

# Wak Wak Solar Farm

Application Number: **03307**

Commencement Date:  
**21/01/2026**

Status: **Locked**

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## 1. About the project

### 1.1 Project details

#### 1.1.1 Project title \*

Wak Wak Solar Farm

#### 1.1.2 Project industry type \*

Energy Generation and Supply (renewable)

#### 1.1.3 Project industry sub-type

Solar Farm

#### 1.1.4 Estimated start date \*

01/05/2027

#### 1.1.4 Estimated end date \*

01/05/2090

## 1.2 Proposed Action details

**1.2.1 Provide an overview of the proposed action, including all proposed activities. \***

The proposed action is the construction, operation and decommissioning of the Wak Wak Solar Farm and battery energy storage facility (BESS) which aims to generate and store renewable solar energy for both existing industry in the Greater Darwin Region, and potentially, generation of renewable green hydrogen. The proposed action is being undertaken by the Darwin H2 Project Nominee Pty Ltd as trustee for the Darwin H2 Hub Project Trust (Darwin H2) – Darwin H2 is wholly owned by TE H2, which is a joint venture between TotalEnergies (80%) and the Eren Groupe (20%) dedicated to the development of GW-scale multi energy projects globally which provides affordable, sustainable, reliable and accessible energy. TE H2 combines extensive technical expertise and experience to deliver globally impactful renewable energy projects that create affordable, reliable, and accessible clean energy.

The location of the proposed action is approximately 48 kilometres (km) south-east of Darwin – see Att. 1, Figure 1 - within the Litchfield Local Government Area (LGA). Most of the project area is within NT Portion 4477 - under a Perpetual Pastoral Lease, while a smaller part of the project area is located on two small lots of freehold land – Section 1435 and Section 1436, Hundred of Guy - see Att. 1, Figure 2. Access is proposed to be from the Arnhem Highway through Section 1580, Hundred of Guy, with the exact route to be determined in consultation with the relevant authorities and subject to a Traffic Impact Assessment.

The solar farm would have a capacity of up to 2.7-Gigawatt peak (GWp) of solar photovoltaic (PV) and the BESS would have a capacity of 6-Gigawatt hour (GWh).

In this referral, three relevant areas are referred to, described below and shown on Att. 1, Figure 2:

- **Initial investigation area:** a 13,000 ha initial investigation area was originally identified across NT Portion 4477.
- **Project area:** up to 3,400 ha within which the disturbance footprint is located. The project area consists of 900 ha of wildlife corridors between sections of the disturbance footprint that will require ongoing management by Darwin H2. While most of the proposed action would be developed within the disturbance footprint, there will be a requirement for some access tracks and electrical connections outside of that footprint but within the project area.
- **Disturbance footprint:** through extensive ecological survey across the initial investigation area, a 2,500 ha disturbance footprint has been identified (noting the proposed action is at concept design). This process is detailed in Section 4.1.4.10 of this referral.

The project is currently at concept design stage and the project area (up to 3,400 ha) and disturbance footprint (up to 2,500 ha) have been presented as conservative, rounded-up estimates to define the maximum credible development envelope. While the supporting spatial data in Section 2 currently calculates marginally smaller areas, these figures are intended to ensure a precautionary assessment of potential impacts in the absence of detailed design.

Additionally, using conservative estimates in the referral ensures consistency with the project description provided in the NT EP Act referral, where spatial calculations are not explicitly reported. The minor discrepancy between the GIS calculations and the stated areas does not represent an increase in disturbance risk. The significant impact assessments for Matters of National Environmental Significance (MNES) have been undertaken using the higher, conservative area estimates. The assessment of MNES impacts remains precautionary and is not affected by the variation between the spatial data and the rounded figures presented in the referral.

Avoidance areas include known sacred sites, areas subject to flooding, high quality significant vegetation, high quality vegetation and threatened species habitat and threatened flora records (described further in Section 4.1.4.10).

Key components of the proposed action to be developed within the disturbance footprint include:

- solar generation sites including solar PV
- BESS
- internal transmission infrastructure (within the site, interconnecting system infrastructure)

- ancillary infrastructure (including site offices, roads and laydown areas).

Over the life of the proposed action, works will include:

- land clearing and site preparation
- establishment of temporary facilities including offices, laydown areas, storage areas and hardstands, amenities, power generation infrastructure, drainage infrastructure, chemical stores and vehicle washdown and maintenance areas
- construction of solar PV and BESS and ancillary infrastructure
- ongoing operation and maintenance, including periodic cleaning of solar arrays to maintain performance and efficiency
- environmental management and protection, including installation and monitoring of erosion and sediment control measures, stormwater infrastructure, weed management and dust management.
- potential repowering after 30-years operation
- decommissioning and site rehabilitation at the end of life.

**1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?**

Yes

**1.2.3 Is the proposed action the first stage of a staged development (or a larger project)?**

Yes

**1.2.5 Provide information about the staged development (or relevant larger project).**

The proposed action may itself be developed in stages but it is not part of a staged development, nor is it part of a larger action that Darwin H2 proposes to develop. The proposed action is however related to other potential actions in the region.

### **OHTL**

The proposed action is related to, but does not include the development of an overhead transmission line (OHTL) that would convey renewable electricity to the Middle Arm Precinct (MAP) on the Middle Arm Peninsula. The reason for this is summarised below.

This referral excludes assessment of the OHTL on the basis that there are ongoing commercial negotiations and coordination with the NT Government for use of the nominated utilities corridor.

Renewable energy generated at the solar farm will be collected on-site in a network of underground and overhead 33 kilovolt (kV) or 66 kV reticulation. The collection points will be up to two 33/330 kV or 33/132 kV substations and switchyards in the north-western corner and the centre of the proposal area, which will connect to a planned high voltage OHTL line running to the MAP on the Middle Arm Peninsula.

The proposed OHTL is planned to run within an existing NT Government corridor zoned Utilities. The corridor is approximately 30 km long and 50 m wide. This corridor forms part of the wider Territory Energy Link, which has been designated and is under active design and planning by the NT Government. The OHTL will consist of an access track, towers, and transmission lines. Detailed co-ordination with NT Government agencies is ongoing to ensure that Darwin H2's plans are compatible with the infrastructure corridors being developed as part of the MAP and multi-user approach envisaged for zoned utility corridors.

While the OHTL has been mentioned in this referral, the ownership and operation of the OHTL are subject to ongoing negotiations and consultation. The OHTL may ultimately be owned and operated by the NT Government as a shared corridor accommodating multiple proponents and various types of public infrastructure.

At this stage, Darwin H2 cannot be the proponent for the proposed infrastructure corridor because:

- land tenure sits with the NT Government, and specific consent for Darwin H2's proposed OHTL cannot be granted in isolation from other uses or infrastructure
- planning and design work for NT Government's Territory Energy Link is still underway, and while Darwin H2 continues to work with the NT Government and both agree the OHTL will be located within the utility corridor, the exact location is not currently known; and
- the NT Government supports the proposal; however, Darwin H2 must proceed with assessments over the solar farm to ensure the generation component of the proposal is secured prior to final investment decisions on transmission infrastructure.

The OHTL will be terminated at the boundary of the MAP and run underground to a new substation on Darwin H2's designated land parcel, (noting any infrastructure within an approved MAP strategic approval area is excluded from the scope of the proposal in this referral). Darwin H2 are committed to undertaking the necessary technical studies and impact assessment to support any future approvals within the Territory Energy Link corridor.

### **Darwin H2 Hub**

The Darwin H2 Hub is not part of a staged development, however in the future Darwin H2 may develop, construct and operate a green hydrogen production facility at MAP to produce and export green hydrogen to national and international markets.

## **1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? \***

## **Key Commonwealth legislation**

### ***Native Title Act 1993 (Commonwealth)***

There are no native title claims or determinations over the project area; however, the proposed land use is a 'future act' that needs to be covered by one of the provisions in Part 2, Division 3, of this Act. Darwin H2 is in negotiations with the Northern Land Council (NLC), Traditional Owners and relevant representative bodies to discuss land access and land use agreements, including the possibility of entering into an Indigenous Land Use Agreement (ILUA) for the proposed action.

### ***Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)***

Darwin H2's self-assessment as set out later in this referral identifies potential for the proposed action to impact seven EPBC-listed threatened species.

## **Key NT legislation**

### ***Building Act 1993 (NT)***

All buildings constructed in the NT must comply with the standards and codes prescribed under the *Building Act 1993* (NT). Works within declared building control areas also require building permits and occupancy certificates. The proposed action is within the Darwin Building Control Area and will therefore require building permits and occupancy certificates where relevant.

### ***Bushfires Management Act 2016 (NT)***

The controls on fire activities provided in Part 4 of the Act will apply to the proposal, including the requirement to establish fire breaks, controls on high-risk activities during fire danger periods, and compliance with fire bans.

### ***Control of Roads Act 1953 (NT)***

Should any work be required within a road reserve for a road under the care and control of the NTG or a Local Council, a permit may be required under the *Control of Roads Act 1953* (NT). If the work involves creating a new access, modification of an existing access, discharging stormwater or installation of new infrastructure within the NTG road network, a Road Agency Approval may be required. Darwin H2 is progressing stakeholder consultations and a Traffic Impact Assessment to determine if permits are required and to inform any subsequent application process.

### ***Environment Protection Act 2019 (NT)***

A referral has been submitted to the NT Environment Protection Authority to determine if the proposed action requires assessment and approval under the *Environment Protection Act 2019*.

### ***Heritage Act 2011 (NT)***

Darwin H2 is progressing Aboriginal heritage surveys in consultation with NT Heritage Branch, Larrakia Nation Aboriginal Corporation, NLC and Wulna Traditional Owners and Custodians and will seek to avoid and protect identified places and objects where practicable. Where works on a heritage place or object are unavoidable, works approvals will be sought pursuant to Part 3.2 of the Act.

### ***Northern Territory Aboriginal Sacred Sites Act 1989 (NT)***

This Act is largely concerned with the protection of Sacred Sites. A person who proposes to use or carry out work on land may apply to the AAPA for Authority Certificate/s in accordance with Division 1A of the Act.

The proposed action design has accounted for and avoided known registered and recorded sacred sites, noting there may be unregistered sites that require avoidance. Darwin H2 is progressing ethnographic surveys along with Custodians and will seek to avoid and protect sacred sites (including tangible and

intangible values). Darwin H2 will apply for an Authority Certificate over all proposed development areas to ensure that Sacred Sites are identified and protected.

### ***Pastoral Lands Act 1992 (NT)***

The *Pastoral Lands Act 1992* (NT) provides for the conversion and granting of title to pastoral land and the administration, management and conservation of pastoral land, and for related purposes.

The proposal will require the following approvals under the *Pastoral Lands Act 1992* (NT):

- Non-pastoral Land Use Permit for non-pastoral use of pastoral land under a Perpetual Pastoral Lease.
- Pastoral Land Clearing Consent for clearing of native vegetation on pastoral land under a Perpetual Pastoral Lease.

### ***Planning Act 1999 (NT)***

The *Planning Act 1999* (NT) provides for appropriate and orderly planning and control of the use and development of land, and for related purposes.

The proposal will require the following approvals under the *Planning Act 1999* (NT):

- Development Permit for:
- Impact assessable development – as the use of land for a renewable energy facility is impact assessable within Rural (R) land under the *Northern Territory Planning Scheme 2020 (NTPS 2020)*.
- Subdivision consent - where the proposal involves the granting of a lease exceeding 12 years.

### ***Soils Conservation and Land Utilisation Act 1969 (NT)***

This Act provides for the prevention of soil erosion and for the conservation and reclamation of soil. Darwin H2 will implement Erosion and Sediment Control Plans (ESCP) to facilitate compliance with the general provisions of this Act.

### ***Territory Parks and Wildlife Conservation Act 1976 (NT)***

The Act makes provision for the establishment of Territory Parks and the study, protection and conservation of wildlife in the NT. This includes the classification of threatened species and general protection of native flora and fauna.

A permit may be required under Section 55 of the Act, to take or interfere with protected wildlife.

### ***Traffic Act 1987 (NT)***

A permit is required where construction activities are proposed within an NT road reserve. To comply with this Act, Darwin H2 will be required to obtain a permit to undertake any works within a road that is open to public traffic, whether publicly or privately owned. Darwin H2 is progressing a Traffic Impact Assessment to determine if permits are required and to inform any subsequent application process.

### ***Water Act 1992 (NT)***

The *Water Act 1992* (NT) provides for the investigation, allocation, use, control, protection, management and administration of water resources, and for related purposes. The Act regulates the use of both surface and groundwater and sets out the purposes for which water can be legally used. Waste discharge to natural waters is prohibited unless licenced under the Act.

Water Allocation Plans (WAP) and Water Control Districts (WCD) are declared under the Act. The proposal is within the Darwin Rural WCD. While there is no gazetted WAP for the area, the Adelaide River WAP is currently in development and is due for completion mid-2026.

The proposal does not currently involve any activity that requires approval under the Act. As detailed design progresses, compliance requirements under this Act will be reviewed and addressed as necessary.

**1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. \***

Darwin H2 commenced consultation with key stakeholders in January 2023. Consultation has been undertaken through a variety of methods, including email, phone calls and formal meetings (both virtual and in-person). To date, TE H2/Darwin H2 has been in ongoing discussions with various NT Government agencies, including:

- Investment Territory Department of the Chief Minister and Cabinet
- NT Department of Logistics and Infrastructure
- NT Department of Lands, Planning and the Environment Crown Land Estate
- NT Land Development Corporation
- NT Department of Mining and Energy (DME) Mineral Titles.

A variety of other stakeholders have been identified, including from the NT Government, Indigenous organisations and Traditional Owners, environment organisations, industry and community groups, service providers, residents, and mineral title holders, namely:

- Federal State Government
- Northern Territory Government Ministers, Members of Parliament, Departments
- Litchfield Council Councillors, Heads of Departments
- City of Palmerston Councillors, Heads of Departments
- Bushfires NT
- Aboriginal Areas Protection Authority (AAPA)
- Northern Land Council
- Larrakia Development Corporation
- Larrakia Nation Aboriginal Corporation
- Pudukul Aboriginal Corporation
- Host Landowner
- Immediate neighbours
- Environment Centre NT
- Landcare NT
- Territory Natural Resource Management
- Planning Action Network
- Amateur Fishing Association
- NT Farmer's Association
- Extractive Industries Association NT
- NT Cattleman's Association
- NT Road Transport Association
- Intrapac Projects Pty Ltd
- Service providers
- Humpty Doo and rural community.

Immediate neighbour engagement commenced in October 2025. Community engagement occurred at Humpty Doo and Coolalinga in December 2025, with all future engagement to be undertaken in accordance with Darwin H2's Stakeholder Engagement Strategy. Darwin H2 records all engagement activities and stakeholder information within the Mipela X-Info software.

Darwin H2 undertook stakeholder mapping to identify key stakeholders, government bodies and representatives, First Nations stakeholders, community and advocacy organisations, industry and businesses, and local communities. These stakeholder groups have informed the engagement approach for the development of Wak Wak Solar Farm.

Engagement activities will continue in 2026. Darwin H2 is committed to genuine and meaningful engagement with key stakeholders and the local community and will ensure they are brought along the journey of the proposal development.

## 1.3.1 Identity: Referring party

### **Privacy Notice:**

Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable.

By completing and submitting this form, you consent to the collection of all personal information contained in this form. If you are providing the personal information of other individuals in this form, please ensure you have their consent before doing so.

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**Confirm that you have read and understand this Privacy Notice \***

### **1.3.1.1 Is Referring party an organisation or business? \***

Yes

Referring party organisation details

**ABN/ACN** 81143989039  
**Organisation name** ECOZ PTY LTD  
**Organisation address** 0800 NT

Referring party details

**Name** Alice Nicholl  
**Job title** Environmental Consultant  
**Phone** 08 8981 1100  
**Email** alice.nicholl@ecoz.com.au  
**Address** Level 1, 70 Cavenagh Street, Darwin, NT 0800, Australia

## 1.3.2 Identity: Person proposing to take the action

**1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? \***

No

**1.3.2.2 Is Person proposing to take the action an organisation or business? \***

Yes

Person proposing to take the action organisation details

**ABN/ACN** 682475270  
**Organisation name** Darwin H2 Project Nominees Pty Ltd  
**Organisation address** Melbourne, Victoria, Australia, 3000

Person proposing to take the action details

**Name** Christian Hearn  
**Job title** Senior Development Manager  
**Phone** 0457 391 666  
**Email** chris.hearn@te-h2.com  
**Address** Office 24, Level 1, 131-135 High Street Fremantle, Perth WA 6160

**1.3.2.14 Are you proposing the action as part of a Joint Venture? \***

No

**1.3.2.15 Are you proposing the action as part of a Trust? \***

Yes

**1.3.2.16 Describe the nature of the trust arrangement in relation to the proposed action. \***

The action will be undertaken by Darwin H2 Project Nominee Pty Ltd which is the Trustee for Darwin H2 Hub Project Trust.

Unit Trust – Trust Deed is provided at Att. 2.

**1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. \***

The Wak Wak Solar Farm will be Darwin H2's first operating project in Australia and this is its first EPBC Act referral.

Darwin H2 and the person preparing the application have not been the subject of any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment.

**1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework**

While Darwin H2 does not currently have a formal environmental policy, it is committed to responsible environmental management and conducting its activities in accordance with all applicable Commonwealth and Territory environmental legislation, approvals, and regulatory requirements. Environmental considerations are integrated into operational planning and decision-making to minimise impacts and support compliance outcomes.

## 1.3.3 Identity: Proposed designated proponent

### 1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? \*

Yes

#### Proposed designated proponent organisation details

|                             |                                      |
|-----------------------------|--------------------------------------|
| <b>ABN/ACN</b>              | 682475270                            |
| <b>Organisation name</b>    | Darwin H2 Project Nominees Pty Ltd   |
| <b>Organisation address</b> | Melbourne, Victoria, Australia, 3000 |

#### Proposed designated proponent details

|                  |  |
|------------------|--|
| <b>Name</b>      | Christian Hearn  |
| <b>Job title</b> | Senior Development Manager                                       |
| <b>Phone</b>     | 0457 391 666   |
| <b>Email</b>     | chris.hearn@te-h2.com  |
| <b>Address</b>   | Office 24, Level 1, 131-135 High Street Fremantle, Perth WA 6160 |

## 1.3.4 Identity: Summary of allocation

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## ✔ Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

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|                            |   |
|----------------------------|---|
| ABN/ACN                    | 81143989039   |
| Organisation name          | ECOZ PTY LTD  |
| Organisation address       | 0800 NT   |
| Representative's name      | Alice Nicholl   |
| Representative's job title | Environmental Consultant                                |
| Phone                      | 08 8981 1100  |
| Email                      | alice.nicholl@ecoz.com.au                               |
| Address                    | Level 1, 70 Cavenagh Street, Darwin, NT 0800, Australia |

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## ✔ Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

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|                            |  |
|----------------------------|--|
| ABN/ACN                    | 682475270  |
| Organisation name          | Darwin H2 Project Nominees Pty Ltd                               |
| Organisation address       | Melbourne, Victoria, Australia, 3000                             |
| Representative's name      | Christian Hearn  |
| Representative's job title | Senior Development Manager                                       |
| Phone                      | 0457 391 666   |
| Email                      | chris.hearn@te-h2.com  |
| Address                    | Office 24, Level 1, 131-135 High Street Fremantle, Perth WA 6160 |

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## ✔ Confirmed Proposed designated proponent's identity

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

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Same as Person proposing to take the action information.

## 1.4 Payment details: Payment exemption and fee waiver

**1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? \***

No

**1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? \***

No

**1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?**

No

**1.4.7 Has the department issued you with a credit note? \***

No

**1.4.9 Would you like to add a purchase order number to your invoice? \***

No

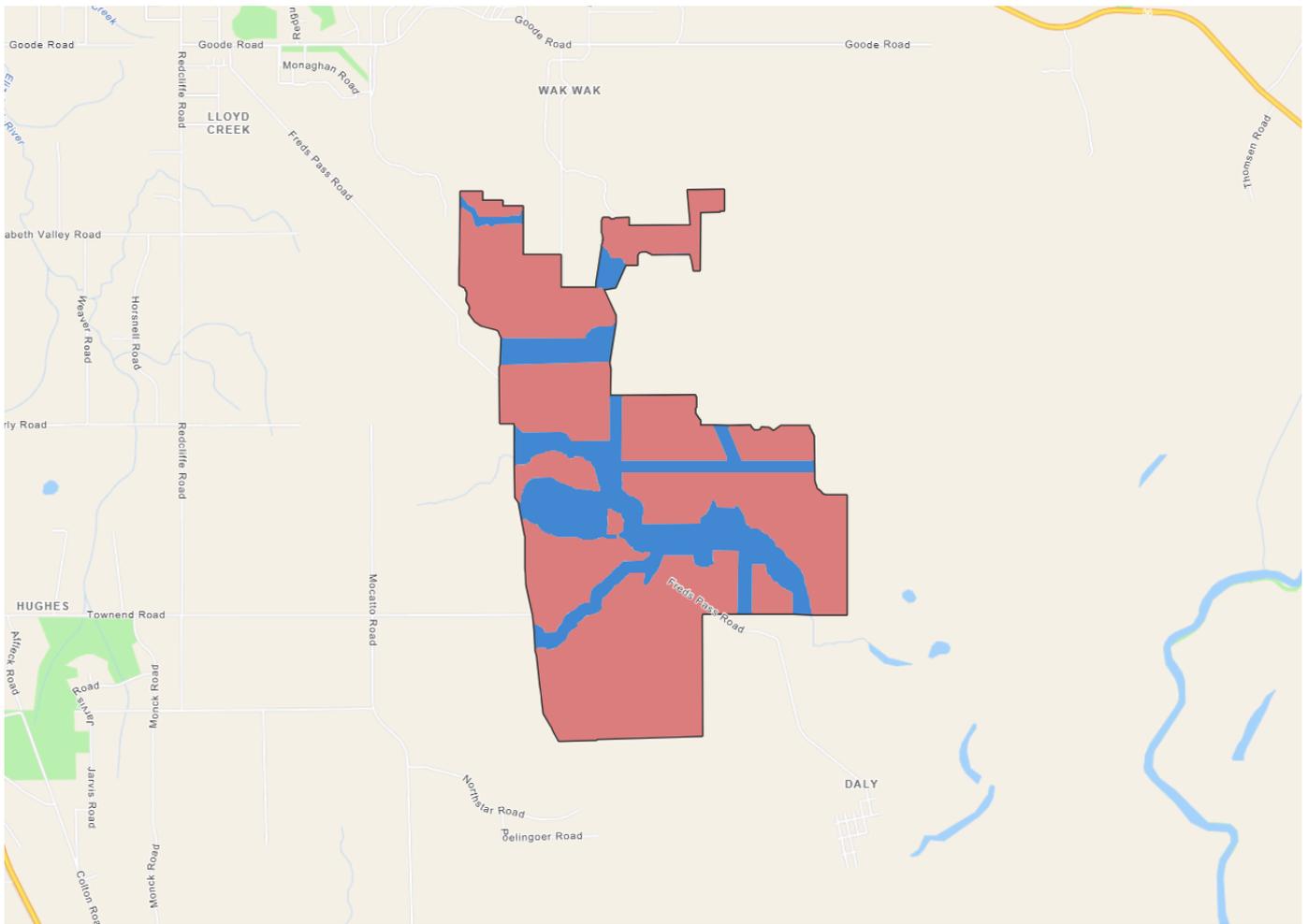
## 1.4 Payment details: Payment allocation

**1.4.11 Who would you like to allocate as the entity responsible for payment? \***

Person proposing to take the action

## 2. Location

## 2.1 Project footprint



**Project Area: 3199.08 Ha Disturbance Footprint: 2447.99 Ha Avoidance Area: 751.13 Ha**

## 2.2 Footprint details

### 2.2.1 What is the address of the proposed action? \*

1230 Goode Road, Wak Wak 0830

### 2.2.2 Where is the primary jurisdiction of the proposed action? \*

Northern Territory

### 2.2.3 Is there a secondary jurisdiction for this proposed action? \*

No

### 2.2.5 What is the tenure of the action area relevant to the project area? \*

Most of the project area is within NT Portion 4477 under a Perpetual Pastoral Lease 1147, although not all of NT Portion 4477 falls within the project area. The remainder of the project area covers two small lots of freehold land – Section 1435 and Section 1436, Hundred of Guy. The proposed access track traverses Section 1580 which is Vacant Crown Land; however, the exact route has not yet been determined and will be defined through detailed design in response to ongoing environmental surveys.

Darwin H2 has an Agreement to Sublease NT Portion 4477 and an Agreement to lease Sections 1435 and 1436.

There are no native title claims or determinations under the *Native Title Act 1993* (Cth) over any part of the project area.

## 3. Existing environment

## 3.1 Physical description

### 3.1.1 Describe the current condition of the project area's environment.

The project area is in the Litchfield Local Government Area, approximately 48 km south-east of Darwin.

The project area is entirely zoned rural and surrounded by a mix of rural, rural living, horticulture and agriculture properties. While there are mineral leases surrounding the project area on NT Portion 4477, these mineral leases are situated outside the project area – shown on Att. 1, Figure 3. Freds Pass Road intersects the project area, but this road is not part of the project area.

The project area is generally greenfield and undeveloped, except for access tracks.

Most of the north and a large section in the south and east of project area is characterised as well-drained rises and low hills, with parts of the south also being characterised as slow draining plains. A few small sections of the project area – mostly isolated patches around the periphery of the project area - are mapped as drainage systems, swamps, alluvial plains and marine areas with severe levels of seasonal soil waterlogging or inundation.

In the north, the project area is predominantly savanna woodland on low hills; in the south, the dominant habitats are plains of low shrublands and woodlands with vegetation accustomed to seasonally-saturated soils. The project area is incised by corridors of riparian vegetation associated with drainage systems and small areas of alluvial plains.

Topography across the project area is patchy, with some areas having slopes greater than 2% (approximately 700 ha). The remainder of the project area is generally flat, with slopes under 2%. The project area has avoided areas of steeper rises through design. Slopes of greater than 2% present a high risk of erosion. Existing erosion across the site is unknown; however, given the limited previous disturbance across the site it is expected to be minimal.

Including historic disturbance through areas of mineral extractive activities and pastoral activities, field surveys recorded several weeds declared under the *Weeds Management Act 2001*, namely Gamba Grass (*Andropogon gayanus*), Mission Grass (*Cenchrus polystachios*), Hyptis (*Hyptis suaveolens*) and Olive Hymenachne (*Hymenachne amplexicaulis*). Gamba Grass was the most observed and widespread.

Most of the project area has burnt upwards of 20 times since 2000, but there are areas aligning with watercourses and drainage lines that have burnt less – see Att. 1, Figure 4. Parts of the southern section of the project area have been subject to late season burns; however, this has only occurred between one and four years since 2000. The northern section has also been subject to late season burns of a higher frequency compared to the south, with some areas being subject to late season burns around 12 times since 2000.

Most of the project area has been burnt almost every year since 2000, meaning that the ecological condition of the environment within the project area has been severely compromised by such a highly-detrimental fire regime – as evidenced by a severely-reduced midstorey and many Gamba Grass infestations.

This is no coincidence; the project area was deliberately located in the poorest quality habitat to minimise impacts to biodiversity values and threatened species. Any localised fire-protected areas associated with riparian vegetation have been buffered and avoided.

Whilst habitat condition has not be stratified, a good proxy is presented in the fire frequency map at Figure 2-1 and Figure 2-2 of Att.5 and the habitat quality map for Northern Brushtail Possum at Figure 10 of Att. 1.

### **3.1.2 Describe any existing or proposed uses for the project area.**

While NT Portion 4477 is subject to a Pastoral Lease, there is no evidence of widespread current or recent commercial cattle grazing. Large areas in the north of NT Portion 4477 – but outside of the project area – are subject to mineral leases for extractive activities.

Indigenous land uses, if present within the project area, will be identified and assessed through community consultation with Traditional Owners and Custodians as part of the cultural values (ethnographic) assessment.

The proponent is not aware of any other proposed uses for the project area.

### **3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.**

A small portion of the proposed action intersects the Adelaide River coastal floodplain Site of Conservation Significance (SOCS). The floodplain is a large seasonally-inundated freshwater floodplain that is traversed by a major and permanent tidal river and regularly supports large numbers of waterbirds including internationally significant numbers of species such as Magpie Goose and Whistling-Ducks. Key threats to the SOCS include groundwater extraction and introduced species such as Water Buffalo, horse and pig, and pasture grasses. The SOCS covers 177,100 ha, of which less than 1 % (171 ha) is within the disturbance footprint.

The proposed action design has avoided known recorded sacred sites under the *Northern Territory Sacred Sites Act 1989*, significant vegetation types, major drainage lines and areas of high-quality savannah woodland habitat providing habitat for various threatened species.

### **3.1.4 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.**

Elevation within the project area ranges from around 10 m above sea level to 45 m above sea level. Topography across the project area is patchy, with some areas having slopes greater than 2% (approximately 700 ha). The remainder of the project area is generally flat, with slopes under 2%. The design of the proposed action has avoided areas of steeper rises. Contour mapping for the project area is shown in Att. 1, Figure 5.

## 3.2 Flora and fauna

**3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.**

The assessment of impacts on terrestrial ecosystems was informed by a comprehensive, multi-year program of threatened species surveys of the initial investigation area coupled with vegetation and habitat quality mapping. The methods and results are detailed in Att. 3 - Ecology Survey Report.

The project area supports the usual suite of flora and fauna species that persist within savannah woodland habitats that experience extremely high fire frequency. Notably, midstorey shrub and perennial grass species were in low abundance. Diversity of fauna increased in less-frequently burnt and fire-protected habitats.

A likelihood of occurrence assessment (LOO) was undertaken to determine which threatened species have a reasonable (that is, high or medium) likelihood of occurring in the initial investigation area. This process involved undertaking a search of the EPBC Protected Matters Search Tool (PMST) to generate a report of threatened ecological communities, listed threatened and migratory species that could occur in the initial investigation area. Full details of the LOO methodology are provided at Att. 3 – Ecology Survey Report, Section 2.5, pp. 10.

The results of this LOO informed the location and design of targeted surveys undertaken across most of the initial investigation area, the results of which informed Darwin H2's design of the proposed action to avoid or (where avoidance was not practicable) minimise impacts to the identified values (discussed further in Section 4.1.4.10 of this referral).

In summary:

#### Threatened Ecological Communities

There are no Threatened Ecological Communities mapped within or within proximity to the project area.

#### Flora

There are no EPBC Listed Threatened Flora Species expected to occur within the project area. One species on the Finalised Priority Assessment List (FPAL) was detected within the project area – *Typhonium praetermissum*. Broad land types and vegetation communities are summarised below and detailed in Att. 3 - Ecology Survey Report, Section 2.3.

#### Fauna

After comprehensive survey effort, the disturbance footprint was designed to avoid and minimise impacts to biodiversity values by avoiding areas of highest quality habitat within the initial investigation area. The following threatened fauna species were detected within or adjacent to the disturbance footprint, or have potential habitat within or adjacent to the disturbance footprint:

- Black-footed Tree-rat (*Mesembriomys gouldii gouldii*).
- Bare-rumped Sheath-tailed Bat (*Saccolaimus saccolaimus nudicluniatus*).
- Northern Blue-tongued Skink (*Tiliqua scincoides intermedia*).
- Northern Brushtail Possum (*Trichosurus vulpecula arnhemensis*).
- Mertens' Water Monitor (*Varanus mertensi*).
- Mitchell's Water Monitor (*Varanus mitchelli*).
- Partridge Pigeon (*Geophaps smithii smithii*).

Records of these species are shown on Att. 1, Figure 6. Further information about the presence of each species within or adjacent to the disturbance footprint is provided at Att. 3, Section 2.1 and 2.2.

#### Migratory species

The EPBC Act Protected Matters Search Tool report identified 34 migratory species protected under international agreements as possibly occurring within the initial investigation area.

Most of the identified migratory species have an inherently low likelihood of occurring with the initial investigation area because they occur almost exclusively in marine, coastal and estuarine environments. For many of these species – including all marine species – the initial investigation area does not contain suitable habitat, and so they are not considered further.

The remaining migratory species may occur within the terrestrial or freshwater ecosystems within the initial investigation area. However, even if individual members of some migratory species were to seasonally utilise habitat with the initial investigation area, this occurrence is expected to be of a short period and in low abundances.

### **3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.**

The disturbance footprint avoids the steeper rises in the north of the project area. The disturbance footprint is predominantly savanna woodland on low hills; in the south, the dominant habitats are plains of low shrublands and woodlands with vegetation accustomed to seasonally-saturated soils. The disturbance footprint is incised by corridors of riparian vegetation associated with drainage systems and small areas of alluvial plains.

A map of landforms within the proposal area is provided at Att. 1, Figure 7. Landforms include:

- **Low hills:** the landform is rapidly drained and soils experience nil to low levels of seasonal waterlogging.
- **Rises:** these areas are rapidly drained, and soils are well drained with nil to low level of seasonal soil waterlogging. Slopes are generally between 2 – 5%.
- **Plains:** some plains are generally characterised by slow drainage with moderate to high levels of seasonal waterlogging. Generally, these land units are flat to gentle lower slopes (between 0.5 and 2.5% slope). Other areas are generally characterised by very poorly-drained soils with severe seasonal waterlogging. These are also relatively flat areas (>1.5% slope) of incised drainage floors with upland terrain or broad lowland plains.
- **Alluvial plains:** this land unit is characterised by very poorly-drained soils with severe seasonal waterlogging.
- **Marine:** a very small area of marine landform is mapped within the disturbance footprint which is characterised as extensive plains with slopes of <0.5% and very poorly drained soils.

**Swamps:** a small area of swamp depressions is mapped with very poorly drained soils.

## 3.3 Heritage

### 3.3.1 Describe any Commonwealth Heritage Places Overseas or other places recognised as having heritage values that apply to the project area.

There are no Commonwealth Heritage places within or surrounding the project area.

### 3.3.2 Describe any Indigenous heritage values that apply to the project area.

The project area has been designed to avoid known recorded and registered sites and restricted works areas identified with the AAPA Abstract of Records (AAPA file RI2022/618) obtained across the initial investigation area. Further ethnographic survey work will be undertaken in consultation with AAPA and Custodians to confirm there are no unrecorded or unregistered sacred sites within the project area.

Darwin H2 has commenced consultation with AAPA and Custodians and have applied for an Authority Certificate through AAPA.

A review of the NT Heritage Register and NT archaeological sites database did not identify any recorded archaeological places or objects, nor any Declared Heritage Places, within the project area. There are no places within the project area that are under assessment or consideration for listing on the NT Heritage Register.

The absence of recorded Aboriginal archaeological sites reflects the absence of formal archaeological surveys and recording of Aboriginal objects and sites, rather than an absence of Aboriginal occupation in the past that would have resulted in the deposition of Aboriginal occupation evidence (Aboriginal objects and places) that the *Heritage Act 2011* protects.

Consequently, an archaeological assessment (including survey) will be undertaken in consultation with Traditional Owners, the NLC and Larrakia Nation.

While not formally recognised under the *Northern Territory Aboriginal Sacred Sites Act 1989* or *Heritage Act 2011*, cultural landscape features and cultural values are an important consideration. Darwin H2 will consult with Traditional Owners and other appropriate representatives, and relevant representative bodies such as the NLC, to identify cultural landscape features and seek to minimise the proposed action's impacts to these values.

The processes and consultation summarised above will assist in identifying cultural values within the project area which may be impacted by the proposed action and help Darwin H2 develop appropriate impact avoidance and mitigation measures to be implemented to the satisfaction of Traditional Owners.

## 3.4 Hydrology

**3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. \***

## Surface water

The project area includes numerous low order streams - see Att. 1, Figure 8 - that are largely ephemeral, becoming seasonally inundated and flowing during the wet season and/or immediately following major rains. As shown on Att. 1, Figure 8, there is one major drainage line that the disturbance footprint has avoided through design (including a buffer in accordance with the *Land Clearing Guidelines* (DEPWS 2024)) that runs west-east through the project area. Surface water runoff from within the project area is assumed to flow south-easterly toward the Adelaide River floodplain, and ultimately Adelaide River.

The project area is within the the eastern boundary of the Adelaide River catchment, which covers an area of 764,000 ha. The disturbance footprint at 2,500 ha, covers approximately 0.3% of the total catchment area.

The initial investigation area - Att. 1, Figure 8 - is subject to two primary flooding mechanisms:

- Local flooding – local flooding will occur due to rain falling across the local catchments with resulting runoff concentrating and being conveyed in the local flowpaths. If the capacity of these flowpaths is exceeded, floodwater will escape to inundate the surrounding land.
- Regional flooding – Regional flooding will occur when the capacity of the Adelaide River is exceeded, causing floodwater to enter the floodplains and tributaries and inundate the study area.

A baseline flood model was undertaken by WRM for the Adelaide River catchment to assess flood behaviour (for example, flood depths, level, extents, and velocities) under current and future climate conditions (year 2090 for regional flooding and year 2100 for local flooding) for both a minor (10 per cent (%) Annual Exceedance Probability (AEP)) and major (1% AEP) design storm events. The project area has been configured to avoid areas affected by the 1% AEP flood levels.

Ecological field surveys undertaken identified that surface water systems support *Melaleuca spp.* swamps in the project area – as shown on Att. 1, Figure 8. In areas avoided by the design of the proposed action but adjacent to the disturbance footprint, surface water flows support riparian vegetation, sandsheet heath vegetation, and some dry rainforest patches.

## Groundwater

The project area overlies the Wildman Siltstone and Whites Formation, which is described as a local-scale, fractured and weathered rock aquifer dominated by shale, greywacke and sandstone typically local in scale and low-yield. This aquifer is part of the Mount Partridge groundwater system within the Noonamah Water Management Zone (WMZ) of the Adelaide River catchment (DLPE 2025). Recharge of the aquifer occurs in the wet season through diffuse recharge. In the Noonamah WMZ, groundwater levels can range from 1 to 40 m below ground level (mBGL).

Directly adjacent to the project area is the Koolpinyah Dolostone groundwater system, a fractured karstic dolostone aquifer that is part of the Howard Groundwater System (HGWS). This system is generally recharged by diffuse rainfall recharge during the wet season and discharges to the Howard River in the west (including Howard Springs) and the Adelaide River in the east (DENR 2020). The project area is outside of the known recharge areas of the HGWS noting that the known recharge zone for the HGWS lies further east, north and northwest (DENR 2020). However, the lateral hydraulic connectivity between the aquifers in the project area and those in the HGWS are not well understood. Given the structural complexity and faulting in the Mount Partridge–Koolpinyah interface, some degree of hydraulic connectivity is plausible but likely limited. Groundwater levels in the HGWS zone adjacent to the project area ranges from 1 to 30 mBGL (Tickell, Cobban & Baird 2023).

## 4. Impacts and mitigation

## 4.1 Impact details

**Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.**

| <b>EPBC Act section</b> | <b>Controlling provision</b>   | <b>Impacted</b> | <b>Reviewed</b> |
|-------------------------|--|-----------------|-----------------|
| S12                     | World Heritage   | No              | Yes             |
| S15B                    | National Heritage  | No              | Yes             |
| S16                     | Ramsar Wetland   | No              | Yes             |
| S18                     | Threatened Species and Ecological Communities                                | Yes             | Yes             |
| S20                     | Migratory Species  | No              | Yes             |
| S21                     | Nuclear  | No              | Yes             |
| S23                     | Commonwealth Marine Area   | No              | Yes             |
| S24B                    | Great Barrier Reef   | No              | Yes             |
| S24D                    | Water resource in relation to large coal mining development or coal seam gas | No              | Yes             |
| S26                     | Commonwealth Land  | No              | Yes             |
| S27B                    | Commonwealth Heritage Places Overseas  | No              | Yes             |
| S28                     | Commonwealth or Commonwealth Agency  | No              | Yes             |

## 4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

### 4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? \*

No

### 4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

\*

There are no World Heritage Places within or proximate to the project area. The nearest World Heritage Place – Kakadu National Park – is approximately 80 km east of the proposed action.

## 4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

### 4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? \*

No

### 4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.

\*

There are no National Heritage Places within or proximate to the project area. The nearest National Heritage Place – Kakadu National Park – is approximately 80 km east of the proposed action.

## 4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

**4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? \***

No

**4.1.3.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.**

\*

There are no Ramsar Wetlands within or proximate to the project area. The nearest Ramsar Wetland – Kakadu National Park – is approximately 80 km east of the proposed action.

**4.1.4 Threatened Species and Ecological Communities**

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

### Threatened species

| Direct impact | Indirect impact | Species                             | Common name  |
|---------------|-----------------|-------------------------------------|--|
| No            | No              | <i>Acanthophis hawkei</i>           | Plains Death Adder   |
| No            | No              | <i>Antechinus bellus</i>            | Fawn Antechinus  |
| No            | No              | <i>Calidris acuminata</i>           | Sharp-tailed Sandpiper   |
| No            | No              | <i>Calidris ferruginea</i>          | Curlew Sandpiper   |
| No            | No              | <i>Charadrius leschenaultii</i>     | Greater Sand Plover, Large Sand Plover   |
| No            | No              | <i>Chloebia gouldiae</i>            | Gouldian Finch   |
| No            | No              | <i>Conilurus penicillatus</i>       | Brush-tailed Rabbit-rat, Brush-tailed Tree-rat, Pakooma  |
| No            | No              | <i>Dasyurus hallucatus</i>          | Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu]               |
| No            | No              | <i>Erythrotriorchis radiatus</i>    | Red Goshawk  |
| No            | No              | <i>Falco hypoleucos</i>             | Grey Falcon  |
| Yes           | Yes             | <i>Geophaps smithii smithii</i>     | Partridge Pigeon (eastern)   |
| No            | No              | <i>Macroderma gigas</i>             | Ghost Bat  |
| Yes           | Yes             | <i>Mesembriomys gouldii gouldii</i> | Black-footed Tree-rat (Kimberley and mainland Northern Territory), Djintamoonga, Manbul        |
| No            | No              | <i>Numenius madagascariensis</i>    | Eastern Curlew, Far Eastern Curlew   |
| No            | No              | <i>Petrogale concinna canescens</i> | Nabarlek (Top End)   |
| No            | No              | <i>Phascogale pirata</i>            | Northern Brush-tailed Phascogale   |
| No            | No              | <i>Pristis pristis</i>              | Large-tooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish |
| No            | No              | <i>Rostratula australis</i>         | Australian Painted Snipe   |

| <b>Direct impact</b> | <b>Indirect impact</b> | <b>Species</b>                        | <b>Common name</b>   |
|----------------------|------------------------|---------------------------------------|--|
| Yes                  | Yes                    | Saccolaimus saccolaimus nudicluniatus | Bare-rumped Sheath-tailed Bat, Bare-rumped Sheath-tail Bat |
| No                   | No                     | Stylidium ensatum                     | a triggerplant   |
| Yes                  | Yes                    | Tiliqua scincoides intermedia         | Northern Blue-tongued Skink                                |
| Yes                  | Yes                    | Trichosurus vulpecula arnhemensis     | Northern Brushtail Possum                                  |
| No                   | No                     | Tringa nebularia                      | Common Greenshank, Greenshank                              |
| No                   | No                     | Tyto novaehollandiae kimberli         | Masked Owl (northern)                                      |
| No                   | No                     | Uperoleia daviesae                    | Howard River Toadlet, Davies's Toadlet                     |
| No                   | Yes                    | Varanus mertensi                      | Mertens' Water Monitor                                     |
| No                   | Yes                    | Varanus mitchelli                     | Mitchell's Water Monitor                                   |
| No                   | No                     | Xeromys myoides                       | Water Mouse, False Water Rat, Yirkoo                       |

## **Ecological communities**

—

**4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? \***

Yes

**4.1.4.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. \***

The proposed action has the potential to impact on seven threatened species and one species on the finalised priority assessment list (FPAL) (a listing decision for this species is due in early 2026).

These are:

1. Black-footed Tree-rat (*Mesembriomys gouldii gouldii*)x
2. Bare-rumped Sheath-tailed Bat (*Saccolaimus saccolaimus nudicluniatus*)x
3. Northern Blue-tongued Skink (*Tiliqua scincoides intermedia*)x
4. Northern Brushtail Possum (*Trichosurus vulpecula arnhemensis*)x
5. Partridge Pigeon (*Geophaps smithii smithii*)x
6. Mertens' Water Monitor (*Varanus mertensi*)x
7. Mitchell's Water Monitor (*Varanus mitchelli*)x
8. *Typhonium praetermissum* (FPAL)

#### Black-footed Tree-rat

The proposed action has the potential to impact the Black-footed Tree-rat through:

- Loss of habitat due to land clearing.
- Mortality of individual animals during land clearing.
- Degradation of habitat through sedimentation of surface water, introduction of weeds and pests and altered fire regimes.
- Habitat fragmentation through construction of solar infrastructure.

Despite comprehensive camera surveying, the Black-footed Tree-rat was only recorded in one location across the approximately 5,000 ha survey area. That record was outside the disturbance footprint (to the south-west). There are also no other recent records in the vicinity of the initial investigation area. If present within an area, the Black-footed Tree-rat is considered to have a high rate of being detected using the survey methods applied.

The disturbance footprint has been placed in an area of predominantly lower quality habitat for this species. The potential habitat present within the disturbance footprint is considered to be of low quality due to the frequency of fire within the disturbance footprint. Figure 2-2 of Att. 4 – Significant Impact Assessment shows that Black-footed Tree-rat records are concentrated in areas that do not burn the majority of years, or else on the periphery or in refugial areas (often riparian vegetation) of those that do. There are very few records in the middle of frequently-burnt areas.

Refer to Att. 4, Section 2.1.2 for further information regarding this species.

#### Bare-rumped Sheath-tailed Bat

The proposed action has the potential to impact the Bare-rumped Sheath-tailed Bat through:

- Loss of habitat due to land clearing.
- Mortality of individual animals during land clearing.
- Habitat fragmentation through construction of solar infrastructure.

The Bare-rumped Sheath-tailed Bat was recorded in five locations during surveys for this proposed action, including at one location within, and one on the boundary of, the project area (the rest are to the south-east) – see Att. 4, Figure 1-1. Consequently, all remnant vegetation – and possibly even cleared areas – in the disturbance footprint constitute foraging habitat for the Bare-rumped Sheath-tailed Bat.

Roosting habitat is likely limited to old-growth forest with trees supporting hollows, of which there is very little within the disturbance footprint due to avoidance through design – see Att. 4, Figure 2-3. The species has only ever been recorded at five other locations in the Greater Darwin region (all to the north), noting it is a difficult to detect species for which only recently has a definitive call signature been developed.

Refer to Att. 4, Section 2.1.4 for further information regarding this species.

### Northern Blue-tongued Skink

The proposed action has the potential to impact the Northern Blue-tongued Skink directly through:

- Loss of habitat due to land clearing.
- Mortality of individual animals during land clearing.
- Degradation of habitat through sedimentation of surface water, introduction of weeds and pests and altered fire regimes.
- Habitat fragmentation through construction of solar infrastructure.

There is a spread of recent records of the species across the Greater Darwin region, reflected in the detection of the Northern Blue-tongued Skink at three disparate locations across the initial investigation area (one on the boundary of the disturbance footprint and a wildlife corridor). These records are all proximate to riparian or rainforest vegetation that provide the cool, dense vegetation that is this species' core habitat. None of this rainforest vegetation habitat occurs within the disturbance footprint.

Whilst habitat for this species will be cleared, the disturbance footprint has been placed (through considered design) within the lowest quality habitat available. Moreover, areas of higher quality habitat in the vicinity will be retained within a substantial network of wildlife corridors which will be managed to improve habitat quality for – and therefore abundance of – this, and other, threatened savanna woodland species. Additionally, the proposed action is unlikely to exacerbate the presence of Cane Toads, which are already well established in the region and pose a threat to the Northern Blue-tongued Skink through ingestion of the toxic pest.

Refer to Att. 4, Section 2.1.5 for further information regarding this species.

### Northern Brushtail Possum

The proposed action has the potential to impact the Northern Brushtail Possum through:

- Loss of habitat due to land clearing.
- Mortality of individual animals during land clearing.
- Degradation of habitat through sedimentation of surface water, introduction of weeds and pests and altered fire regimes.
- Habitat fragmentation through construction of solar infrastructure.

The Northern Brushtail Possum was detected at numerous locations across the initial investigation area – including in the north, centre and south of the project area (but generally on the periphery of the disturbance footprint). The species appears to be widespread in the region, but occurring at the highest density in the south-west of the initial investigation area (outside of the project area). Based on this, there is 2,077 ha of habitat for Northern Brushtail Possum within the disturbance footprint. Given the dispersal barrier presented by the Adelaide River, the project area is considered to be near the eastern edge of the Greater Darwin sub-population of Northern Brushtail Possum.

Refer to Att. 4, Section 2.1.1 for further information regarding this species.

### Partridge Pigeon

The proposed action has the potential to impact the Partridge Pigeon directly through:

- Loss of habitat due to land clearing.
- Degradation of habitat through sedimentation of surface water, introduction of weeds and pests and altered fire regimes.
- Habitat fragmentation through construction of solar infrastructure.

There are records of Partridge Pigeon at eight locations in the south-west and centre of the initial investigation area, one of which occurs on the boundary of a wildlife corridor in the centre of the project area. There are other recent records in the vicinity. The species is rarely recorded these days within the Greater Darwin region – there were no records from a 2019 regional survey of Gunn Point, only one record

from a 2024 regional survey of Weddell, and none thus far from ongoing surveys within Greater Holtze Area. The records in the north of the initial investigation area are therefore on the northern edge of the extent of the mainland sub-population of Partridge Pigeon.

There is 1,712 ha of suitable savanna woodland habitat for Partridge Pigeon within the disturbance footprint. The habitat in the south is not suitable because it is low shrubland or open woodland with a paucity of tall Eucalypt trees.

Given the mobility of the species, there is unlikely to be any direct mortality of individual Partridge Pigeons because of interactions with vehicles or equipment.

Refer to Att. 4, Section 2.1.3 for further information regarding this species.

#### Mertens' Water Monitor

The proposed action has the potential to impact the Mertens' Water Monitor indirectly through:

- Degradation of habitat through sedimentation of surface water.

There were incidental records of Mertens' Water Monitors from the watercourse that runs through the centre-west of the disturbance footprint. That waterway has been excised and buffered from the disturbance footprint.

Given there is no habitat within the disturbance footprint, there is unlikely to be any direct impacts on Mertens' Water Monitor. Additionally, the proposed action is unlikely to exacerbate the presence of Cane Toads, which are already well established in the region and pose a threat to the Mertens' Water Monitor through ingestion of the toxic pest.

Refer to Att. 4, Section 2.2.1 for further information regarding this species.

#### Mitchell's Water Monitor

The proposed action has the potential to impact the Mitchell's Water Monitor indirectly through:

- Degradation of habitat through sedimentation of surface water.

There were incidental records of Mitchell's Water Monitors from the watercourse to the north-west of the disturbance footprint – that is, in a different waterway to the abovementioned Mertens' Water Monitor records. That waterway has also been excised and buffered from the disturbance footprint.

Given there is no habitat within the disturbance footprint, there is unlikely to be any direct impacts on Mitchell's Water Monitor. Additionally, the proposed action is unlikely to exacerbate the presence of Cane Toads, which are already well established in the region and pose a threat to the Mitchell's Water Monitor through ingestion of the toxic pest.

Refer to Att. 4, Section 2.2.2 for further information regarding this species.

#### *Typhonium praetermissum* (FPAL)

The proposed action has the potential to impact *Typhonium praetermissum* directly through:

- Loss of habitat due to land clearing.
- Removal of individual plants during land clearing.

There are 33 plants within the disturbance footprint which is at most 2% of the Koolpinyah sub-population of the species. There are an estimated 1,666 known records of plants within the Koolpinyah sub-population.

Refer to Att. 4, Section 2.3.1 for further information regarding this species.

#### **4.1.4.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact?**

\*

No

**4.1.4.6 Describe why you do not consider this to be a Significant Impact. \***

Significant impact assessments against each criterion in the *EPBC Significant Impact Guidelines 1.1* are included in Att. 4, Section 2.1.1 to Section 2.3.1.

The assessment concludes the proposed action is unlikely to have a significant impact on any of the identified threatened or FPAL species.

None of the criterion in the *EPBC Significant Impact Guidelines 1.1* are met for any species.

The assessments are summarised below from the full text in Attachment 4.

#### Black-footed Tree-rat – Att. 4, Section 2.1.2

Because there are no records of Black-footed Tree-rat within the disturbance footprint, very few recent records across the region, and the potential habitat within the disturbance footprint is of such low quality, it is considered unlikely that proposed action activities will have a significant impact upon this sub-species.

#### Bare-rumped Sheath-tailed Bat – Att. 4, Section 2.1.2

The impacts on this species associated with the proposed action are unlikely to be significant because the occurrence of Bare-rumped Sheath-tailed Bat within the disturbance footprint is not considered an important population, and the disturbance footprint does not contain habitat critical to the survival of the species.

#### Northern Blue-tongued Skink – Att. 4, Section 2.1.5

Whilst habitat for this species will be cleared, the disturbance footprint has been placed (through considered design) within the lowest quality habitat available to minimise potential impacts to this species. Moreover, areas of higher quality habitat in the vicinity will be retained within a substantial network of wildlife corridors which will be managed to improve habitat quality for – and therefore abundance of – this, and other, threatened savanna woodland species.

In addition, the proposed action will not increase the current regional threat to the Northern Blue-tongued skink posed by Cane Toads.

#### Northern Brushtail Possum – Att. 4, Section 2.1.1

Whilst habitat for this species will be cleared, the disturbance footprint has been placed (through considered design) within the lowest quality habitat available such that implementation of the proposed action does not meet any of the criterion in the *EPBC Significant Impact Guidelines 1.1*. Moreover, areas of higher quality habitat in the vicinity will be retained within a substantial network of wildlife corridors which will be managed to improve habitat quality for – and therefore abundance of – this, and other, threatened savanna woodland species.

#### Partridge Pigeon – Att. 4, Section 2.1.3

Whilst habitat for this species will be cleared, the disturbance footprint has been placed (through considered design) within the lowest quality habitat available within the initial investigation area such that implementation of the proposed action does not meet any of the criterion in the *EPBC Significant Impact Guidelines 1.1*. Moreover, areas of higher quality habitat in the vicinity will be retained within a substantial network of wildlife corridors which will be managed to improve habitat quality for – and therefore abundance of – this, and other, threatened savanna woodland species.

#### Mertens' Water Monitor – Att. 4, Section 2.2.1 and Mitchell's Water Monitor – Att. 4, Section 2.2.2

Because no habitat for these species will be directly disturbed, and potential impacts to water quality (and therefore habitat quality) have been minimised through proposed action design and industry best practices to avoid impacts to water quality – the impacts to these species associated with the proposed action are unlikely to be significant. The greatest threat to these species relates to interactions with Cane Toads; this proposed action will not exacerbate that threat.

#### *Typhonium praetermissum* (FPAL) – Att. 4, Section 2.3.1

This species was assessed for the Endangered criterion because is listed as endangered on the FPAL. Impacts to this species associated with the proposed action are unlikely to be significant because only a small area of suitable habitat and very few individuals (especially in proportion to the Koolpinyah sub-population) will be lost if the disturbance footprint is developed.

**4.1.4.7 Do you think your proposed action is a controlled action? \***

No

**4.1.4.9 Please elaborate why you do not think your proposed action is a controlled action.**

\*

The assessments undertaken against each criterion in the *EPBC Significant Impact Guidelines 1.1*, summarised above and detailed in Att. 4, Section 2.1.1 to Section 2.3.1, conclude the proposed action is unlikely to have a significant impact on any threatened species.

**4.1.4.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. \***

## Avoidance

Investigations first occurred across the initial investigation area (approximately 13,000 ha of NT Portion 4477) to then define an initial 5,000 ha development envelope, within which the project area and disturbance footprint were ultimately located. The progression of defining these areas is shown on Att. 1, Figure 9. The discussion below summarises the steps Darwin H2 has taken to avoid values in accordance with the mitigation hierarchy and to define the project area and disturbance footprint presented in this referral.

### Excise significant vegetation types

Early wet season survey results highlighted a high concentration of biodiversity values associated with sandsheet heath (and, to a lesser extent, rainforest) in the northernmost part of the initial investigation area, with some additional isolated patches of high-value sandsheet heath in the centre. Based on these survey results, Darwin H2 excised the following areas from the project area to avoid high value biodiversity features:

- The northernmost portion of the initial investigation area containing sandsheet heath and rainforest.
- The few sandsheet heath patches in the centre of the initial investigation area, buffered as per recommendation of the NT *Land Clearing Guidelines* (DEPWS 2024).
- Riparian vegetation, buffered as per the NT *Land Clearing Guidelines* (DEPWS 2024) recommendations.

The only significant vegetation type that could not be avoided are three low-value swamps that are partially or wholly within the infrastructure footprint (total of 28 ha).

### Avoid high quality savanna woodland habitat

Darwin H2 undertook a habitat quality survey over the initial investigation area relating to key threatened species. This information was used in conjunction with other targeted ecological surveys to inform the development footprint (up to 2,500 ha) within the final 3,400 ha project area. Given the initial investigation area is dominated by savanna woodland of varying quality, the objective was to avoid the areas with the highest biodiversity values.

As discussed above, through an iterative design process, Darwin H2's interim development envelope had avoided habitats supporting threatened species that have a restricted range (namely those associated with sandsheet heath, rainforest and riparian vegetation communities). However, targeted surveys also identified records of one FPAL flora species and four EPBC Act threatened fauna species within the savanna woodlands (the most common habitat in the region) of the 5,000 ha development envelope. These species were:

- Black-footed Tree-rat
- Northern Brushtail Possum
- Partridge Pigeon
- Bare-rumped Sheath-tail Bat
- *Typhonium praetermissum*.

The threats to these species are multi-factorial; there is not one direct cause for observed population declines. Given the scale of the disturbance footprint required to achieve the necessary power output, and the limited land available within reasonable proximity to Darwin that has already been subject to clearing, complete avoidance of impacts to these species entirely is not feasible. Consequently, minimising potential impacts as part of the initial site selection and design for the proposal was prioritised.

To this end, the focus was turned to one of these species – the Northern Brushtail Possum – as an *umbrella species* because it was the most widely recorded in the 13,000 ha initial investigation area. Doing so presumes that the spatial extent of the predicted likelihood of occurrence and high habitat quality for that species coarsely encompasses those for the other threatened woodland species. This presumption is

based upon the current knowledge of these species that suggest that the threats and habitat characteristics that these species rely upon is a subset of the threats and habitat characteristics associated with Northern Brushtail Possum.

Because of its abundance and broad distribution across the initial investigation area, the Northern Brushtail Possum is considered to be the threatened species with the inherently highest potential to be significantly impacted by the proposal under the provisions of the EPBC Act. Consequently, the modelled impact for the Northern Brushtail Possum is assumed to represent a conservative proxy for the highest potential impact on any savanna woodland species.

Darwin H2 engaged EcOz Environmental Consultants to undertake an assessment of habitat quality for the Northern Brushtail Possum across almost the entire 13,000 ha initial investigation area – excluding areas under granted mineral leases and known registered sacred sites under the *Northern Territory Aboriginal Sacred Sites Act 1989*. As detailed in Att. 5, Section 2, two independent approaches were used to measure and determine the quality of habitat and likelihood of occurrence for the Northern Brushtail Possum:

1. The first approach used remote-sensing products and statistical analyses to develop a species' distribution model of threatened woodland fauna for the initial investigation area. The model was formulated and statistically validated with survey records (presence and absence data of focal species) collected by EcOz as part of surveys for the proposal.
2. The second approach leveraged the habitat characteristics measured during an intensive ecological survey of the initial investigation area. A total of 170 sites were surveyed for a range of attributes that are thought to be associated with the species.

These attributes were combined and scored using a rubric that has been developed by EcOz for this species in the Top End (see Att. 5, Section 4.2.3). Spatial statistics were used to derive a map of interpolated habitat scoring across the initial investigation area. The results of both approaches were added together into a composite map. This mapping suggested that areas in the south-west of the initial investigation area contain the highest quality woodland habitats, with other areas of high-quality habitat in the far north. Areas in the far south, central and eastern parts of the initial investigation area have lower estimated habitat quality for threatened woodland fauna. This uneven distribution of values is likely the product of the inter-relationship between differing fire frequencies and availability of refugial habitat across the region.

Darwin H2 used the results of this constraints analysis to focus the location of the disturbance footprint within the lowest quality habitat for Northern Brushtail Possum (and still avoiding significant vegetation types, as discussed above) – see Att. 1, Figure 10. Because habitat quality for the Northern Brushtail Possum is closely aligned with the other threatened woodland species recorded in the area, avoiding higher quality habitat is of benefit to all the threatened woodland species recorded in the region. Moreover, the proposed disturbance footprint is intersected by wildlife corridors – see Att. 1, Figure 2 – which have been retained or incorporated into the design to reduce habitat fragmentation and minimise impacts on threatened woodland species. These focus on existing riparian areas along drainage lines, and specifically excluded corridors maintaining connection between areas of higher habitat quality or biodiversity value from the disturbance footprint.

## **Mitigation**

### Savanna woodland species

The following measures will be implemented to mitigate unavoidable impacts to threatened species and threatened species habitats.

- Wildlife corridors will be established and managed in accordance with the NT *Land Clearing Guidelines* (DEPWS 2024) to maintain connectivity for ground-dwelling (Partridge Pigeon) and arboreal (Northern Brushtail Possum, Black-footed Tree-rat) fauna.

- Clearance will only occur within the boundaries approved in licences obtained to clear native vegetation as per the *Pastoral Land Act 1992*.
- All temporary construction footprints will be re-instated and follow-up weed control will be undertaken post-construction.
- Weed hygiene measures will be implemented in accordance with obligations under the *Weeds Management Act 2001*.
- Development and implementation of a Bushfire Management Plan, including first response capability in accordance with the *Bushfires Management Act 2016*.
- Undertake pre-clearance surveys and employ a suitably qualified fauna-spotter catcher.
- Water quality will be managed through best-practice measures – including implementation of an Erosion and Sediment Control Plan prepared in accordance with the most current revision of the International Erosion Control Association Guidelines and endorsed by a Certified Practitioner of Erosion and Sediment Control – to mitigate potential impacts to water quality in nearby waterways where threatened fauna have been recorded.

#### Riparian species

In addition to the abovementioned mitigations, indirect impacts to adjacent riparian habitats will also be mitigated via implementation of stormwater management infrastructure to manage surface water flows both within the project area and offsite.

#### **4.1.4.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. \***

Offsets are not proposed because the proposed action is not considered to be a controlled action.

#### **4.1.5 Migratory Species**

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

| <b>Direct impact</b> | <b>Indirect impact</b> | <b>Species</b>                   | <b>Common name</b>  |
|----------------------|------------------------|----------------------------------|---|
| No                   | No                     | <i>Acrocephalus orientalis</i>   | Oriental Reed-Warbler   |
| No                   | No                     | <i>Actitis hypoleucos</i>        | Common Sandpiper  |
| No                   | No                     | <i>Apus pacificus</i>            | Fork-tailed Swift   |
| No                   | No                     | <i>Calidris acuminata</i>        | Sharp-tailed Sandpiper  |
| No                   | No                     | <i>Calidris ferruginea</i>       | Curlew Sandpiper  |
| No                   | No                     | <i>Calidris melanotos</i>        | Pectoral Sandpiper  |
| No                   | No                     | <i>Cecropis daurica</i>          | Red-rumped Swallow  |
| No                   | No                     | <i>Charadrius leschenaultii</i>  | Greater Sand Plover, Large Sand Plover  |
| No                   | No                     | <i>Charadrius veredus</i>        | Oriental Plover, Oriental Dotterel  |
| No                   | No                     | <i>Crocodylus porosus</i>        | Salt-water Crocodile, Estuarine Crocodile   |
| No                   | No                     | <i>Cuculus optatus</i>           | Oriental Cuckoo, Horsfield's Cuckoo   |
| No                   | No                     | <i>Glareola maldivarum</i>       | Oriental Pratincole   |
| No                   | No                     | <i>Hirundo rustica</i>           | Barn Swallow  |
| No                   | No                     | <i>Motacilla cinerea</i>         | Grey Wagtail  |
| No                   | No                     | <i>Motacilla flava</i>           | Yellow Wagtail  |
| No                   | No                     | <i>Numenius madagascariensis</i> | Eastern Curlew, Far Eastern Curlew  |
| No                   | No                     | <i>Pandion haliaetus</i>         | Osprey  |
| No                   | No                     | <i>Pristis pristis</i>           | Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish |
| No                   | No                     | <i>Tringa nebularia</i>          | Common Greenshank, Greenshank   |

**4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? \***

No

**4.1.5.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.**

\*

The EPBC Act Protected Matters Search Tool report identified migratory species protected under international agreements as possibly occurring within the initial investigation area - see Att, 1, Figure 2.

Most of the migratory species identified have an inherently low likelihood of occurring with the initial investigation area because they occur almost exclusively in marine, coastal and estuarine environments. For many of these species – including all marine species – the initial investigation area does not contain suitable habitat, and so they are not considered further.

The remaining migratory species may occur within the terrestrial or freshwater ecosystems within the initial investigation area. However, even if individual members of some migratory species were to seasonally utilise habitat with the project area, this occurrence is expected to be of a short period and in low abundances.

**4.1.6 Nuclear**

**4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? \***

No

**4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.**

\*

The proposed action does not involve any nuclear activities.

**4.1.7 Commonwealth Marine Area**

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

**4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? \***

No

**4.1.7.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.**

\*

The proposed action does not involve any activities within or near any marine environment.

**4.1.8 Great Barrier Reef**

**4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? \***

No

**4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.**

\*

The proposed action is within the Northern Territory, a significant distance from the Great Barrier Reef.

**4.1.9 Water resource in relation to large coal mining development or coal seam gas**

**4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? \***

No

**4.1.9.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.**

\*

The proposed action is not a large coal mining development or coal seam gas project.

**4.1.10 Commonwealth Land**

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

**4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? \***

No

**4.1.10.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.**

\*

The proposed action is not being undertaken on Commonwealth Land. The nearest Commonwealth Land is approximately 9 km north-east on Section 1538, Hundred of Guy.

**4.1.11 Commonwealth Heritage Places Overseas**

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

**4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? \***

No

**4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact.**

\*

The proposed action is within Australia.

**4.1.12 Commonwealth or Commonwealth Agency**

**4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? \***

No

## 4.2 Impact summary

### Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

*None*

### Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Threatened Species and Ecological Communities (S18)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

## 4.3 Alternatives

### 4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? \*

No

### 4.3.8 Describe why alternatives for your proposed action were not possible. \*

After a site selection process identified the property the proposed action would take place on, Darwin H2 undertook an extensive avoidance process, commencing initial investigations across the initial investigation area (approximately 13,000 ha of NT Portion 4477) to then define an initial 5,000 ha development envelope, within which the project area and disturbance footprint were ultimately located. The progression of defining these areas is shown on Att. 1, Figure 9. This is discussed in detail in Section 4.1.4.10 of this referral.

Darwin H2 will continue refining the disturbance footprint in response to ongoing environmental surveys where required.

## 5. Lodgement

## 5.1 Attachments

### 1.2.1 Overview of the proposed action

|     | Type     | Name                                     | Date       | Sensitivity | Confidence |
|-----|----------|--|------------|-------------|------------|
| #1. | Document | Att. 1-Figures.pdf<br>Supporting figures | 04/02/2026 | No          | High       |

### 1.3.2.16 (Person proposing to take the action) Nature of the trust arrangement in relation to the proposed action

|     | Type     | Name   | Date       | Sensitivity | Confidence |
|-----|----------|--|------------|-------------|------------|
| #1. | Document | Att. 2-Trust Deed for Darwin H2 Hub<br>Project Trust.pdf | 05/12/2024 | Yes         |            |

### 3.1.1 Current condition of the project area's environment

|     | Type     | Name  | Date       | Sensitivity | Confidence |
|-----|----------|---|------------|-------------|------------|
| #1. | Document | Att. 5-Threatened Woodland Fauna<br>Constraints Analysis.pdf<br>Threatened Woodland Fauna<br>Constraints Analysis to support<br>proposed action avoidance process | 05/01/2026 | No          | High       |

### 3.1.3 Natural features, important or unique values that applies to the project area

|     | Type | Name  | Date | Sensitivity | Confidence |
|-----|------|---|------|-------------|------------|
| #1. | Link | <a href="https://territorystories.nt.gov.au/10070/534042">Adelaide River coastal floodplain<br/>https://territorystories.nt.gov.au/10070/534042</a> |      |             | High       |

### 3.1.4 Gradient relevant to the project area

|     | Type     | Name                                     | Date       | Sensitivity | Confidence |
|-----|----------|--|------------|-------------|------------|
| #1. | Document | Att. 1-Figures.pdf<br>Supporting figures | 03/02/2026 | No          | High       |

### 3.2.1 Flora and fauna within the affected area

|     | Type     | Name  | Date       | Sensitivity | Confidence |
|-----|----------|---|------------|-------------|------------|
| #1. | Document | Att. 1-Figures.pdf<br>Supporting figures  | 03/02/2026 | No          | High       |
| #2. | Document | Att.3-Ecology Survey Report_Part1.pdf<br>Part 1 of Ecology Survey Report to<br>support referral application | 12/12/2025 | No          | High       |
| #3. | Document | Att.3-Ecology Survey Report_Part2.pdf<br>Part 2 of Ecology Survey Report to<br>support referral application | 12/12/2025 | No          | High       |

### 3.2.2 Vegetation within the project area

|     | Type     | Name                                     | Date       | Sensitivity | Confidence |
|-----|----------|--|------------|-------------|------------|
| #1. | Document | Att. 1-Figures.pdf<br>Supporting figures | 03/02/2026 | No          | High       |

#### 3.4.1 Hydrology characteristics that apply to the project area

|     | Type     | Name  | Date       | Sensitivity | Confidence |
|-----|----------|---|------------|-------------|------------|
| #1. | Document | Att. 1-Figures.pdf<br>Supporting figures  | 03/02/2026 | No          | High       |
| #2. | Link     | Groundwater management zones<br>in Darwin Rural, Technical Report<br>20/2023<br><a href="https://territorystories.nt.gov.au/10070/980415/">https://territorystories.nt.gov.au/10070/980415/..</a>     |            |             | High       |
| #3. | Link     | Howard Groundwater System:<br>Management zones delineation<br>and recharge estimates<br><a href="https://territorystories.nt.gov.au/10070/761601">https://territorystories.nt.gov.au/10070/761601</a> |            |             | High       |
| #4. | Link     | Land Clearing Guidelines:<br>Northern Territory Planning<br>Scheme<br><a href="https://nt.gov.au/_media/docs/housing,-property-..">https://nt.gov.au/_media/docs/housing,-<br/>property-..</a>        |            |             | High       |
| #5. | Link     | Water Data Portal<br><a href="https://ntg.aquaticinformatics.net/Data">https://ntg.aquaticinformatics.net/Data</a>  |            |             | High       |

#### 4.1.4.2 (Threatened Species and Ecological Communities) Why your action has a direct and/or indirect impact on the identified protected matters

|     | Type     | Name   | Date       | Sensitivity | Confidence |
|-----|----------|--|------------|-------------|------------|
| #1. | Document | Att. 4-Significant Impact<br>Assessment.pdf<br>Significant impact assessments in<br>accordance with EPBC Significant<br>Impact Guidelines 1.1 to support<br>referral | 04/02/2026 | No          | High       |

#### 4.1.4.6 (Threatened Species and Ecological Communities) Why you do not consider the direct and/or indirect impact to be a Significant Impact

|     | Type     | Name  | Date       | Sensitivity | Confidence |
|-----|----------|---|------------|-------------|------------|
| #1. | Document | Att. 4-Significant Impact<br>Assessment.pdf | 03/02/2026 | No          | High       |

Significant impact assessments in accordance with EPBC Significant Impact Guidelines 1.1 to support referral

4.1.4.9 (Threatened Species and Ecological Communities) Why you do not think your proposed action is a controlled action

|     | <b>Type</b> | <b>Name</b>  | <b>Date</b> | <b>Sensitivity</b> | <b>Confidence</b> |
|-----|-------------|--|-------------|--------------------|-------------------|
| #1. | Document    | Att. 4-Significant Impact Assessment.pdf<br>Significant impact assessments in accordance with EPBC Significant Impact Guidelines 1.1 to support referral | 03/02/2026  |                    | High              |

4.1.4.10 (Threatened Species and Ecological Communities) Avoidance or mitigation measures proposed for this action

|     | <b>Type</b> | <b>Name</b>  | <b>Date</b> | <b>Sensitivity</b> | <b>Confidence</b> |
|-----|-------------|--|-------------|--------------------|-------------------|
| #1. | Document    | Att. 1-Figures.pdf<br>Supporting figures   | 03/02/2026  | No                 | High              |
| #2. | Document    | Att. 5-Threatened Woodland Fauna Constraints Analysis.pdf<br>Threatened Woodland Fauna Constraints Analysis to support proposed action avoidance process                               | 06/01/2026  | No                 | High              |
| #3. | Link        | Land Clearing Guidelines:<br>Northern Territory Planning Scheme<br><a href="https://nt.gov.au/_media/docs/housing,-property-..">https://nt.gov.au/_media/docs/housing,-property-..</a> |             |                    | High              |

## 5.2 Declarations

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## Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

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|                            |   |
|----------------------------|---|
| ABN/ACN                    | 81143989039   |
| Organisation name          | ECOZ PTY LTD  |
| Organisation address       | 0800 NT   |
| Representative's name      | Alice Nicholl   |
| Representative's job title | Environmental Consultant                                |
| Phone                      | 08 8981 1100  |
| Email                      | alice.nicholl@ecoz.com.au                               |
| Address                    | Level 1, 70 Cavenagh Street, Darwin, NT 0800, Australia |

Check this box to indicate you have read the referral form. \*

Check this box to confirm these are the correct identification details. \*

By checking this box, I, **Alice Nicholl of ECOZ PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. \*

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

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## Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

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|                       |                                      |
|-----------------------|--------------------------------------|
| ABN/ACN               | 682475270                            |
| Organisation name     | Darwin H2 Project Nominees Pty Ltd   |
| Organisation address  | Melbourne, Victoria, Australia, 3000 |
| Representative's name | Christian Hearn                      |

|                            |  |
|----------------------------|--|
| Representative's job title | Senior Development Manager                                       |
| Phone                      | 0457 391 666   |
| Email                      | chris.hearn@te-h2.com  |
| Address                    | Office 24, Level 1, 131-135 High Street Fremantle, Perth WA 6160 |

Check this box to indicate you have read the referral form. \*

Check this box to confirm these are the correct identification details. \*

I, **Christian Hearn of Darwin H2 Project Nominees Pty Ltd**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. \*

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

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## Completed Proposed designated proponent's declaration

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

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Same as Person proposing to take the action information.

Check this box to indicate you have read the referral form. \*

Check this box to confirm these are the correct identification details. \*

I, **Christian Hearn of Darwin H2 Project Nominees Pty Ltd**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. \*

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.