ntepa Northern Territory Environment Protection Authority

Statement of Reasons

EZION OFFSHORE LOGISTICS HUB (TIWI) PTY LTD – PORT MELVILLE

PROJECT

On 17 March 2014, Ezion Offshore Logistics Hub (Tiwi) Pty Ltd (the Proponent) submitted a Notice of Intent (NOI) for Port Melville to the Northern Territory Environment Protection Authority (NT EPA) for consideration under the *Environmental Assessment Act* (EA Act). The submission of the NOI was in response to the NT EPA's decision to enact clause 7 of the Environmental Assessment Administrative Procedures (EAAP) and call for the formal notification of Port Melville under the EA Act.

Components of Port Melville had already been constructed when the NOI was submitted to the NT EPA. Construction continued while the NOI, and additional information received in response to requests from the NT EPA, were being considered. Consequently, the scope of the proposed action considered by the NT EPA is limited to components yet to be constructed in the lease area[1] and the operation of Port Melville.

Port Melville is located on Melville Island, approximately 122 km north of Darwin, Northern Territory, and is situated on the Apsley Strait, immediately south of Barlow Point and the community of Pirlangimpi.

Port Melville provides for the export of woodchips and the shipment of equipment and supplies for other projects such as the construction and operation of oil and gas fields. The wharf infrastructure at Port Melville was constructed in 2013. The wharf is a floating concrete structure designed to withstand a category two cyclone and has an expected design life of five years.

Port Melville has been designed to accommodate the berthing of vessels up to 200 m in length. The projected monthly vessel movements (excluding pilot vessels) in 2015 is 23, increasing to 28.5 in 2019. Vessels entering and departing to the north of the Apsley Strait would navigate the marked channel between St Asaph Bay and Port Melville. Barges entering and departing to the south of the Apsley Strait would navigate the existing marked channel.

A range of on-shore support facilities and infrastructure has been constructed or is planned, including:

- laydown areas (11 000 m^2 and 60 500 m^2) and woodchip stockpile area
- warehouse, workshop, office facilities, customs station
- biosecurity washdown and container inspection facilities
- accommodation camp (150 person)
- waste holding and transfer facility
- fuel farm (30ML capacity) and additional fuel storage infrastructure
- wastewater treatment plant with an associated 0.4 ha wastewater subsurface irrigation area.

Port Melville will continue to operate as a port into the foreseeable future, with upgrades dependent upon the changing needs of shipping movements and markets.

[1] The area of land (being part of land) as shown on the plan attached to the lease held by the Proponent, together with all structures in and on the land.

CONSULTATION

The NT EPA consulted with Northern Territory Government (NTG) advisory bodies in accordance with clause 8(1) of the EAAP. The Proponent provided further information on a number of occasions at the request of the NT EPA, including an Operational Environmental Management Plan (OEMP) and sub-plans. The NT EPA also received information from the Australian Government Department of the Environment that had been provided to it to inform its consideration under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

JUSTIFICATION

Review of the documentation identified the following potential environmental impacts:

- the impact on marine megafauna from vessel collisions as a result of increased vessel movements
- the impact of artificial lighting on marine turtle nesting and hatchling activity
- the impact of water extraction on the supply of water to the community of Pirlangimpi
- the impact on the quality of freshwater (ground and surface) and marine ecosystems from port operations, including potential hydrocarbon spills, wastewater and erosion and sediment mobilisation
- the impact of construction activities on significant heritage items and places
- the impact on threatened species that may be present in an area proposed for land clearing
- the potential introduction of weed and marine pest species
- the impact of poor waste management.

Vessel movements

The operation of Port Melville will increase the number of vessel movements in and around the Apsley Strait, presenting a risk of collision with marine megafauna, in particular to marine turtles, cetaceans and dugongs. These species are protected under the EPBC Act and the *Territory Parks and Wildlife Conservation Act* (TPWC Act).

The marked channel between St Asaph Bay and Port Melville by which vessels would navigate through the northern entrance of Apsley Strait is largely in deep water. This section would provide marginal habitat for marine megafauna and therefore it is unlikely that significant populations of marine megafauna would aggregate or remain in the channel. The NT EPA considers that the main risk from vessel movements would be to individual marine megafauna traversing the channel and interacting with vessels.

The Proponent has committed to enforcing speed restrictions and using pilot-assisted navigation to reduce the risk of collisions with marine megafauna. The mitigation actions would apply to vessels in excess of 50 m using the northern entrance of Apsley Strait. A pilot would be on board these vessels between Port Melville and the pilot boarding station situated 30 km north of the Apsley Strait. These vessels would be restricted to an overall maximum speed of twelve knots and a specific maximum speed of six knots over Mermaid Shoal, and would be required to remain within the marked channel at all times.

Vessel masters would be required to report marine megafauna sightings and strikes if and when they occur to the Port Operations Manager. The Port Operations Manager would maintain a register of marine megafauna sightings and strikes. The Proponent has committed to undertaking a review of its procedures and implementing additional measures in response to vessel strike.

The NT EPA notes that the southern Apsley Strait is an established route and is used frequently by barges to service the local communities.

The NT EPA recommends that the Proponent apply for a permit to take or interfere with protected wildlife under section 55 of the TPWC Act. At the discretion of the Director of Parks and Wildlife, the permit should condition the movement of large vessels (>50 m in length) to and from Port Melville in a manner that requires:

- **vessels to enter and exit the Apsley Strait only from the northern entrance**
- **vessels to be overseen by a pilot while travelling between Port Melville and the pilot boarding station**
- **vessels to not exceed a maximum of 12 knots when traversing between Port Melville and the pilot boarding station and 6 knots when navigating over Mermaid Shoal under normal operating conditions**
- **the Proponent to maintain a register of dugong, cetacean and marine turtle sightings and vessel strikes**
- **the Proponent to report any vessel strike to a dugong, cetacean or marine turtle to Marine Wildwatch within 24 hours of becoming aware of a vessel strike**
- **for any dugong, cetacean or marine turtle vessel strike, the Proponent to review procedures and, where appropriate, implement measures to minimise the risk of future vessel strikes**
- **the Proponent to submit an annual report to the Director of Parks and Wildlife that summarises data on all dugong, cetacean and marine turtle sightings and strikes and reviews the effectiveness of procedures to minimise vessel strikes and, where appropriate, describes additional measures to reduce the risk of future vessel strikes.**

Lighting

The beaches surrounding Bathurst and Melville Islands provide highly significant nesting sites for marine turtles, in particular the Olive Ridley Turtle (*Lepidochelys olivacea*) and Flatback Turtle (*Natator depressus*). Changed light horizons associated with artificial light, such as those by Port Melville, presents a risk to marine turtle hatchlings and nesting adults resulting in disorientation. There is potential for artificial lighting to affect nesting activity and hatchling survival at nesting sites in the absence of suitable avoidance and mitigation measures.

The Proponent engaged an independent expert to undertake an assessment of the risks from lighting on marine turtles. The assessment included a review of the proposed avoidance and mitigation measures at Port Melville. Mitigation measures utilised include keeping lights low, shielded and aimed in a direction away from potential nesting sites. The assessment concluded that:

- measures adopted during night time vessel movements were adequate to avoid potential light impacts on nesting beaches
- light from Port Melville under the present conditions had no detectable impact on sea turtle nesting beaches.

The NT EPA is satisfied that the potential impacts of lighting from Port Melville on marine turtles are not significant and associated avoidance and mitigations have been appropriately considered.

Water extraction

The Proponent will extract water from a regional shallow, unconfined aquifer for the supply of water to Port Melville. The aquifer is connected to the Blue Water Creek spring, which is currently used to supply water to the community of Pirlangimpi. The aquifer is also part of a borefield protection zone, which is an area that the Power and Water Corporation intends to develop for future public water supply for Pirlangimpi.

The Proponent modelled the predicted groundwater drawdown at the Blue Water Creek spring and concluded that the operations at Port Melville would not result in a measurable impact at the spring. The NT EPA considers that it is appropriate for the Proponent to continue to monitor for the potential over-extraction of groundwater, including the evidence of aquifer drawdown and/or saline intrusion and consult with the relevant agencies in respect to water extraction.

The NT EPA recommends that the Proponent provide monthly groundwater monitoring data to the Department of Land Resource Management and the Power and Water Corporation. The monthly monitoring data should include, but not be limited to, details of monthly extractions, standing water levels and results from water quality monitoring, as well as any exceedances above trigger thresholds. The NT EPA recommends that the Proponent provide an interpretation of the data with respect to the sustainability of the aquifer.

Water quality

Wastewater

The production and handling of wastewater presents a risk to the environment in the absence of appropriate management and mitigation measures. The Proponent has prepared a Recycled Water Management Plan, which outlines the treatment and disposal process of wastewater at Port Melville. Effluent will be treated to Class B standard[2] and disposed of within a designated 0.4 ha irrigation area.

The NT EPA recommends that the system for treatment and disposal of wastewater is designed and managed in a manner that avoids the discharge of pollutants to water through surface and groundwater flows.

Erosion and sediment control

The Proponent has prepared an Erosion and Sediment Control Plan (ESCP). The NT EPA has concerns that the ESCP is not fit for purpose in its current form, particularly during times of monsoonal and/or significant rainfall events. Given the imminent Wet Season, the NT EPA considers that the revision of the ESCP and adoption of adequate erosion and sediment control measures is a matter of priority.

The NT EPA recommends that the Proponent review and update the ESCP as a matter of priority and ensure that all erosion and sediment control infrastructure is installed before the commencement of the Wet Season. The updated ESCP must identify all permanent operational phase controls and be prepared by a suitably qualified professional.

Hydrocarbon Spills

The operation of Port Melville involves the storage and supply of a considerable amount of Diesel fuel. The impact of a spill on the environment could be significant in the absence of appropriate planning and management measures. The Proponent has constructed the fuel storage and transfer

[2]Northern Territory Department of Health 2013, *Draft guidelines for wastewater works design approval of recycled water systems*, 1 November 2013. Available at: http://www.health.nt.gov.au/Environmental_Health/Wastewater_Management/index.aspx

infrastructure in accordance with relevant Australian Standards[3] and Code of Practice[4] to reduce the risk of spills to the environment. Additional mitigation and management measures have been described in several documents and plans outlining how fuel is to be stored, procedures for fuel transfers and responses to emergency situations, including cyclones and hydrocarbon spills. The NT EPA has concerns that the documents and plans are not fit for purpose in their current form and would be difficult to implement in the event of an emergency.

The NT EPA recommends that the Proponent develop and centralise information pertaining to the storage of fuel, procedures for fuel transfers and responses to emergency situations, including hydrocarbon spills. It is essential that the document outline avoidance, mitigation and management measures for hydrocarbon spills, with appropriate emergency response measures. The document should be fit for purpose, current and accessible to all staff that would be required to undertake action(s) in an emergency situation.

Other potential impacts

The Proponent has committed to measures to avoid or mitigate other potential impacts. The NT EPA considers that these impacts can be appropriately managed through the implementation of proposed measures, compliance with regulatory requirements and standards, and the following recommendations from the NT EPA.

Historic and culturally sensitive heritage

The NT EPA recommends that the Proponent maintain an uncleared buffer of at least 100 m around the artefact sites identified as Crosby 62, 64, 66, 68, 71, 72, 73 and convict quarters.

Land clearing

The NT EPA recommends that the Proponent undertake pre-clearance and targeted surveys for threatened species prior to disturbing any vegetation associated with clearing activities. The pre-clearance surveys should be undertaken at an appropriate time to identify threatened species, and be undertaken by a suitably qualified expert that has demonstrated experience surveying for threatened species.

Weeds

The NT EPA recommends that the Proponent maintain a Weed Management Plan that provides for prescriptive measures for avoiding the introduction and spread of weeds and provides appropriate provisions for monitoring and reporting. The NT EPA recommends that the Weed Management Plan be approved by relevant Agencies.

Biosecurity

The NT EPA recommends that the Proponent maintain a Biosecurity Management Plan that outlines the measures for avoiding the introduction and spread of invasive terrestrial and marine species, and provides appropriate provisions for monitoring and reporting. The NT EPA recommends that the Biosecurity Management Plan be revised by a suitably qualified professional.

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[3] Standards Australia 2004, *Australian Standard AS1940-2004 - the storage and handling of flammable and combustible liquids risks associated with spills*, Standards Australia, Sydney.

[4] National Fire Protection Association, 2015, Flammable and Combustible Liquids Code Handbook, National Fire Protection Association, Quincy MA.

Waste management

The NT EPA recommends that the Proponent consult with the Tiwi Land Council in respect of disposing of any wastes associated with the operation of Port Melville into local landfill and, if necessary, contribute to the ongoing management and upkeep of the facility.

Environmental management

The NT EPA recommends the Proponent review the OEMP, and sub-plans, at a frequency of not less than 12 month.

The NT EPA recommends that the Proponent publishes the current OEMP, and sub-plans, on its webpage not less than 14 days after it has been finalised. The current OEMP, and sub-plans, should be publicly accessible for the duration of the proposed action.

The NT EPA recommends that the Proponent undertake annual audits of operations at Port Melville and the implementation of the OEMP, and sub-plans. The NT EPA recommends that a suitably qualified independent auditor undertake the audits.

Changes to the proposed action

The NT EPA recommends that the Proponent take all reasonable measures to ensure that Port Melville is implemented in accordance with the environmental commitments and safeguards provided in the NOI and OEMP.

The NT EPA recommends that the Proponent advise the NT EPA of any changes to Port Melville, in accordance with clause 14A of the EAAP.

Summary

The NT EPA has considered the environmental risks associated with Port Melville. Environmental management of some of the risks has been identified in the NOI and additional information, while the remainder will be addressed through monitoring and management actions detailed in the OEMP and/or the granting of permits and approvals under separate legislation. The NT EPA considers that Port Melville can be managed in a manner that avoids significant environmental impacts provided that the commitments and safeguards detailed in the NOI, additional information and OEMP, and the recommendations provided here are implemented and are subject to regular monitoring, auditing and review.

DECISION

The environmental significance of the Port Melville project is such that a public environmental report or an environmental impact statement is not necessary and, subject to clause 14A of the EAAP, the administrative procedures are at end in respect of the proposed action. This decision is in accordance with clause 8(2) of the EAAP.

DR BILL FREELAND

CHAIR

NORTHERN TERRITORY ENVIRONMENT PROTECTION AUTHORITY

16 OCTOBER 2015