

# Statement of Reasons

## NT FISHERIES – ARTIFICIAL REEF DEPLOYMENT, GREATER DARWIN AREA

### PROPOSAL

Northern Territory (NT) Fisheries of the Department of Primary Industry and Resources (the Proponent), submitted the Notice of Intent (NOI) for the Artificial Reef Deployment, Greater Darwin Area (the Proposal) to the Northern Territory Environment Protection Authority (NT EPA) on 25 March 2019 for consideration under the *Environmental Assessment Act 1982* (EA Act).

The Proposal is for development of four artificial reefs (AR) in the greater Darwin area, between Cape Scott and Point Stuart, located within 26 km (14 nautical miles) of the coast (see Table 1).

Table 1. Location information for the four proposed artificial reefs.

Nearest coast location	Artificial reef (AR) site name	AR site ID	Tenure
Lee Point	Lee Point Wide	AR1	NT
Charles Point	Central North and South Gutter	AR2	NT
Dundee	Dundee Wide	AR3	Commonwealth
mouth of Adelaide River	Adelaide River mouth	AR4	NT

The Proposal underwent an extensive site selection process, including community consultation, with the report available at: <https://dpiir.nt.gov.au/fisheries/fisheries-strategies,-projects-and-research/artificial-reef-and-fish-aggregating-devices-have-your-say>.

The Proposal aims to provide accessible artificial reefs to improve recreational fishing, including fishing-based tourism opportunities through improved habitat diversity. The Proposal also aims to reduce impact on 'at risk' reef fish species.

The Proposal components include:

- the design and fabrication of purpose built artificial reef units from steel or reinforced concrete or a combination of the two
- transport and deployment of up to 25 reef units, in clusters of four, per artificial reef
- placement of stable, free standing and open shaped artificial reef units 4 - 12 m above the seafloor at the four locations
- a minimum life span of artificial reefs of 30 years
- a scalable footprint of 1-2 ha per artificial reef depending on locality.

The Proposal plans to deploy purpose built artificial reefs to provide complex habitat for nearshore finfish species such as tropical snappers, black jewfish, cod, trevally, mackerel and queenfish.

The Proponent did not refer the Proposal for consideration under the *Environment Protection and Biodiversity Conservation Act 1999*.

Construction of concrete reef units is proposed to commence Dry season 2019.

## CONSULTATION

The NOI has been reviewed as a notification under the EA Act in consultation with Northern Territory Government advisory bodies (see Attachment A) and the responsible Minister, in accordance with clause 8(1) of the Environmental Assessment Administrative Procedures.

## JUSTIFICATION

The NOI was assessed against the NT EPA's environmental factors and objectives.

### 1. Benthic communities and habitat

**Objective:** Protect benthic communities and habitats so that biological and functional diversity and ecological integrity are maintained.

The four proposed artificial reefs have each been located offshore, on sand, sand silt and gravel sand (AR1-2) and mud (AR3-4) substrates to avoid sensitive benthic communities like mangroves, seagrasses, coral reefs and macro algae. Potential impacts on benthic communities and habitat from the Proposal include short term site disturbance with increased suspension of marine sediments. Longer term potential impacts relate to modification of benthic habitat, and may include minor changes to connectivity and larval dispersal patterns at nearby natural reefs resulting in shifts in trophic or food-web structure. Increased visitation by recreational boats has the potential to increase risks relating to introduction of pollutants, diseases and marine pests.

Site selection for the four artificial reefs has appropriately reduced the potential to impact on benthic communities at each site as well as those of nearby natural reefs. While the potential for impact on nearby reef communities has not been fully examined, the overall impact on existing benthic communities and trophic or food-web structure is expected to be small.

The Proponent has committed to a five year monitoring program to determine the effectiveness of the artificial reef. The NT EPA acknowledges that this monitoring would contribute to understanding the dispersal and response of fish to artificial reefs and reduce the uncertainty around the potential impact on nearby natural reefs. The NT EPA supports the recommendations within the NOI to avoid loss of existing high relief benthic habitat and loss of seagrass habitat through sampling at proposed deployment locations.

The NT EPA is satisfied that potential impacts from the short term disturbance of benthic habitat and long term effects on nearby natural reefs are not significant and the NT EPA's environmental objective for Benthic communities and habitat is likely to be met.

### 2. Marine flora and fauna

**Objective:** Protect marine flora and fauna so that biological diversity and ecological integrity are maintained.

The Coastal waters of the NT and adjacent Commonwealth Marine Areas have significant environmental values relating to marine flora and fauna. The Proposal has identified fauna of conservation significance that may be present within 5 km of the proposed artificial reefs, including: five species of marine turtle (Green, Hawksbill, Flatback, Olive Ridley and Leatherback turtles), the saltwater crocodile, six species of marine mammals (e.g. dugong, dolphins and whales) and seven species of shark or rays (e.g. sawfish, manta rays and whale shark). The potential impacts from the Proposal on these species result from the loss or change to foraging and breeding habitat, and an increase in boat traffic.

The Proponent has prevented the potential for injury or entanglement of fauna through the design of artificial reef units with no free-floating equipment. The Proposal avoided important areas for foraging and breeding through the site selection process. The potential for impact with increased boat traffic is likely to be mitigated through ongoing community engagement associated with the Proposal.

The NT EPA is satisfied that, with the implementation of these measures, potential impacts and risks to marine fauna can be adequately managed and that the NT EPA's objective for Marine flora and fauna is likely to be met.

### 3. Marine environmental quality

**Objective:** Maintain the quality and productivity of water, sediment and biota so that environmental values are protected.

The marine environmental quality of coastal waters of the NT and adjacent Commonwealth Marine Areas is generally very high. There is large natural variation in some water quality parameters due to large tides and seasonal metocean conditions. Potential impacts to water quality include the temporary suspension of marine sediments and oil spills. Historically, some artificial reefs have used opportunistic listed waste materials (tyres) and recycled material (construction debris and decommissioned vessels) for the construction of artificial reefs.

The Proponent has designed stable purpose built artificial reef units which avoid any impact associated with the use of opportunistic materials such as tyres or wastes. The NT EPA is satisfied that potential impacts from spills during transport and deployment are unlikely to be significant, and that the NT EPA's environmental objective for Marine environmental quality is likely to be met.

### 4. Social, economic and cultural surroundings

**Objective:** Protect the rich social, economic, cultural and heritage values of the Northern Territory.

Recreational fishing is a valuable contributor to the Territory lifestyle and includes the fishing-based tourism industry. Economic values within coastal waters of the NT and adjacent Commonwealth Marine Areas include; shipping channels, maritime facilities (ports, jetties and landings), subsea infrastructure (pipelines and cables) and commercial wild harvest fisheries. These waters also contain significant historic and Aboriginal cultural heritage values which include WWII and Cyclone Tracy shipwrecks, dreaming sites, burial sites and sites with culturally significant resources. The Proposal is expected to improve recreational fishing opportunities for tourists and local fishers. The Proposal has limited potential to impact on commercial fisheries, maritime facilities, subsea infrastructure, shipping channels and, historic and aboriginal cultural heritage.

Site selection for the location of each of the four artificial reefs has appropriately avoided sites of significance, including suitable buffers, to prevent or reduce the potential to impact on social, economic and cultural values. The NT EPA supports the recommendations within the NOI to avoid interference with marine infrastructure and cultural heritage sites through ongoing consultation with appropriate stakeholders of proposed deployment locations.

The NT EPA is satisfied that potential impacts on known and unknown historic and cultural heritage sites would be mitigated and managed through measures presented in the NOI so that the NT EPA's environmental 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 small spatial and temporal footprint of disturbance by the Proposal.

The Proponent has conducted an extensive site selection process to avoid significant environmental values. The Proponent has committed to undertake a five year monitoring program of the four artificial reefs and nearby natural reefs to measure the success and impact on the new and existing reef communities respectively.

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 the Proponent to ensure that potential impacts on the environment are minimised and responsibilities under the legislation can be met.

## DECISION

The proposed action, which was referred to the NT EPA by NT Fisheries of The Department of Primary Industry and Resources, 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 1982*. Environmental management of the potential environmental impacts is the responsibility of NT Fisheries through preparation and implementation of procedures and management plans specified in the NOI.

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 AM MAICD  
CHAIRMAN

NORTHERN TERRITORY ENVIRONMENT PROTECTION AUTHORITY

9 MAY 2019

**Attachment A: Northern Territory Government Advisory bodies consulted on the Notice of Intent**

<b>Department</b>	<b>Division</b>
Department of Environment and Natural Resources	Flora and Fauna Water Resources Weeds Environment Bushfires NT Rangelands
Department of Infrastructure, Planning and Logistics	Lands Planning Infrastructure Transport
Department of Primary Industry and Resources	Fisheries Mining Compliance Petroleum Primary Industry
Department of Tourism, Sport and Culture	Heritage Tourism NT Arts and Museums Parks and Wildlife
NT Police, Fire and Emergency Services	Business Improvement and Planning
Department of Health	Environmental Health Medical Entomology
Department of Trade, Business and Innovation	Economics and Policy Strategic Policy and Research
Department of Housing and Community Development	Maintenance Planning Housing supply
Power and Water Corporation	
Aboriginal Areas Protection Authority	Technical
Department of the Attorney-General and Justice	Commercial Division NT Worksafe
Department of the Chief Minister	Economic and Environmental Policy