

## 1. Application details and outcomes

### 1.1. Permit application details

|                       |                                 |
|-----------------------|---------------------------------|
| Permit number:        | 10976/1                         |
| Permit type:          | Purpose Permit                  |
| Applicant name:       | Westdeen Holdings Pty Ltd       |
| Application received: | 16 April 2025                   |
| Application area:     | 16 hectares                     |
| Purpose of clearing:  | Sand mining                     |
| Method of clearing:   | Mechanical Removal              |
| Tenure:               | Mining Leases 70/250 and 70/692 |
| Location (LGA area):  | Shire of Gingin                 |
| Colloquial name:      | Lancelin Limesand Operations    |

### 1.2. Description of clearing activities

Westdeen Holdings Pty Ltd proposes to clear up to 16 hectares of native vegetation within a boundary of approximately 193 hectares, for the purpose of sand mining (Westdeen, 2025a; 2025b). The project is located less than one kilometre east of Lancelin, within the Shire of Gingin (GIS Database).

The application is to allow for progressive limesand mining as part of an expansion of an existing operation (Westdeen, 2025b). The area will be subject to progressive rehabilitation, as required within tenement conditions for Mining Leases 70/250 and 70/692 (DMPE, 2025a; 2025b).

### 1.3. Decision on application and key considerations

|                |                                  |
|----------------|----------------------------------|
| Decision:      | Grant                            |
| Decision date: | 20 November 2025                 |
| Decision area: | 16 hectares of native vegetation |

### 1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed, and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Mines, Petroleum and Exploration (DMPE) advertised the application for a public comment for a period of 21 days, and one submission was received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix C), relevant datasets (Appendix G), supporting information provided by the applicant (Appendix A), the clearing principles set out in Schedule 5 of the EP Act (Appendix D), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.2.2).

The assessment identified that the proposed clearing may result in:

- the potential introduction and spread of weeds or dieback into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values;
- loss of habitat for potentially occurring conservation significant flora and fauna; and
- potential land degradation in the form of erosion.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (Section 3.1), the Delegated Officer determined the proposed clearing can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values.

The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback;
- at least once in each 12 month period for the term of this Permit, the Permit Holder must remove or kill any weeds growing within areas cleared under this Permit; and
- commence construction no later than three months after undertaking clearing to reduce the risk of erosion.

## 2. Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Country Areas Water Supply Act 1947* (WA) (CAWS Act)
- *Mining Act 1978* (WA)
- *Rights in Water and Irrigation Act 1914* (RIWI Act)

Relevant agreements (treaties) considered during the assessment include:

- Japan-Australia Migratory Bird Agreement
- China-Australia Migratory Bird Agreement
- Republic of Korea-Australia Migratory Bird Agreement

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2014)
- *Procedure: Native vegetation clearing permits* (DWER, October 2021)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)

## 3. Detailed assessment of application

### 3.1. Avoidance and mitigation measures

The applicant considered alternatives to clearing, but determined that the requested clearing was necessary for mining operations (Westdeen, 2025a). Impacts of clearing will be minimised by progressively rehabilitating cleared areas as the mine face progresses north (Westdeen, 2025a). As the majority of the clearing permit application area consists of unvegetated dunes, there will likely be a higher overall vegetation cover post-mining (Westdeen, 2025a).

The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.

### 3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (Appendix C) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles identified that the impacts of the proposed clearing present a risk to biological values (fauna, flora and vegetation). The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

#### 3.2.1. Biological values (fauna) - Clearing Principles (a) and (b)

##### Assessment

The following species require further consideration, due to the presence of nearby records, and potentially suitable habitat.

##### **Carnaby's cockatoo**

Carnaby's cockatoo (*Zanda latirostris*) (Endangered) has been recorded approximately 500 metres from the application area, and the application area is within the modelled distribution of Carnaby's cockatoo (Commonwealth of Australia, 2008; GIS Database). The application area is highly unlikely to include suitable breeding or roosting habitat, and unlikely to represent critical foraging habitat due to containing limited myrtaceous species and no proteaceous species, as well as no habitat trees (Commonwealth of Australia, 2022; EPA, 2019; Shah, 2006; Woodgis, 2025). Carnaby's cockatoo may occasionally fly over the application area, but the habitat is unlikely to be significant for conservation of this species.

##### **Black-striped burrowing snake**

The black-striped burrowing snake (*Neelaps calonotos*) (Priority 3) occurs on sandy soils of the Perth region, including coastal areas, vegetated dunes and sandplains (ALA, n.d.; Cogger, 2018; Gaikhorst et al., 2018; How & Shine, 2006; WAM, 2025; Wilson & Swan, 2021). It is possible that this species may occur within the application area, however noting that the application area consists of primarily bare dunes, habitat for this species is more abundant outside of the application area, where vegetation is denser (Woodgis, 2025; GIS Database). Therefore, the proposed clearing is unlikely to result in significant impacts to this species (GIS Database).

### **Peregrine falcon**

The peregrine falcon (*Falco peregrinus*) (Other Specially Protected) is a global species that migrates long distances and occurs in a wide range of habitats on every continent except Antarctica (NWF, n.d.). This species may use the application area as a wider home range, but the area is not considered critical habitat.

### **Lancelin Island skink**

The Lancelin Island skink (*Ctenotus lancelini*) (Vulnerable) has been recorded on Lancelin Island, and at one location on the adjacent mainland (Cogger, 2018; Commonwealth of Australia, 2008). The specimen from the mainland was recorded in 1994, and it is expected that this species is very rare on the mainland (Commonwealth of Australia, 2008; Pearson & Jones, 2000). As the application is outside of the known range of this species, it is considered unlikely to occur, and therefore unlikely to be impacted by the proposed clearing.

### **Greater bilby**

The greater bilby (*Macrotis lagotis*) (Vulnerable) had a wide distribution, occurring over 70 percent of mainland Australia, prior to European settlement (DCCEEW, 2023). Since then, the range has contracted towards the north, and the bilby now only occurs in northern, arid areas in Western Australia, and reintroduction sites (Commonwealth of Australia, 2008; DCCEEW, 2023). Bilbies are unlikely to occur in the region and the nearest record was collected in 1920 (Commonwealth of Australia, 2008; DCCEEW, 2023; GIS Database).

### Conclusion

There are no conservation significant fauna likely to be significantly impacted by the proposed clearing.

### Conditions

No fauna management conditions required.

## **3.2.2. Biological values (flora and vegetation) - Clearing Principle (a)**

### Assessment

#### **Weeds and dieback**

The following 24 weed species have been recorded within the application area:

- *Arctotheca calendula*;
- *Arctotheca populifolia*;
- *Bromus diandrus*;
- *Cakile maritima*;
- *Crassula glomerata*;
- *Dischisma arenarium*;
- *Ehrharta villosa*;
- *Euphorbia terracina*;
- *Ficinia marginata*;
- *Gazania linearis*;
- *Heliophila pusilla*;
- *Lagurus ovatus*;
- *Lolium rigidum*;
- *Lysimachia arvensis*;
- *Medicago polymorpha*;
- *Oenothera drummondii*;
- *Pelargonium capitatum*;
- *Romulea rosea*;
- *Sonchus oleraceus*;
- *Tetragonia decumbens*;
- *Thinopyrum distichum*;
- *Trachyandra divaricata*;
- *Vellereophyton dealbatum*; and
- *Vulpia myuros* (Woodgis, 2025).

A further 13 weed species have been recorded in the broader survey area (Woodgis, 2025).

As the application area has an average annual rainfall of greater than 400 millimetres, the application area is located within the dieback vulnerable zone (BoM, 2025; DBCA, 2017).

Weeds and dieback have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area.

#### **Priority flora**

Woodgis (2025) conducted a revegetation monitoring survey over 23-26 September 2025. This is within the recommended survey timing for the South-West Botanical Province (EPA, 2016). No priority flora have been identified within the application area during the survey by Woodgis (2025). However, the following three priority species were detected in the broader survey area:

- *Hibbertia leptotheca*;
- *Thryptomene butleri*; and
- *Conostylis pauciflora* subsp. *euryrhipis* (Woodgis, 2025).

The identification of these species was confirmed by the Western Australian Herbarium (Woodgis, 2025).

*Hibbertia leptotheca* (Priority 3) inhabits heath on dunes (Western Australian Herbarium, 1998-). This species is known from 32 Western Australian Herbarium (1998-) records from the Perth subregion of the Swan Coastal Plain bioregion. This species was recorded at two sample sites during the Woodgis (2025) survey, with both of these being reference sites. As this species has been detected outside of the application area, is known from 32 records, and suitable habitat occurs adjacent to and surrounding the application area, the proposed clearing is unlikely to be significant to the conservation of this species (Western Australian Herbarium, 1998-; Woodgis, 2025).

*Thryptomene butleri* (Priority 3) inhabits sand dunes (Western Australian Herbarium, 1998-). This species is known from 40 Western Australian Herbarium (1998-) records from the Perth and Lesueur Sandplain subregions of the Swan Coastal Plain and Geraldton Sandplains bioregions. This species was recorded at one reference site during the Woodgis (2025) survey. As this species is not regionally restricted, has been detected outside of the application area, is known from 40 records, and suitable habitat occurs adjacent to and surrounding the application area, the proposed clearing is unlikely to be significant to the conservation of this species (Western Australian Herbarium, 1998-; Woodgis, 2025).

*Conostylis pauciflora* subsp. *euryrhipis* (Priority 4) inhabits white, grey or yellow sand on coastal sand dunes (Western Australian Herbarium, 1998-). This species is known from 32 Western Australian Herbarium (1998-) records from the Perth subregion of the Swan Coastal Plain bioregion. This species was recorded in five sample sites during the Woodgis (2025) survey, with three of these being reference sites, and two of these being rehabilitated sites. As this species is able to reinhabit rehabilitated sites post-mining, has been detected outside of the application area, and is known from 32 records, the proposed clearing is unlikely to be significant to the conservation of this species (Western Australian Herbarium, 1998-; Woodgis, 2025).

The following priority flora species were not detected in the survey by Woodgis (2025), however are considered possibly occurring, due to the occurrence of nearby records and suitable habitat:

- *Stylidium maritimum*;
- *Scholtzia laciniata*;
- *Babingtonia urbana*;
- *Sarcozona bicarinate*;
- *Styphelia porcata*;
- *Conostephium magnum*;
- *Conostylis bracteata*; and
- *Dodonaea hackettiana* (Western Australian Herbarium, 1998-; GIS Database).

*Scholtzia laciniata*, *Babingtonia urbana*, *Sarcozona bicarinate* and *Styphelia porcata* may have been unidentifiable during the survey, as September is outside of their flowering period (Hislop, 2024; Rye, 2015; 2019; Western Australian Herbarium, 1998-). Survey timing was unlikely to be a limitation to the detection of other species possibly occurring within the application area (Keighery et al., 2023; Western Australian Herbarium, 1998-).

*Stylidium maritimum* (Priority 3) and *Babingtonia urbana* (Priority 2) are unlikely to be significantly impacted by the proposed clearing, as they have been well recorded in multiple bioregions (Western Australian Herbarium, 1998-).

*Scholtzia laciniata* (Priority 2) inhabits sand dunes, usually with shrub cover (Western Australian Herbarium, 1998-). As the application area is to be progressively rehabilitated, and the application area consists of primarily bare dunes, habitat for this species will likely increase post-mining (Westdeen, 2025a).

*Sarcozona bicarinate* (Priority 3) has been recorded inhabiting disturbed sites (Western Australian Herbarium, 1998-). As this species is able to occur in disturbed sites, and the application area is to be progressively rehabilitated post-mining, the proposed clearing is unlikely to be significant to the conservation of this species (Westdeen, 2025a; GIS Database).

*Styphelia porcata* (Priority 3) is known from 30 Western Australian Herbarium (1998-) records from the Perth subregion of the Swan Coastal Plain bioregion. It has been recorded inhabiting disturbed sites (Western Australian Herbarium, 1998-). As this species is able to occur in disturbed sites, is known from 30 records, and suitable habitat occurs adjacent to and surrounding the application area, the proposed clearing is unlikely to be significant to the conservation of this species (GIS Database).

*Conostylis bracteata* (Priority 3) and *Dodonaea hackettiana* (Priority 4) are unlikely to be significantly impacted by the proposed clearing, as they have been well recorded in the Swan Coastal Plain bioregion and suitable habitat occurs adjacent to and surrounding the application area (Western Australian Herbarium, 1998-; GIS Database).

*Conostephium magnum* (Priority 4) is known from 33 Western Australian Herbarium (1998-) records from the Perth and Lesueur Sandplain subregions of the Swan Coastal Plain and Geraldton Sandplains bioregions. It has been recorded inhabiting disturbed sites (Western Australian Herbarium, 1998-). As this species is not regionally restricted, is able to occur in disturbed sites, is known from 33 records, and suitable habitat occurs adjacent to and surrounding the application area, the proposed clearing is unlikely to be significant to the conservation of this species (GIS Database).

### Conclusion

Based on the above assessment, the proposed clearing may result in lowered biodiversity due to the spread and introduction of weeds and dieback and loss of habitat for potentially occurring priority flora species.

For the reasons set out above, it is considered that the impacts of the proposed clearing on biodiversity and priority flora can be managed by taking steps to minimise the risk of the introduction and spread of weeds and dieback; and avoiding, minimising and reducing the impacts and extent of clearing.

### Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback;

- at least once in each 12 month period for the term of this Permit, the Permit Holder must remove or kill any weeds growing within areas cleared under this Permit.

### 3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 13 May 2025 by the Department of Energy, Mines, Industry Regulation and Safety (now Department of Mines, Petroleum and Exploration) inviting submissions from the public. One submission was received in relation to this application (see Appendix B).

The permit area is within the South West Native Title Settlement area (DPLH, 2025). This settlement resolves Native Title rights and interests over an area of approximately 200,000 square kilometres within the southwest of Western Australia. The mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2025). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

Other relevant authorisations required for the proposed land use include:

- A Mining Proposal / Mine Closure Plan / Mining Development and Closure Proposal approved under the *Mining Act 1978*

It is the proponent's responsibility to liaise with the Department of Water and Environmental Regulation and the Department of Biodiversity, Conservation and Attractions, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

**End**

## Appendix A. Additional information provided by applicant

| Summary of comments  | Consideration of comment   |
|--|--|
| The applicant provided the results of the 2025 revegetation monitoring survey, for the project area (Woodgis, 2025). | The information contained in this survey assisted in the assessment of clearing principles (a), (b), (c) and (d) (see Appendix D). |

## Appendix B. Details of public submissions

| Summary of comments  | Consideration of comment  |
|--|---|
| The Lancelin sand dunes constitute an off-road vehicle area and tourist attraction of the highest significance to Western Australia. The resulting diminution of Lancelin's attractiveness to tourists and holidaymakers would have an adverse effect on the local economy (Shire of Gingin, 2025b). | Off-road vehicle usage is permitted in the Lancelin Off-road Vehicle Area (LORVA) (LGIRS, 2024; Shire of Gingin, 2025a). The clearing permit boundary is not within the LORVA, and management of the LORVA is considered in the Mining Proposal approved under the <i>Mining Act 1978</i> (Aglime, 2020; LGIRS, 2024).<br><br>The Shire of Gingin was encouraged to liaise with the applicant to address the concern. |
| The movement of heavy haulage trucks on Lancelin Road/Walker Avenue will cause premature wear and tear on road surfaces which result in an increased road maintenance burden on the Shire of Gingin (Shire of Gingin, 2025b).  | The Shire of Gingin was encouraged to liaise with the applicant to address the concern.   |
| The Shire is of the view that the applicant and/or the Department of Mines, Petroleum and Exploration should undertake adequate consultation with the Lancelin community in relation to Miscellaneous Licences and Mining Tenements within the locality (Shire of Gingin, 2025b).                    | Outside the scope of this assessment.<br><br>The Shire of Gingin was encouraged to liaise with the applicant to address the concern.  |
| The application area is identified to be within a Public Drinking Water Source Area. The Shire has concerns that a mining/industry related activity may impact the public drinking water source (Shire of Gingin, 2025b).  | Impacts to water quality of a Public Drinking Water Source Area are addressed in the assessment of clearing principle (i) (see Appendix D).   |
| The removal of additional dunes/vegetation may contribute to coastal erosion and effect coastal dune replenishment (Shire of Gingin, 2025b).   | The impact of the proposed clearing on erosion is addressed in the assessment of clearing principle (g) (see Appendix D).   |

## Appendix C. Site characteristics

### C.1. Site characteristics

| Characteristic         | Details  |
|------------------------|--|
| Local context          | The application area is in the Swan Coastal Plain bioregion, Perth subregion and Shire of Gingin (GIS Database). It is located on the Lancelin sand dunes, and bound by native vegetation to the south and east, the town of Lancelin immediately west and bare dunes to the north (GIS Database). Dunes in the local area have a history of limesand operations (GIS Database).                 |
| Ecological linkage     | According to available databases, the application area does not contain any known or mapped ecological linkages (GIS Database).  |
| Conservation areas     | The application area is not located within any DBCA legislated conservation areas (GIS Database).<br><br>The nearest legislated conservation areas are the Nilgen Nature Reserve, located approximately 1.2 kilometres northeast of the application area, and the Lancelin and Edwards Islands Nature Reserve, located approximately 1.8 kilometres west of the application area (GIS Database). |
| Vegetation description | The vegetation of the application area is broadly mapped as the following Beard vegetation associations:<br>129: Dune sand; and<br>1007: Mosaic of shrublands, heath and thicket; <i>Acacia lasiocarpa</i> , <i>Melaleuca systema</i> , <i>Acacia rostellifera</i> & <i>Acacia cyclops</i> (Western Australian Herbarium, 1998-; GIS Database).  |
| Vegetation condition   | A revegetation monitoring survey was submitted in support of this application (Woodgis, 2025; Appendix A).<br><br>Aerial imagery and photographs and descriptions of site indicate that large areas of the application area consists of bare dunes (Woodgis, 2025; GIS Database; Appendix F).  |

| Characteristic                              | Details   |   |                                     |             |                                       |               |                       |   |             |   |  |            |   |
|---|---|---|-------------------------------------|-------------|---------------------------------------|---------------|-----------------------|---|-------------|---|--|------------|---|
|   | <p>As the application area includes existing sand mining activities and many weed species have been recorded, it can be inferred that the application area is in Excellent to Completely Degraded Keighery (1994) condition (Westdeen, 2025b; Woodgis, 2025; GIS Database).</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix E.</p>   |   |                                     |             |                                       |               |                       |   |             |   |  |            |   |
| Climate and landform                        | <p>The climate of the Perth subregion is described as Mediterranean, with the nearest weather station (San Angelo) recording an average rainfall of approximately 615 millimetres per year (BoM, 2025; CALM, 2002).</p> <p>The application area is mapped at elevations of 5-40 metres Australian height datum (GIS Database). Land system mapping broadly describes the application area as dunes, loose sand and limestone outcropping (DPIRD, 2025b).</p>  |   |                                     |             |                                       |               |                       |   |             |   |  |            |   |
| Soil description                            | <p>The soils within the application area are broadly mapped as the following (DPIRD, 2025b):</p> <table border="1"> <thead> <tr> <th>System</th> <th>Extent within application area (ha)</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Quindalup South 5 subsystem (211Qu_5)</td> <td>172.9 (89.6%)</td> <td>Unstable active dunes</td> </tr> <tr> <td>Quindalup South third dune phase (211Qu_Q3)</td> <td>11.0 (5.7%)</td> <td>The third phase. Irregular dunes with high relief and slopes up to 20%. Loose calcareous sand with little surface organic staining and incipient cementation at depth</td> </tr> <tr> <td>Quindalup South 13 subsystem (211Qu13)</td> <td>9.1 (4.7%)</td> <td>Limestone outcrop; shallow calcareous sands and remnants of parabolic dunes, limestone dominant</td> </tr> </tbody> </table> | System  | Extent within application area (ha) | Description | Quindalup South 5 subsystem (211Qu_5) | 172.9 (89.6%) | Unstable active dunes | Quindalup South third dune phase (211Qu_Q3) | 11.0 (5.7%) | The third phase. Irregular dunes with high relief and slopes up to 20%. Loose calcareous sand with little surface organic staining and incipient cementation at depth | Quindalup South 13 subsystem (211Qu13) | 9.1 (4.7%) | Limestone outcrop; shallow calcareous sands and remnants of parabolic dunes, limestone dominant |
| System                                      | Extent within application area (ha)   | Description   |                                     |             |                                       |               |                       |   |             |   |  |            |   |
| Quindalup South 5 subsystem (211Qu_5)       | 172.9 (89.6%)   | Unstable active dunes   |                                     |             |                                       |               |                       |   |             |   |  |            |   |
| Quindalup South third dune phase (211Qu_Q3) | 11.0 (5.7%)   | The third phase. Irregular dunes with high relief and slopes up to 20%. Loose calcareous sand with little surface organic staining and incipient cementation at depth |                                     |             |                                       |               |                       |   |             |   |  |            |   |
| Quindalup South 13 subsystem (211Qu13)      | 9.1 (4.7%)  | Limestone outcrop; shallow calcareous sands and remnants of parabolic dunes, limestone dominant   |                                     |             |                                       |               |                       |   |             |   |  |            |   |
| Land degradation risk                       | <p>As the Quindalup South 5 subsystem consists of unstable and active dunes, there is a risk of wind erosion if vegetation is cleared, however, considering the scale of clearing and the planned site rehabilitation post-clearing, this risk is considered negligible (DPIRD, 2025a).</p> <p>As the other two land systems within the application area occur to a lesser extent, it is unlikely that the clearing within these land systems will contribute to significant land degradation (GIS Database).</p>   |   |                                     |             |                                       |               |                       |   |             |   |  |            |   |
| Waterbodies                                 | The desktop assessment and aerial imagery indicated that no watercourses or waterbodies occur within the application area (GIS Database).   |   |                                     |             |                                       |               |                       |   |             |   |  |            |   |
| Hydrogeography                              | <p>The application area is located within the Lancelin Water Reserve, a Public Drinking Water Source Area (PDWSA), classified as Priority 1 under the CAWS Act (DWER, 2025a; GIS Database).</p> <p>The application area is located within the Gingin Groundwater Area proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (GIS Database).</p> <p>The groundwater salinity mapped across the application area is 500-1,000 total dissolved solids milligrams per litre, which is described as fresh to brackish water quality (DISR, 2024; GIS Database).</p>  |   |                                     |             |                                       |               |                       |   |             |   |  |            |   |
| Flora                                       | There are records of 25 priority flora and one threatened flora species within 20 kilometres of the application, four of these priority flora species are recorded within one kilometre of the application area (Woodgis, 2025; GIS Database).  |   |                                     |             |                                       |               |                       |   |             |   |  |            |   |
| Ecological communities                      | There are records of one threatened ecological community (TEC) and three priority ecological communities (PECs) within 20 kilometres of the application area (GIS Database).  |   |                                     |             |                                       |               |                       |   |             |   |  |            |   |
| Fauna                                       | There are records of 34 conservation significant fauna species within the local area (20 kilometre radius of the application area), with the nearest recorded 500 metres from the application area (GIS Database).  |   |                                     |             |                                       |               |                       |   |             |   |  |            |   |

## C.2. Vegetation extent

|                                     | Pre-European area (ha) | Current extent (ha) | Extent remaining (%) | Current extent in all DBCA managed land (ha) | Current extent in all DBCA Managed Land (proportion of pre-European extent) (%) |
|-------------------------------------|------------------------|---------------------|----------------------|--|---|
| IBRA Bioregion - Swan Coastal Plain | 1,501,221.93           | 579,813.47          | 38.62                | 222,916.97                                   | 14.85   |
| IBRA Subregion - Perth              | 1,117,757.03           | 466,142.73          | 41.70                | 183,163.92                                   | 16.39   |

|   |            |            |       |           |       |
|---|------------|------------|-------|-----------|-------|
| Local Government<br>– Gingin                                      | 319,676.55 | 176,727.13 | 55.28 | 83,234.44 | 26.04 |
| Beard vegetation associations<br>- State                          |            |            |       |           |       |
| 129   | 95,286.36  | 82,850.05  | 86.95 | 42,870.88 | 44.99 |
| 1007  | 30,407.75  | 20,691.11  | 68.05 | 3,051.60  | 10.04 |
| Beard vegetation associations<br>- Bioregion (Swan Coastal Plain) |            |            |       |           |       |
| 129   | 10,346.37  | 9,802.98   | 94.75 | 5,174.52  | 50.01 |
| 1007  | 30,109.89  | 20,679.62  | 68.68 | 3,050.88  | 10.13 |
| Beard vegetation associations<br>- Subregion (Perth)              |            |            |       |           |       |
| 129   | 10,346.37  | 9,802.98   | 94.75 | 5,174.52  | 50.01 |
| 1007  | 30,109.89  | 20,679.62  | 68.68 | 3,050.88  | 10.13 |

Government of Western Australia (2019)

### C.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (Appendix G.1), and biological survey information (Woodgis, 2025), impacts to the following conservation significant flora required further consideration.

| Species name  | Conservation status | Suitable habitat features? [Y/N] | Detected in Woodgis (2025) survey? [Y/N] | Distance of closest record to application area (km) | Number of known records (total) | Likelihood of occurrence              |
|---|---------------------|----------------------------------|--|---|---------------------------------|---------------------------------------|
| <i>Hibbertia leptotheca</i>                           | P3                  | Y                                | Y  | <1  | 39                              | Likely – discussed in Section 3.2.2   |
| <i>Conostylis pauciflora</i> subsp. <i>euryrhipis</i> | P4                  | Y                                | Y  | <1  | 32                              | Likely – discussed in Section 3.2.2   |
| <i>Thryptomene butleri</i>                            | P3                  | Y                                | Y  | <1  | 40                              | Likely – discussed in Section 3.2.2   |
| <i>Stylidium maritimum</i>                            | P3                  | Y                                | N  | <1  | 50                              | Possible – discussed in Section 3.2.2 |
| <i>Scholtzia laciniata</i>                            | P2                  | Y                                | N  | <2  | 12                              | Possible – discussed in Section 3.2.2 |
| <i>Babingtonia urbana</i>                             | P3                  | Y                                | N  | <2  | 27                              | Possible – discussed in Section 3.2.2 |
| <i>Sarcozona bicarinata</i>                           | P3                  | Y                                | N  | <3  | 12                              | Possible – discussed in Section 3.2.2 |
| <i>Styphelia porcata</i>                              | P3                  | Y                                | N  | <7  | 30                              | Possible – discussed in Section 3.2.2 |
| <i>Conostephium magnum</i>                            | P4                  | Y                                | N  | <18   | 33                              | Possible – discussed in Section 3.2.2 |
| <i>Conostylis bracteata</i>                           | P3                  | Y                                | N  | <19   | 18                              | Possible – discussed in Section 3.2.2 |
| <i>Dodonaea hackettiana</i>                           | P4                  | Y                                | N  | <20   | 31                              | Possible – discussed in Section 3.2.2 |



| Species name  | Conservation status | Suitable habitat features? [Y/N] | Detected in Woodgis (2025) survey? [Y/N] | Distance of closest record to application area (km) | Number of known records (total) | Likelihood of occurrence |
|---|---------------------|----------------------------------|--|---|---------------------------------|--------------------------|
| <i>Banksia dallanneyi</i> subsp. <i>pollostata</i>                        | P3                  | N                                | N  | <8  | 28                              | Unlikely                 |
| <i>Amanita marinae</i>  | P2                  | N                                | N  | <8  | 6                               | Unlikely                 |
| <i>Isotropis cuneifolia</i> subsp. <i>glabra</i>                          | P3                  | N                                | N  | <13   | 20                              | Unlikely                 |
| <i>Caladenia speciosa</i>   | P4                  | N                                | N  | <13   | 73                              | Unlikely                 |
| <i>Gratiola pedunculata</i>   | P2                  | N                                | N  | <13   | 7                               | Unlikely                 |
| <i>Trithuria australis</i>  | P4                  | N                                | N  | <13   | 19                              | Unlikely                 |
| <i>Eryngium pinnatifidum</i> subsp. <i>Palustre</i> (G.J. Keighery 13459) | P3                  | N                                | N  | <13   | 24                              | Unlikely                 |
| <i>Eleocharis keigheryi</i>   | T                   | N                                | N  | <13   | 60                              | Unlikely                 |
| <i>Chamaescilla gibsonii</i>  | P3                  | N                                | N  | <13   | 29                              | Unlikely                 |
| <i>Eucalyptus foecunda</i> subsp. <i>foecunda</i>                         | P4                  | Y                                | N  | <14   | 80                              | Unlikely                 |
| <i>Verticordia lindleyi</i> subsp. <i>lindleyi</i>                        | P4                  | N                                | N  | <16   | 83                              | Unlikely                 |
| <i>Hypocalymma quadrangulare</i>  | P3                  | N                                | N  | <18   | 9                               | Unlikely                 |
| <i>Calothamnus accedens</i>   | P4                  | N                                | N  | <18   | 40                              | Unlikely                 |
| <i>Banksia fraseri</i> var. <i>crebra</i>                                 | P3                  | N                                | N  | <18   | 17                              | Unlikely                 |
| <i>Tetrateca pilifera</i>   | P3                  | N                                | N  | <20   | 36                              | Unlikely                 |

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

#### C.4. Fauna analysis table

The following conservation significant fauna species have been recorded within 20 kilometres of the application area (GIS Database).

The likelihood of occurrence for these species were determined by potentially suitable habitat within the application area, species distribution, biological survey information, and known regional records (ACAP, 2010; ALA, n.d.; Australian Museum, 2019; BirdLife Australia, 2025; Bishop et al., 2010; CALM, n.d.a; n.d.b; Commonwealth of Australia, 2008; 2020; 2022; DCCEEW, 2023; DEC, 2011; DOTE, 2014; DSE, 2003; DWER, 2025b; EPA, 2019; Gamblin et al., 2011; Mason et al., 2018; Menkhorst et al., 2019; Simpson & Day, 2010; TSSC, 2019; Valentine & Stock, 2008; WAM, 2025; Woodgis, 2025; GIS Database).

| Species name   | Conservation status |      | Suitable habitat features? [Y/N] | Distance of closest record to application area (km) | Likelihood of occurrence              |
|--|---------------------|------|----------------------------------|---|---------------------------------------|
|  | WA                  | EPBC |                                  |   |                                       |
| Carnaby's cockatoo ( <i>Zanda latirostris</i> )            | EN                  | EN   | N                                | 0.5   | Possible – discussed in Section 3.2.1 |
| Black-striped burrowing snake ( <i>Neelaps calonotos</i> ) | P3                  | -    | Y                                | 1.2   | Possible – discussed in Section 3.2.1 |
| Peregrine falcon ( <i>Falco peregrinus</i> )               | OS                  | -    | Y                                | 1.2   | Possible – discussed in Section 3.2.1 |
| Lancelin Island skink ( <i>Ctenotus lanceolini</i> )       | VU                  | VU   | Y                                | 1.1   | Unlikely – discussed in Section 3.2.1 |
| Greater bilby ( <i>Macrotis lagotis</i> )                  | VU                  | VU   | Y                                | 17.2  | Unlikely – discussed in Section 3.2.1 |
| Roseate tern ( <i>Sterna dougallii</i> )                   | MI                  | MI   | N                                | 0.9   | Unlikely                              |
| Crested tern ( <i>Thalasseus bergii</i> )                  | MI                  | MI   | N                                | 0.9   | Unlikely                              |
| Common noddy ( <i>Anous stolidus</i> )                     | MI                  | MI   | N                                | 0.9   | Unlikely                              |

| Species name  | Conservation status |         | Suitable habitat features? [Y/N] | Distance of closest record to application area (km) | Likelihood of occurrence |
|---|---------------------|---------|----------------------------------|---|--------------------------|
|   | WA                  | EPBC    |                                  |   |                          |
| Red-necked stint ( <i>Calidris ruficollis</i> )                                 | MI                  | MI      | N                                | 1.0   | Unlikely                 |
| Southern giant petrel ( <i>Macronectes giganteus</i> )                          | MI                  | EN & MI | N                                | 1.6   | Unlikely                 |
| Bridled tern ( <i>Onychoprion anaethetus</i> )                                  | MI                  | MI      | N                                | 1.7   | Unlikely                 |
| Sanderling ( <i>Calidris alba</i> )   | MI                  | MI      | N                                | 1.8   | Unlikely                 |
| Graceful sunmoth ( <i>Synemon gratiosa</i> )                                    | P4                  | -       | N                                | 1.8   | Unlikely                 |
| Bar-tailed godwit ( <i>Limosa lapponica</i> )                                   | MI                  | MI      | N                                | 1.8   | Unlikely                 |
| Ruddy turnstone ( <i>Arenaria interpres</i> )                                   | MI                  | MI      | N                                | 1.8   | Unlikely                 |
| Grey plover ( <i>Pluvialis squatarola</i> )                                     | MI                  | MI      | N                                | 1.8   | Unlikely                 |
| Quenda ( <i>Isoodon fusciventer</i> )   | P4                  | -       | N                                | 1.9   | Unlikely                 |
| Western brush wallaby ( <i>Notamacropus irma</i> )                              | P4                  | -       | N                                | 2.0   | Unlikely                 |
| Swan Coastal Plain shield-backed trapdoor spider ( <i>Idiosoma sigillatum</i> ) | P3                  | -       | N                                | 7.4   | Unlikely                 |
| Long-toed stint ( <i>Calidris subminuta</i> )                                   | MI                  | MI      | N                                | 8.3   | Unlikely                 |
| Sharp-tailed sandpiper ( <i>Calidris acuminata</i> )                            | MI                  | MI      | N                                | 8.3   | Unlikely                 |
| White-winged black tern ( <i>Chlidonias leucopterus</i> )                       | MI                  | MI      | N                                | 8.3   | Unlikely                 |
| Common greenshank ( <i>Tringa nebularia</i> )                                   | MI                  | MI      | N                                | 8.3   | Unlikely                 |
| Glossy ibis ( <i>Plegadis falcinellus</i> )                                     | MI                  | MI      | N                                | 8.3   | Unlikely                 |
| Pectoral sandpiper ( <i>Calidris melanotos</i> )                                | MI                  | MI      | N                                | 8.3   | Unlikely                 |
| Green turtle ( <i>Chelonia mydas</i> )  | VU                  | VU & MI | N                                | 8.8   | Unlikely                 |
| Blue-billed duck ( <i>Oxyura australis</i> )                                    | P4                  | -       | N                                | 11.7  | Unlikely                 |
| Ruff ( <i>Calidris pugnax</i> )   | MI                  | MI      | N                                | 11.8  | Unlikely                 |
| Hooded plover ( <i>Charadrius cucullatus</i> )                                  | P4                  | -       | N                                | 12.5  | Unlikely                 |
| Australasian bittern ( <i>Botaurus poiciloptilus</i> )                          | EN                  | EN      | N                                | 17.1  | Unlikely                 |
| Sperm whale ( <i>Physeter macrocephalus</i> )                                   | VU                  | MI      | N                                | 1.5   | Highly unlikely          |
| Humpback whale ( <i>Megaptera novaeangliae</i> )                                | CD & MI             | MI      | N                                | 1.6   | Highly unlikely          |
| Grey nurse shark ( <i>Carcharias taurus</i> )                                   | VU                  | VU      | N                                | 14.9  | Highly unlikely          |
| Carter's freshwater mussel ( <i>Westralunio carteri</i> )                       | VU                  | VU      | N                                | 18.9  | Highly unlikely          |

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, MI: migratory, CD: conservation dependent, OS: other specially protected, P: priority

### C.5. Ecological community analysis table

The following ecological communities have been recorded within 20 kilometres of the application area (GIS Database).

The likelihood of occurrence for these communities was determined by potentially suitable habitat within the application area, community distribution, biological survey information, and known regional records (Commonwealth of Australia, 2016; 2019; DBCA, 2019; TSSC, 2023; Woodgis, 2025; GIS Database).

| Community name   | Abbreviated community name      | Conservation status |              | Suitable habitat features? [Y/N] | Distance of closest record to application area (km) | Likelihood of occurrence |
|--|---------------------------------|---------------------|--------------|----------------------------------|---|--------------------------|
|  |                                 | State               | Commonwealth |                                  |   |                          |
| Sedgeland in Holocene dune swales of the southern Swan Coastal Plain (floristic community type 19 as originally described in Gibson et al. 1994) | SCP19a                          | CR                  | EN           | N                                | 1.2   | Unlikely                 |
| Banksia Woodlands of the Swan Coastal Plain ecological community   | Banksia WL SCP                  | P3                  | EN           | N                                | 2.3   | Unlikely                 |
| Tuart ( <i>Eucalyptus gomphocephala</i> ) woodlands and forests of the Swan Coastal Plain  | Tuart woodlands                 | P3                  | CR           | N                                | 7.9   | Unlikely                 |
| Claypans with mid dense shrublands of <i>Melaleuca lateritia</i> over herbs  | Claypans with shrubs over herbs | P1                  | CR           | N                                | 12.7  | Unlikely                 |

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

### Appendix D. Assessment against the clearing principles

| Assessment against the clearing principles  | Variance level               | Is further consideration required?                             |
|---|------------------------------|--|
| <b>Environmental value: biological values</b>   |                              |  |
| <p><u>Principle (a):</u> "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p><u>Assessment:</u></p> <p>The proposed clearing may result in lowered biodiversity due to the spread and introduction of weeds and dieback and loss of habitat for potentially occurring priority flora and conservation significant fauna.</p>   | May be at variance           | Yes<br><i>Refer to Section 3.2.1 and Section 3.2.2, above.</i> |
| <p><u>Principle (b):</u> "Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared does not contain critical habitat for conservation significant fauna.</p>  | Not likely to be at variance | Yes<br><i>Refer to Section 3.2.1, above.</i>                   |
| <p><u>Principle (c):</u> "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."</p> <p><u>Assessment:</u></p> <p>There is one flora species listed under the BC Act (<i>Eleocharis keigheryi</i>) known to occur within the local area (20 kilometre radius of the application area) (GIS Database). As suitable habitat for this species does not occur within the application area, the area proposed to be cleared is unlikely to contain flora species listed under the BC Act (Western Australian Herbarium, 1998-; Woodgis, 2025; GIS Database).</p> | Not likely to be at variance | No   |
| <p><u>Principle (d):</u> "Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is not likely to represent a threatened ecological community (TEC) (Appendix C.5).</p>   | Not likely to be at variance | No   |
| <b>Environmental value: significant remnant vegetation and conservation areas</b>   |                              |  |
| <p><u>Principle (e):</u> "Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."</p> <p><u>Assessment:</u></p>   | Not at variance              | No   |

| Assessment against the clearing principles  | Variance level               | Is further consideration required? |
|---|------------------------------|------------------------------------|
| <p>The extent of the native vegetation in the region is consistent with the national objectives and targets for biodiversity conservation in Australia (Commonwealth of Australia, 2001; Appendix C.2).</p>   |                              |                                    |
| <p><b>Principle (h):</b> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.”</i></p> <p><u>Assessment:</u></p> <p>Given native vegetation is continuous surrounding the nearest conservation area (the Nilgen Nature Reserve), and the Lancelin and Edwards Islands Nature Reserve is located offshore, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas (GIS Database).</p>  | Not likely to be at variance | No                                 |
| <b>Environmental value: land and water resources</b>  |                              |                                    |
| <p><b>Principle (f):</b> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u></p> <p>Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact vegetation in association with a watercourse or wetland (GIS Database).</p>   | Not likely to be at variance | No                                 |
| <p><b>Principle (g):</b> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u></p> <p>The mapped soils are susceptible to wind erosion when native vegetation cover is removed (DPIRD, 2025a; 2025b). Noting the extent of the application area, and the plans for rehabilitation, the proposed clearing is unlikely to have an appreciable impact on land degradation (DPIRD, 2025a). However, the likelihood of erosion can be reduced by implementing a staged clearing condition on the permit.</p> <p><u>Condition:</u></p> <p>To address the above impact, the following management measure will be required as a condition on the clearing permit:</p> <ul style="list-style-type: none"> <li>a staged clearing condition to minimise erosion.</li> </ul>  | Not likely to be at variance | No                                 |
| <p><b>Principle (i):</b> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.”</i></p> <p><u>Assessment:</u></p> <p>The application area is located within the Lancelin Water Reserve, a Public Drinking Water Source Area (PDWSA), classified as Priority 1 under the CAWS Act (DWER, 2025a; GIS Database).</p> <p>The proposed clearing is unlikely to have any major impacts to water within this reserve provided approved clearing limits are not exceeded and all clearing activities are conducted in accordance with DWER guidelines (relevant guidelines listed below) (DWER, 2025a):</p> <ul style="list-style-type: none"> <li>WQPN 10 – Contaminant spills – emergency response plan (DWER, 2020);</li> <li>WQPN 15 – Basic raw materials extraction (DWER, 2019);</li> <li>WQPN 25 – Land use compatibility tables for public drinking water source areas (DWER, 2021);</li> <li>WQPN 56 – Tanks for fuel and chemical storage near sensitive water resources (DWER, 2018);</li> <li>WQPN 65 – Toxic and hazardous substances (Department of Water, 2015);</li> <li>WQPN 84 – Rehabilitation of disturbed land in public drinking water source areas (Department of Water, 2009);</li> <li>Water Quality Protection Guidelines for Mining and Mineral Processing (No. 1-11) (WRC, 2000a; 2000b; 2000c; 2000d; 2000e; 2000f; 2000g; 2000h; 2000i; 2000j; 2000k).</li> </ul> <p>As there are no watercourses or waterbodies within the application area, the proposed clearing is not likely to significantly alter surface or groundwater quality (GIS Database).</p> | Not likely to be at variance | No                                 |

| Assessment against the clearing principles   | Variance level               | Is further consideration required? |
|--|------------------------------|------------------------------------|
| <p><u>Principle (j):</u> “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</p> <p><u>Assessment:</u></p> <p>The clearing of up to 16 hectares within a boundary of 193 hectares is not likely to lead to an appreciable increase in run off, and subsequently cause or exacerbate the incidence or intensity of flooding.</p> | Not likely to be at variance | No                                 |

### Appendix E. Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation’s ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

#### Measuring vegetation condition for the South West and Interzone Botanical Province (Keighery, 1994)

| Condition           | Description  |
|---------------------|--|
| Pristine            | Pristine or nearly so, no obvious signs of disturbance.  |
| Excellent           | Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.  |
| Very good           | Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.   |
| Good                | Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing. |
| Degraded            | Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.                 |
| Completely degraded | The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as ‘parkland cleared’ with the flora comprising weed or crop species with isolated native trees or shrubs.   |

### Appendix F. Photographs of the application area

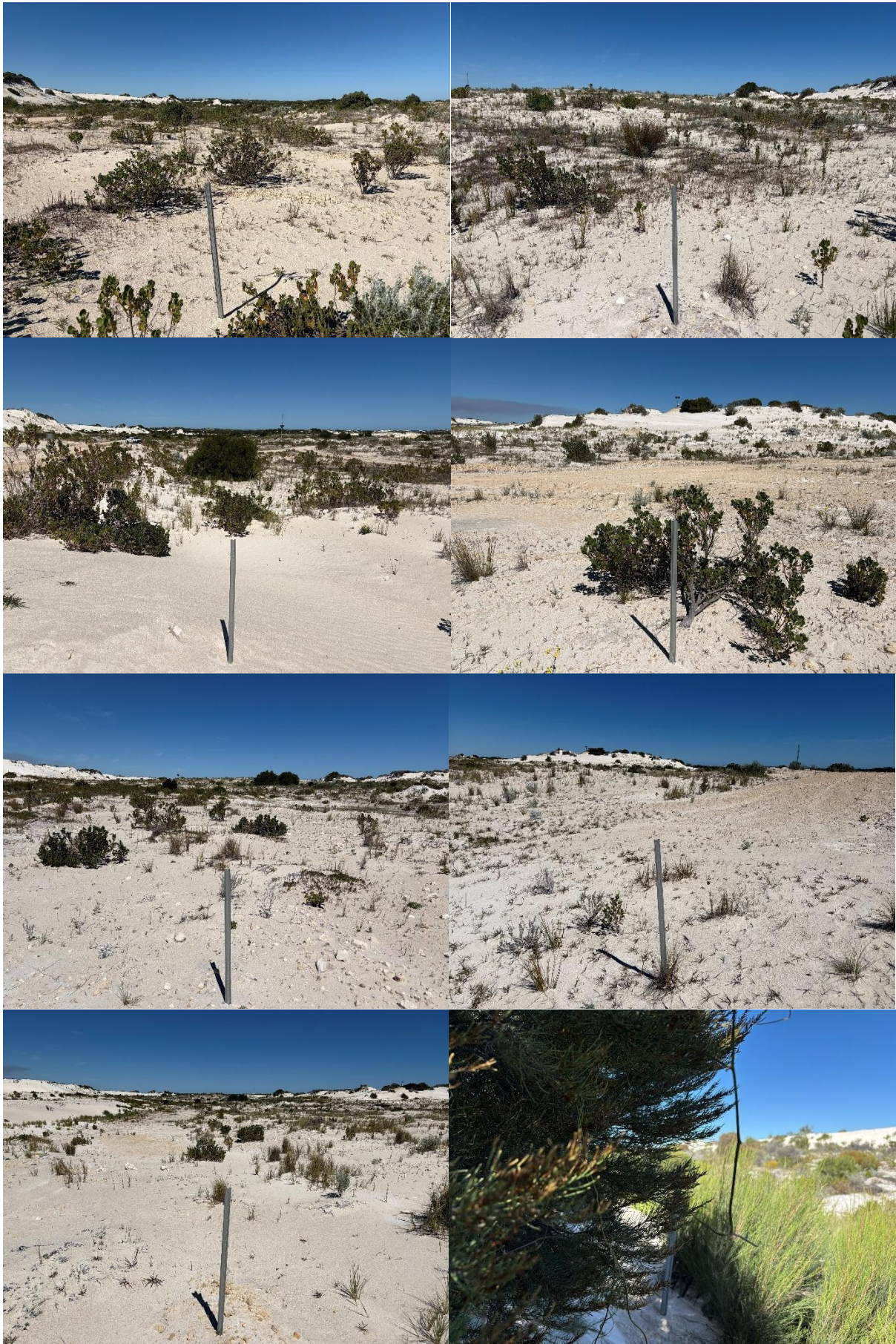
The following photographs were taken at sites within the application, during the survey by Woodgis (2025).











## Appendix G. Sources of information

### G.1. GIS datasets

Publicly available GIS datasets used (sourced from [www.data.wa.gov.au](http://www.data.wa.gov.au)):

- 10 metre contours (DPIRD-073)

- 2 metre contours (DPIRD-072)
- Cadastre (Polygon) (LGATE-217)
- Clearing Regulations - Environmentally Sensitive Areas (DWER-046)
- Clearing Regulations - Schedule One Areas (DWER-057)
- DBCA - Lands of Interest (DBCA-012)
- DBCA - Legislated Lands and Waters (DBCA-011)
- DBCA Fire History (DBCA-060)
- EPA Referred Schemes Pending (DWER-121)
- EPA Referred Significant Proposals (DWER-120)
- EPA Referred Significant Proposals Pending (DWER-103)
- Geographic Names (GEONOMA) (LGATE-013)
- Groundwater Salinity Statewide (DWER-026)
- IBRA Vegetation Statistics
- IBSA Survey Details (DWER-118)
- Local Government Area (LGA) Boundaries (LGATE-233)
- Localities (LGATE-234)
- Medium Scale Topo Contour (Line) (LGATE-015)
- Native Vegetation Extent (DPIRD-005)
- Pre-European Vegetation (DPIRD-006)
- Public Drinking Water Source Areas (DWER-033)
- Regional Parks (DBCA-026)
- Reserves (LGATE-227)
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Rivers (DWER-036)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping - Best Available (DPIRD-027)
- Swan Coastal Plain and Perth-Peel Native Vegetation Extent 2024 (DWER-141)
- Townsites (LGATE-248)
- Tuart Woodlands (DBCA-048)
- Vegetation Complexes - Swan Coastal Plain (DBCA-046)
- WA Now Aerial Imagery

Restricted GIS Databases used:

- Black Cockatoo Roosting Sites
- Forest Red Tailed Black Cockatoo Breeding Sites
- White-Tailed Black Cockatoo Breeding Sites
- Black Cockatoo BC Feeding SCP
- Black Cockatoo Feeding JF
- Black Cockatoo Feeding Areas Buffered
- Black Cockatoo Baudin's Distribution
- Black Cockatoo Forest Red Tail Distribution
- Black Cockatoo Carnaby's Distribution
- Threatened and Priority Flora (TPFL)
- Threatened and Priority Flora (WAHerb)
- Threatened and Priority Fauna
- Threatened and Priority Ecological Communities
- Threatened and Priority Ecological Communities (Buffers)

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## 4. Glossary

### Acronyms:

|               |  |
|---------------|--|
| <b>BC Act</b> | <i>Biodiversity Conservation Act 2016</i> , Western Australia                          |
| <b>BoM</b>    | Bureau of Meteorology, Australian Government   |
| <b>DAA</b>    | Department of Aboriginal Affairs, Western Australia (now DPLH)                         |
| <b>DAFWA</b>  | Department of Agriculture and Food, Western Australia (now DPIRD)                      |
| <b>DCCEEW</b> | Department of Climate Change, Energy, the Environment and Water, Australian Government |
| <b>DBCA</b>   | Department of Biodiversity, Conservation and Attractions, Western Australia            |
| <b>DEMIRS</b> | Department of Energy, Mines, Industry Regulation and Safety (now DMPE)                 |
| <b>DER</b>    | Department of Environment Regulation, Western Australia (now DWER)                     |
| <b>DMIRS</b>  | Department of Mines, Industry Regulation and Safety, Western Australia (now DMPE)      |
| <b>DMP</b>    | Department of Mines and Petroleum, Western Australia (now DMPE)                        |
| <b>DMPE</b>   | Department of Mines, Petroleum and Exploration   |
| <b>DoEE</b>   | Department of the Environment and Energy (now DCCEEW)                                  |
| <b>DoW</b>    | Department of Water, Western Australia (now DWER)                                      |
| <b>DPaW</b>   | Department of Parks and Wildlife, Western Australia (now DBCA)                         |
| <b>DPIRD</b>  | Department of Primary Industries and Regional Development, Western Australia           |
| <b>DPLH</b>   | Department of Planning, Lands and Heritage, Western Australia                          |
| <b>DRF</b>    | Declared Rare Flora (now known as Threatened Flora)                                    |
| <b>DWER</b>   | Department of Water and Environmental Regulation, Western Australia                    |
| <b>EP Act</b> | <i>Environmental Protection Act 1986</i> , Western Australia                           |

|                 |   |
|-----------------|---|
| <b>EPA</b>      | Environmental Protection Authority, Western Australia   |
| <b>EPBC Act</b> | <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Commonwealth Act)                                   |
| <b>GIS</b>      | Geographical Information System   |
| <b>ha</b>       | Hectare (10,000 square metres)  |
| <b>IBRA</b>     | Interim Biogeographic Regionalisation for Australia   |
| <b>IUCN</b>     | International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union |
| <b>PEC</b>      | Priority Ecological Community, Western Australia  |
| <b>RIWI Act</b> | <i>Rights in Water and Irrigation Act 1914</i> , Western Australia  |
| <b>TEC</b>      | Threatened Ecological Community   |

## **Definitions:**

**DBCAs (2023) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia:**

### **Threatened species**

**T** Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the Biodiversity Conservation Act 2016 (BC Act).

**Threatened fauna** is the species of fauna that are listed as critically endangered, endangered or vulnerable threatened species.

**Threatened flora** is the species of flora that are listed as critically endangered, endangered or vulnerable threatened species.

The assessment of the conservation status of threatened species is in accordance with the BC Act listing criteria and the requirements of [Ministerial Guideline Number 1](#) and [Ministerial Guideline Number 2](#) that adopts the use of the International Union for Conservation of Nature (IUCN) [Red List of Threatened Species Categories and Criteria](#), and is based on the national distribution of the species.

### **CR Critically endangered species**

Threatened species considered to be “*facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines.

### **EN Endangered species**

Threatened species considered to be “*facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines.

### **VU Vulnerable species**

Threatened species considered to be “*facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines*”.

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines.

### **Extinct species**

Listed by order of the Minister as extinct under section 23(1) of the BC Act as extinct or extinct in the wild.

### **EX Extinct species**

Species where “*there is no reasonable doubt that the last member of the species has died*”, and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

### **EW Extinct in the wild species**

Species that “*is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form*”, and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild.

### **Specially protected species**

**SP Specially protected species**

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered, or vulnerable) or extinct species under the BC Act cannot also be listed as specially protected species.

**MI Migratory species**

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Migratory species include birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) or The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

**CD Species of special conservation interest (conservation dependent fauna)**

Species of special conservation need that are dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

Currently only fauna are listed as species of special conservation interest.

**OS Other specially protected species**

Species otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Currently only fauna are listed as species otherwise in need of special protection.

**Priority species**

**P Priority species**

Priority is not a listing category under the BC Act. The Priority Flora and Fauna lists are maintained by the department and are published on the department's website.

All fauna and flora are protected in WA following the provisions in Part 10 of the BC Act. The protection applies even when a species is not listed as threatened or specially protected, and regardless of land tenure (State managed land (Crown land), private land, or Commonwealth land).

Species that may possibly be threatened species that do not meet the criteria for listing under the BC Act because of insufficient survey or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of prioritisation for survey and evaluation of conservation status so that consideration can be given to potential listing as threatened.

Species that are adequately known, meet criteria for near threatened, or are rare but not threatened, or that have been recently removed from the threatened species list or conservation dependent or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

Assessment of priority status is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

**P1 Priority One - Poorly-known species – known from few locations, none on conservation lands**

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, for example, agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation.

Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under immediate threat from known threatening processes. These species are in urgent need of further survey.

**P2 Priority Two - Poorly-known species – known from few locations, some on conservation lands**

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, for example, national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation.

Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under threat from known threatening processes. These species are in urgent need of further survey.

**P3 Priority Three - Poorly-known species – known from several locations**

Species that are known from several locations and the species does not appear to be under imminent threat or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat.

Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. These species need further survey.

**P4 Priority Four - Rare, Near Threatened and other species in need of monitoring**

- (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.
- (b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as a conservation dependent specially protected species.
- (c) Species that have been removed from the list of threatened species or lists of conservation dependent or other specially protected species, during the past five years for reasons other than taxonomy.
- (d) Other species in need of monitoring.

**Principles for clearing native vegetation:**

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.
- (d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.
- (e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.
- (h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.
- (i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.
- (j) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.