

Discovery Drive, Agnes Water Residential Development

Application Number: 02713

Commencement Date:
05/12/2024

Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Discovery Drive, Agnes Water Residential Development

1.1.2 Project industry type *

Residential Development

1.1.3 Project industry sub-type

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1.1.4 Estimated start date *

01/12/2026

1.1.4 Estimated end date *

01/01/2031

1.2 Proposed Action details

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

Jamworth Pty Ltd and Sunshine State Developments Pty Ltd submits a proposal for a residential development (referred to herein as 'the **Proposed Action**') on Lot 2 Captain Cook Drive, Agnes Water (Lot 2 on SP117407, herein referred to as 'the **Site**'). The Site is located approximately 75 km south-east of Gladstone and occupies approximately 88.19 ha (**Att-1_MNES Report_ Section 2.1_ Page 3**) .

The Site is characterised by native vegetation cover consisting of open woodland and regrowth vegetation. An informal, privately owned airstrip encroaches the Site from a neighbouring property. The surrounding areas mostly comprise native bushland to the North and West, and residential housing to the South and East.

The Proposed Action is a multi-precinct residential development, with provision of supporting services and functions, that will consist of the following land uses:

'Hard development' comprising of the residential and health precincts (67.20 ha)

- Character (rural) residential precinct – 70 lots
- Low density residential precinct – 250 lots over
- Health and wellbeing precinct
- Environmental Reserve and stormwater treatment area
- Sewage pumping station
- Sub-arterial road (40 m wide, 4 lane).

'Soft development' of the stormwater management area (20.77 ha)

- Environmental Reserve (8.43 ha) and stormwater treatment area (12.37 ha)
- Sewage pumping station.
- The retention of an existing dam, in the northwest of the Site

Notably, the primary direct impact is associated with the civil earthworks. Mitigation measure to reduce impact will be employed where practical, and include the use of arborist assessment, fauna spotter catchers, Construction Environmental Management Plans, and Erosion and Sediment Control Plans, such that direct impacts are minimised. Use of the latter management plans aids to ensure indirect impacts such as excessive dust, noise, and light are managed during construction

The layout of the Proposed Action and location and extent can be seen in (**Att-2_MNES Report _Figures_ Figure 1 and 2**) and (**Att-3_MNES Attachment 1 - Development Map**).

For the purpose of the Proposed Action, the Site area is approximately 88.19 ha, including a Disturbance Footprint of 67.39 ha and an Environmental Retention Area of 20.77 ha (**Att-2_MNES Report _Figures_ Figure 3**).

In addition to the designated Environmental Reserve, individual trees will be retained within the development footprint, except where their removal is required to achieve the development intent and to deliver a safe space to live, work and play.

The construction phase of the Proposed Action will entail the following steps:

- Clear and grub of vegetated components of the development footprint
- Civil groundworks to establish final landform
- Installation of erosion and sediment controls

- Installation of essential services and utilities, such as sewerage, stormwater, electricity, gas and communications
- Construction of roads and pavements, including installation of longitudinal and cross-drainage structures
- Subdivision of land into individual lots according to the approved design plan, including boundary markers and individual lot access
- Installation of landscaping features, community amenities (such as parks and recreational areas) and signage to enhance the appeal and functionality of the subdivision
- Construction of residential properties

As part of the Proposed Action a Concept Erosion and Sediment Control Plan has been developed to provide overarching strategies for erosion and sediment control principles for guidance to Project contractors. An ESCP is a dynamic management plan that must be regularly updated to ensure it remains effective for the changes to the Site conditions and catchments. In line with the IECA Guidelines, the principles for development of erosion and sediment controls required for the proposed Project include (**Att-8_MNES Report Attachment 6 - Concept Erosion and Sediment Control Plan**):

- Appropriately integrate the development into the Site.
- Integrate erosion and sediment control risks into site planning and construction planning.
- Develop an effective and flexible ESCP based on anticipated soil loss, weather, and construction activities.
- Minimise the extent and duration of soil disturbance.
- Control water movement through the Site.
- Minimise soil erosion.
- Promptly stabilise disturbed areas.
- Once mobilised, maximise sediment retention within the Site.
- Maintain all ESC measures in proper working order at all times.
- Monitor the Site and adjust ESC practices to maintain the required performance standard.

This concept ESCP will be provided to the construction contractor as the framework for developing a site-specific, detailed ESCP. The detailed ESCP will need to be prepared in accordance with the principles of the IECA's Best Practice Erosion and Sediment Control guideline, and endorsed by a Certified Practitioner in Erosion and Sediment Control.

A Stormwater Management Plan has been developed regarding the stormwater management strategies for the Proposed Action. Water Quality MUSIC Modelling was performed to ensure the nominated treatment strategy achieves the required pollutant reduction objectives. As per the SPP (2017) guidelines, MUSIC modelling is performed to avoid or minimise impacts on the environmental values of receiving waters by managing the release of nutrients and sediments into waterways. As the results in **Att-9_MNES Report Attachment 7 - Stormwater Management Plan_ Section 3.4_ Page 7** show, the stormwater management strategy proposed for the Discovery Drive development and future developments within the contributing catchment area, meet, or exceed the target reduction rates for major pollutants required.

In light of the Proposed Action—specifically habitat clearance and civil earthworks—on the designated Site, there is a considerable likelihood of Significant Impacts on several Matters of National Environmental Significance (**MNES**) species and one Threatened Ecological Community (**TEC**). Development will result in the permanent change in land use within the 79.76 ha Development Footprint.

In addition, the Proposed Action may result in indirect impacts to fauna, as follows:

- Disturbance to fauna during construction due to noise and vibration from construction vehicles, plant and machinery.
- Increased potential for road strike once internal roads are operational.

Refer (Att-1_MNES Report, Section 2, Page 3) for a summary of the Proposed Action.

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

No

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

Commonwealth

The Proposed Action is referred as it is considered a controlled action requiring approval from the Minister under the Environment Protection and Biodiversity Conservation Act 1999. (EPBC Act). This viewpoint is based on the potential for significant impacts to threatened species (Koala and Grey-headed Flying fox), which have habitat found on the Site (**Att-1_MNES Report, Section 3.4, Page 12**).

State

Potential impacts to Matters of State Environmental Significance are regulated under the State planning framework, and affiliated environmental legislation and instruments (**Att-1_MNES Report, Section 3.3, Page 7**). This includes:

- the Planning Act 2016 (Qld) (**Planning Act**) – The Planning Act is Queensland’s overarching planning legislation, and establishes the planning approval framework under which development approval for the proposed action is intended to be sought;
- the State Planning Policy 2017 (**SPP**) – The SPP is a statutory instrument made by the State under the Planning Act. It sets out overarching policies regarding a broad range of matters of interest to the State, including ecological matters. The SPP will be relevant in the assessment of the development application, to be made under the Planning Act, for the proposed action;
- the *Vegetation Management Act 1999* (Qld) (**VM Act**) – The VM Act operates in tandem with the *Planning Act*, by establishing a system for identifying and classifying protected categories of vegetation. The VM Act is primarily given effect through the Planning Act, which identifies circumstances in which clearing of vegetation protected by the VM Act is prohibited, requires approval, or may occur “as of right”. Therefore, to the extent that the proposed action involves clearing of native vegetation, that clearing will be regulated by the VM Act, through the Planning Act. Importantly the proposed action does not propose the clearing of Regulated Vegetation to Site that will be protected, enhanced and maintained through the future environmental management area in the north east corner of the Site;
- the *Nature Conservation Act 1992* (Qld) (**NC Act**) – The NC Act establishes a specific framework, including standalone approval processes, for the protection of particular areas, flora and fauna. To the extent that the proposed action may involve any matters protected under the NC Act, all necessary approvals will be obtained in accordance with the NC Act;
- the *Fisheries Act 1994* (Qld) (**Fisheries Act**) – The Planning Act includes particular approval requirements for certain works in fish habitat areas, subject to exemptions set out under the Fisheries Act. A ‘low’ waterway for waterway barrier works is mapped centrally in the Site. To the extent that the proposed action may involve such regulated works, the exemptions in the Fisheries Act may be relevant or the applicant will undertake works in compliance with Accepted Development Requirements for waterway barrier works; and
- the *Environmental Offsets Act 2015* (Qld) (**Offsets Act**) – The Offsets Act establishes a uniform State-wide framework for the imposition of conditions requiring environmental offsets. To the extent that the development approval for the proposed action requires such offsets in relation to Matters of State Environmental Significance, or Matters of Local Environmental Significance, those offsets will be given effect through conditions imposed in accordance with the Offsets Act.

Local

The Site’s land use planning intent is governed by the Gladstone Regional Council (**GRC**) Planning Scheme. Pursuant to the Planning Scheme, the Site is currently zoned by the GRC as Emerging Communities with surrounding lots zoned as Rural, Rural Residential and Low-medium Density Residential under the GRC Planning Scheme V2 2017 (**Att-1_MNES Report, Section 3.2, Page 6**).

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. *

As the overall site development is impact assessable the development will be publicly notified for 30 days enabling the public to make submissions on the proposed development which the proponent will need to provide a response to any issues raised by the public.

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	31195566910
Organisation name	The Trustee for 28 South Environmental Trust
Organisation address	4151 QLD

Referring party details

Name	Mitch Taylor
Job title	Director
Phone	0488 204 523
Email	EPBC@28south.com.au
Address	Level 2, Cameron House, , Fortitude Valley, QLD, 4006

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 78860731075

Organisation name SUNSHINE STATE DEVELOPMENTS PTY LTD & JAMWORTH PTY LTD

Organisation address PO Box 1532, BUDERIM, QLD, 4556

Person proposing to take the action details

Name Andrew Hunter

Job title Senior Project Manager

Phone 0409925839

Email andrew@anhdevelopments.com.au

Address 460 Pumicestone Road, Elimbah

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? *

No

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 person proposing the action does not have a history of environmental management under a Commonwealth, State or Territory law.

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

Sunshine State Developments Pty Ltd and Jamworth Pty Ltd understands and recognises it has duty of care for the environment. The company's history does not include any instances of contraventions or non-compliance.

Whilst having no-formal policies, associated entities have undertaken initiatives such as community planting days and bush education as part of an associated kindergarten and childcare business.

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

ABN/ACN 78860731075

Organisation name SUNSHINE STATE DEVELOPMENTS PTY LTD & JAMWORTH PTY LTD

Organisation address PO Box 1532, BUDERIM, QLD, 4556

Proposed designated proponent details

Name Andrew Hunter

Job title Senior Project Manager

Phone 0409925839

Email andrew@anhdevelopments.com.au

Address 460 Pumicestone Road, Elimbah

1.3.4 Identity: Summary of allocation

✔ Confirmed Referring party's identity

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

ABN/ACN	31195566910
Organisation name	The Trustee for 28 South Environmental Trust
Organisation address	4151 QLD
Representative's name	Mitch Taylor
Representative's job title	Director
Phone	0488 204 523
Email	EPBC@28south.com.au
Address	Level 2, Cameron House, , Fortitude Valley, QLD, 4006

✔ 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.

ABN/ACN	78860731075
Organisation name	SUNSHINE STATE DEVELOPMENTS PTY LTD & JAMWORTH PTY LTD
Organisation address	PO Box 1532, BUDERIM, QLD, 4556
Representative's name	Andrew Hunter
Representative's job title	Senior Project Manager
Phone	0409925839
Email	andrew@anhdevelopments.com.au
Address	460 Pumicestone Road, Elimbah

✔ 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.

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

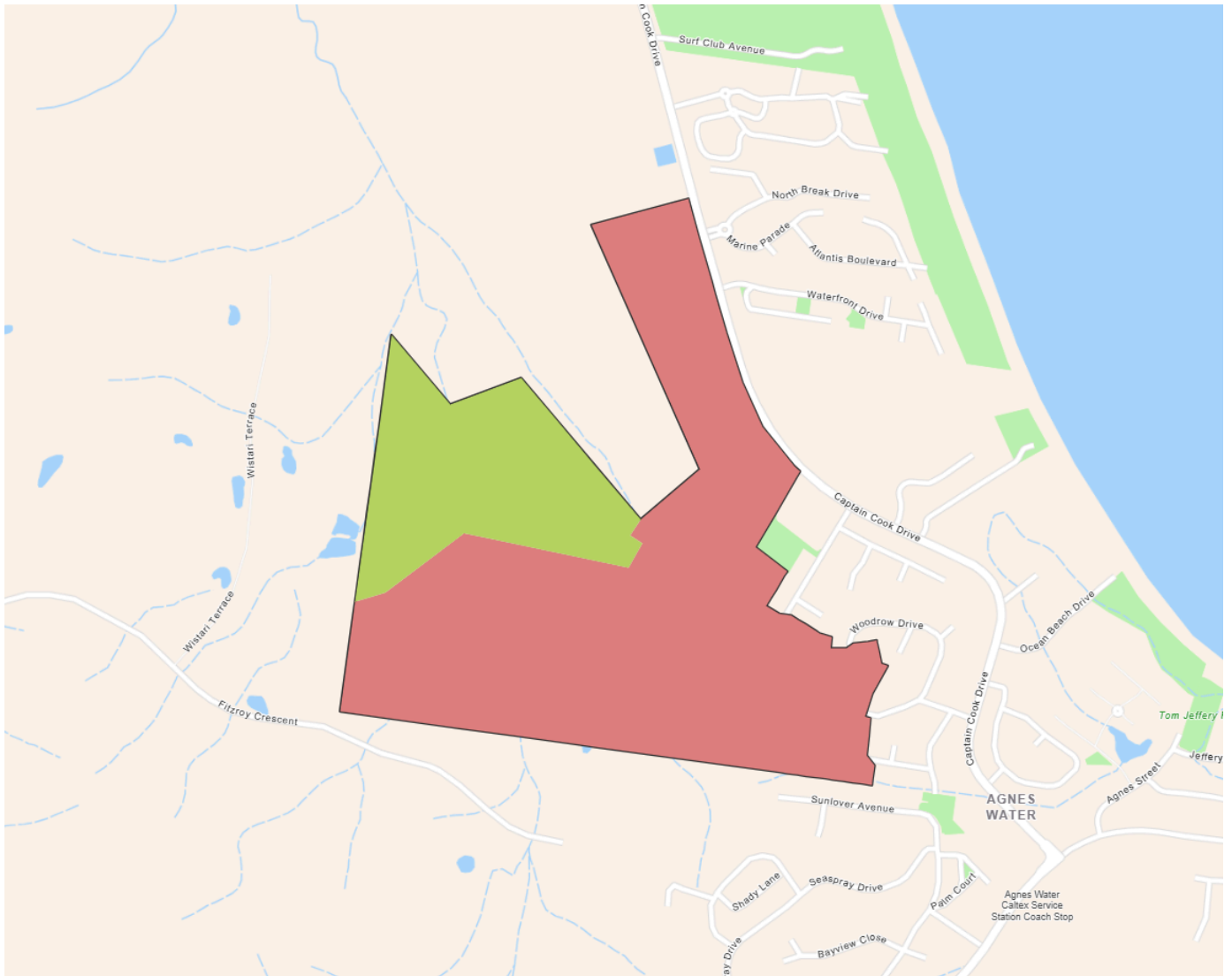
1.4 Payment details: Payment allocation

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: 88.38 Ha **Disturbance Footprint:** 67.39 Ha **Retention Area:** 20.99 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Discovery Drive, Agnes Water, QLD, 4677

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

Queensland

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? *

The land parcel that makes up the Site of the Proposed Action is held in freehold, being:
Lot 2 SP117407

3. Existing environment

3.1 Physical description

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

The Site is located approximately 75 km south-east of Gladstone and occupies approximately 88.19 ha. To the east, west and south are the residential and rural-residential suburbs of Agnes Waters with the road to the town of 1770 to the north. The Site in its regional context is shown in (**Att-2_MNES Report _ Figures, Figure 2**).

More broadly the suburb of which the Site is located has been subject to ongoing development. The town of Agnes Water has and is continuing to experience growth with several developments currently proposed and being constructed in the Agnes Water region. These developments include shopping centres and residential developments. The Sites land use planning intent is governed by GRC's planning scheme. Pursuant to the Planning Scheme the Site is Zoned as Emerging Communities, surrounding lots zoned as Rural, Rural Residential and Low-medium Density Residential under the GRC Planning Scheme (**Att-2_MNES Report _ Figures, Figure 4**).

The Site is accessible from the eastern boundary via Discovery Drive which adjoins Captain Cook Drive. Both roads are sealed and Captain Cook Drive joins Round Hill Road and Springs Road, providing connection to surrounding communities.

The Site is located in proximity to the coastline, with the coast of the Coral Sea less than 1 km to the Northeast and estuaries to the North and East. The marine considerations for the Site location extends to the wider Great Barrier Reef Marine Park Mackay / Capricorn management area (**Att-2_MNES Report _ Figures, Figure 1**).

The Site is characterised by native vegetation cover consisting of open woodland and regrowth vegetation. An informal, privately owned airstrip encroaches the Site from a neighbouring property. Vegetation on Site is composed on non-remnant and remnant vegetation. The remnant vegetation is primarily composed of *Melaleuca quinquenervia*, *Eucalyptus tereticornis*, and *Eucalyptus portuensis* or *Eucalyptus. Acmenoides* species in open forest and woodland structures (**Att-2_MNES Report _ Figures, Figure 5**).

Several drainage features and one waterway intersect the site. Generally, Site surveys have noted the watercourses and drainage features on the Site lacked defined beds and banks, consisting of heavily segmented isolated areas not capable of consistent or adequate flow. The Site lacked any distinct riparian vegetation on the Site. Additionally, there was no marine plants found on the Site and no indication of tidal or estuarine or salt marshes (**Att-5_MNES Report Attachment 3 _ MSES**).

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

The Site is largely unused for any industrial, economic or social uses however an informal, privately owned airstrip encroaches the Site from a neighbouring property. The Site is currently improved by dams and access tracks that cross the Site.

The Proposed Action is a multi-precinct residential development, with provision of supporting services and functions, that will consist of the following land uses:

- 'Hard development' comprising of the residential and health precincts
- Character (rural) residential precinct – 70 lots
- Low density residential precinct – 250 lots over
- Health and wellbeing precinct
- Sub-arterial road (40 m wide, 4 lane)
- Environmental Reserve and stormwater treatment area –
- 'Soft development' of the stormwater management area
- Sewage pumping station
- The retention of an existing dam, in the Northwest of the Site

The distribution of these areas across the Site is shown in the Development Master Plan (**Att-3_MNES Report Attachment 1 – Development Map**).

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

The Site is devoid of outstanding natural features and/or any other important or unique values. The Sites natural features are largely representative of the wider natural features that are found in the surrounding areas. There are no State-recognised protected areas directly next to the Proposed Action however further abroad, the Site is located close to the coastline and consideration must be given to the Great Barrier Reef Marine Park which is located in proximity to the Site (**Att-5_MNES Report Attachment 3 _ MSES**).

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

The Site features three primary topographical features, being a high point of 35 m Australian Height Datum (AHD) in the south-east corner of the Site, a north-easterly facing slope in the south-west corner (high of 25 m AHD to <5 m AHD) and a small knoll (17 m AHD) on the eastern boundary of the Site. (**Att-8_MNES Report Attachment 6 - Concept Erosion and Sediment Control Plan _ Page 5**).

Detailed (1:100K) surface geology mapping shows these topographical features as being part of the Agnes Water Volcanics unit (Rvw/ir), a stratified unit including volcanic and metamorphic components. The lithology of this rock type is crystal- and lithic-rich strongly welded rhyolitic ignimbrite.

The flatter, coastal plains areas of the Site are associated with a Holocene sand unit (Qhb). This unit consists of moderately well-sorted, fine to coarse-grained quartzose to shelly sand and minor gravel, silt, mud: mainly beach ridges and cheniers.

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.

To inform the requirements of the field surveys, a desktop assessment was undertaken to review contemporary and relevant database and mapping resources relating to flora and fauna, ecological communities, waterways and other Matters of National Environmental Significance (**MNES**), Matters of State Environmental Significance (**MSES**) and Matters of Local Environmental Significance (**MLES**) likely to occur within and in proximity to the Site. The outcomes sought by the desktop assessment were to:

- Refine a list of threatened species to be targeted by the ecological surveys;
- Guide the survey methods to be adopted.

In addition to review of current aerial photography, the following key Commonwealth, State and Local government desktop databases and mapping resources were reviewed are listed below.

- Commonwealth DCCEEW Protected Matters Search Report (**PMST**), under the EPBC Act (**Att-4_MNES Report Attachment 2 _ Protected Matters Search Tool**)
- Atlas of Living Australia (insofar as MNES species are concerned)
- National flying-fox monitoring map prepared by DCCEEW
- Species list generated from the Queensland Government's WildNet database (2 km radius) (**Att-6_MNES Report Attachment 4 _ WildNet Database Report**)
- Vegetation Management Report, generated by Department of Resources (Queensland) (**Att-5_MNES Report Attachment 3 _ MSES**)
- Mapping of MSES (Queensland Globe)
- Protected plant trigger mapping, under the *Nature Conservation Act 1992* (**NC Act**)
- Planning Scheme environmental overlays (**Att-2_MNES Report _ Figures _ Figure 4**).

Following a review of relevant desktop resources, a likelihood of occurrence assessment was undertaken for species listed under the NC Act and EPBC Act that:

- Have verified occurrence records within 5 km of the Site according to the Queensland WildNet online database;
- Are considered 'known' or 'likely' to occur within 2 km of the Site according to the EPBC Act PMST.

To assess the likelihood of occurrence for these species, the habitat requirements for each species was reviewed and compared against the habitat types present within the Site. The results of the likelihood of occurrence assessment are provided in **Table 5.1.1_ Page 19, Table 5.1.2_ Page 25 and Table 5.1.3_ Page 31** of the Ecological Report (**Att-1_MNES Report**).

To further the assessment of threatened fauna MNES, fauna that comprise the balance of species on or potentially within the Site has been conducted. To outline the non-threatened/general flora species surrounding the Site, a species list was requested from the WildNet database for all species, both native and introduced, of any conservation status, for all records from 1980. These results are outlined in (**Att-6_MNES Report Attachment 4 _ WildNet Database Report**). Fish have been removed from the species list as the Site does not contain adequate aquatic habitat to sustain fish species beyond isolated specimens introduced into dams. The list is dominated by highly mobile avi-fauna and mobile mammals that have a possibility to stochastically utilise the Site from time to time. Avoidance, Mitigation and Management Measures (**Att-1_MNES Report _ Section 7_ Page 41**) remain applicable to these species to ensure potential impact is mitigated to the highest degree possible.

The assessment process determined that there is a possibility of one species of threatened flora occurring on Site. The assessment also identified four fauna species and one TEC with potential to occur on Site, being:

- *Petauroides volans* (Greater Glider (northern))
- *Phascolarctos cinereus* (Koala)
- *Pteropus poliocephalus* (Grey-headed Flying-fox)
- *Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland*
- *Cupaniopsis shirleyana* (Wedge-leaf Tuckeroo)

Of these species and TEC, none have been observed occurring on Site through Site Surveys or on database searches (**Att-1_MNES Report _ Section 4.3_ Page 16**).

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

A property map of assessable vegetation (PMAV) has been carried out previously to assess the regional ecosystems present on the Site using the Queensland Regional Ecosystem (RE) mapping system (**Att-7_MNES Report Attachment 5 _ PMAV**). Two ecosystems found on Site are analogies for one MNES TEC (**Att-2_MNES Report _ Figures_ Figure 5**). Following this rationality TEC Coastal Swamp Sclerophyll Forest of New South Wales and Southeast Queensland has been identified as potentially being present on the Site. This TEC has potential to be found in the following areas (**Att-2_MNES Report _ Figures_ Figure 10**):

- The northwestern section of the area designated as Environmental Reserve
- The 'soft development' of the stormwater management area
- The 'hard development' composed of the residential and health precincts

Vegetation on Site is composed on non-remnant and remnant vegetation. The remnant vegetation is primarily composed of *Melaleuca quinquenervia*, *Eucalyptus tereticornis*, and *Eucalyptus portuensis* or *Eucalyptus Acmenoides* species in open forest and woodland structures.

Comprehensive soil mapping of the Site has previously been conducted as part of the Land Resources of the Miriam Vale and Kolan Shires project (Donnollan, Wetherall, & Griffiths, 2004). From this project, three soil types have been mapped across the Site (**Att-8_MNES Report Attachment 6 - Concept Erosion and Sediment Control Plan**).

Sodosol: Sodosols usually have a number of adverse physical and chemical properties. The sodic horizons are usually readily dispersible and prone to erosion. However some sodic soils in this study area have strongly acid pH (pH less than 5.5).

Tenosol: Deep coarse textured soils usually with thick bleached subsurface horizons.

Hydrosol: Soils usually contain sulfidic materials (usually pyrite FeS₂) or sulfuric materials (such as sulfuric acid) at various depths and quantities. These potential or actual acid sulphate soils should not be disturbed and always be correctly managed to prevent the release of sulfuric acid and other contaminants into the environment.

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 known Commonwealth Heritage places or other places recognised as having heritage values within or proximal to the Site. The Site is also not listed on the Queensland Heritage Register.

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

The Site is located on Gureng Gureng country. The Proponent is not aware of the Site having recognised Indigenous heritage value. Research activities have not been undertaken to understand indigenous heritage values at this time.

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. *

Queensland mapping via Qld Globe has identified several waterways on the site subject to waterway barrier works, as stipulated by the Fisheries Act 1994 (QLD). These waterways are categorised into two levels of significance: Low, with four identified waterways, and Moderate, encompassing two waterways.

In addition, watercourse features are comprehensively charted across the Site, in accordance with the Water Act 2000 (QLD). These features are categorised as follows: Major non-perennial, and Major perennial, the latter of which includes a dam located in the northern section of the Site.

Both waterways and watercourse features are systematically mapped concurrently across the Site (**Att-1_MNES Report _ Section 3.3.3_ Page 7**).

The Site is situated within the Baffle Creek Basin water plan area. Water within the Burdekin Basin water plan area is regulated by the Water Plan (Baffle Creek Basin) 2010. The Site is situated within the Great Barrier Reef catchment for the purpose of section 75 of the *Environmental Protection Act 1994*.

Drainage across the Site is generally in a south-east to north-west direction, directed towards a constructed dam in the north-west corner of the Site. Water discharged from this dam enters an unnamed creek system that eventually discharges into the Town of 1770 inlet. There is an 8.5 km flow distance from the on-Site dam to the boundary of the Great Barrier Reef Marine Park, at the mouth of the Town of 1770 inlet (**Att-8_MNES Report Attachment 6 - Concept Erosion and Sediment Control Plan_ Section 3.4_ Page 6**).

A Stormwater Management Plan has been created to outline the stormwater management strategies for the Proposed Action. Water Quality MUSIC Modelling has been conducted to verify that the selected treatment strategy meets the necessary pollutant reduction goals. In accordance with the SPP guidelines, MUSIC modelling is utilized to mitigate potential impacts on the environmental values of receiving waters by effectively managing the release of nutrients and sediments into waterways. As demonstrated in **Att-9_MNES Report Attachment 7 - Stormwater Management Plan_ Section 3.4_ Page 7**, the stormwater management strategy proposed for the Discovery Drive development, as well as for future developments within the contributing catchment area, meets or surpasses the target reduction rates for major pollutants.

4. Impacts and mitigation

4.1 Impact details

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

EPBC Act section	Controlling provision	Impacted	Reviewed
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.

Direct impact	Indirect impact	World heritage
No	No	Great Barrier Reef

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.

*

With appropriate, standard practice sediment and runoff controls there will be no direct or indirect impacts on the World heritage area located in proximity to the Site, the Great Barrier Reef.

Outlined in the Concept Erosion and Sediment Control Plan the principles for development of erosion and sediment controls required for the proposed Project include:

- Appropriately integrate the development into the Site.
- Integrate erosion and sediment control risks into site planning and construction planning.
- Develop an effective and flexible ESCP based on anticipated soil loss, weather, and construction activities.
- Minimise the extent and duration of soil disturbance.
- Control water movement through the Site.
- Minimise soil erosion.
- Promptly stabilise disturbed areas.
- Once mobilised, maximise sediment retention within the Site.
- Maintain all ESC measures in proper working order at all times.
- Monitor the Site and adjust ESC practices to maintain the required performance standard.

This concept ESCP will be provided to the construction contractor as the framework for developing a site-specific, detailed ESCP. The detailed ESCP will need to be prepared in accordance with the principles of the IECA's Best Practice Erosion and Sediment Control guideline, and endorsed by a Certified Practitioner in Erosion and Sediment Control. Further information on the ESC management strategies is explained in Section 4 of the Concept Erosion and Sediment Control Plan (**Att-8_MNES Report Attachment 6 - Concept Erosion and Sediment Control Plan_ Page 7**).

The Stormwater Management Plan for the Proposed Action includes MUSIC modelling to ensure that treatment strategies meet pollutant reduction goals, following SPP guidelines. As detailed in **Att-9_MNES Report Attachment 7 - Stormwater Management Plan_ Section 3.4_ Page 7**, the proposed strategy for Discovery Drive and future developments meets or exceeds target reduction rates for major pollutants.

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.

Direct impact	Indirect impact	National heritage
No	No	Great Barrier Reef

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.

*

With appropriate, standard practice sediment and runoff controls there will be no direct or indirect impacts on the World heritage area located in proximity to the Site, the Great Barrier Reef.

Outlined in the Concept Erosion and Sediment Control Plan the principles for development of erosion and sediment controls required for the proposed Project include:

- Appropriately integrate the development into the Site.
- Integrate erosion and sediment control risks into site planning and construction planning.
- Develop an effective and flexible ESCP based on anticipated soil loss, weather, and construction activities.
- Minimise the extent and duration of soil disturbance.
- Control water movement through the Site.
- Minimise soil erosion.
- Promptly stabilise disturbed areas.
- Once mobilised, maximise sediment retention within the Site.
- Maintain all ESC measures in proper working order at all times.
- Monitor the Site and adjust ESC practices to maintain the required performance standard.

This concept ESCP will be provided to the construction contractor as the framework for developing a site-specific, detailed ESCP. The detailed ESCP will need to be prepared in accordance with the principles of the IECA's Best Practice Erosion and Sediment Control guideline, and endorsed by a Certified Practitioner in Erosion and Sediment Control. Further information on the ESC management strategies is explained in Section 4 of the Concept Erosion and Sediment Control Plan (**Att-8_MNES Report Attachment 6 - Concept Erosion and Sediment Control Plan_ Page 7**).

The Stormwater Management Plan for the Proposed Action includes MUSIC modelling to ensure that treatment strategies meet pollutant reduction goals, following SPP guidelines. As detailed in **Att-9_MNES Report Attachment 7 - Stormwater Management Plan_ Section 3.4_ Page 7**, the proposed strategy for Discovery Drive and future developments meets or exceeds target reduction rates for major pollutants.

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.

*

The Proposed Action is not located in proximity to a Ramsar Wetland or located up stream of a Ramsar Wetland (**Att-4_MNES Report Attachment 2 _ Protected Matters Search Tool**) .

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>Argynnis hyperbius inconstans</i>	Australian Fritillary
No	No	<i>Balaenoptera musculus</i>	Blue Whale
No	No	<i>Bulbophyllum globuliforme</i>	Miniature Moss-orchid, Hoop Pine Orchid
No	No	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper
No	No	<i>Calidris canutus</i>	Red Knot, Knot
No	No	<i>Calidris ferruginea</i>	Curlew Sandpiper
No	No	<i>Carcharias taurus</i> (east coast population)	Grey Nurse Shark (east coast population)
No	No	<i>Carcharodon carcharias</i>	White Shark, Great White Shark
No	No	<i>Caretta caretta</i>	Loggerhead Turtle
No	No	<i>Charadrius leschenaultii</i>	Greater Sand Plover, Large Sand Plover
No	No	<i>Chelonia mydas</i>	Green Turtle
No	No	<i>Cupaniopsis shirleyana</i>	Wedge-leaf Tuckeroo
No	No	<i>Cycas megacarpa</i>	
No	No	<i>Dasyurus hallucatus</i>	Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu]
No	No	<i>Delma torquata</i>	Adorned Delma, Collared Delma
No	No	<i>Dermochelys coriacea</i>	Leatherback Turtle, Leathery Turtle, Luth
No	No	<i>Egernia rugosa</i>	Yakka Skink
No	No	<i>Eretmochelys imbricata</i>	Hawksbill Turtle
No	No	<i>Erythrorchis radiatus</i>	Red Goshawk
No	No	<i>Falco hypoleucos</i>	Grey Falcon

Direct impact	Indirect impact	Species	Common name
No	No	<i>Fregetta grallaria grallaria</i>	White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian)
No	No	<i>Furina dunmalli</i>	Dunmall's Snake
No	No	<i>Gallinago hardwickii</i>	Latham's Snipe, Japanese Snipe
No	No	<i>Germainia capitata</i>	
No	No	<i>Hirundapus caudacutus</i>	White-throated Needletail
No	No	<i>Lepidochelys olivacea</i>	Olive Ridley Turtle, Pacific Ridley Turtle
No	No	<i>Limosa lapponica baueri</i>	Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit
No	No	<i>Macadamia integrifolia</i>	Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak
No	No	<i>Macroderma gigas</i>	Ghost Bat
No	No	<i>Macronectes giganteus</i>	Southern Giant-Petrel, Southern Giant Petrel
No	No	<i>Natator depressus</i>	Flatback Turtle
No	No	<i>Neochmia ruficauda ruficauda</i>	Star Finch (eastern), Star Finch (southern)
No	No	<i>Numenius madagascariensis</i>	Eastern Curlew, Far Eastern Curlew
No	No	<i>Pachyptila turtur subantarctica</i>	Fairy Prion (southern)
Yes	No	<i>Petauroides volans</i>	Greater Glider (southern and central)
Yes	No	<i>Phascolarctos cinereus</i> (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)
No	No	<i>Phoebastria fusca</i>	Sooty Albatross
No	No	<i>Pristis zijsron</i>	Green Sawfish, Dindagubba, Narrowsnout Sawfish
No	No	<i>Pterodroma neglecta neglecta</i>	Kermadec Petrel (western)
Yes	No	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox
No	No	<i>Rhincodon typus</i>	Whale Shark
No	No	<i>Rostratula australis</i>	Australian Painted Snipe

Direct impact	Indirect impact	Species	Common name
No	No	<i>Sphyrna lewini</i>	Scalloped Hammerhead
No	No	<i>Thalassarche carteri</i>	Indian Yellow-nosed Albatross
No	No	<i>Thalassarche cauta</i>	Shy Albatross
No	No	<i>Thalassarche impavida</i>	Campbell Albatross, Campbell Black-browed Albatross
No	No	<i>Thalassarche melanophris</i>	Black-browed Albatross
No	No	<i>Thalassarche salvini</i>	Salvin's Albatross
No	No	<i>Thalassarche steadi</i>	White-capped Albatross
No	No	<i>Tringa nebularia</i>	Common Greenshank, Greenshank
No	No	<i>Turnix melanogaster</i>	Black-breasted Button-quail
No	No	<i>Xeromys myoides</i>	Water Mouse, False Water Rat, Yirrkoo

Ecological communities

Direct impact	Indirect impact	Ecological community
No	No	Coastal Swamp Oak (<i>Casuarina glauca</i>) Forest of New South Wales and South East Queensland ecological community
No	No	Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland
No	No	Lowland Rainforest of Subtropical Australia
No	No	Poplar Box Grassy Woodland on Alluvial Plains
No	No	Subtropical and Temperate Coastal Saltmarsh
No	No	Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions

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 construction of the Proposed Action requires bulk earthworks resulting in a direct impact due to vegetation clearing.

In addition, the Proposed Action may result in indirect impacts to MNES, as follows:

- Disturbance to fauna during construction due to noise and vibration from construction vehicles, plant and machinery.
- Increased potential for road strike once internal roads are operational.
- Increased potential for interaction between native fauna and domestic animals.

MNES Assessed and Considered a Significant Impact

- The Proposed Action will require permanent development of 67.20 ha of the Site, which is regarded as currently offering foraging and movement habitat for koala (**Att-1_MNES Report _ Section 8.1.1 _Page 46**). No Koalas were observed on Site during field surveys.
- Assessment has concluded that one other MNES threatened species, the grey-headed flying fox (*Pteropus poliocephalus*), may utilise the Site. Surveys did not detect the presence of grey-headed flying-fox (**Att-1_MNES Report _ Section 8.1.2_Page 49**). No roosts were detected within or in the surrounding peripheral to the Site. Vegetation within the Site is considered to provide foraging habitat for this species, given the distribution of important winter and spring flowering species including Corymbia and Eucalypts within the Site . Consequently, the Proposed Action will result in the removal of foraging resources (blossoming eucalypts) for grey-headed flying-fox.

MNES Assessed and Considered Not to Constitute a Significant Impact

- TEC Coastal Swamp Sclerophyll Forest of New South Wales and Southeast Queensland - The significant impact assessment concluded that the vast majority of TEC that has a possibility of being located on the Site will be conserved in an Environmental Reserve. The maximum extent of TEC that may be found outside of the Environmental Reserve is 0.52 ha (**Att-1_MNES Report _ Section 8.1.6_Page 65**).
- Australian Painted Snipe - Integrating the provided additional information and habitat considerations, the proposed development does not trigger any of the significant impact criteria. The retention and environmental stewardship of the dam, along with the absence of known local populations and the limited scope of the development, ensure that the action will not have a significant impact on the Australian Painted Snipe (**Att-1_MNES Report _ Section 8.1.4_Page 57**).
- Wedge-leaf Tuckeroo - The Proposed Action is not expected to result in a Significant Impact to this species when assessed against the Vulnerable species criteria of the MNES Significant Impact Guidelines (**Att-1_MNES Report _ Section 8.1.5_Page 61**).

Further assessment and analysis will be required to confirm if constitutes a Significant Impact

- Greater Glider - The significant impact assessment of the greater glider outlined that this species is unknown to occur within the Site and the surrounding locality (**Att-1_MNES Report _ Section 8.1.3_Page 54**). Results of the in-field surveys confirmed suitable hollow bearing trees within the Site. In-field assessments failed to detect the presence of greater glider. With the lack of targeted data relating to the occurrence of mature trees and the dimension of hollows, there is insufficient information available to discount the possibility of a Significant Impact to this species.

Other MNES presence or habitat was not identified or not identified in significant enough proportions to warrant further assessment. A likelihood of occurrence assessment was undertaken for species listed under the EPBC Act that are considered 'known' or 'likely' to occur within 5 km of the Site according to the EPBC Act PMST. This assessment can be found in Section 5 MNES report (**Att-1_MNES Report _ Section 5_Page 17**).

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

*

Yes

4.1.4.5 Describe why you consider this to be a Significant Impact. *

The proposed action will have various impacts to protected matters however these impacts have been avoided, as far as possible, then minimised through retaining areas with highest ecological significance for future environmental management and ecological corridors. Despite these efforts, the proposed action is likely to have a significant impact on threatened species.

Direct Impact

1. Koala (*Phascolarctos cinereus*) (combined populations of Qld, NSW and the ACT)

Being an endangered species, the Department specifies that all habitat is habitat critical to the survival of koala and that even small areas of habitat loss (as little as 1 ha) can have a significant impact (DCCEEW, 2023). The Proposed Action will require permanent development of 67.20 ha of the Site, which is regarded as currently offering foraging and movement habitat for koala.

While the Proposed Action has maintained the higher value koala habitat within the Site (nominally the Environmental Reserve) the Proposed Action will impact koala foraging resources and is likely to be considered a Significant Impact under the DCCEEW MNES Significant impact guidelines 1.1 (DoE, 2013) (**Att-1_MNES Report _ Section 8.1.1_Page 46**).

2. Grey-headed Flying-fox (*Pteropus poliocephalus*)

Grey-headed flying-fox is a Vulnerable species under the EPBC Act and therefore the significance of impact on this matter has been assessed against the significant impact criteria for 'Vulnerable species' in the MNES Significant impact guidelines 1.1 (DoE, 2013).

Spring foraging resources are considered to be critical to the survival of the species (DoE, 2001). Trees that will be cleared for the Proposed Action include winter and spring flowering species. Therefore, the permanent development of 67.20 ha that will be cleared for the Proposed Action aligns with the definition of 'habitat critical to the survival of the species'.

The Proposed Action is expected to result in a significant impact to grey-headed flying fox on the basis that it will result in the clearing of the equivalent of 67.20 (the Development Area) ha of foraging habitat for the species. In doing so, the Proposed Action will adversely affect habitat critical to the survival of a species (**Att-1_MNES Report _ Section 8.1.2_Page 49**).

Further assessment and analysis will be required to confirm if constitutes a Significant Impact

- Greater Glider - With the lack of targeted data relating to the occurrence of mature trees and the dimension of hollows, there is insufficient information available to discount the possibility of a Significant Impact to this species. Further assessment and analysis will be required to confirm if this is the case (**Att-1_MNES Report _ Section 8.1.3_Page 54**).

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

Yes

4.1.4.8 Please elaborate why you think your proposed action is a controlled action. *

As outlined above, in Section 4.1.4.5 of the EPBC Act Business Portal, the assessment of the Proposed Action concludes that the area of impact to koala is 67.20 ha (area impacting foraging and movement habitat); while impacts to grey-headed flying-fox habitat total 67.20 ha (area of foraging habitat removed). Assessment of koala and grey-headed flying fox against the Significant impact guidelines 1.1 (DoE, 2013) has concluded that both species are likely to be significantly impacted by the Proposed Action (**Att-1_MNES Report _ Section 8__Page 46**).

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. *

Avoiding Impacts Through Design

In developing a robust strategy to mitigate ecological impacts, the Proposed Action demonstrates a deliberate focus on preservation and responsible environmental stewardship. By integrating advanced ecological assessment methodologies, the design of the Proposed Action ensures the protection of the Site's most valuable habitats.

Central to the Proposed Action's ecological consideration is the strategic avoidance of habitats identified as critical to MNES (**Att-2_MNES Report _ Figures _ Figure 6**) . The area designed as Environmental Reserve in order to protect areas of potential TEC in addition MNES species is 12.37 ha (**Att-2_MNES Report _ Figures _ Figure 3**). The preservation of these areas is prioritised within the Project's design framework, helping safeguarding species that are reliant on these high-value habitats. An evidence-based spatial planning approach was employed to delineate areas of ecological significance, ensuring that development activities refrain from encroaching upon these sensitive zones.

By aligning the project footprint with less-sensitive areas, the proposal systematically reduces the risk of impacting critical ecosystems. Advanced geospatial mapping and habitat modelling supported this process, allowing for informed decision-making and the optimisation of land use to avert adverse ecological outcomes.

Through the integration of comprehensive ecological data and strategic planning, the Proposed Action exemplifies an evidence-driven approach to avoiding significant ecological impacts. By consciously designing development around critical habitats, the proposal not only complies with environmental regulations but also exemplifies a commitment to sustainable development practices (**Att-1_MNES Report _ Section 7.3.3_Page 43**).

Impact minimisation

The Proposed Action is underpinned by a comprehensive understanding of the Site's ecological, environmental, and landscape characteristics. The approach prioritises impact avoidance, and where avoidance is impracticable, seeks to mitigate and attenuate potential impacts. The following mitigation strategies will be operationalised, ensuring impacts on MNES and associated habitats are minimised to the greatest feasible extent:

Construction Environmental Management Plan (CEMP): A CEMP will be meticulously developed and executed, providing a detailed framework of environmental requisites applicable to the Proposed Action execution phase.

Restricted Working Hours: Operational hours will be confined between 6:30 am and 6:30 pm, thereby curtailing potential disturbances related to nocturnal noise, vibration, and artificial lighting.

Erosion and Sediment Control Plan: A strategic plan addressing erosion and sedimentation will be formulated and endorsed by a RPEQ or an accredited specialist in erosion and sediment control, ensuring its diligent implementation.

Weed Management and Native Grass Reestablishment: Comprehensive weed control measures will be enforced and complemented by initiatives to reintroduce native grass species across the site.

Protected Plant Survey: Prior to any disturbance activities, a survey adhering to the Department of Environment and Science's Flora Survey Guidelines will be conducted to ensure compliance with statutory flora protection requirements.

Wildlife Survey by Licensed Spotter/Catcher: A licensed Wildlife Spotter/Catcher, accredited under the NC Act 1992, will conduct a thorough survey to identify fauna or habitat features such as nests and tree hollows, ensuring appropriate fauna protection and relocation measures are in place.

Demarcation of Permissible Clearing Areas: An ecologist will accurately delineate the extent of permissible vegetation clearing prior to construction commencement to prevent encroachments beyond the authorised work footprint.

On-Site Utilisation of Felled Trees and Habitat Features: Trees that are felled will be processed into mulch for site rehabilitation use, while other habitat structures, including boulders and logs, will be preserved and reconstituted within rehabilitated areas of the site.

These measures constitute a robust framework aimed at ensuring the minimal ecological disruption and promoting environmental sustainability throughout the lifecycle of the Proposed Action.

Refer to Section 7 of the Ecological Report for full discussion of the avoidance, mitigation and management measures that either have been, or will be implemented for the Proposed Action (**Att-1_MNES Report _ Section 7.4_Page 44**).

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

On-site compensation

A 12.37 ha Environmental Reserve, analogous with a TEC, has been incorporated into the development plan for the Proposed Action (**Att-1_MNES Report _ Section 7.5.1_Page 45**). The intended purpose of this area is to provide a long-term ecological benefit to the Site, relative to present day condition.

Off-site offsets

Offsets for impacts to threatened species would be delivered in accordance with the EPBC Act Environmental Offsets Policy, with an Offset Strategy to be developed through the assessment process for the Proposed Action should the proposed action be assessed as a controlled action. The proponent is committed to securing and delivering biodiversity offsets, to compensate for significant residual impacts to MNES, in accordance with the EPBC Act Environmental Offsets Policy (**Att-1_MNES Report _ Section 7.5.2_Page 45**).

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.

Direct impact	Indirect impact	Species	Common name
No	No	<i>Actitis hypoleucos</i>	Common Sandpiper
No	No	<i>Anous stolidus</i>	Common Noddy
No	No	<i>Anoxypristis cuspidata</i>	Narrow Sawfish, Knifetooth Sawfish
No	No	<i>Apus pacificus</i>	Fork-tailed Swift
No	No	<i>Ardenna carneipes</i>	Flesh-footed Shearwater, Fleshy-footed Shearwater
No	No	<i>Balaenoptera edeni</i>	Bryde's Whale
No	No	<i>Balaenoptera musculus</i>	Blue Whale
No	No	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper
No	No	<i>Calidris canutus</i>	Red Knot, Knot
No	No	<i>Calidris ferruginea</i>	Curlew Sandpiper
No	No	<i>Calidris melanotos</i>	Pectoral Sandpiper
No	No	<i>Carcharhinus longimanus</i>	Oceanic Whitetip Shark
No	No	<i>Carcharias taurus</i>	Grey Nurse Shark
No	No	<i>Carcharodon carcharias</i>	White Shark, Great White Shark
No	No	<i>Caretta caretta</i>	Loggerhead Turtle
No	No	<i>Charadrius leschenaultii</i>	Greater Sand Plover, Large Sand Plover
No	No	<i>Chelonia mydas</i>	Green Turtle
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>Dermochelys coriacea</i>	Leatherback Turtle, Leathery Turtle, Luth
No	No	<i>Dugong dugon</i>	Dugong
No	No	<i>Eretmochelys imbricata</i>	Hawksbill Turtle

Direct impact	Indirect impact	Species	Common name
No	No	Fregata ariel	Lesser Frigatebird, Least Frigatebird
No	No	Fregata minor	Great Frigatebird, Greater Frigatebird
No	No	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	No	Hirundapus caudacutus	White-throated Needletail
No	No	Lamna nasus	Porbeagle, Mackerel Shark
No	No	Lepidochelys olivacea	Olive Ridley Turtle, Pacific Ridley Turtle
No	No	Limosa lapponica	Bar-tailed Godwit
No	No	Macronectes giganteus	Southern Giant-Petrel, Southern Giant Petrel
No	No	Megaptera novaeangliae	Humpback Whale
No	No	Mobula alfredi	Reef Manta Ray, Coastal Manta Ray
No	No	Mobula birostris	Giant Manta Ray
No	No	Natator depressus	Flatback Turtle
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	No	Orcaella heinsohni	Australian Snubfin Dolphin
No	No	Orcinus orca	Killer Whale, Orca
No	No	Pandion haliaetus	Osprey
No	No	Phaethon lepturus	White-tailed Tropicbird
No	No	Phoebastria fusca	Sooty Albatross
No	No	Pristis zijsron	Green Sawfish, Dindagubba, Narrowsnout Sawfish
No	No	Rhincodon typus	Whale Shark
No	No	Sousa sahalensis	Australian Humpback Dolphin
No	No	Sternula albifrons	Little Tern
No	No	Thalassarche carteri	Indian Yellow-nosed Albatross
No	No	Thalassarche cauta	Shy Albatross
No	No	Thalassarche impavida	Campbell Albatross, Campbell Black-browed Albatross

Direct impact	Indirect impact	Species	Common name
No	No	Thalassarche melanophris	Black-browed Albatross
No	No	Thalassarche salvini	Salvin's Albatross
No	No	Thalassarche steadi	White-capped Albatross
No	No	Tringa nebularia	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.

*

Assessments have assessed the likelihood of threatened species occurring on, or proximal to the Site (**Att-1_MNES Report _ Section 5.1.3_Page 31**). Whilst not recorded during Site surveys there is a possibility, that with the Site being located in relatively close proximity to the coast that Migratory MNES Birds may be utilising the existing dam located on Site. The long-term potential impact to these species is minimal as the not only is the dam being retained within the Environmental Reserve, adjacent to the dam is the proposed manufactured wetland as part of the water management plan. This proposed wetland will likely increase the area some species of migratory birds will be able to utilise across the Site. Consequently, it is not expected Migratory Species will be impacted by the Proposed Action (**Att-1_MNES Report _ Section 6.2 _Page 39**).

Further detail into the Proposed Stormwater Treatment Train and the MUSIC Modelling was performed to ensure the nominated treatment

strategy achieves the required pollutant reduction objectives can be found in **Att-9_MNES Report Attachment 7 - Stormwater Management Plan_ Section 3.4_ Page 6** and **Att-9_MNES Report Attachment 7 - Stormwater Management Plan_ Section 3.4_ Page 7**.

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 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.

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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.

*

There are no Commonwealth Marine Areas proximal to the Site.

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.

*

There are four mapped Great barrier reef parks within the Site (5 km search) or buffer zone (PMST, 2024). Zone ID's and Types are:

- CP-24-4112 Conservation Park
- CP-24-4113 Conservation Park
- GU-21-6016 General Use
- MNP-24-1171 Marine National Park

With appropriate, standard practice sediment and runoff controls there should be no direct or indirect impacts on the Great Barrier Reef.

Outlined in the Concept Erosion and Sediment Control Plan the principles for development of erosion and sediment controls required for the proposed Project include:

- Appropriately integrate the development into the Site.
- Integrate erosion and sediment control risks into site planning and construction planning.
- Develop an effective and flexible ESCP based on anticipated soil loss, weather, and construction activities.
- Minimise the extent and duration of soil disturbance.
- Control water movement through the Site.
- Minimise soil erosion.
- Promptly stabilise disturbed areas.
- Once mobilised, maximise sediment retention within the Site.
- Maintain all ESC measures in proper working order at all times.
- Monitor the Site and adjust ESC practices to maintain the required performance standard.

This concept ESCP will be provided to the construction contractor as the framework for developing a site-specific, detailed ESCP. The detailed ESCP will need to be prepared in accordance with the principles of the IECA's Best Practice Erosion and Sediment Control guideline, and endorsed by a Certified Practitioner in Erosion and Sediment Control. Further information on the ESC management strategies is explained in Section 4 of the Concept Erosion and Sediment Control Plan (**Att-8_MNES Report Attachment 6 - Concept Erosion and Sediment Control Plan_ Page 7**).

The Stormwater Management Plan for the Proposed Action includes MUSIC modelling to ensure that treatment strategies meet pollutant reduction goals, following SPP guidelines. As detailed in **Att-9_MNES Report Attachment 7 - Stormwater Management Plan_ Section 3.4_ Page 7**, the proposed strategy for Discovery Drive and future developments meets or exceeds target reduction rates for major pollutants.

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 will not impact a water resource, nor is it 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 located on, or proximal to, Commonwealth land.

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 not located on, or proximal to, Commonwealth land.

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:

- Threatened Species and Ecological Communities (S18)

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)
- 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. *

The suitability of the Site for development is indicated, in part, by the local land use zoning (**Att-2_MNES Report _ Figures _ Figure 4**), the Site is currently zoned by the GRC as Emerging Communities. Consequently, the Proposed Action is compatible with the identified development intent.

The Site is situated within a region predominantly encircled by urban development, aligning seamlessly with the character and thematic orientation of the Proposed Action. In the broader context concerning the Site, the Agnes Water area is notably restricted in terms of development potential. This limitation stems from the presence of National Parks located to the south and west, which impose significant boundaries on urban expansion in these directions. This is in addition to the coastlines and waterways that surround Agnes Water further limiting urban expansion. The Site occupies an area central to the Agnes Water residential area, alternative Sites would be located a significant distance from the residential areas out of the town itself, increasing the distance travelled for future residents to access services.

No alternative sites have been considered for the Proposed Action (**Att-1_MNES Report _ Section 7.3.2_Page 43**).

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-1_MNES Report.pdf MNES Report	19/12/2024	No	High
#2.	Document	Att-2_MNES Report _ Figures.pdf Relevant Figures	18/12/2024	No	High
#3.	Document	Att-3_MNES Report Attachment 1 - Development Map.pdf Development Map	05/04/2023	No	High
#4.	Document	Att-8_MNES Report Attachment 6 - Concept Erosion and Sediment Control Plan.pdf Site Concept Erosion and Sediment Control Plan	18/12/2024	No	High
#5.	Document	Att-9_MNES Report Attachment 7 - Stormwater Managment Plan.pdf Stormwater Management Plan	01/04/2023	No	High

1.2.6 Commonwealth or state legislation, planning frameworks or policy documents that are relevant to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-1_MNES Report.pdf MNES Report	18/12/2024	No	High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-2_MNES Report _ Figures.pdf Relevant Figures	17/12/2024	No	High
#2.	Document	Att-5_MNES Report Attachment 3 - MSES.pdf Matters of State Environmental Significance	30/10/2024	No	High

3.1.2 Existing or proposed uses for the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-3_MNES Report Attachment 1 - Development Map.pdf Map of the Proposed Development	17/12/2024	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document				

Att-5_MNES Report Attachment 3 - MSES.pdf Matters of National Environmental Significance	18/12/2024	No	High
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3.1.4 Gradient relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-8_MNES Report Attachment 6 - Concept Erosion and Sediment Control Plan.pdf Site Concept Erosion and Sediment Control Plan	17/12/2024	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-1_MNES Report.pdf MNES Report	18/12/2024	No	High
#2.	Document	Att-2_MNES Report _ Figures.pdf Relevant Figures	17/12/2024	No	High
#3.	Document	Att-4_MNES Report Attachment 2 - Protected Matters Search Tool.pdf Protected Matters Search Tool	30/10/2024	No	High
#4.	Document	Att-5_MNES Report Attachment 3 - MSES.pdf Matters of State Environmental Significance	17/12/2024	No	High
#5.	Document	Att-6_MNES Report Attachment 4 - WildNet Database Report.pdf WildNet Database Report	30/10/2024	No	High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-2_MNES Report _ Figures.pdf Relevant Figures	17/12/2024	No	High
#2.	Document	Att-7_MNES Report Attachment 5 - PMAV.pdf Property Map of Assessable Vegetation	14/08/2024	No	High
#3.	Document	Att-8_MNES Report Attachment 6 - Concept Erosion and Sediment Control Plan.pdf Site Concept Erosion and Sediment Control Plan	17/12/2024	No	High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-1_MNES Report.pdf MNES Report	18/12/2024	No	High
#2.	Document	Att-8_MNES Report Attachment 6 - Concept Erosion and Sediment Control Plan.pdf Site Concept Erosion and Sediment Control Plan	17/12/2024	No	High
#3.	Document	Att-9_MNES Report Attachment 7 - Stormwater Managment Plan.pdf Stormwater Management Plan	31/03/2023	No	High

4.1.1.3 (World Heritage) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-8_MNES Report Attachment 6 - Concept Erosion and Sediment Control Plan.pdf Site Concept Erosion and Sediment Control Plan	17/12/2024	No	High
#2.	Document	Att-9_MNES Report Attachment 7 - Stormwater Managment Plan.pdf Stormwater Management Plan	31/03/2023	No	High

4.1.2.3 (National Heritage) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-8_MNES Report Attachment 6 - Concept Erosion and Sediment Control Plan.pdf Site Concept Erosion and Sediment Control Plan	17/12/2024	No	High
#2.	Document	Att-9_MNES Report Attachment 7 - Stormwater Managment Plan.pdf Stormwater Management Plan	31/03/2023	No	High

4.1.3.3 (Ramsar Wetland) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-4_MNES Report Attachment 2 - Protected Matters Search Tool.pdf Protected Matters Search Tool	17/12/2024	No	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-1_MNES Report.pdf MNES Report	18/12/2024	No	High

4.1.4.5 (Threatened Species and Ecological Communities) Why you consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-1_MNES Report.pdf MNES Report	18/12/2024	No	High

4.1.4.8 (Threatened Species and Ecological Communities) Why you think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-1_MNES Report.pdf MNES Report	18/12/2024	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-1_MNES Report.pdf MNES Report	18/12/2024	No	High
#2.	Document	Att-2_MNES Report _ Figures.pdf Relevant Figures	17/12/2024	No	High

4.1.4.11 (Threatened Species and Ecological Communities) Proposed offsets relevant to avoidance or mitigation measures

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-1_MNES Report.pdf MNES Report	18/12/2024	No	High

4.1.5.3 (Migratory Species) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-1_MNES Report.pdf MNES Report	18/12/2024	No	High
#2.	Document	Att-9_MNES Report Attachment 7 - Stormwater Managment Plan.pdf Stormwater Management Plan	31/03/2023	No	High

4.1.8.3 (Great Barrier Reef) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-8_MNES Report Attachment 6 - Concept Erosion and Sediment Control	17/12/2024	No	High

Plan.pdf Site Concept Erosion and Sediment Control Plan					
#2.	Document	Att-9_MNES Report Attachment 7 - Stormwater Managment Plan.pdf Stormwater Management Plan	31/03/2023	No	High

4.3.8 Why alternatives for your proposed action were not possible

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att-1_MNES Report.pdf MNES Report	18/12/2024	No	High
#2.	Document	Att-2_MNES Report _ Figures.pdf Relevant Figures	17/12/2024		High

5.2 Declarations

✔ Completed Referring party's declaration

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

ABN/ACN	31195566910
Organisation name	The Trustee for 28 South Environmental Trust
Organisation address	4151 QLD
Representative's name	Mitch Taylor
Representative's job title	Director
Phone	0488 204 523
Email	EPBC@28south.com.au
Address	Level 2, Cameron House, , Fortitude Valley, QLD, 4006

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

☒ I would like to receive notifications and track the referral progress through the EPBC portal. *

☒ By checking this box, I, **Mitch Taylor of The Trustee for 28 South Environmental Trust**, 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. *

☒ I would like to receive notifications and track the referral progress through the EPBC portal. *

✔ 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.

ABN/ACN	78860731075
Organisation name	SUNSHINE STATE DEVELOPMENTS PTY LTD & JAMWORTH PTY LTD
Organisation address	PO Box 1532, BUDERIM, QLD, 4556
Representative's name	Andrew Hunter

Representative's job title	Senior Project Manager
Phone	0409925839
Email	andrew@anhdevelopments.com.au
Address	460 Pumicestone Road, Elimbah

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

☒ I would like to receive notifications and track the referral progress through the EPBC portal. *

☒ I, **Andrew Hunter of SUNSHINE STATE DEVELOPMENTS PTY LTD & JAMWORTH 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. *

☒ I would like to receive notifications and track the referral progress through the EPBC portal. *

☒ 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.

Same as Person proposing to take the action information.

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

☒ I would like to receive notifications and track the referral progress through the EPBC portal. *

☒ I, **Andrew Hunter of SUNSHINE STATE DEVELOPMENTS PTY LTD & JAMWORTH 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. *

☐ I would like to receive notifications and track the referral progress through the EPBC portal. *

