

Statement of Reasons

POWER AND WATER CORPORATION – APSLEY STRAIT POWERLINE CROSSING

PROJECT

Power and Water Corporation (the Proponent), submitted the Notice of Intent (NOI) for the Apsley Strait Powerline Crossing to the Northern Territory Environment Protection Authority (NT EPA) on 7 July 2017 for consideration under the *Environmental Assessment Act* (EA Act).

The proposal is to install a 355 mm conduit beneath the seabed of the Apsley Strait, Tiwi Islands. The proposed conduit will accommodate a high voltage powerline and a water pipeline. The Project involves horizontal directional drilling through claystone under the seabed for 750 m between two land sites above the high tide mark either side of Apsley Strait.

The proposed entry drilling site is at the town of Wurrumiyanga on Bathurst Island, and the proposed exit site is at the outstation of Paru on Melville Island. Both are on Aboriginal land held by the Tiwi Land Council (TLC). Works are proposed to take place at these two sites (with a total area of 0.24 ha) for a temporary period totalling approximately four weeks. Construction activities include setup, drilling for ten to fourteen days, installation of conduit, and site reinstatement. Works are scheduled to commence in September 2017.

Within the two sites, the Project will require the construction of temporary containment and settlement pits for drilling mud wastes. The remainder of the sites will be largely hardstand areas for storage and equipment. Drilling wastes will be tested for contaminants of concern, including potential acid sulphate soils. If wastes comply with the relevant criteria or guidelines, it is proposed that solid waste (~ 135 m³) will be disposed of at the Wurrumiyanga landfill and that liquid waste (~ 80 m³) will be deposited on suitable land. If wastes do not comply, further treatment will be applied, using methods to be determined following testing.

This Project is one component of a proposed high voltage powerline network on the Tiwi Islands. The overhead powerline component of the network (on Melville Island) will be addressed in a separate NOI.

CONSULTATION

The NOI has been reviewed as a notification under the EA Act in consultation with Northern Territory Government (NTG) advisory bodies, 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 has identified the potential for environmental impacts associated with the proposed action. Potential impacts are discussed below, relating to the environmental factors of Environmental Quality; Marine Fauna; Inland Waters Environmental Quality; Terrestrial Flora and Vegetation; Terrestrial Environmental Quality; and Social, Economic and Cultural Surroundings.

Marine Environmental Quality

The quality of marine waters in the Apsley Strait is close to its natural state due to the relatively low level of anthropogenic disturbance on the Tiwi Islands. The proposal could potentially cause a reduction in this water quality as a result of contamination of surface water or groundwater. This could occur at the land sites from loss of containment of waste water/slurry containing drilling mud additives, or potential acid and metalliferous leachate from Potential Acid Sulphate Soils (PASS).

The risk of such contamination can be mitigated by implementing measures outlined in the NOI. This includes

- implementation of the Acid Sulphate Soil (ASS) Management Plan
- development and implementation of an Erosion and Sediment Control Plan (ESCP) as part of the Construction Environmental Management Plan (CEMP)
- the use of bunds and lining to contain wastewater spills and minimise runoff to marine environment and leachate to groundwater.

There is potential for impacts to marine water quality from a drilling blow-out. In this case, relatively small volumes of drill muds and additives would be released into the marine waters in Apsley Strait. There is a low likelihood of this occurrence with a minor consequence of short-term localised increase in non-toxic turbidity that would naturally disperse.

The NT EPA considers that potential impacts and risks associated with marine water quality are not significant and can be adequately managed through the implementation of measures proposed in the NOI.

Marine Fauna

Apsley Strait has significant marine biodiversity values, including turtles, seabirds, dolphins and dugongs, however there are no known important habitats or nesting areas for these species in proximity to the project area. Noise emissions from the drilling and other site activities are not expected to be significant, though fauna may temporarily avoid the local area in the short term.

The NT EPA considers that the small scale of the proposal, the short duration of proposed works and absence of critical habitat for threatened species limits the risks of the proposal to marine fauna.

Inland Waters Environmental Quality

The proposal area overlies a saturated shallow unconfined aquifer of high-quality water that is extracted from inland bores for supplying water to the community. The proposed drilling sites are located at the brackish edges of this aquifer. There is potential for a reduction in the quality of the groundwater at the proposed drilling sites and further inland as a result of the proposal. Excavation at the proposed drilling sites, for establishment of temporary settlement pits, could intercept and contaminate groundwater. This will be avoided by ensuring this excavation does not intercept the groundwater and by using PVC liners in the pits.

Additionally, leachate from drilling wastes could seep into the groundwater at the drilling sites, from the Wurrumiyanga landfill or from the disposal site for liquid wastes. If PASS are not identified and treated, the leachate could contain acid and metals. This will be mitigated by lining the waste storage pad and using bunds and sumps for the collection of leachate, and by testing for and treating any PASS in accordance with the ASS Management Plan. Contamination from the landfill and liquid waste disposal site will be mitigated by testing of the waste, appropriate treatment if necessary, disposal only following consultation with the TLC, and removal from the Tiwi Islands of any materials deemed hazardous.

The NT EPA considers that potential impacts and risks associated with the quality of groundwater are likely to be highly localised and small in scale. The potential impacts are therefore not considered to be significant and can be adequately managed through the implementation of measures proposed in the NOI.

Terrestrial Flora and Vegetation

The proposed drilling sites have previously been significantly disturbed and do not contain any threatened flora or significant vegetation. There is potential for broader impacts to flora and vegetation across the Tiwi Islands if new weed species arrive on the Tiwi Islands via the transport of equipment and machinery to the project area, and by ground disturbance facilitating conditions for the establishment of weeds. This will be mitigated by reinstating existing top soil, ensuring that all equipment and machinery is declared weed free prior to transport to the Tiwi Islands and by using only existing barge landings and access tracks.

There is potential for flora and vegetation to be impacted by the proposal at the site of liquid waste disposal if soil becomes contaminated, however this will be mitigated as outlined below for Terrestrial Environmental Quality.

The NT EPA considers that potential impacts and risks to flora and vegetation are not significant due to the small scale of the proposal and existing disturbance at the proposed drilling sites and can be adequately managed through the implementation of measures proposed in the NOI.

Terrestrial Environmental Quality

Soils in the project areas are currently intact and uncontaminated, and there is potential for the proposal to result in some erosion or contamination of soils. At the proposed drilling sites, ground disturbance combined with rain falling in September or October could cause erosion and subsequent turbid runoff into the waters of Apsley Strait. This will be mitigated by the development and implementation of an ESCP as part of the CEMP.

There is potential for contamination of soil from the disposal of solid waste. This will be mitigated as outlined above for Inland Waters Environmental Quality.

There is also potential for contamination of soil from the disposal of liquid waste which is likely to contain residual drilling additives and possibly small quantities of hydrocarbons. This will be mitigated by testing of the liquid waste and, following confirmation that the waste is considered suitable for release according to relevant criteria, disposal by controlled release at a suitable site to be selected in consultation with the TLC.

The NT EPA considers that potential impacts and risks associated with erosion and contamination of soils are not significant and can be adequately managed through the implementation of measures proposed in the NOI.

Social, Economic and Cultural Surroundings

The township of Wurrumiyanga is the largest community on the Tiwi Islands, housing approximately 2 000 people. Paru is an outstation of less than ten houses. The proposal will bring a number of positive benefits to the Tiwi Islands community, including improved water quality at Paru, continuation of power supply, and the opening up of land for housing development in Milikapiti and Pirlangimpi.

Drilling noise could be a nuisance to sensitive receptors, with levels reaching up to 65 dB(A) at receptors located 50 – 100 m away. However the impact of this will be minimal at Wurrumiyanga

because residences and community services are located more than 100 m away from the drilling site. At Paru there may be some short-term exceedance of the background plus 5dB(A) guideline for residential use areas. This will be mitigated by drilling between the hours of 7am to 7pm over a defined period of 10-15 days and providing advance notice of the works to the community. The NT EPA considers that this impact to the cultural and social surroundings would not be significant considering the small scale of the project, the short duration of works, and implementation of measures proposed in the NOI.

No Aboriginal Sacred Sites or known heritage places or archaeological sites will be impacted by the project. However, if any archaeological sites are discovered during the project, then all works in the immediate area will cease and the Heritage Branch will be contacted for comment. A procedure for dealing with any unexpected heritage finds will be included in the CEMP. The NT EPA considers that there is a low risk of impact to the cultural surroundings and that this that can be adequately managed through the implementation of measures proposed in the NOI.

Conclusion

The NT EPA considers that significant environmental impacts are unlikely due to the small scale of the project and that potential impacts can be appropriately managed through implementing the mitigation measures detailed in the NOI, including the development and implementation of a detailed Construction Environmental Management Plan (CEMP). Power and Water Corporation have advised that the CEMP will be developed by their contractor and reviewed and approved by Power and Water Corporation. As the proponent, Power and Water Corporation have a duty of care to ensure that the potential environmental impacts associated with the proposed action are effectively managed by their contractor through compliance with an approved CEMP and measures outlined in the NOI.

DECISION

The proposed action, which was submitted to the NT EPA by Power and Water Corporation, 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 to warrant environmental impact assessment by the NT EPA under provisions of the *Environmental Assessment Act*.

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

5 SEPTEMBER 2017