

# Statement of Reasons

## **BERNO BROTHERS PTY LTD – HOWARD LOT 1 SAND PROJECT**

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### **PROPOSAL**

Berno Brothers Pty Ltd (the Proponent) submitted a Notice of Intent (NOI) for the Howard Lot 1 Sand Project (the Proposal) to the Northern Territory Environment Protection Authority (NT EPA) on 9 March 2020 for consideration under the *Environmental Assessment Act 1982* (EA Act). The NT EPA requested additional information and clarifications on the NOI on 24 March 2020 and 5 June 2020 with the additional information submitted on 6 April 2020 and 12 June 2020.

The Proposal is located on Section 03645 Hundred of Strangways, 860 Girraween Road, Herbert which is approximately 35 km southeast of Darwin and 16 km southeast of Palmerston. The majority of the Proposal area is within Extractive Mineral Permit (EMP) 23038, with the southern portion on EMP 23039. Previous disturbance of the Proposal area and wider area occurred as a result of sand extraction activities until 2014.

The Proposal includes extraction of fine sand from an existing disturbed area, less than 2.5 ha in extent, followed by rehabilitation activities to reinstate natural surface hydrology, including surface flows.

Extracted sand would be screened, washed and stockpiled nearby on EMP 25527, then loaded onto trucks and transported 11 km via existing tracks and public roads to the Proponent's yard in Coolalinga, with up to 2-4 truck movements per day. All activities would be undertaken by three staff from Monday to Friday, from 7am to 6pm, during the wet season.

The NOI states that water used for sand crushing, screening and washing would be sourced from ponded water that has accumulated onsite in previously disturbed extraction pits; and that it would be recycled and reused on site, avoiding the generation of any wastewater. No chemicals would be added to the water.

No fuel or hazardous chemicals would be stored onsite and no servicing of vehicles or equipment would occur onsite.

The Proposal area would be rehabilitated following completion of sand extraction operations.

### **CONSULTATION**

The NOI has been reviewed by the NT EPA as a notification under the EA Act in consultation with targeted Northern Territory Government (NTG) advisory bodies (Attachment 1) and the responsible Minister, in accordance with clause 8(1) of the Environmental Assessment Administrative Procedures 1984 (EAAP).

### **JUSTIFICATION**

The NOI was assessed against the NT EPA's environmental factors and objectives. The NT EPA identified four environmental factors (Table 1) that could potentially be significantly impacted by the Proposal. The NT EPA considered the importance of other environmental factors during the course

of its assessment, however those factors were not identified as being potentially significantly impacted.

Table 1: Key environmental factors considered for this assessment

Theme	Key Environmental Factor	Objective
Land	Terrestrial flora and fauna	Protect the NT's flora and fauna so that biological diversity and ecological integrity are maintained.
Water	Hydrological processes	Maintain the hydrological regimes of groundwater and surface water so that environmental values are protected.
	Inland water environmental quality	Maintain the quality of groundwater and surface water so that environmental values including ecological health, land uses, and the welfare and amenity of people are protected.
People and Communities	Social, economic and cultural surroundings	Protect the rich social, economic, cultural and heritage values of the Northern Territory.

## 1. Hydrological processes

**Objective:** *Maintain the hydrological regimes of groundwater and surface water so that environmental values are protected.*

The shallow fine sand deposits occur on top of a highly permeable surface lateritic stratum and a claystone/sandstone stratum. The Proposal is underlain by a seasonally recharged aquifer hosted in Koolpinyah dolomite. Groundwater levels in the greater Darwin region vary from about 2 m in the wet season to 8-10 m in the dry season. Wet season flows to the sand plains are fed by rainfall as well as peripheral seepages, soaks, springs and surface flows, and flows from the Howard River and minor tributaries. The sandy areas are likely to contain areas of preferential recharge (Yin Foo 2004<sup>1</sup>).

The Proposal relies on incidental surface water runoff collecting in the sand extraction pit, to create a sand slurry that can be pumped via a pipeline approximately 400 metres to the sand stockpile on EMP 25527. Waste (return) water from the transport of the slurry would return from the stockpile to the sand extraction pit via overland flows. Due to the topography of the proposal area, the Proponent advised that return water would be contained and would not be released from the operational area. The proposed sand extraction is estimated to reach a maximum depth of 2 m below surface level. While this has the potential to contact shallow wet season groundwater levels, it is noted that any potential interception would be temporary (during wet season only).

The Proponent has stated that its rehabilitation objective with respect to surface hydrology is to reinstate natural surface hydrology, including surface flows, and protect offsite hydrology. The Proponent plans to achieve this by rehabilitating the impacted landform by re-contouring to restore surface hydrology and ensuring that no voids alter groundwater hydrology.

The NT EPA supports the Proponent's commitments to rehabilitate the currently disturbed landform, in a way that improves current hydrology and protects offsite hydrology. With the proposed mitigation and management measures presented in the NOI and Additional Information, the NT EPA

<sup>1</sup> Modelling of the McMinns / Howard East groundwater system. Report 26/20004D. Department of Infrastructure, Planning and Environment, Darwin.

is satisfied that the potential impacts and risks to hydrological processes are not significant. The NT EPA considers that its objective for hydrological processes is likely to be met.

## 2. Inland water environmental quality

**Objective:** *Maintain the quality of groundwater and surface water so that environmental values including ecological health, land uses, and the welfare and amenity of people are protected.*

The Proponent advised that the mining and processing areas are fully bunded and self-contained. Sediment is unlikely to leave the Proposal area. No chemicals would be used in the process and no water would be discharged to the environment.

The risk of spills is likely to be low, as no fuel or hazardous chemicals would be stored within the Proposal area and no servicing of vehicles or equipment would occur onsite. In the event of a hydrocarbon spill, absorbent materials would be kept on site and contaminated soils would be removed for appropriate disposal.

Based on the information provided, the proposed activities are unlikely to impact on the quality of the groundwater, wet season surface flows and the Howard River located approximately 500 m to the east of the sand mining area.

The NT EPA is satisfied that the potential impacts and risks to inland water environmental quality are not significant. The NT EPA considers that its objective for inland water environmental quality is likely to be met.

## 3. Terrestrial flora and fauna

**Objective:** *Protect the NT's flora and fauna so that biological diversity and ecological integrity are maintained.*

The works are located within the Howard Sand Plains Site of Conservation Significance (SOCS). The key ecological values of the Howard Sand Plain SOCS include important sandsheet heath habitat. The Flora and Fauna Division of the Department of Environment and Natural Resources (DENR) advised that this habitat supports an outstanding diversity and concentration of flora species and regionally important populations of threatened and significant species that are largely or entirely restricted to this habitat type.

Within the Howard Sand Plain SOCS, a 'priority protection area' was established in 2016 to protect areas that contain significant biodiversity values. At the time it was established, the 'priority protection area' contained several extractive operations. While the 'priority protection area' is afforded protection from new extractive mining activities, existing operations were permitted to continue where an authorisation was in place. The Proposal is located within the 'priority protection area', and entirely overlies land that has previously been disturbed by sand extraction operations. The Department of Primary Industry and Resources advises that all extractive operations will cease operating within the protected area by 30 June 2022<sup>2</sup>.

Five threatened species, listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and/or *Territory Parks and Wildlife Conservation Act 1976* (TPWC Act) are known to occur within or immediately adjacent to the proposal:

- Howard River toadlet (Vulnerable TPWC Act)
- floodplain monitor (Vulnerable TPWC Act)
- Mertens' water monitor (Vulnerable TPWC Act)
- *Typhonium taylori* (Endangered TWPC Act and EPBC Act)

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<sup>2</sup> Moss L, 2017. Letter to NT EPA from the Minister of Environment and Natural Resources – Creation of protected area. Available at [Link](#).

- *Utricularia dunstaniae* (Vulnerable TPWC Act).

The Flora and Fauna Division advised that the siting of the proposal entirely within a previously disturbed area means that it is unlikely to directly impact on the individual listed threatened species or the significant biodiversity values associated with the priority protection area.

The Flora and Fauna Division advised that the measures proposed by the Proponent, including management of weeds, measures to avoid and/or manage edge effects and offsite impacts and measures to achieve the Proponents stated rehabilitation objectives appear appropriate. While the proposed measures go beyond standard industry practice, the NT EPA considers that these measures are required due to the sensitivity of the surrounding environment. The NT EPA considers that achieving the objectives to rehabilitate the site will result in an improvement on the current disturbed landform, and result in better outcomes for the surrounding 'priority protected area'.

The NT EPA is satisfied that the potential impacts and risks to terrestrial flora and fauna can be mitigated through implementation of the management measures presented in the NOI. The NT EPA considers that its objective for terrestrial flora and fauna is likely to be met.

### **Social, economic and cultural surroundings**

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

The Heritage Branch of the Department of Tourism, Sport and Culture advised that there are no heritage or archaeological issues associated with the re-mining of the disturbed area. The Aboriginal Areas Protection Authority recommends the Proponent acquire an Authority Certificate to obtain a statutory indemnity to prosecution under the *Sacred Sites Act 1989*.

The proposed activities may generate noise, vibration and dust, with the potential to affect nearby residential properties in the vicinity of the Proposal during the hours of operation. The region is zoned Rural Living, with borders of the closest residential properties approximately 70 m from the sand processing area and 217 m from the sand extraction area.

The proposed activities will be of short duration, with rehabilitation to be completed by 2022. The proposal would result in 2-4 truck movements per day during the wet season, between the Proposal area and Coolalinga. This is not considered to be a significant increase to road traffic on the route and is not expected to cause disruption to road users. The Proponent committed to installing temporary road signage at the site entrance point during transportation of sand product to Coolalinga to notify road users of turning trucks.

The Proposal would potentially have some localised short term economic benefits to the community through job creation and provision of sand products.

The NT EPA is satisfied that the potential impacts and risks to social, economic and cultural surroundings are not significant with implementation of the proposed mitigation and management measures presented in the NOI and Additional Information. The NT EPA considers that its objective for social, economic and cultural surroundings is likely to be met.

### **Conclusion**

The NOI was assessed against the NT EPA's environmental factors and objectives. The NT EPA did not consider that any of its environmental factors would potentially be significantly impacted by the Proposal.

The NT EPA is of the view that the potential impacts of the Proposal can be adequately managed through implementation of the Proposal in accordance with the NOI, the Additional Information, and the Proponent's mitigation and management commitments.

Achieving the proposed rehabilitation outcomes will be essential, due to the highly sensitive nature of the surrounding environment. The NT EPA has provided comments to the Proponent and the responsible Minister to support this outcome, and to minimise potential impacts on the environment to the greatest extent practicable.

## **DECISION**

The proposed action, which was referred to the NT EPA by Berno Brothers Pty Ltd, has been examined by the NT EPA. 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 at the level of a Public Environmental Report or Environmental Impact Statement, under provisions of the *Environmental Assessment Act 1982*.

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



**DR PAUL VOGEL AM MAICD**

CHAIRPERSON

NORTHERN TERRITORY ENVIRONMENT PROTECTION AUTHORITY

26 JUNE 2020