami Road but outside of the road reserve. The pipeline is proposed to be buried and would require above ground infrastructure including:

- 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.

A 30 m right-of-way (RoW) and access tracks to the RoW from the Tanami Road would be required for construction, however, the RoW is proposed to be initially established within a 300 m wide pipeline corridor to accommodate deviations in the alignment required to address site constraints for assessment and approval purposes.

The pipeline alignment passes through Aboriginal Freehold, Pastoral Land and Crown Land tenures as well as mineral and petroleum tenements.

Construction of the pipeline would require clearing of up to 1348.5 ha of native vegetation. The Proponent has reconsidered the need for a permanent access track for the length of the alignment, and proposes that a 5 m wide permanent access track will only be required for the alignment between KP 0-3 and KP 390-439. The area of permanent disturbance will be approximately 40 ha, with the remainder of the alignment (97 %) proposed to be rehabilitated.

A workforce of between 250 and 350 people will be required during the construction period, to be accommodated in a temporary work camp, generally established no greater than 50 km from the work front. Up to four camps could be required at peak of construction.

The peak water requirements for construction are estimated to be 4.54 ML/week and off peak (pre- and post-trenching / backfill) expected to be 2.52 ML/week.

The Proponent referred the Project to the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

CONSULTATION

The NOI for the Project has been reviewed in consultation with Northern Territory Government (NTG) advisory bodies and the responsible Minister, in accordance with clause 8(1) of the Environmental Assessment Administrative Procedures.

JUSTIFICATION

Review of the NOI by the NT EPA and NTG advisory bodies identified the potential for environmental impacts associated with the proposed action. Potential impacts are discussed below, relating to the environmental factors of Terrestrial Flora and Fauna; Terrestrial Environmental Quality; Hydrological Processes; and Social, Economic and Cultural Surrounds.

Terrestrial Flora and Fauna

Native vegetation clearing as proposed would remove up to 1348.5 hectares (ha) along the 439 km pipeline length for the RoW, access and turn-around points, materials laydown, worker camps and for permanent facilities. The vegetation in the RoW is comprised of four broad vegetation communities (hummock grassland, open hummock grassland, open woodland and woodland), including 10 vegetation subtypes, which are variations in the Eucalyptus, Acacia and grass species assemblages. The NOI indicates that the communities mapped are not threatened or locally restricted, as they extend well beyond the proposed alignment or occur more broadly in the region. No Threatened Ecological Communities protected under the EPBC Act occur (or have the potential to occur) in the region.

The Proponent identified through flora databases that two plant species listed as threatened under the EPBC Act and *Territory Parks and Wildlife Conservation Act* (TPWC Act) could occur in the broader region. Only one of these species, the dwarf desert spike-rush (*Eleocharis papillosa*), was determined moderately likely to occur in proximity to the Project. This species is restricted to seasonal swamps and riverine waterholes. Potentially suitable habitat containing this species (open woodland community) was mapped in the south of the study area making up less than 15% of the RoW.

The NT EPA is of the opinion that the NOI adequately describes the likelihood of occurrence of threatened flora within the proposed pipeline corridor, and the key threatening processes for the dwarf desert spike rush which include direct clearing of suitable habitat and changed fire regimes resulting from introduction and/or spread of weeds.

The Proponent proposes to avoid significant impacts by conducting targeted pre-construction surveys of the RoW and avoiding known occurrences and important habitat for the dwarf desert spike rush. Where suitable habitat is identified but cannot be avoided, the Proponent has committed to pre-clearance surveys immediately prior to disturbance to identify and remove/translocate individuals. The Proponent has committed to progressively rehabilitate the RoW. It is expected that of the total vegetation proposed to be cleared, 1308.5 ha (97 %) is proposed to be rehabilitated with up to 40 ha remaining permanently disturbed for a five metre wide access track between KP 0-3 and KP 390-439. Rehabilitation criteria, monitoring and reporting requirements and corrective actions will be addressed in an operations environmental management plan (OEMP) which requires approval by the Department of Primary Industry and Resources (DPIR).

The Proponent has committed to preparing a weed management plan based on the presence of weed species confirmed during the detailed ecological survey and to implement standard fire management controls, which are proposed to be incorporated into the Proponent's construction

environmental management plan (CEMP). The NT EPA has made a number of recommendations to the Proponent in relation to its proposed weed management plan to maximise the success of rehabilitation of native vegetation along the pipeline alignment.

The NT EPA is satisfied that with the implementation of commitments made by the Proponent and the actions recommended by the NT EPA, potential impacts and risks to the dwarf desert spike-rush and the broader integrity of native vegetation in the region are unlikely to be significant and can be adequately managed.

A search of protected matters and fauna databases for the broader region recovered 19 fauna species listed as threatened. Following a likelihood of occurrence assessment, it was considered that five species, the great desert skink (*Liopholis kintorei*), greater bilby (*Macrotis lagotis*) (both listed under EPBC Act and TPWC Act), grey falcon (*Falco hypoleucus*), brush-tailed mulgara (*Dasyurus blythii*) and southern marsupial mole (*Notoryctes typhlops*) (all listed under the TPWC Act) were likely to occur in the Project area. The Australian painted snipe (*Rostratula australis*), night parrot (*Pezoporus occidentalis*) and the princess parrot (*Polytelis alexandrae*) were considered to potentially occur due to the presence of suitable habitat.

The key potential impacts associated with terrestrial fauna include temporary and permanent loss of habitat and habitat fragmentation through clearing of native vegetation, wildlife mortality from vehicle movements, and trench fall during the period in which sections of the pipeline trench are open.

For the above species, the NT EPA considers that the NOI adequately assesses the potential for the development to impact on important populations or critical habitat, the potential impacts to particular species, and whether significant impacts are likely. The NT EPA agrees that significant impacts are possible for all species listed except for the Australian Painted Snipe for which no ephemeral wetlands that are considered critical habitat occur along the pipeline corridor.

The NOI establishes an appropriate framework to apply measures to reduce the impacts to listed threatened species. This includes: targeted fauna surveys to determine presence/absence and where present, avoidance of known occurrences and important habitat for threatened species; application of vehicle speed limits; continuous monitoring of the trench and removal of trapped fauna during construction; progressive rehabilitation of the trench and revegetation of 83% of the disturbed area. The NT EPA considers that significant impacts to listed species are likely to be avoided if these mitigation measures are implemented. The NT EPA has made a number of recommendations for specific controls to be incorporated into the management plans for pipeline construction to further minimise potential impacts including specification of maximum open trench length and fauna protection measures, and protocols for fauna teams.

The NT EPA does not consider the buried pipeline a significant impediment to wildlife movement. When the alignment is vegetated, the pipeline route would become a minor service road that is proposed to be unsealed (5 m wide) and infrequently-traversed. The service road may have some adverse impacts on fauna and there is likely to be a cumulative impact due to the proximity of the Tanami Road, which already fragments the landscape along its length. However, the NT EPA does not consider that the service road will add significantly to habitat fragmentation.

The NT EPA considers that the linear disturbance from the pipeline adjacent to an existing road corridor and the short duration of proposed works at any particular point on the alignment limits the risks of the Project to populations of listed fauna.

The NT EPA is satisfied that potential impacts and risks to terrestrial flora and fauna can be adequately managed with the implementation of the mitigation actions proposed in the NOI and

recommended by the NT EPA, and the proposal is likely to meet the NT EPA's objective for Terrestrial Flora and Fauna.

Terrestrial Environmental Quality

There is potential for the quality of the terrestrial environment to be impacted by invasive species; erosion, runoff and soil compaction from trenching and reinstatement; and altered fire regimes. The Proponent has committed to developing management plans with appropriate measures to prevent and mitigate these potential impacts and risks. The NT EPA is satisfied that with the implementation of these measures potential impacts and risks to terrestrial environmental quality can be adequately managed and that the NT EPA's objective for Terrestrial Environmental Quality is likely to be met.

Hydrological Processes

The Proponent's peak construction water requirements, including for dust suppression and pipeline testing, are estimated to be 4.54 ML/week and off peak (pre- and post-trenching / backfill) volumes expected to be 2.52 ML/week. Groundwater is proposed as the primary water supply for construction as there are no permanent water courses along the alignment. Therefore there is potential for impacts to other water users and the environment (groundwater dependent vegetation).

Bore testing was conducted along the Tanami Road in June/July 2017, which indicated a high number of potential existing bores suitable for construction water supply (average 4L/s). Turkey nest dams exist at about half the bores identified for use. Usage for construction requires a maximum of 15 bores along the Tanami Road and existing bores are located at suitable locations along the alignment to limit water transport distances to less than 22.5 km from point of use. No new bores are expected to be required.

Potable water supply is proposed to be either fully sourced from Alice Springs via trucks, or a combination of Alice Springs supply, potable water bores where available and reverse osmosis treatment if required.

Hydrostatic testing (pressure testing) would be undertaken during commissioning of the pipeline. The water used could contain chemical additives such as corrosion inhibitors and biocides. Where this is the case, disposal of this water would be either into one of the mine sites' tailings dams, subject to agreement from the Department of Primary Industry and Resources (DPIR) or into an HDPE lined turkey nest dam for evaporation. The Proponent anticipates that if additives are not required, subject to licensing requirements and landholder approval, hydrotest water would be discharged to the surrounding environment at an appropriate distance from any water courses.

The Proponent has consulted with relevant pastoralists in regards to water use and abstraction, and the Department of Infrastructure, Planning and Logistics as manager of the adjacent road. A hydrological survey was completed for water courses as well as potential and existing bores for the Project. The NOI identified no issues with existing bore sites in terms of groundwater dependant vegetation for those locations reviewed during the survey.

The NT EPA considers that potential impacts and risks to groundwater users and groundwater-dependent vegetation associated with the use of groundwater for construction supply are likely to be localised and limited in duration. Any potential impacts are therefore not considered to be significant and can be adequately managed through the implementation of measures proposed in the NOI and the CEMP. The NT EPA's objective for Hydrological Processes is likely to be met.

Social, Economic and Cultural Surroundings

The closest population is Yuendumu, which is adjacent to the Tanami Road and may be impacted by temporary traffic increases along the Tanami Road during construction. A traffic impact assessment and a traffic management plan will be required by the Department of Infrastructure, Planning and Logistics where pipeline construction activities interact with the Tanami Road. The NT EPA considers that any impacts would be temporary and unlikely to be significant.

Yuendumu sources its water from groundwater in the Ngalia Basin and specifically the Mt Eclipse Sandstone. The water supply for Yuendumu is critical and could be impacted by extra demand. Access to Yuendumu's water supply for pipeline construction is not proposed and any requirement for additional bores would target the Yuendumu Sandstone or Walibiri Dolomite to avoid impacts to the Yuendumu supply.

The Proponent has engaged with the Department of Tourism and Culture with respect to potential impacts to archaeological heritage. The Proponent has committed to archaeological surveys of the proposed RoW prior to construction and preparation of a Cultural Heritage Management Plan. The Proponent has consulted with the Aboriginal Areas Protection Authority and the Central Land Council with respect to Aboriginal cultural aspects of the Project and no concerns have been raised with the NT EPA.

The NT EPA is satisfied that its objective for Social, Economic and Cultural Surroundings is likely to be met.

Conclusion

The NT EPA considers that significant environmental impacts are unlikely due to the narrow, linear nature of the Project, the temporary and local scale impacts along the alignment during construction and limited operational footprint, and the commitment by the Proponent to manage its activities using appropriate measures for minimising and mitigating impacts as outlined in the NOI. The Proponent will develop and implement a detailed CEMP and OEMP. These plans are a requirement under the *Energy Pipelines Act* and will be regulated by the DPIR.

The NT EPA considers that the potential environmental impacts and risks associated with the Project are not significant and that the Project does not require assessment under the EA Act. Comments from NTG advisory bodies have been provided to the Proponent and the NT EPA has provided recommendations to ensure that potential impacts on the environment are minimised and responsibilities under relevant legislation can be met.

DECISION

The proposed action, which was referred to the NT EPA by DDG Operations Pty Ltd, has been examined by the NT EPA and preliminary investigations and inquiries conducted. The NT EPA has decided that the potential environmental impacts and risks of the proposed action are not so significant as to warrant environmental impact assessment by the NT EPA under provisions of the *Environmental Assessment Act*. However, the proposed action will require assessment and approvals under the *Energy Pipelines Act* and Regulations to ensure the environmental issues associated with the proposed action are effectively managed.

This decision is made in accordance with clause 8(2) of Environmental Assessment Administrative Procedures, and subject to clause 14A the administrative procedures are at an end with respect to the proposed action.



DR PAUL VOGEL

CHAIR

NORTHERN TERRITORY ENVIRONMENT PROTECTION AUTHORITY

30 OCTOBER 2017