

Statement of Reasons

DEPARTMENT OF INFRASTRUCTURE, PLANNING AND LOGISTICS – KATHERINE EAST NEIGHBOURHOOD CENTRE AND RESIDENTIAL DEVELOPMENT AREA

PROPOSAL

The Department of Infrastructure, Planning and Logistics (DIPL) (the Proponent) submitted a Notice of Intent (NOI) for the Katherine East Neighbourhood Centre and Residential Development Area (the Proposal) to the Northern Territory Environment Protection Authority (NT EPA) on 29 March 2019, for consideration under the *Environmental Assessment Act 1982* (EA Act).

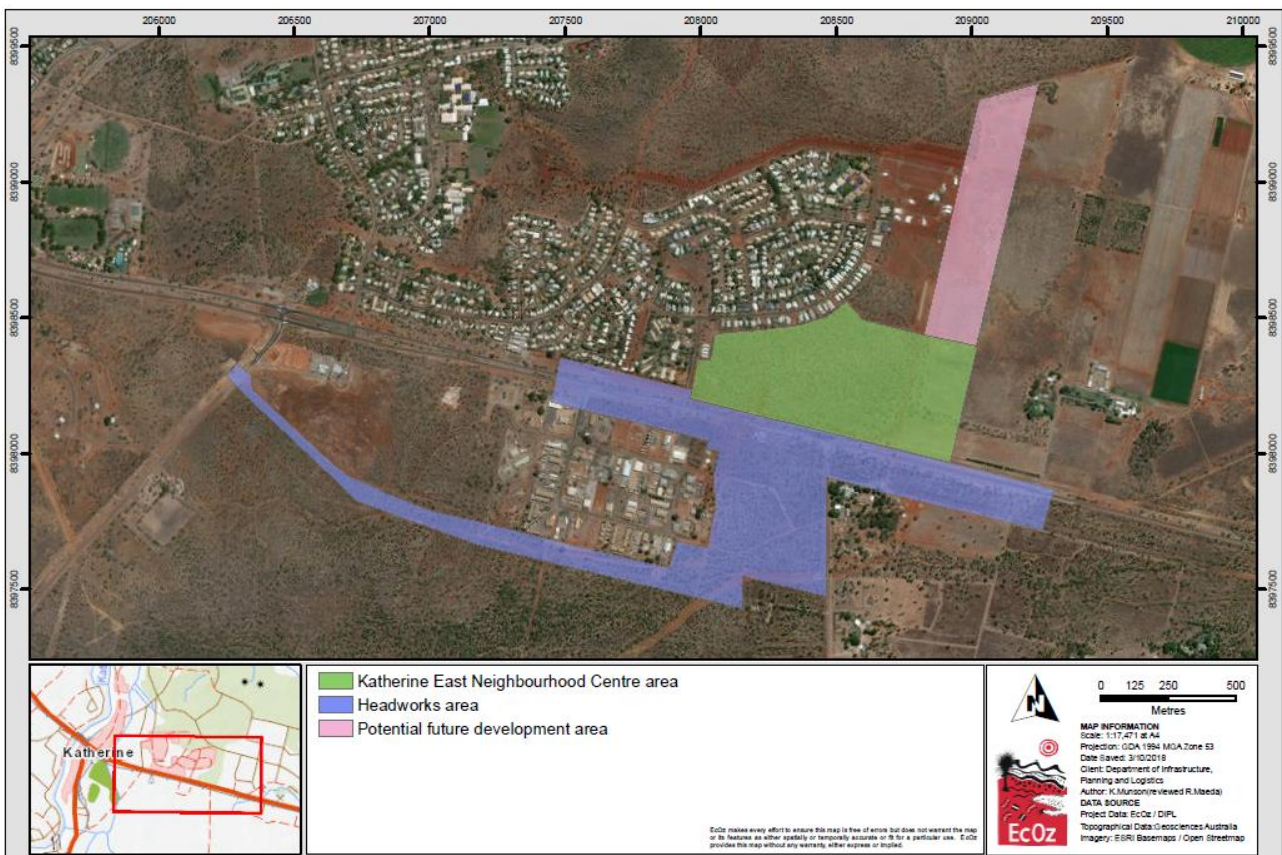
The Proposal is to facilitate the development of the Katherine East Neighbourhood Centre (KENC), a mixed use subdivision intended to address the current shortfall of retail and commercial floor space in Katherine and to provide for the ongoing delivery of land for residential, open space and community purposes.

The total area of land being considered covers 119.8ha (see Figure 1) and includes:

- the KENC (38ha)
- additional potential future development of the KENC (19ha)
- headworks servicing to support the KENC (62.8ha).

Assessment of the NOI is based on the total 119.8ha area of potential development.

Figure 1 – Map of the Proposal area (Source: NOI)



The concept layout of KENC is still in development and may be further modified to respond to a number of influences including: constraints mapping, outcome of infrastructure design consultancies, traffic impact assessment and planning approvals. It is, however, expected to be broadly consistent with the concept plan provided in the NOI. The size of the headworks area is also likely to reduce once the internal development layout is confirmed.

The Proposal is located in Katherine East, approximately 300km south of Darwin on the Stuart Highway and is bounded to the west by Cyprus Street. The northern and western boundaries of the site are adjacent to existing housing and to the east is the Katherine Research Station.

Construction will be progressive, with two stages developed over a two-year period. Headworks construction is proposed to commence in mid-2019. Land release is expected to commence mid-2021.

The Katherine East Area Plan (KEAP) is currently being progressed by the Northern Territory Planning Commission (NTPC) in parallel with the Proposal.

CONSULTATION

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

JUSTIFICATION

The NOI was assessed against the NT EPA's environmental factors and objectives. The NT EPA identified six environmental factors (Table 1) that could be potentially 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 potentially significantly impacted.

Table 1 - Key environmental factors

Theme	Key Environmental Factor	Objective
Land	1. Terrestrial Flora and Fauna	Protect the NT's flora and fauna so that biological diversity and ecological integrity are maintained.
	2. Terrestrial Environmental Quality	Maintain the quality of land and soils so that environmental values are protected.
Water	3. Hydrological processes	Maintain the hydrological regimes of groundwater and surface water so that environmental values are protected.
	4. 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.
Air	5. Air Quality and Greenhouse Gases	Maintain air quality and minimise emissions and their impact so that environmental values are protected.
People and Communities	6. Social, Economic and Cultural Surroundings	Protect the rich social, economic, cultural and heritage values of the Northern Territory.

1. Terrestrial flora and fauna

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

The vegetation on site largely consists of eucalyptus woodland. Approximately 25ha of the eastern section of the Proposal north of the Stuart Highway has been previously cleared. Further clearing of native vegetation is required for project infrastructure across the KENC and within the headworks area. There are no sensitive vegetation communities or threatened ecological communities within the Proposal area.

A desktop assessment of threatened species identified seven fauna species (one mammal, five birds and one reptile) that have a high or medium likelihood of occurrence within the Proposal area. However, no threatened species were detected during targeted field surveys. Given the disturbed nature of the Proposal area, it is considered unlikely that threatened fauna would use the area as core habitat or for breeding purposes.

Hyptis (*Hyptis suaveolens*) was found to be widespread across the Proposal area. Scattered infestations of neem (*Azadirachta indica*), a single chinese apple (*Ziziphus mauritiana*) and scattered flannel weed (*Sida cordifolia*) were also identified during field survey south of the Stuart Highway. These are declared weeds under the *Weeds Management Act 2001*. There is potential for construction works to result in the introduction and spread of declared weeds off site that could affect surrounding areas. To mitigate this risk, the Proponent has committed to the development of a Weed Management Plan for construction works. Any areas not covered by construction works will be covered under DIPL's existing Katherine Region Vacant Crown Land Weed Management Plan and related weed control contracts.

Yellow crazy ants were identified as having potential to be introduced on site via machinery and soil being brought in from outside areas. Vermin, including rats, feral cats and dogs also have the potential to be present on site if waste is not managed appropriately during construction works. The Proponent has committed to managing these impacts by inspecting machinery and equipment prior to arrival and departure on site and managing waste appropriately in accordance with DIPL's Standard Specifications for Environmental Management.

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.

2. Terrestrial environmental quality

Objective: Maintain the quality of land and soils so that environmental values are protected.

Review of the historical aerial photographs and titles indicated that contaminants associated with crop spray used at the Katherine Research Station may be present in KENC, while contaminants associated with general industrial/commercial land use may be present in the headworks area. Per- and poly-fluoroalkyl substances (PFAS) was also identified as a potential contaminant within the Proposal area.

The Proposal is located within the investigation area of PFAS that was undertaken for Royal Australian Air Force (RAAF) Base Tindal where PFAS containing firefighting foam was previously used. RAAF Base Tindal is located approximately 10km south-east of the Proposal. Soil sampling for PFAS, pesticides and a suite of metals and hydrocarbons was undertaken as

part of the Preliminary Site Investigation for the Proposal. All recorded samples were found to be below adopted guidelines¹ i.e. no recorded soil contamination.

The Proposal has the potential to impact terrestrial environmental quality through soil disturbance and erosion from vegetation clearing. The site was assessed as having a very low erosion risk based on soil characteristics and low topographic slope (typically <1%). No active erosion was observed on site. The Proponent has committed to implementing an Erosion and Sediment Control Plan (ESCP) in accordance with the International Erosion Control Association guidelines and DIPL Standard Specifications for Environmental Management. The ESCP will be prepared by a suitably qualified professional with experience in erosion and sediment control planning, and endorsed by DIPL.

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

3. Hydrological processes

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

The hydrology of the area is dominated by a network of ephemeral creeks, sinkholes and small drainage courses which feed into the Katherine River, located approximately 4km to the west of KENC and approximately 2km to the west of the headworks area. The northern and southern portion of the Proposal are located within the 1 in 100-year flood extent. A small sinkhole is present within the KENC.

A site investigation determined that the sinkhole located within KENC was small (approximately 1m across) and considered unlikely to supply substantial drainage into the groundwater. The DENR Water Resources Division supported this conclusion. The sinkhole is proposed to be contained within the area identified as Open Space in the concept design layout which will provide a buffer to the sinkhole.

Impacts to groundwater drawdown are not expected given no on site bore water will be used. Water required for clearing and construction works will be supplied by the construction contractor from an approved source off-site. Operational water will be from reticulated potable water supply.

There are no substantial natural drainage lines on site. A stormwater drainage assessment is proposed as part of the engineering design and will ensure drainage from the site is managed to prevent erosion and not impact on downstream infrastructure.

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

4. 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.

¹ National Environment Protection (Assessment of Site Contamination) Amendment Measure 1999 (NEPC, as amended 2013) Schedule B1 Investigation Levels for Soil and Groundwater for human health and ecological investigation and screening levels for low density residential and industrial/commercial land use. PFAS National Environmental Management Plan (HEPA, 2018) for human health and ecological screening values for low density residential and industrial/commercial land use.

The site is located within the Tindall Limestone Aquifer and within the Roper Daly Beetaloo Water Control District. There are no bores located within the Proposal area.

Groundwater samples were collected from four bores located to the east and west of the Proposal area. Sampling indicates PFAS concentrations exceed the PFAS National Environmental Management Plan 2018 guideline for drinking and recreational water. Therefore, it is likely that the groundwater beneath the Proposal area is impacted by PFAS. The concentrations of PFAS in groundwater were not however considered abnormal and were similar to the concentrations of PFAS reported as part of the assessment into RAAF Base Tindal (2017 monitoring event). Exceedances of the Australian and New Zealand Environment and Conservation Council 2000 freshwater (95% protection) guidelines for copper and zinc was also reported. However, it was determined that this is likely to be naturally occurring and unlikely to be attributed to contaminating activities on or surrounding the Proposal area.

The storage and use of fuel on site has the potential to result in spills or leaks, leading to contamination of surface and groundwater. To manage this risk, the Proponent has committed to ensuring all fuels are stored and handled appropriately and spill kits are kept on site.

Clearing also has the potential to create erosion and increase turbidity in surface water run-off. To manage this risk, the Proponent has committed to developing and implementing an ESCP in accordance with the International Erosion Control Association guidelines and as per the DIPL Standard Specifications for Environmental Management.

The NT EPA is satisfied that the potential impacts and risks on inland water environmental quality can be mitigated through implementation of the management measures presented in the NOI. The NT EPA considers that its objective for inland water environmental quality is likely to be met.

5. Air Quality and greenhouse gases

Objective: Maintain air quality and minimise emissions and their impact so that environmental values are protected.

Ambient air quality within the vicinity of the Proposal is good, except during bushfires, and occasional dust from exposed soils during high wind. The nearest sensitive receptors for air quality are located along the boundary of the Proposal and include:

- residential houses on Casuarina and Cyrus Streets
- the Stuart Highway
- Katherine Research Station
- industrial/commercial area south of the Stuart Highway.

Land clearing and vehicle movement during construction activities have the potential to cause dust. The Proponent has committed to ensuring water trucks will be used to mitigate any potential impacts.

Site preparation and construction activities will require the use of diesel powered vehicles and generators. The Proponent has committed to ensuring that vehicles and machinery are in good working order and inspected and maintained appropriately to avoid excessive emissions.

The NT EPA is satisfied that the potential impacts and risks on air quality and greenhouse gases can be mitigated through implementation of the management measures presented in the NOI. The NT EPA considers that its objective for air quality and greenhouse gases is likely to be met.

6. Social, economic and cultural surroundings

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

Cultural heritage

The Proponent has obtained Authority Certificates from the Aboriginal Areas Protection Authority. There are no sacred sites or restricted work areas within the Proposal area.

Archaeological survey in consultation with Traditional Owners was undertaken in September 2018. Survey identified two Aboriginal stone artefacts within the Proposal area, however they were found to be of low archaeological and Aboriginal significance.

Archaeological survey also identified that a section of the former North Australia Railway (NAR) embankment runs parallel to the Stuart Highway (within the headworks area). While the NAR features within the Proposal area are not currently protected under the *Heritage Act 2011*, it does have some significance to the many people in the Northern Territory. While the site condition is poor, works are proposed to minimise further impacts where possible.

Social considerations

Existing noise on site is dominated by noise from surrounding residential and industrial areas and traffic noise from surrounding roads, including the Stuart Highway. Noise impact assessment determined that road traffic noise levels will exceed the external noise criteria² of ≤ 60 dB(A) L10,18 hours at accommodation and residential buildings facades within approximately 70m of the Stuart Highway. To mitigate the acoustic constraints of the Proposal, the Proponent has committed to implementing the noise mitigation measures identified in the Noise Assessment Report in the detailed design stage. One of these measures is to implement architectural treatment along the southern boundary of the Proposal in accordance with the *Australian Standard 3671-1989 Acoustics – Road traffic noise intrusion – Building siting and construction*.

Construction works are not expected to impact on the amenity of the existing land uses. Works will be undertaken between 7am and 6pm Monday to Saturday and between 9am and 6pm on Sundays and public holidays. All vehicles will be fitted with noise attenuation reverse alarms and maintained as necessary during the course of works.

Dust generated during works will be controlled using a water cart or sprinkler system to avoid impacting users accessing areas around the Proposal as well as neighbouring residential areas.

It is likely the Proposal will result in increased traffic movements. A traffic study is being undertaken as part of the infrastructure design consultancy phase to inform the road layout of KENC. To prevent an increase in traffic incidents and congestion, a Traffic Management Plan will be implemented during the clearing and construction phase of the Proposal.

The NT EPA is satisfied that the potential impacts and risks on social, economic and cultural surroundings can be mitigated through implementation of the management measures presented in the NOI. The NT EPA considers that its objective for social, economic and cultural surroundings is likely to be met.

7. Human health

Objective: Ensure that the risks to human health are identified, understood and adequately avoided and/or mitigated.

PFAS could potentially pose a risk to human health if soil on site becomes contaminated through the use of PFAS contaminated groundwater. To mitigate this risk, all water to be used during construction will be sourced off-site and tested to ensure it is fit for purpose. All developed lots

² Queensland Department of Infrastructure, Local Government and Planning (2017) State Development Assessment Provisions, Code 1: Development in a state-controlled road environment, online at: <https://www.dlgrma.qld.gov.au/resources/policy/sdap/v2/state-code-1.pdf>

will be connected to a reticulated potable water supply from Katherine town supply, which is treated at the Katherine treatment plant.

Mosquito borne diseases were also identified as a risk to human health. Drainage infrastructure has the potential to create areas of standing water, and therefore an increase in mosquito breeding habitat. To mitigate this risk, stormwater drainage infrastructure will be designed in accordance with the recommendations of the Department of Health Medical Entomology Unit and in accordance with Katherine Town Council Development Guidelines.

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

CONCLUSION

The NT EPA considers that the potential environmental impacts and risks associated with the Proposal are not significant and that the Proposal 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 legislation can be met.

DECISION

The proposed action, which was referred to the NT EPA by DIPL 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 EA Act. Environmental management of the potential environmental impacts is the responsibility of DIPL through preparation and implementation of procedures and management plans specified in the NOI.

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

CHAIRMAN

NORTHERN TERRITORY ENVIRONMENT PROTECTION AUTHORITY

9 MAY 2019

Attachment 1: Northern Territory Government Advisory bodies consulted on the Notice of Intent

Department	Division
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 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
Land Development Corporation	
Department of the Chief Minister	Economic and Environmental Policy