GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 10262/1
Permit Holder:	Co-operative Bulk Handling Limited (CBH)
Duration of Permit:	From 15 October 2025 to 15 October 2047

ADVICE NOTE

In relation to condition 10 and 11 of this permit, 23.28 hectares of Lot 291 on Deposited Plan 418426, Miling, will be attributed to the offset for this permit. The nominated 23.28-hectare area contains vegetation that provides foraging habitat for Carnaby's cockatoo (*Zanda latirostris)*, is representative of the highly cleared Beard Vegetation Association (BVA) Victoria Plain_142 and is a significant remnant within an extensively cleared landscape, in addition to other environmental values.

The permit holder is authorised to clear *native vegetation* subject to the following conditions of this permit.

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of expanding the Miling grain receival handling facilities.

2. Land on which clearing is to be done

Lot 6 on Deposited Plan 418426, Miling;
Lot 7 on Deposited Plan 418426, Miling;
Lot 4089 on Deposited Plan 187070 (Reserve 26009), Miling;
Lot 3954 on Deposited Plan 175371 (Reserve 26009), Miling;
Miling West Road (PIN 11290851), Miling;
Miling West Road (PIN 11676150), Miling;
Lot 329 on Deposited Plan 409265 (PIN 12263753), Miling;
Unnamed road reserve (PIN 11290844), Miling; and
Unnamed road reserve (PIN 1263341), Miling.

3. Clearing authorised

The permit holder must not clear more than 18.4 hectares of *native vegetation* within the combined areas cross-hatched yellow in Figure 1 of Schedule 1.

4. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 15 October 2030.

PART II – MANAGEMENT CONDITIONS

5. Avoid, minimise, and reduce impacts and extent of clearing

In determining the *native vegetation* authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending order of preference:

(a) avoid the clearing of *native vegetation*;

(b) minimise the amount of *native vegetation* to be cleared; and

(c) reduce the impact of clearing on any environmental value.

6. Weed and dieback management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds* and *dieback*:

(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;

(b) ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill*, or other material is brought into the area to be cleared; and

(c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

7. Directional clearing

The permit holder must:

(a) conduct clearing activities in a slow, progressive manner towards adjacent remnant *native vegetation*; and

(b) allow reasonable time for fauna present within the area being cleared to move into adjacent *native vegetation* ahead of the clearing activity.

8. Land degradation risk management

The permit holder must commence activities related to the purpose of the clearing, no later than three (3) months after undertaking the authorised clearing activities to reduce the land degradation risks.

9. Revegetation

Within 12 months of the completion of clearing and no later than 15 October 2031, at an *optimal time*, the permit holder must implement and adhere to the *Revegetation Management Plan*, including but not limited to the following actions:

(a) commence *revegetating* the area cross-hatched red on Figure 2 of Schedule 1, by way of:

(i) deliberately *planting native vegetation* that will result in species composition, structure and density that align with the completion criteria detailed in Table 1 of Schedule 2; and

(ii) ensuring only *local provenance* seeds and propagating material are used, where possible, to *revegetate* the area.

(b) implement hygiene protocols by cleaning earth-moving machinery of soil and vegetation prior to entering and leaving the site;

(c) undertake *weed* control activities annually for at least three years after the commencement of the *revegetation*;

(d) establish no less than four 10 x 10 metre quadrat monitoring sites within the *revegetated* area;

(e) engage an *environmental specialist* to undertake annual monitoring within the quadrats specified in condition 9(d) until the completion criteria detailed in Table 1 of Schedule 2 are met; and

(f) undertake *remedial actions* where monitoring undertaken in accordance with condition 9(e) indicated that *revegetation* has not met the completion criteria detailed in Table 1 of Schedule 2, including:

(i) repeating the *revegetation* actions required under conditions 9(a)-(c);

(ii) annual monitoring of the *revegetated* areas by an *environmental specialist*, until the completion criteria detailed in Table 1 of Schedule 2 are met; and

(iii) where an *environmental specialist* has determined that the completion criteria detailed in Table 1 of Schedule 2 have been met, that determination must be submitted to the *CEO* within three months of the determination being made by the *environmental specialist*.

10. Offset - Vegetation management

(a) Within 12 months of the commencement of clearing authorised under this permit and no later than 15 October 2027, the permit holder must construct a fence to restrict stock, along the perimeters of the area cross hatched red in Figure 3 of Schedule 1.

(b) Within one (1) month of installing the fence, the permit holder must notify the *CEO* in writing that the fencing has been completed.

(c) The permit holder must undertake feral animal control activities, as required, within the area cross hatched red in Figure 4 of Schedule 1, for the duration of this permit.

(d) The permit holder must engage an *environmental specialist* to undertake monitoring of the species composition, structure and density of the vegetation, at least once every two years, within the area cross-hatched red in Figure 4 of Schedule 1, until the completion criteria detailed in Table 2 of Schedule 2 are met.

(e) The permit holder must undertake *remedial actions* where monitoring undertaken in accordance with condition 10(d) indicates that completion criteria detailed in Table 2 of Schedule 2, will not be achieved by 15 October 2047, including:

(i) *revegetate/rehabilitate* the area by deliberately *planting* and/or direct seeding *native vegetation* that will result in the minimum completion criteria, detailed in Table 2 of the Schedule 2, being met by 15 October 2047 and ensuring, where possible, only *local provenance* seeds and propagating material are used; and

(ii) undertake weed control activities, as required.

(f) Where a determination is made by an *environmental specialist* under condition 10(d) that the composition, structure and density within the area cross hatched red in Figure 4 of Schedule 1, have achieved the completion criteria specified in Table 2 of Schedule 2, that determination shall be submitted to the *CEO* within three months of the determination being made by the *environmental specialist*.

11. Offset - Native vegetation conservation (conservation covenant)

Within 24 months of the commencement of clearing authorized under this permit and no later than 15 October 2027, the permit holder must provide a conservation covenant under section 30B of the *Soil and Land Conservation Act 1945* for the area cross hatched red in Figure 4 of Schedule 1 in accordance with the following conditions:

(a) *Native vegetation* in the area subject to the conservation covenant must not be cleared, other than for clearing required under the *Bush Fires Act 1954*;

(b) The land subject to the conservation covenant shall not be used for the purpose of cultivation of crops or pasture, or for the grazing of any stock;

(c) The conservation covenant is to apply in perpetuity and be registered on the title of the property; and

(d) Within one (1) month of executing and returning the conservation covenant to the Commissioner of Soil and Land Conservation, the permit holder must notify the *CEO* in writing that the conservation covenant has been completed.

12. Watercourse surface flow management

The permit holder must maintain the existing surface water flows where a watercourse is to be impacted by clearing authorised under this permit.

PART III - RECORD KEEPING AND REPORTING

13. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 5; (f) actions taken to minimise the risk of the

No.	Relevant matter	Specifications
		introduction and spread of *weeds* and *dieback* in accordance with condition 6; (g) the direction(s) *clearing* was undertaken in accordance with condition 7; (h) the date that the activities related to the purpose of the clearing commenced in accordance with condition 8; and (i) actions undertaken in accordance with condition 12.
2.	In relation to mitigation *revegetation* pursuant to condition 9.	(a) a description of the *revegetation* activities undertaken; (b) the size of the areas *revegetated* in hectares); (c) the date that *revegetation* works began; (d) any remediation works undertaken; (e) *a copy of environmental specialist* monitoring reports; and (f) the date that completion criteria are considered to be met.
3.	In relation to vegetation management pursuant to condition 10.	(a) the size (in hectares), map and representative photographs of the area being fenced; (b) the dates that fencing works began and completed; (c) any remediation works undertaken*;* (d) a copy of *environmental specialist* monitoring reports; and (e) the date that completion criteria are considered to be met.
4.	In relation to offset pursuant to condition 11.	(a) a copy of the relevant conservation covenant under section 30B of the *Soil and Land Conservation Act 1945*

14. Reporting

(a) The permit holder must provide to the *CEO*, on or before 30 June of each calendar year, a written report containing:

(i) the records required to be kept under condition 13; and

(ii) records of activities done by the permit holder under this permit between 1 January and 31 December of the preceding calendar year.

(b) If no clearing authorised under this permit has been undertaken, a written report confirming that no clearing under this permit has been undertaken, must be provided to the *CEO* on or before 30 June of each calendar year.

(c) The permit holder must provide to the *CEO*, no later than 90 calendar days prior to the expiry date of the permit, a written report of records required under condition 13, where these records have not already been provided under condition 14(a).

DEFINITIONS

In this permit, the terms in Table 2 have the meanings defined.

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.
clearing	has the meaning given under section 3(1) of the EP Act.
dieback	means the effect of *Phytophthora* species on native vegetation.
direct seeding	means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	*Environmental Protection Act 1986* (WA)
environmental specialist	means a person who holds a tertiary qualification specialising in environmental science or equivalent, and has a minimum of 2 years work experience relevant to the type of environmental advice that an environmental specialist is required to provide under this permit, or who is approved by the *CEO* as a suitable environmental specialist.
fill	means material used to increase the ground level, or to fill a depression.
local provenance	means native vegetation seeds and propagating material from natural sources within 100 kilometres and the same IBRA subregion of the area cleared.
mulch	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
optimal time	means the optimal time for undertaking direct seeding and planting for that region.
plant/ed/ing	means the re-establishment of vegetation by creating soil conditions and planting seedlings of the desired species.
remedial action/s	means, for the purpose of this permit, any activity that is required to ensure successful re-establishment of understorey to the composition, structure and density identified in the completion criteria shown in Tables 1 and 2 of Schedule 2, and may include a combination of soil treatments and revegetation.
revegetate/ed/ing/ion	means the re-establishment of a cover of local provenance native vegetation in an area using methods such as natural regeneration, direct seeding and/or planting, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.

Term	Definition
Revegetation Management Plan	means the revegetation plan developed by the permit holder in accordance with condition 9 of this permit '*Miling Revegetation Management Plan – CBH Group. July 2025*' prepared by the Co-operative Bulk Handling Limited (CBH)
weeds	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

J Burton

Jessica Burton
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

22 September 2025

Schedule 1

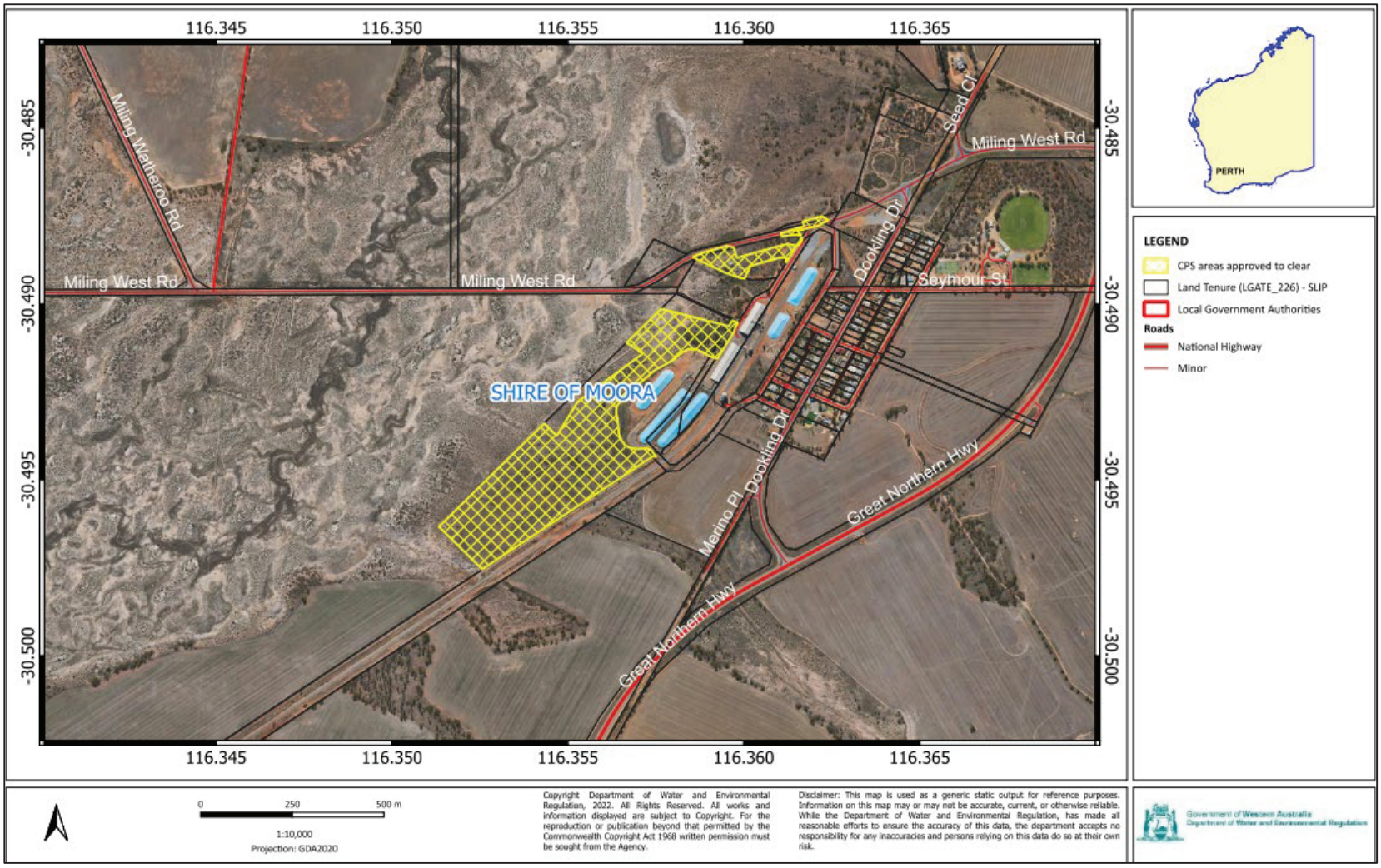

Figure 1: Map of the boundary of the areas within which clearing may occur

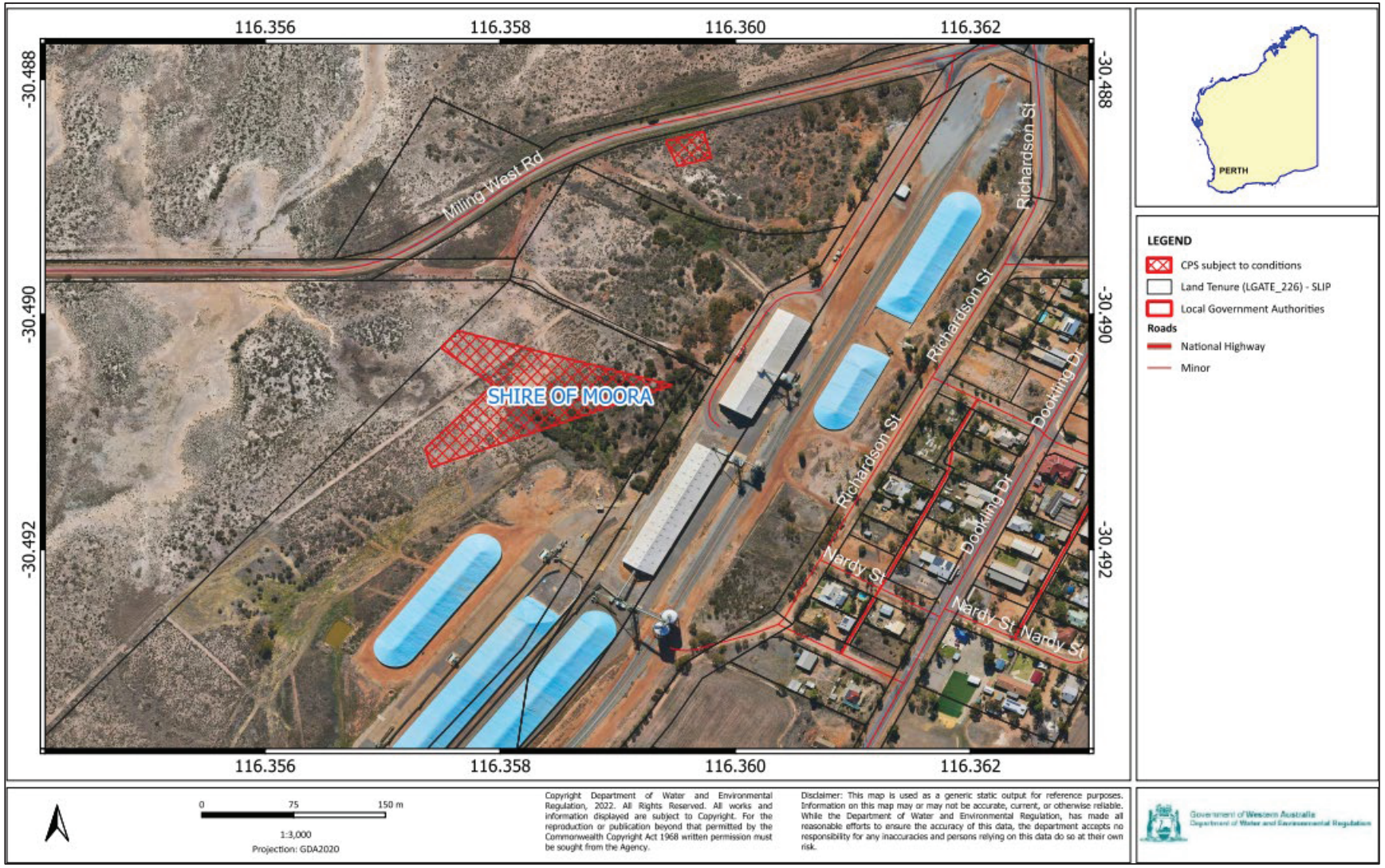

Figure 2: Map of the boundary of the areas subject to revegetation under condition 9

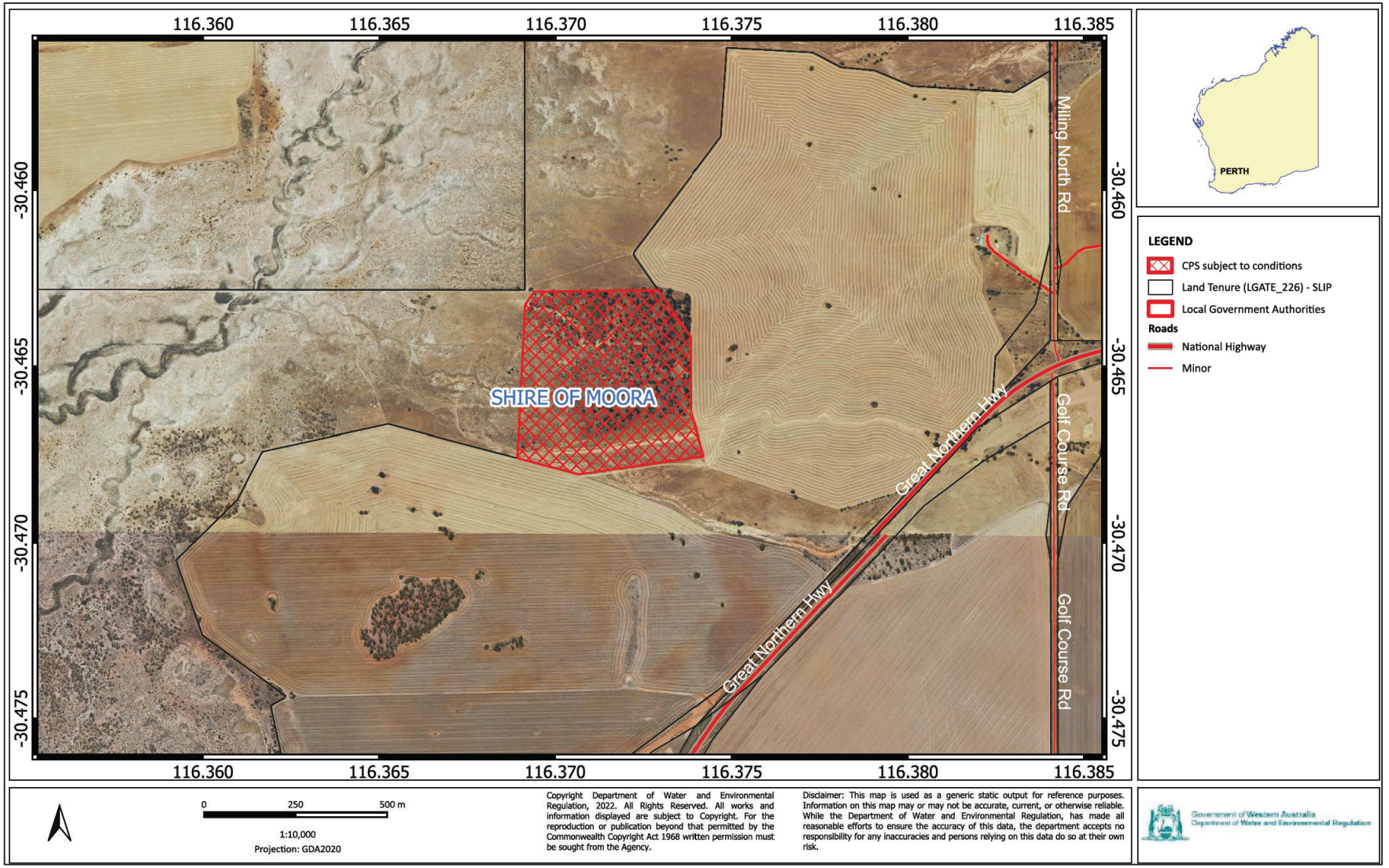

Figure 3: Map of the boundary of the area subject to fence installation under condition 10(a)

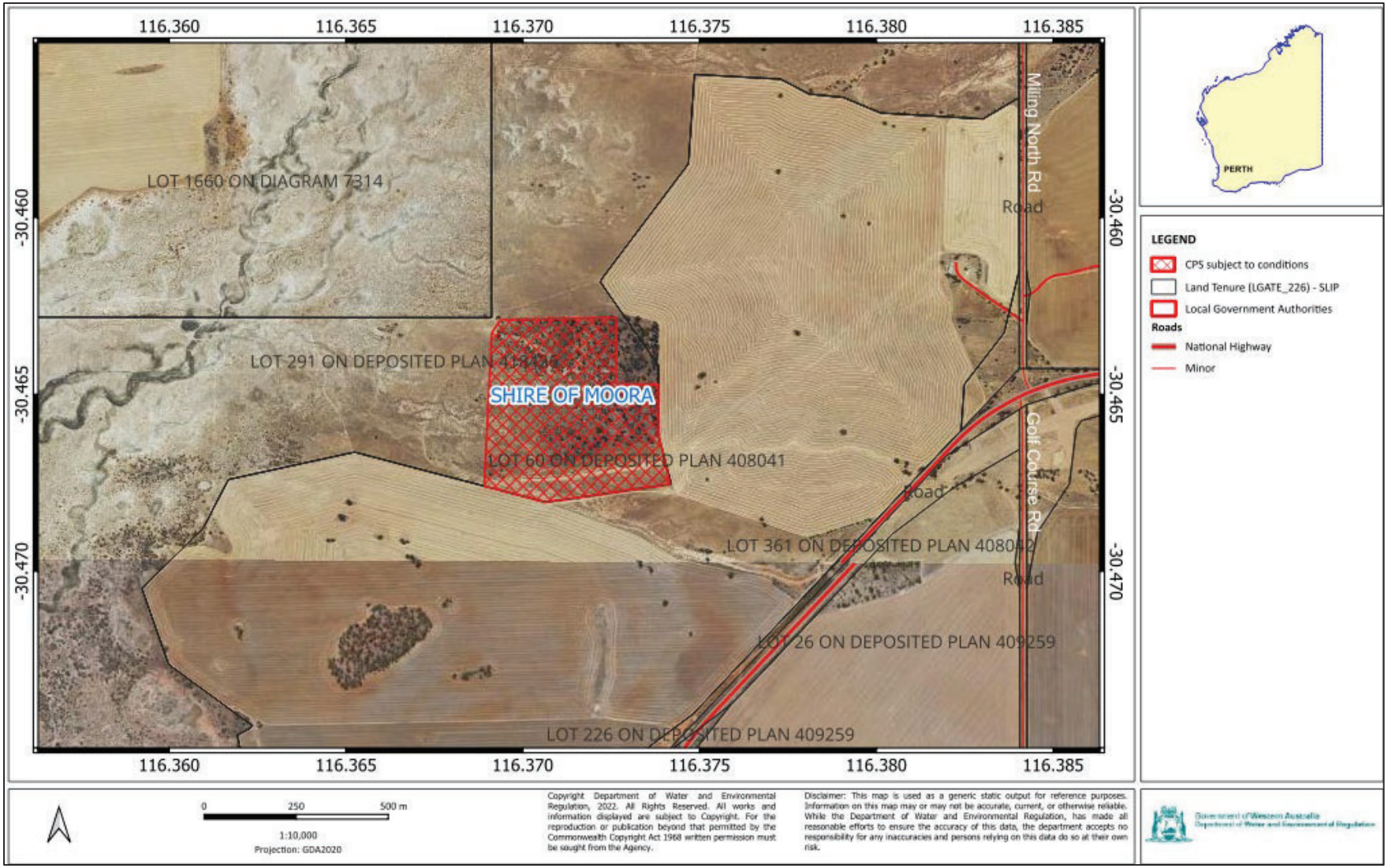

Figure 4: Map of the boundary of the area subject to condition 10 and 11

Schedule 2

The completion criteria in accordance with conditions 9 and 10 are shown in the tables below (Table 1 and Table 2).

Table 1. The *revegetation* completion criteria in accordance with condition 9 of this permit.

Criterion	Completion Target	Completion Criteria
1 – Vegetation structure and plant density	Achieve a similarity in the density of native plants to the reference quadrat across upper and mid storey.	Average plant densities (stems/m^2) for dominant trees, shrubs, and understorey species, are at least 60% of average native plant densities recorded from the referenced quadrats*.
2 – Species richness/diversity		At least 60% of the species listed in Table 2 of the *Revegetation Management Plan.*
3 – High impact weeds	No high impact weeds No Weeds of National Significance.	No weeds present that are listed as Priority Alert, High Impact or Rapid invasiveness on the current DBCA Wheatbelt Region Impact and Invasiveness Ratings list.
4 – Weed density/cover	Weed cover is no greater than the baseline at the reference quadrats.	Weed cover shall be no greater than the baseline data recorded within referenced quadrats.
5 – Bare ground	No more than 5 percent greater than the baseline at the reference quadrats.	No more than 70% bare ground within the revegetated area.

*Note: Referenced quadrats must be within the application area or adjacent area with vegetation in Very Good (Keighery, 1994) condition or better.

Table 2. The completion criteria for the vegetation within the area cross hatched red in Figure 4 of Schedule 1, in accordance with condition 10 of this permit.

Criterion	Area applied	Completion Criteria
1 – Foliage coverage of black cockatoo foraging species	Eucalyptus low woodlands as identified as vegetation type HP Em Ell Ma and HP Ell RwMbEt in the survey of offset site**	The foliage cover of Eucalypt woodlands achieves at least 30-40%
2 – Vegetation condition	Area of vegetation mapped in Good (Keighery, 1994) condition in the survey of offset site.	Vegetation quality achieves Good to Very Good (Keighery, 1994) condition.
	Area of vegetation mapped in Degraded (Keighery, 1994) condition in the survey of offset site.	Vegetation quality achieves Good (Keighery, 1994) condition.

** Reconnaissance Flora and Vegetation Survey - CBH Group Potential Offset Site, Miling. Prepared for Co-Operative Bulk Handling Ltd by Onshore Environmental (July 2025). IBSA Number: IBSA-2025-044

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10262/1
Permit type:	Purpose permit
Applicant name:	Co-operative Bulk Handling Limited (CBH)
Application received:	5 July 2023
Application area:	18.4 hectares of native vegetation within 19.1 hectare clearing footprint
Purpose of clearing:	Expanding CBH's Miling grain receival handling facilities
Method of clearing:	Mechanical
Property:	Lot 6 on Deposited Plan 418426 Lot 7 on Deposited Plan 418426 Lot 4089 on Deposited Plan 187070 (Reserve 26009) Lot 3954 on Deposited Plan 175371 (Reserve 26009) Miling West Road (PIN 11290851) Miling West Road (PIN 11676150) Lot 329 on Deposited Plan 409265 (PIN 12263753) Unnamed/unmade road (PIN 11290844) Unnamed/unmade road (PIN 1263341)
Location (LGA area/s):	Shire of Moora
Localities (suburb/s):	Miling

1.2. Description of clearing activities

The vegetation proposed to be cleared is distributed across three separate areas in a proximity range (see Figure 1, Section 1.5). The application is to clear native vegetation to expand the existing Miling grain receival site located west of the Miling townsite. The expansion includes the following (ELA, 2023):

- Up to four new open bulkheads to the southwest of the existing facilities, catering for approximately 200,000 tonnes of grain;
- A sample hut;
- Additional roads, weighbridges, drainage basins; and
- Other supporting facilities.

The applicant informed that the Miling site has been identified in the CBH Network Strategy as a primary (important) site of the future, and for expansion within the CBH Operations Network Plan. This proposal is required to cater for the growing quantities of grain receivals around the Miling region and surrounding catchments (ELA, 2023).

CBH also advised that under its Operations Network Plan, CBH seeks to build or expand sites in proximity to regional towns and communities built around the original grain receival site, which contributes to the longevity of rural communities by employing local and regional residents and attracting customers of local businesses and reduces the need for employees to travel significant distances following long shifts.

1.3. Decision on application

Decision:	Granted
Decision date:	22 September 2025
Decision area:	18.4 hectares of native vegetation, as depicted in Section 1.5, below.

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 Water and Environmental Regulation (DWER) advertised the application for 21 days and one submission was received. Consideration of matters raised in the public submission is summarised in Appendix B.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix C), relevant datasets (see Appendix H.1), the findings of flora and fauna surveys (see Appendix G), the clearing principles set out in Schedule 5 of the EP Act (see Appendix D), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration the necessity to expand the existing grain receival site to cater the growth of grains harvested within the region.

The assessment identified that the proposed clearing will result in:

- the loss of approximately 3.5 hectares of native vegetation that provides suitable foraging habitat for Carnaby's cockatoo;
- the loss of approximately 10.6 hectares of native vegetation that is representative of significant remnant vegetation in an extensively cleared landscape, including 1.4 hectares of the highly cleared Beard Vegetation Association (BVA) Victoria Plains_142;
- the potential impacts to fauna utilising the application area during the time of clearing;
- the potential introduction and spread of weeds and dieback into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values; and
- short term impacts to the water flows of the watercourse within the application area.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined that the potential impacts to fauna individuals during the time of clearing, the potential to facilitate the introduction of weeds and dieback, and the short term impacts to the watercourse can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values through permit conditioning. However, impacts on foraging habitat for Carnaby's cockatoos and significant remnant vegetation remained significant even after the application of minimisation and mitigation measures and constituted a significant residual impact.

In accordance with the Government of Western Australia's *Environmental Offsets Policy* (2011) and *Environmental Offsets Guidelines* (2014), the Delegated Officer determined that the following land acquisition and vegetation management offsets are required to address the above significant residual impacts:

- Conservation of 9.26 hectares of native vegetation within Lot 291 on Deposited Plan 418426, in Good and Degraded (Keighery, 1994) conditions, that provides foraging habitat for Carnaby's cockatoo;
- Conservation of 23.20 hectares native vegetation in Lot 291 on Deposited Plan 418426, in Good and Degraded (Keighery, 1994) condition that is considered a significant remnant of native vegetation in an extensively cleared landscape; and
- The applicant must undertake on-ground management and maintenance activities for the offset area within Lot 291 on Deposited Plan 418426 to improve the condition of remnant vegetation and Carnaby's cockatoo foraging habitat, including:
  - installing/upgrading fencing to restrict thoroughfare and access by stock;
  - undertaking feral animal control activities, as required; and
  - monitoring the vegetation and undertaking remedial actions (if required) until the relevant completion criteria have been met.

The Delegated Officer determined that the above offset was sufficient to counterbalance the significant residual impacts associated with this project. Further information on the suitability of the offsets provided are summarised in Section 4. 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;

- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- activities for which clearing is authorised to commence within three months of clearing to minimise wind erosion risks;
- maintain the existing surface water flows;
- undertake the revegetation of 1.14 hectares of the area to be cleared; and
- provide offsets, as outlined above, to address significant residual impacts of the proposed clearing.

1.5. Site map

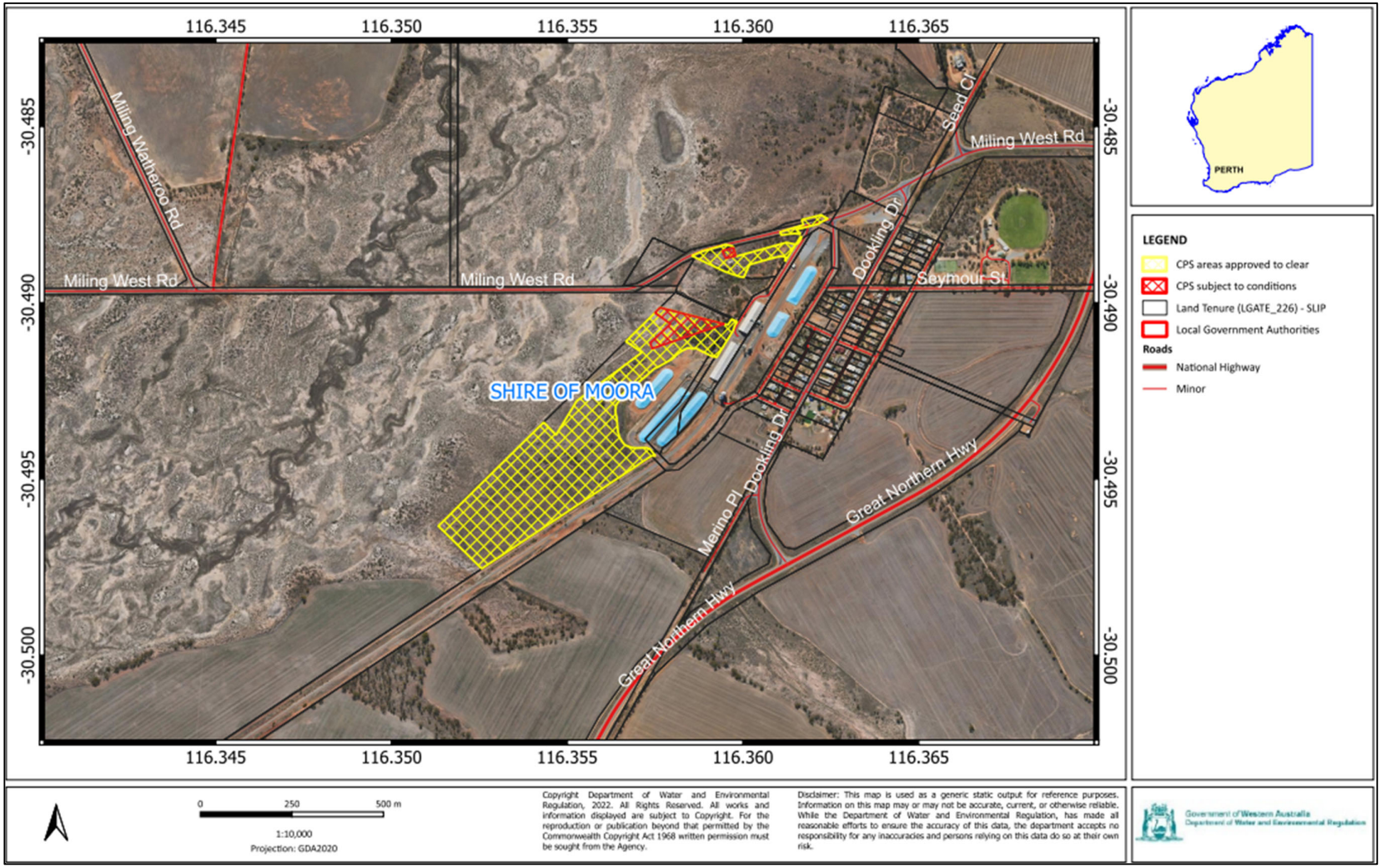

Figure 1 Map of the application area
The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit.
The areas cross-hatched red indicate areas within which specific conditions apply.

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 (see 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 polluter pays principle
- 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)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Rights in Water and Irrigation Act 1994* (RiWI Act)

Relevant policies considered during the assessment include:

- *Environmental Offsets Policy* (2011)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- *Environmental Offsets Guidelines* (August 2014)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Supporting information submitted by the applicant (CBH, 2023; ELA, 2023) showed that the following measures have been taken/committed to be taken to avoid and mitigate clearing and associated impacts:

- A total of 16 options had been considered during the design process during which efforts were made to minimise the impacts on native vegetation. Some options being considered were:
    - Placing the proposed works on cleared agricultural land immediately south of the railway to minimise the impacts on clearing vegetation. However, this option would have introduced additional impacts (primarily noise) on residential properties on Richardson Rd which are located abutting the site and entry roads. The noise impacts may oppose the development approval. In addition, this option is not viable as this land is privately owned. This would also have resulted in operations being separated via a road.
    - Placing the works on the privately owned property north of Milling Road would also require clearing of native vegetation. This option would have resulted in the increase of heavy vehicle movement on both sides of the road and the higher frequency of road crossings back to the main CBH site.
    - The current location has been chosen with the following advantages:
        - Siting within CBH owned land;
        - Site entry and egress locations mitigate impact on local traffic and potential noise impacts on residents;
        - Road safety is ensured with trucks entering and exiting site onto main arterial road in place of minor public road (Richardson Rd);
        - Logistical designs considering onsite traffic, rail access, flow paths in relation to bulkhead storage, access to sample station and weighbridge for all loading and unloading vehicles, reducing occupational health and safety risks to the public, CBH employees and contractors.
- The disturbance footprint was redesigned from 29.4 hectares to 19.1 hectares which resulted in the avoidance of approximately 4.8 ha of native vegetation, including 1.5 hectares of Carnaby's cockatoo foraging habitat.
- Revegetating 1.14 hectares to be disturbed for construction activities that will not be required for ongoing operations. The applicant has provided a revegetation management plan (CBH, 2025a), in which they committed:
    - The revegetation area will be managed to reflect typical VC2 (samphire shrubland on saline flats) vegetation, in Good (Keighery, 1994) condition or better.

    - For disturbed and degraded areas, tree species will be seeded/planted at a rate of 250/ha, with shrubs and other understorey species at 1,000/ha.
- An environmental management plan (EMP) will be developed following the granting of the clearing permit to manage the potential environmental impacts associated with clearing, construction and operational activities prior to clearing. The EMP will be prepared according to both industry and CBH standards to manage potential indirect impacts to prevent degradation of surrounding areas of native vegetation and Carnaby's cockatoo habitat.
- Implementing operational measures to manage impacts associated with weeds and/or disease, wastewater or stormwater run-off, excessive dust and/or contamination from hazardous material with the objective of minimising indirect impacts to areas of surrounding vegetation or habitat, specifically:
    - Water management infrastructure will be installed, and surface and groundwater flows will be managed within the disturbance footprint to avoid pooling of water and to ensure adequate drainage to five designated drainage basins.
    - Drainage design will be finalized as development of the project progresses, to ensure stormwater capacity is sufficient under final constructed conditions.
- Undertaking clearing progressively in the direction of a vegetated boundary to reduce the potential impact of the proposal on fauna, thereby allowing fauna to move away from clearing activities to the surrounding remnant vegetation.

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.

After consideration of avoidance and mitigation measures, it was determined that an offset to counterbalance the significant residual impacts to Carnaby's black cockatoos and significant remnant vegetation was necessary. In accordance with the Government of Western Australia's *Environmental Offsets Policy* and *Environmental Offsets Guidelines*, these significant residual impacts have been addressed through the conditioning of environmental offset requirements on the permit. The nature and suitability of the offset provided are summarised in Section 4.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see 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 (see **Error! Reference source not found.**) identified that the impacts of the proposed clearing present a risk to biological values (biodiversity and fauna), significant remnant vegetation and land degradation. 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 and biodiversity) - Clearing Principles (a) and (b)

Assessment

Four types of fauna habitat have been identified within the area proposed to be cleared, including:

- *Eucalyptus loxophleba* woodland (1.4 hectares);
- Samphire shrubland (7.1 hectares);
- Mixed low shrubland (7.8 hectares); and
- *Hakea* and *Melaleuca* shrubland (2.1 hectares).

According to the available databases, five conservation significant fauna are recorded in the local area (10-kilometre radius of the application area). The application area may provide suitable habitat for the three conservation significant fauna species specified below (See C.3 for fauna analysis table).

Carnaby's cockatoos (Carnaby's BC) (*Zanda latirostris* - Endangered)

Based on the known distribution and habitat preferences, Carnaby's cockatoos is likely to occur within the application area. Two records of this species have been recorded within the local area with the closest distance of approximately 8.65 kilometres from the application area. The application area is mapped within the breeding distribution area of Carnaby's BC, with two breeding sites recorded within the local area. The closest breeding site is recorded approximately 8.6 kilometres from the application area (QGIS database).

There are three key components of Carnaby's BC habitat: foraging habitat; roosting habitat; and breeding habitat. Any tall trees, generally close to a riparian environment, can provide potential roosting habitat for Carnaby's BC (Commonwealth of Australia, 2022). A tree suitable for Carnaby's BC breeding is defined as a tree with a diameter of 50 centimetres or greater at a height of 1.5 metres above the ground (DBH). Carnaby's BC generally forages within

six kilometres of a night roost site and, while nesting, within a 12-kilometre radius of their nest site (Commonwealth of Australia, 2022). Carnaby's BC forages on the seeds, nuts and flowers of a large variety of plants including *Proteaceou*s species (*Banksia*, *Hakea* and *Grevillea*), as well as *Allocasuarina* and *Eucalyptus* species, *Corymbia calophylla* and a range of introduced species (Valentine and Stock, 2008).

Vegetation proposed to be cleared comprises approximately 3.5 hectares foraging habitat, associated with the fauna habitat types of *Eucalyptus loxophleba* woodland and *Hakea* and *Melaleuca* shrubland (ELA, 2023). Two Carnaby's BC suitable foraging species *Hakea preissii* and *Eucalyptus loxophleba* presenting in these two habitat types with low density (less than 20 per cent) (ELA, 2023). No evidence of Carnaby's BC foraging within the application area has been observed during the fauna survey (ELA, 2023).

One planted tree of *Eucalyptus* sp. within the application area can provide potential breeding and rooting habitat (ELA, 2023). There are two other potential breeding and roosting trees (planted) adjacent to the application area which will not be directly impacted by the proposed clearing (ELA, 2023). None of these trees have suitable hollows for breeding (ELA, 2023) and all have been planted an not considered native under the EP Act. Figure 2 shows the map of foraging and potential roosting and breeding habitat for Carnaby's BC within the application area.

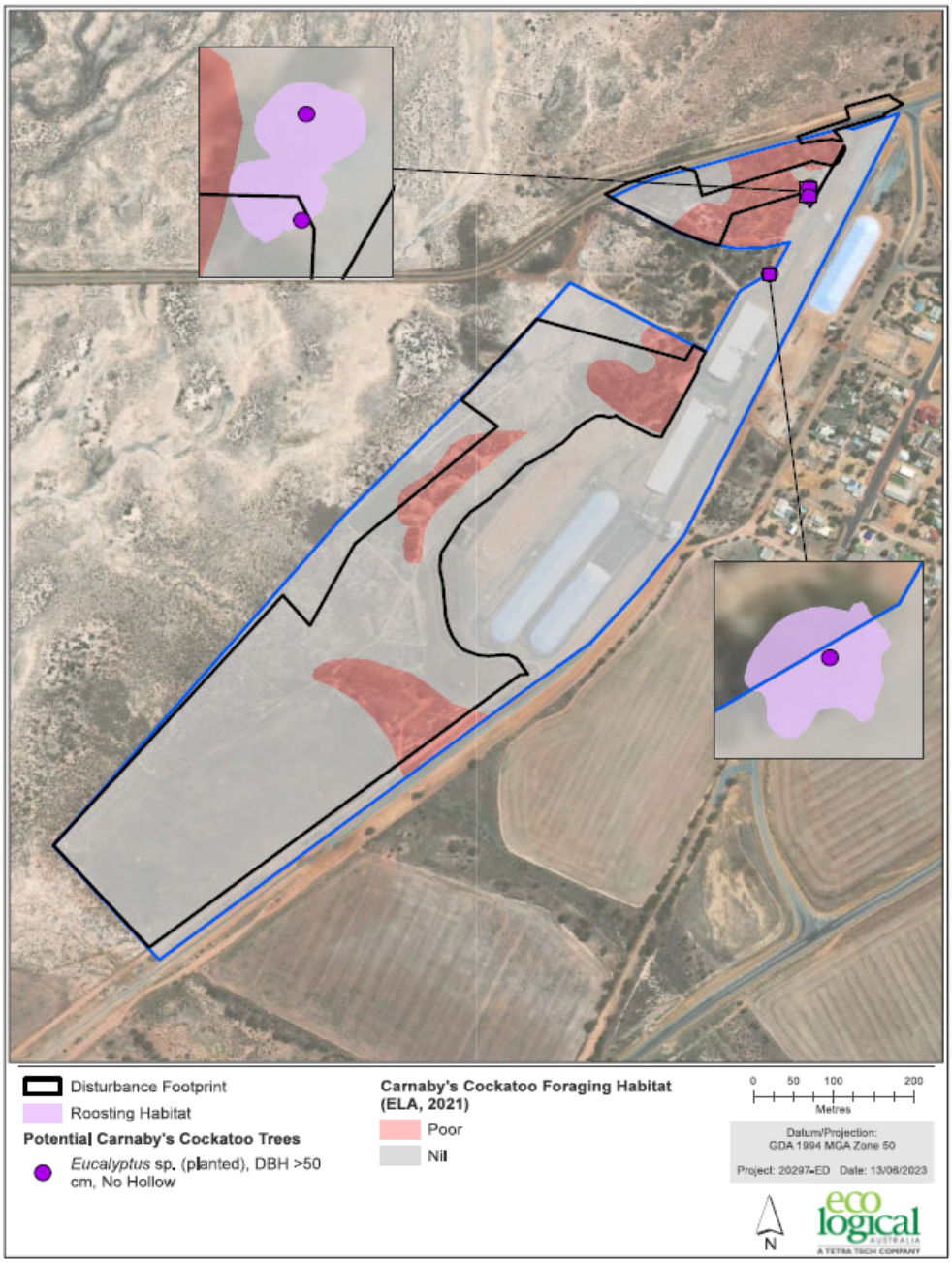

Figure 2. Carnaby's BC habitat within the application area (disturbance footprint) (ELA, 2023)

During the assessment, further avoidance of three potential roosting and breeding trees (with no hollows) was requested from the applicant, noting they are located on the edges of the application area. CBH informed that the avoidance of one tree within the application area was likely to be unfeasible due to the construction of site entry and marshalling area which has been designed to avoid the clearing of a larger area of vegetation to the north and south of the proposed marshalling area (CBH, 2024a). The two remaining trees may also be impacted by the proposed infrastructure (e.g. drainage and utilities) (CBH, 2024a).

Based on the above information, the proposed clearing will impact 3.5 hectares of suitable foraging habitat for Carnaby's BC. The impact on three potential breeding trees was not considered in the assessment, noting the that they have been planted. According to available databases, two confirmed breeding sites occur within 12 kilometres, making it likely that the application area supports foraging by local breeding populations. In considering the proximity of the application area to breeding sites and the cumulative loss of foraging habitat on the Wheatbelt region, the proposed clearing of 3.5 hectares of foraging habitat for Carnaby's BC is considered to represent a significant residual impact.

The applicant proposed to revegetate 1.14 hectares of the area to be cleared, however no Carnaby's BC foraging species have been proposed to be planted as the soil conditions do not support these species (CBH, 2024a and 2025a). The proposed revegetation will not mitigate any impacts of the proposed clearing on Carnaby's BC foraging habitat and therefore an offset is required (see Section 4).

Shield-backed trapdoor spider (*Idiosoma nigrum* - Endangered)

Shield-backed trapdoor spider is a large sized spider species endemic to Western Australia (WA) (TSSC, 2013). There are six records of this species mapped within the local area, with the closest record mapped 4.3 kilometres away from the application area. Shield-backed trapdoor spider's habitat is typically associated with eucalyptus woodlands and *Acacia* vegetation. This species depends significantly on leaf litter and small twigs to construct its burrows (TSSC, 2013). Three habitat types of *Eucalyptus loxophleba* woodland, mixed low shrubland and *Hakea* and *Melaleuca* shrubland may provide suitable habitat for the shield-backed trapdoor spider (Invertebrate Solutions, 2021).

A survey targeted on short range endemic (SRE) and conservation significant invertebrate fauna species undertaken in July 2021 did not record *I. nigrum* within the application area (Invertebrate Solutions, 2021). Only one abandoned burrow of the non-restricted spider species of *Gaius villosus* were recorded (Invertebrate Solutions, 2021). The survey also did not observe SRE and other conservation significant invertebrate fauna species within the application area (Invertebrate Solutions, 2021). Noting the lack of ground litter (ELA, 2023) and the degraded condition due to disturbance, the application area is unlikely to provide suitable habitat for the shield-backed trapdoor spider (Invertebrate Solutions, 2021).

Western spiny-tailed skink (*Egernia stokesii badia* - Vulnerable)

Western spiny-tailed skink (WSTS) is one of four Australian endemic spiny-tailed skink species, in which WSTS is restricted to semi-arid to arid areas of south-western WA (DEC, 2012). There are five records of WSTS mapped within the local area, with three records mapped approximately 600 - 900 metres to the northeast of the proposed clearing area. WSTS is known to typically inhabit logs and cavities in trunks/branches of open eucalypt woodland and Acacia-dominated shrublands (DEC, 2012). The fauna habitat type *Eucalyptus loxophleba* woodland may provide suitable habitat for this skink species (ELA, 2023).

A targeted WSTS survey was undertaken in July 2021 within the application area and surrounding area to support this application. No WSTS individuals or secondary signs (e.g. latrines) were recorded during the survey (ELA, 2021b). The survey identified that the application area was lack of suitable shelter for WSTS (e.g. fallen logs and tree stumps) (ELA, 2021b). Noting the lack of suitable shelter habitat for WSTS, the historic nature of the nearby records (recorded in 1940 and 1954, which are now located on cleared lands), and the disturbance within the application area (e.g. minor earthworks, dumpling of building waste, vehicle tracks) (ELA, 2021), it is unlikely that the area proposed to be cleared provide preferred habitat for WSTS.

The surveys did not record any evidence of other threatened or priority fauna species within the application area during the survey periods (ELA, 2023). However, there is a chance that the proposed clearing may result in impacts to fauna individuals if they happen to be transiting across the application area during the time of the clearing.

Conclusion

Based on the above assessment, the proposed clearing will impact 3.5 hectares of foraging habitat for Carnaby's BC and constitutes a significant residual impact. In accordance with the *Environmental Offsets Policy* (2011) and *Environmental Offsets Guidelines* (2014), this significant residual impact has been addressed through the conditioning of environmental offset requirements, as outlined under Section 4.

There is also the potential that individuals of conservation significant fauna species may occur within the application area at the time of clearing, however direct impacts can be managed by undertaking slow, progressive, directional clearing.

Conditions

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

- Directional clearing, which requires slow, progressive, one directional clearing to allow terrestrial fauna to disperse ahead of the clearing activity should they occur on site at the time of clearing.
- Take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback.
- Provide an offset as outlined under Section 4.

3.2.2. Biological values (flora) - Clearing Principles (a) and (c)

Assessment

Results of the desktop assessment and an analysis of suitable soil type, vegetation type, and habitat showed that there are one threatened and two priority flora species having the potential to be present within the application area. This presumption is based on known records on similar landform types within the local area. They consist of one threatened species and three priority species (See Appendix C.3 for flora analysis table), including:

- *Acacia trinalis* (Priority 1)
- *Caladenia cristata* (Priority 1)
- *Caladenia drakeoides* (Threatened)

Acacia trinalis is a relatively large shrub/tree which can reach four metres height (WA Herb, 1998-). This species is associated within brown sand or clay loam on swampy areas, salt lakes and flats in the IBRA regions of Avon Wheatbelt and Mallee (WA Herb, 1998-). A record of *A. trinalis* is mapped within the local area which is located approximately 2.6 kilometres from the application area. The salination and seasonal inundation of the application area may provide suitable habitat for this species, however, *A. trinalis* was not observed during the flora and vegetation survey (ELA, 2021a).

Caladenia cristata and *C. drakeoides* are orchid species known to occur within Avon Wheatbelt and Geraldton Sandplains IBRA regions (WA Herb, 1998-). These species are typically associated with salt flats or the margin of salt lakes (WA Herb, 1998-). Several records of both species have been recorded within one kilometre radius from the application area. Noting the proximity of the mapped records and the availability of suitable habitat within the application area, it is considered likely that these conservation significant orchids could occur within the application area.

However, a targeted flora survey undertaken in September 2021, during the known flowering period for both species, did not observe *C. cristata* and *C. drakeoides* within the site (ELA, 2021c). The absence of these orchids was attributed to the long history of disturbance in the area, including infrastructure development and pastoral activities as they are sensitive to habitat change and disturbance (ELA, 2021c). The prolonged use of agricultural chemicals (e.g. herbicides, pesticides) and regular soil disturbances may eliminate essential symbiotic fungi and pollinators (e.g. wasps), which are external factors critical to the germination and pollination of *Caladenia* sp., from the application area (ELA, 2021c).

The targeted survey also investigated the presence/absence of *Urodon capitatus* (Priority 1) noting the proximity of one mapped record (see Table C.3). It was identified that the application area did not comprise suitable habitat for this priority 1 flora species (ELA, 2021c). No other conservation significant flora species were identified within the area proposed to be cleared (ELA, 2021c).

Conclusion

Based on the above assessment, the proposed clearing is unlikely to comprise or to have significant impacts to any conservation significant flora species.

Conditions

No management conditions required.

3.2.3. Biological value (threatened ecological community - TEC) - Clearing Principles (d)

Assessment

The application area contains two vegetation communities comprising eucalypt woodlands that might be potential occurrences of the Eucalypt woodlands of the Western Australian Wheatbelt threatened ecological community (Wheatbelt Woodlands TEC) (ELA, 2023). These vegetation communities are:

- VC1: *Eucalyptus loxophleba* low open mallee woodland
- VC6: *Eucalyptus loxophleba* open woodland

The TEC assessment using key diagnostic characteristics of the Wheatbelt Woodlands TEC (TSSC, 2015) has identified that VC1 had the crown cover of greater than 10 per cent but was dominated by a mallee eucalyptus tree. Meanwhile, VC6 contained suitable tree form but the crown cover of less than 10 per cent. Therefore, both vegetation communities did not meet the key diagnostic characteristics, and none of them represent the Wheatbelt Woodland TEC (ELA, 2021a). The detailed assessment can be found in Appendix G.

Conclusion

Based on the above assessment, the proposed clearing is unlikely to comprise and have an impact on any TECs.

Conditions

No management conditions required.

3.2.4. Significant remnant vegetation - Clearing Principle (e)

Assessment

The National Objectives and Targets for Biodiversity Conservation 2001-2005 includes a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750 (i.e., pre-European settlement). This is the threshold level below which species loss appears to accelerate exponentially (Commonwealth of Australia, 2001).

The application area is located within the Avon Wheatbelt IBRA Bioregion which retains only approximately 18.5 per cent of its pre-European vegetation extent (Appendix C.2.) (Government of Western Australia, 2019). The vegetation within the application areas have been identified as the BVA Victoria Plains_142 and BVA Victoria Plains_631 (ELA, 2023), which retains approximately 14.0 per cent and 6.8 per cent of their pre-European vegetation extent, respectively (Government of Western Australia, 2019). The vegetation extent within the local area retains approximately 6.8 per cent of pre-European vegetation remaining (Appendix B.2).

The applicant has stated that the above dataset may over-represent the amount of native vegetation that had been cleared within the local area (CBH, 2024b and 2024c). Therefore, the applicant has undertaken a study to review the remaining extent of the BVA 631 using Normalised Difference Vegetation Index (NDVI) data from satellite monitoring programs with on-ground calibration to estimate current native vegetation cover (Ennovate Consulting, 2024). The study has found that the vegetation community Victoria Plains_631 was locally widespread within the Milling paleovalley with approximate 47 per cent of its original extent remaining (Ennovate Consulting, 2024). The study claimed that this vegetation community may be underestimated as it appeared to have been mapped as different vegetation community (i.e. Victoria Plains_988) with very similar description (Ennovate Consulting, 2024).

Based on the above study, the applicant has recalculated the extent of remnant vegetation as presented in Table 1.

Table 1. Extent of remnant vegetation associated with the application

	Governmental dataset (Government of Western Australia, 2019)	**Recalculated by the applicant** (CBH, 2024c)
Victoria Plains_631	14.0 %	46 %
Victoria Plains_142	6.8 %	7.2 %
Within the local area	6.8 %	9.3 %

Based on the recalculated extent of the vegetation community Victoria Plains_631 and with a statement that the main vegetation communities impacted by the proposed clearing namely VC2 (low open samphire shrubland) and VC3 (Acacia shrubland) were not vegetation of conservation value, the applicant suggested that the proposed clearing was not at variance to this principle, except for the Eucalypt vegetation area characterised as associated with the Victoria Plains_142 (1.4 hectares) (CBH, 2024c).

According to the guideline to the assessment of applications to clear native vegetation (DER, 2013), principle (e) aims to maintain sufficient native vegetation in the landscape for the maintenance of ecological values. It also recognises the need to protect ecological communities that have been extensively cleared and to retain a representation of each ecological community in local areas throughout its pre-European range. This principle is not restricted to areas where the vegetation proposed to be cleared contains threatened or priority flora species. It also applies to landscapes where remaining vegetation plays a critical role in sustaining ecosystem functions (e.g. hydrological processes such as the samphire), or to compensate for a high degree of fragmentation (such as the Wheatbelt region).

The majority of vegetation proposed to be cleared is samphire. Whilst this vegetation community has limited value in terms of providing habitat for conservation significant fauna like black cockatoos, samphire is the most resilient plant species in waterlogged, saline areas (e.g. the paleochannel) in the Avon region and plays a critical role in the establishment of a healthy saline ecosystem in the region (WRC, 2003). Samphire helps stabilise the soil surface and assists the establishment of other flora species by accumulating soil around their bases and offering a favourable environment of slightly less saline soil. This type of vegetation also stabilises and aerates soils by introducing oxygen into waterlogged soils. The introduced oxygen enhances the biological functions of aerobic micro-organisms which are necessary for the survival and health of other species (WRC, 2003). Noting the role the samphire vegetation plays in the extensively cleared landscape of Wheatbelt, the samphire vegetation is deemed a significant remnant in the context of this application.

In addition, the application area is located within an extensively cleared landscape with the ratio of remnant vegetation within the local area of only 6.8% according to the Statewide Vegetation Statistics incorporating the CAR Reserve Analysis Report (Government of Western Australia, 2019). This number was updated to 9.3% by CBH using NDVI approach. The revised figure is still well below the threshold of 30% specified in the National Objectives and Targets for Biodiversity Conservation 2001 - 2005. Below the 30% threshold level, species loss appears to accelerate exponentially. Therefore, the proposed clearing is at variance to the principle (e).

Based on the above assessment, the area proposed to be cleared is considered containing significant remnant vegetation and the proposed clearing constitutes a significant residual impact. It should be noted that the completely degraded vegetation (mapped as 7.8 hectares) is not considered to represent a significant remnant. Therefore, a total of 10.6 hectares of significant remnant vegetation is impacted by the proposed clearing and requires to be offset.

CBH proposed to revegetate 1.14 hectares of area to be cleared after completing the expansion (see Section 3.1). The proposed revegetation aims to restore the vegetation community VC2 with Good (Keighery, 1994) condition or better (CBH, 2025a). However, based on a calculation consistent with the WA Environmental Offsets Metric, the proposed onsite revegetation alone is insufficient to counterbalance the significant residual impacts to significant remnant vegetated caused by the proposed clearing and an offset is required (see Section 4). Noting the findings of the above-mentioned study that the vegetation community Victoria Plains_631 may be more widespread than being estimated in the State dataset, the offset is not required to involve this vegetation community. However, the underrepresented vegetation community Victoria Plains_142 or similar (e.g. with Eucalypt woodlands) need to be included in the offset to ensure a “like for like” offset.

The proposed clearing is not expected to further fragment the remnant vegetation beyond the extent already impacted by existing development on the site. It should be noted that there is potential that the proposed clearing could impact on the remnant native vegetation through the introduction or spread of weeds and dieback into adjacent vegetation. The implementation of hygiene management measures is considered appropriate to mitigate this risk.

Conclusion

Based on the above assessment, the proposed clearing will result in loss of 10.6 hectares of native vegetation that is a significant remnant within an extensively cleared landscape. This loss will be partially mitigated by the proposed onsite vegetation of 1.14 hectares and then by an offset. The implementation of weed and dieback management measures are required to mitigate the risk of weeds and dieback spread.

Conditions

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

- Avoidance and minimisation to reduce the impacts and extent of clearing;

- Weed and dieback management measures, requiring the permit holder to take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback to adjacent vegetation;
- Undertaking the onsite revegetation of 1.14 hectares according to the proposed revegetation management plan; and
- Provision of an offset as outlined in Section 4.

3.2.5. Water and land resources - Clearing Principles (f) and (j)

Assessment

The application area is mapped adjacent to some small sections mapped within a large inundation area associated with Moore River and its attributes. The survey identified an intermittent unnamed minor drainage line (a tributary of the Moore River North) running through the site (ELA, 2023).

The proposed clearing may impact the water flow in short term during clearing process. Considering the intermittent and minor nature of the watercourse and applicant's proposed management measures (water management infrastructure installation, see Section 3.1), the proposed clearing is unlikely to have significant and long-term impact to this watercourse.

A field assessment conducted in 2020 identified that groundwater within the application area has the potential to become perched following rainfall events, with levels ranging between 1.3 and 2.3 metres below ground level observed (ELA, 2023). Subsequent activities (e.g. construction) may impact to the groundwater if excavation reaches these levels. The applicant has committed to install water management infrastructure to manage the groundwater to be adequately drained into designated drainage basins to prevent water pooling (ELA, 2023). It is also noted that the application area is not located within any groundwater areas proclaimed under RiWI Act. As such, the potential impact of the proposed clearing on groundwater quality is expected to be minimal and short-term.

Conclusion

Based on the above assessment, the proposed clearing is unlikely to impact the hydrology and water quality of the watercourse within the application area in long term. However, the proposed clearing may have short term impacts to the water flows of the watercourse within the application area.

Conditions

To address the impacts to the water flows in short term, the following management measure will be required as condition on the clearing permit:

- Maintain the existing surface water flows.

3.3. Relevant planning instruments and other matters

The applicant advised that the development approval for the proposed works was granted by the Shire of Moora on 14 November 2023 (CBH, 2024a). Based on Shire of Moora's Local Planning Scheme (QGIS database), the application area is zoned as 'industrial' and 'general agriculture' which are consistent with the proposed works.

No Aboriginal sites of significance have been mapped within the application area. It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

4 Suitability of offsets

Through the detailed assessment outlined in Section 3.2 above, the Delegated Officer has determined that the following significant residual impacts (SRI) remain after the application of the avoidance and mitigation measures summarised in Section 3.1:

- the loss of approximately 3.5 hectares of native vegetation that provides suitable foraging habitat for Carnaby's black cockatoo;
- the loss of approximately 10.6 hectares of native vegetation that is representative of significant remnant vegetation in an extensively cleared landscape, including 1.4 hectares of the highly cleared BVA Victoria Plains_142.

The applicant has proposed a land acquisition offset at the Lot 291 on Deposited Plan 418426. The offset site is located approximately 2.4 kilometres to the northeast of the application area (Figure 3). CBH proposed to:

- use 23.28 ha within the proposed offset site to offset this application (see Table 2);
- undertake on-ground management and maintenance activities for the proposed offset site, including:
  - installing/upgrading fencing to restrict thoroughfare and access by stock and kangaroos; and

- periodic baiting for rabbits, if required.

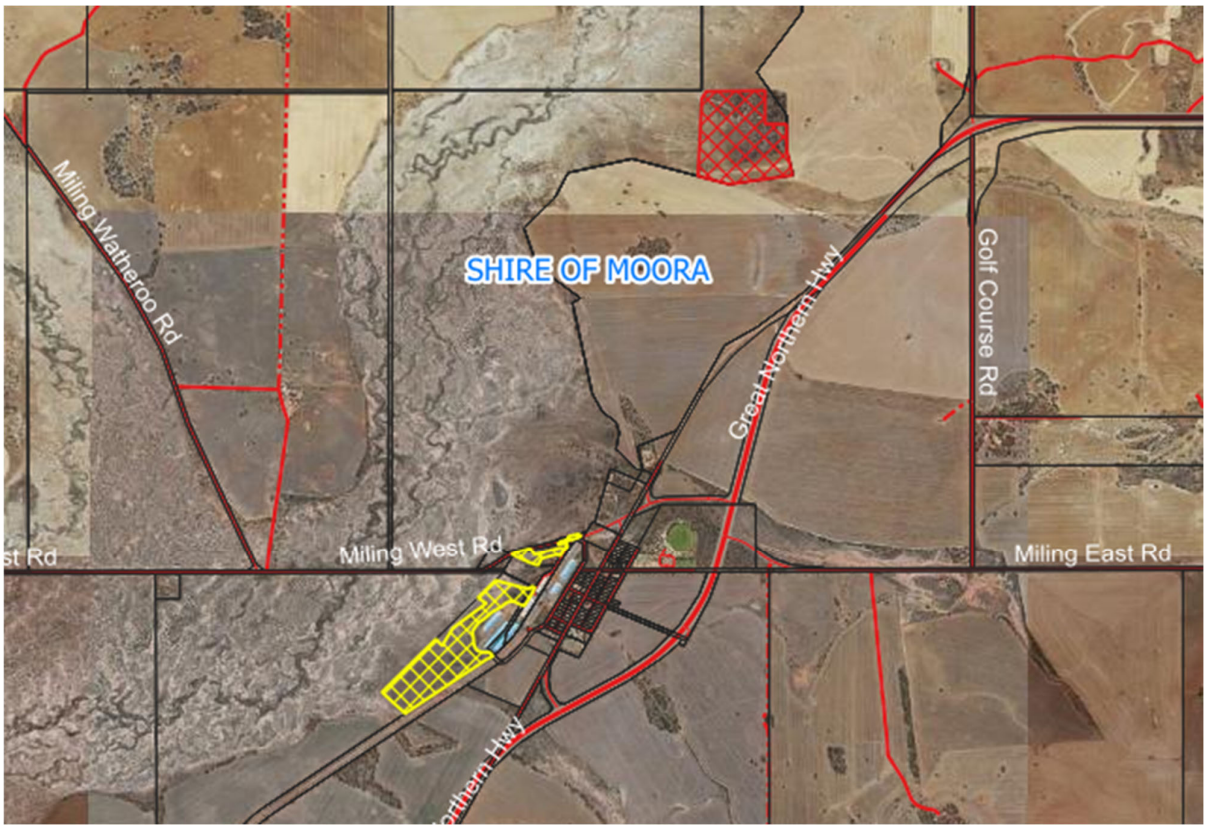

Figure 3. Map of the proposed offset area (crosshatched red) in relation to the application area (crosshatched yellow)

Environmental values of the proposed offset

According to the site survey report (CBH, 2025), the proposed offset site has following environmental values:

- Four vegetation types, with conditions ranging from Good (5.44 ha) to Degraded (19.79 ha), as specified in Table 2.
- Approximately 10.95 ha aligning with the TEC Eucalypt woodlands of the Western Australian Wheatbelt.
- Approximately 10.95 ha foraging habitat for Carnaby's, including 58% area identified as 'moderate' habitat (HP Em Ell Ma), and 42% area in 'moderate to high' (HP Ell RwMbEt).
- Highly cleared BVA Victoria Plains_142 and 631 (total of 25.23 hectares of siginficant rem in extensively cleared landscape).

Table 2. Summary of vegetation types within the proposed offset site and offset area (CBH, 2025a, 2025b and 2025c).

Broad Formation	Veg. Type Description	PEC/TEC	BVA	Carnaby's BC foraging habitat	Proposed offset site		Proposed Offset Area	
					Extent	Condition	Extent	Condition
Eucalyptus Low Woodland A	**HP Em Ell Ma**: Low Woodland A of *Eucalyptus myriadena* (*Eucalyptus loxophleba* subsp. *loxophleba*) over Open Scrub of *Melaleuca eleuterostachya* over *Open Dwarf Scrub D of Rhagodia* sp. *Watheroo* (R.J. Cranfield & P.J. Spencer 8183) and *Maireana brevifolia* over Open Herbs of *Mesembryanthemum nodiflorum* and *Atriplex codonocarpa* on brown sandy loam on hardpan plains and flats	Eucalypt woodlands of the Western Australian Wheatbelt*	VP 142	Moderate quality habitat	6.30 ha	Good	4.89 ha	Good
	HP Ell RwMbEt: Low Woodland A (to Open Low Woodland A) of *Eucalyptus loxophleba* subsp. *loxophleba* over Open Dwarf Scrub D of *Rhagodia* sp. *Watheroo* (R.J. Cranfield & P.J. Spencer 8183), *Maireana brevifolia* and *Enchylaena tomentosa* over Open Herbs of **Mesembryanthemum nodiflorum* and *Sclerolaena diacantha* (*Atriplex codonocarpa, *Romulea rosea*) on brown sandy loam on hardpan plains and flats	Eucalypt woodlands of the Western Australian Wheatbelt*	VP 142	Moderate to high quality habitat	4.65 ha	Good to Degraded	4.37 ha	Good to Degraded
Melaleuca Scrub	**HP Ma RwEtMb**: Scrub (to Open Scrub) of *Melaleuca eleuterostachya* (*Melaleuca acuminata* subsp. *websteri*) over Open Dwarf Scrub D of *Rhagodia* sp. *Watheroo* (R.J. Cranfield & P.J. Spencer 8183), *Enchylaena tomentosa* and *Maireana brevifolia* (*Tecticornia* spp.) over Open Herbs **Mesembryanthemum nodiflorum*, **Romulea rosea* and *Hordeum* sp. *indet*. on brown sandy loam on hardpan plains and flats	Not aligned	Not aligned	None	4.43 ha	Good to Degraded	4.43 ha	Good to Degraded
Tecticornia Dwarf Scrub D	**DZ Te:** Dwarf Scrub D of *Tecticornia lepidosperma, Tecticornia pergranulata* subsp. *pergranulata*, *Maireana brevifolia* and *Enchylaena tomentosa* over Open Herbs **Mesembryanthemum nodiflorum*, *Podolepis aristata*, *Atriplex semibaccata* and *Atriplex codonocarpa* over Very Open Low Grass of *Eragrostis dielsii*, on brown clay loam on salined drainage zones and flats	Not aligned	VP 631	None	9.85 ha	Degraded	9.51 ha	Degraded
Cleared				None	0.08 ha	Completely degraded	0.08 ha**	Completely degraded
TOTAL					**25.31 ha**		**23.28 ha**	

Notes: *: An assessment on whether the vegetation fits the criteria for Eucalypt woodlands of the Western Australian Wheatbelt TEC has not been undertaken by DWER under this application.
**: The cleared area in completely degraded condition has not been included in the offset calculations.

Based on the above information, the proposed offset site at Lot 291 on Deposited Plan 418426 is considered to be appropriate to offset the significant residual impacts of the proposed clearing to Carnaby's cockatoo foraging habitat and significant remnant vegetation. The proposed management measures are considered to improve the vegetation condition in long term as grazing has been identified as one of the major threats of the proposed offset site (Onshore, 2025).

In assessing whether the proposed offset is adequately proportionate to the significance of the environmental values being impacted, DWER undertook a calculation using the WA Environmental Offsets Metric. The calculation indicated that:

- The area of 9.26 hectares of native vegetation within Lot 291 on Deposited Plan 418426, in Good and Degraded (Keighery, 1994) conditions, that provides foraging habitat for Carnaby's cockatoo can mitigate 100.1 per cent the SRI due to the loss of 3.5 hectares of native vegetation that provides suitable foraging habitat for Carnaby's black cockatoo; and
- The area of 23.20 hectares of native vegetation within Lot 291 on Deposited Plan 418426, including 4.75 hectares in Good (Keighery, 1994) condition and 18.45 hectares in Degraded (Keighery, 1994) condition can mitigate 123.1 per cent the SRI due to the loss of 10.6 hectares of native vegetation that is representative of significant remnant vegetation in an extensively cleared landscape. The offset area also includes 9.26 hectares of BVA Victoria Plains_142 which can counterbalance the loss of 1.4 hectares of BVA Victoria Plains_142 by the proposed clearing.

The Delegated Officer considers that this adequately counterbalances the significant residual impacts listed above. The justification for the values used in the offset calculation is provided in 0. Survey data and representative photographs of the vegetation within he offset site is provided in Appendix G.

End

Appendix A. Additional information provided by applicant

During the assessment, the applicant responded to requests for information and provided additional information as following.

Additional information provided	Consideration of provided information
Avoidance and mitigation measures regarding the site selection.	This information is presented in Section 3.1 of the Report.
The applicant could not commit to avoid the potential breeding and roosting trees	This information is presented in Section 3.2.1. of the Report.
A study to review the remaining extent of the BVA 631	This information is presented in Section 3.2.4. of the Report.
Onsite Revegetation Plan	The area proposed to be revegetated has been included in the offset calculations to partially mitigate the significant residual impacts for significant remnant vegetation. This information is presented in Section 3.1 and 3.2.4 of the Report.
Offset proposal	This information is presented in Section 4 of the Report.
Information about development approval	This information is presented in Section 3.3 of the Report.

Appendix B. Details of public submissions

Summary of comments	Consideration of comment
The availability of previously cleared land adjacent to the proposed clearing as an alternative.	The applicant had considered using a cleared agricultural land immediately south of the railway, but this option has not been chosen due to some disadvantages. Details are presented in Section 3.1 of the Report.
The two vegetation associations identified in the proposal area are both significantly below 30%.	This has been considered in Section 3.2.4 of the Report. The assessment determined that the proposed clearing is at variance to principle (e) and constitutes SRI to the significant remnant vegetation. Based on that, a relevant offset is required and has been provided.
The clearing will result in the removal of critical habitat of conservation significant flora species *Caladenia drakeoides* (T) and suitable habitat of *Caladenia cristata* (P1).	The assessment on the impacts of the proposed clearing to conservation significant flora, including these two species, is presented in Section 3.2.1 of the Report.
Impact to critical habitat for Carnaby's BC.	The assessment presented in Section 3.2.1 of the Report determined that the impacts to Carnaby's BC is significant and therefore an offset is required.

Appendix C. Site characteristics

C.1. Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to DWER at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix D.

Characteristic	Details
Local context	The area proposed to be cleared consists of parts of expansive tracts of native vegetation in the intensive land use zone of Western Australia. It is adjacent to the existing grain handling facilities to the east, the existing roads to the north and south, and the remnant vegetation to the west. The proposed clearing area is part of remnant vegetation in a highly cleared landscape. Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 6.8 per cent of the original native vegetation cover.
Ecological linkage	The application area is not within any mapped linkages and is unlikely to be part of any local ecological linkage.
Conservation areas	The application area is not mapped within any conservation areas. The closest mapped conservation area is a conservation covenant (ID 3015), located approximately 7.2 kilometres northwest of the application area.
Vegetation description	Supporting document (ELA, 2023) indicates that the vegetation within the proposed clearing area consists of six vegetation communities, including: • VC1: *Eucalyptus loxophleba* low open mallee woodland (0.1 hectares ~ 0.6 per cent of the footprint area). • VC2: *Tecticornia undulata* and *T. pergranulata* low open samphire shrubland (7.1 hectares ~ 37.4 per cent) • VC3: *Acacia hemiteles* isolated shrubs over *Maireana brevifolia* and *Salsola australis* low open chenopod shrubland (7.8 hectares ~ 40.7 per cent) • VC4: C*asuarina obesa*, *Hakea preissii*, *Melaleuca lateriflora* and *M. stereophloia* tall shrubland (0.9 hectares ~ 4.8 per cent) • VC5: *Acacia lineolata* subsp. l*ineolata*, *Melaleuca lateriflora* and *Hakea preissii* tall sparse shrubland (1.1 hectares ~ 6.0 per cent) • VC6: *Eucalyptus loxophleba* open woodland (1.3 hectares ~ 7.0 per cent) (The remaining 3.5 per cent is attributed to cleared area). Representative photos and maps are available in Appendix G. This is consistent with the mapped vegetation types: • Victoria Plains_142, which is described as York gum, salmon gum etc. *Eucalyptus loxophleba*, *E. salmonophloia*. • Victoria Plains_631, which is described as Tea tree with York gum, *casuarina Tecticornia* spp. *Melaleuca* spp. *Eucalyptus loxophleba*, *Casuarina obesa* (Shepherd et al, 2001). *The mapped vegetation types retain approximately 6.8 per cent and 14.0 per cent of the original extent, respectively (Government of Western Australia, 2019).*
Vegetation condition	Supporting document (ELA, 2023) indicates that the vegetation within the proposed clearing area ranges from very good to completely degraded (Keighery, 1994) condition, including: • Very good: 0.3 hectares (1.8 per cent of the footprint area). • Good: 8.9 hectares (46.7 per cent). • Degraded: 1.4 hectares (7.2 per cent). • Completely Degraded: 7.8 hectares (40.8 per cent). (The remaining 3.5 per cent is attributed to cleared area). The full Keighery (1994) condition rating scale is provided in Appendix E. The mapping is available in Appendix G.

Characteristic	Details
Climate	Climate: Mean maximum temperature is 24.9 degrees Celsius. Mean minimum temperature is 10.8 degrees Celsius. Rainfall: Mean annual rainfall is 462.9 millimetres. (Data of Walebing (BOM, 2025))
Soil and landform	The soils are mapped as: • Burabidge Hill 7 Subsystem (256Bg_7) which is described as: Shallow to deep loamy duplex, red sandy earth and red shallow loam. • Goomalling System (256Go) which is described as: Grey deep sandy duplexes, alkaline grey deep sandy duplexes and saline wet soils. (DPIRD, 2022) Supporting document indicated that the subsurface profile typically comprised of sand overlying sandy silt / silty sand / clayey sand / sandy clay / gravelly sand to termination depths, at most test pit locations, determined by geotechnical field investigation (ELA, 2023) Landforms are mapped as: • Burabidge Hill 7 Subsystem (256Bg_7) which is described as: Mid slope, gently undulating rises adjacent to valley plain and drainage line on Colluvium, lithic sand. • Goomalling System (256Go) which is described as: Poorly drained valley flats. (DPIRD, 2022).
Land degradation risk	The soil unit 256Bg_7, which accounts for majority of the application area (approximately 17 hectares - 92.4 per cent) is mapped as having a high risk of subsurface acidification but having low risks due to other factors. The other soil unit 256Go (1.4 hectares - 7.6 per cent) is mapped as having high risks for most of factors, except for the water erosion and salinity (see Appendix C.5).
Waterbodies	The desktop assessment and aerial imagery indicated that the application area is partially mapped within a large inundation area located to the northwest edge of to application area. There are a non-perennial swamp located approximately 100 metres, and a non-perennial minor river located approximately 50 metres (but separated by a road) from the application area. The supporting document (ELA, 2023) identified that there is an intermittent unnamed minor drainage line (a tributary of the Moore River North) running through the site.
Hydrogeography	The application area does not fall within any areas protected under the *Country Water Supply Act 1917*, the *Right in Water and Irrigation Act 1914* (RiWI Act) or a Public Drinking Water Source Area. Groundwater salinity within the application area is mapped as from 7000 to 14000 milligrams per litre total dissolved solids.
Flora	There are records of four threatened flora species and eight priority flora species within the local area. None of these is recorded within the application area. The closest recorded conservation significant species is *Caladenia cristata*, located approximately 43 metres from the application area. There are three species found on the same soil type and same vegetation type as the application area.
Ecological communities	The application area is not mapped within any threatened or priority ecological communities. 'Eucalypt woodlands of the Western Australian Wheatbelt' is the only one type of threatened ecological community (TEC) (Critically endangered - EPBC Act) /priority ecological community (PEC) (Priority 3 – BC Act) recorded within the local area. The closest occurrence of this TEC/PEC is mapped approximately 300 metres from the application area.
Fauna	The desktop assessment identified that a total of five threatened and no priority fauna species have been recorded within the local area. The most frequently recorded species is shield-backed trapdoor spider with five records. The species recorded at the closest distance is the western spiny-tailed skink, located approximately 630 metres from the application area.

C.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Avon Wheatbelt	9,517,109.95	1,761,187.42	18.51	174,980.68	1.84
Vegetation complex					
BVA Victoria Plain_631	12,215.57	1,706.04	13.97		
BVA Victoria Plain_142	226,907.73	15,426.18	6.80		
Local area (calculation - delete if not required)					
10km radius	34,614.92	2,345.89	6.78	-	-

*Government of Western Australia (2019)

C.3. Flora analysis table

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

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records in the local area	Are surveys adequate to identify? [Y, N, N/A]
Acacia trinalis	P1	Y	Y	Y	2.58	1	Y
Caladenia cristata	P1	Y	Y	Y	0.04	3	Y
Caladenia drakeoides	T	Y	Y	Y	0.37	2	Y
Urodon capitatus	P1	N	Y	N	0.07	1	Y

P: priority, T: threatened

C.4. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records in the local area	Are surveys adequate to identify? [Y, N, N/A]
Western spiny-tailed skink (*Egernia stokesii badia*)	VU	Y	Y	0.6	5	Y
Shield-backed trapdoor spider (*Idiosoma nigrum*)	EN	Y	Y	4.3	6	Y
Carnaby's cockatoo (*Zanda latirostris*)	EN	Y	Y	8.7	2	Y

EN: endangered, VU: vulnerable

C.5. Land degradation risk table

Risk categories	Soil unit 256Bg_7	Soil unit 256Go
Wind erosion	L1	H1
Water erosion	L1	L1
Salinity	L1	M2
Subsurface Acidification	H1	H2
Flood risk	L1	H2
Water logging	L1	H2
Phosphorus export risk	L2	H2

Note:

L1 <3% of map unit has a moderate/high to high/extreme (or is presently acid/saline for the risk of subsurface acidification/salinity)

L2 3-10% of map unit has a moderate/high to high/extreme (or is presently acid/saline for the risk of subsurface acidification/salinity)

M1 10-30% of map unit has a moderate/high to high/extreme (or is presently acid/saline for the risk of subsurface acidification/salinity)

M2 30-50% of map unit has a moderate/high to high/extreme (or is presently acid/saline for the risk of subsurface acidification/salinity)

H1 50-70% of map unit has a moderate/high to high/extreme (or is presently acid/saline for the risk of subsurface acidification/salinity)

H2 >70% of map unit has a moderate/high to high/extreme (or is presently acid/saline for the risk of subsurface acidification/salinity)

Appendix D. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared contains suitable habitat for conservation significant fauna. However, noting the disturbance status of the site and the findings of biological surveys, the application area is unlikely to comprise a high level of biodiversity.	Not likely to be at variance	Yes *Refer to Section 3.2.1 and 3.2.2, above.*
Principle (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."* Assessment: The area proposed to be cleared contains foraging habitat for Carnaby's Cockatoo.	At variance	Yes *Refer to Section 3.2.1, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The area proposed to be cleared is likely to contain suitable habitat for threatened flora species *Caladenia drakeoides*. However, the targeted flora	Not likely to be at variance	Yes *Refer to Section 3.2.2, above.*

Assessment against the clearing principles	Variance level	Is further consideration required?
survey did not observe any records of this species within the application area (ELA, 2021c).		
Principle (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."* Assessment: There are two vegetation communities (VC1 and VC6) within the application area having the potential to represent floristic and structural aspects of the Wheatbelt Woodlands TEC. However, an assessment utilising key diagnostic characteristics of the Wheatbelt Woodlands TEC concluded that neither of these two vegetation communities represents the Wheatbelt Woodland TEC (ELA, 2021a)	Not likely to be at variance	Yes *Refer to Section 3.2.3, above.*
Environmental value: significant remnant vegetation and conservation areas		
Principle (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."* Assessment: The extents of the mapped vegetation types and native vegetation in the local area are inconsistent with the national objectives and targets for biodiversity conservation in Australia.	At variance	Yes *Refer to Section 3.2.4, above.*
Principle (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."* Assessment: Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	Not at variance	No
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: An intermittent minor drainage line running through the site (ELA, 2023).	May be at variance	Yes *Refer to Section 3.2.5, above.*
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils within the application area are highly susceptible subsurface acidification and a small area (approximately 7.6 per cent of the application area) is mapped as susceptible to wind erosion, nutrient export, flooding and waterlogging. The soil tests in 2020 identified no existing or potential acidity present within the application area (ELA, 2023). Noting the final land use is for infrastructure construction which will not leave the bare earth exposed to weather, the impacts will be in short-term and the proposed clearing is unlikely to cause appreciable land degradation.	Not likely to be at variance	No
Principle (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."* Assessment:	Not likely to be at variance	Yes *Refer to Section 3.2.5, above.*

Assessment against the clearing principles	Variance level	Is further consideration required?
An intermittent minor drainage line has been identified within the application area. Given the intermittent and minor nature of the watercourse and the proposed water management measures (see Section 3.1), the surface and groundwater will be managed, and the proposed clearing is unlikely to impact surface or ground water quality.		
Principle (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."* Assessment: The majority area of the application area is mapped as low flooding risk and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. Given the water management measures proposed by the applicant (see Section 3.1), the proposed clearing is unlikely to contribute to waterlogging.	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. Offset calculator value justification

WA Environmental Offsets Calculators
Rationale for scores used in the offset calculators

Calculation 1.1 - Carnaby's black cockatoo habitat – Moderate to high quality foraging habitat

***Area* (impact site)**

Part A: Significant impact calculation *Area*

Significant impact	Description	Quantum of impact	
	Clearing of native vegetation that provide suitable foraging habitat for Carnaby's black cockatoo	Significant impact (hectares)	3.50
		Quality (scale)	5.00
		Total quantum of impact	1.75

Part B: Rehabilitation credit calculation *Area* (onsite)

Rehabilitation Credit	Description				
		Proposed rehabilitation (area in hectares)		Time until ecological benefit (years)	
		Current quality of rehabilitation site (scale)		Confidence in rehabilitation result (%)	
		Future quality WITHOUT rehabilitation (scale)		Rehabilitation credit	0.00
		Future quality WITH rehabilitation (scale)			

Part C: Significant residual impact calculation *Area*

Significant residual impact		
	Total quantum of impact	1.75
	Rehabilitation credit	0.00
	Significant residual impact	1.75

Environmental value (step 1)	Clearing of native vegetation that provide foraging habitat for Carnaby's black cockatoo	Significant impact (step 2, part A)	3.50
		Rehabilitation credit (step 2, part B)	0.00
		Significant residual impact (step 2, part C)	1.75

***Area* (offset site)**

Offset calculation
Area

Offsets calculation	**Description**	**Proposed offset (area in hectares)**	4.37	**Duration of offset implementation (maximum 20 years)**	20.00	**Offset value**	**0.70**
	Land acquisition within the Lot 291 on Deposited Plan 418426	**Current quality of offset site (scale)**	7.00	**Time until offset site secured (years)**	2.00	What-if Analysis	**39.8%**
		Future quality WITHOUT offset (scale)	6.00	**Risk of future loss WITHOUT offset (%)**	20.0%		
		Future quality WITH offset (scale)	7.00	**Risk of future loss WITH offset (%)**	5.0%	What-if Analysis Reinstate Formula	
		Time until ecological benefit (years)	20.00				
		Confidence in offset result (%)	90.0%			**OFFSET ADEQUATE?**	**NO**

Calculation	Score (Area)	Rationale
Conservation significance		
Description	BC habitat	Application area contains 3.5 ha of foraging habitat of Carnaby's black cockatoo.
Type of environmental value	Species (flora/fauna)	BC species are listed as a threatened fauna species under the Commonwealth EPBC Act and state BC Act.
Conservation significance of environmental value	Endangered	Carnaby's cockatoo is listed as Endangered under both the EPBC Act and BC Act.
Landscape-level value impacted	yes/no	The impact is to an area of foraging habitat in area.
Significant impact		
Description	Clearing of native vegetation that provides suitable habitat for Carnaby's black cockatoo	Application area contains foraging habitat of Carnaby's black cockatoo. The foraging habitat is found mostly within the *Eucalyptus loxophleba* woodland and *Hakea* and *Melaleuca* shrubland fauna habitats, with the majority of the disturbance footprint containing no foraging habitat for the species. Suitable foraging plant species present included *Hakea preissii* and *Eucalyptus loxophleba*, with both species present at a low density (less than 20% cover).
Significant impact (hectares) / Type of feature	3.50	The application area contains 3.5 ha of native vegetation that provide low-moderate quality foraging habitat for Carnaby's black cockatoo.

Calculation	Score (Area)	Rationale
Quality (scale) / Number	5.00	Vegetation was identified to be in Very Good to Degraded (Keighery, 1994) condition, with majority in good condition (2ha). The density of Carnaby foraging plant species (included *Hakea preissii* and *Eucalyptus loxophleba*) was identified as 10-20% or less than 10% (ELA, 2023), therefore the quality of the foraging vegetation is classed as 'low to moderate' or "low" with the score of 3 for site condition (DCCEEW's scoring system). Noting that the application area is mapped within the Carnaby's modelled distribution, with 2 breeding sites mapped within 10 km, and the application area is also located within an extensively cleared part of the species' range and available foraging habitat in the local area is limited; a value of 2 was used for site context, resulting in the total score of 5.
Rehabilitation credit		
Description		The proposed revegetation onsite does not include suitable habitat species for black cockatoos.
Offset		
Description	Land acquisition within the Lot 291 on Deposited Plan 418426	The applicant proposed to place the Lot 291 on Deposited Plan 418426 into conservation covenant and use 23.28 ha within the lot to offset this application. This area contains 9.26 ha of Eucalypt woodland, which is considered provide suitable foraging habitat for Carnaby's cockatoo.
Proposed offset (area in hectares)	4.37	Applicant proposed to use 4.37 ha of area mapped as providing Moderate to High foraging habitat (Vegetation type HP Ell RwMbEt) (Onshore, 2025). This area can mitigate 39.8% the SRI.
Current quality of offset site	7.00	The coverage of CBC foraging species is from 30-40%, classed as "moderate to high" quality with the score of 5 for site condition. With two known breeding sites within 12 km from the proposed offset site, the value of 2 is given for site context, resulting in the total score of 7 based on DCCEEW's scoring system.
Future quality WITHOUT offset (scale) / Future number WITHOUT offset	6.00	The vegetation condition will be decreased over time due to free access by farming/grazing activities and high occurrence of rabbits onsite.
Future quality WITH offset (scale) / Future number WITH offset	7.00	Applicant proposed to fence the offset site and bait for rabbit (if necessary). The quality of vegetation overall is expected to improve over the 20-year period with the regeneration of shrub and herb layers; however, such improvements are not captured in the methodology used to assign habitat quality scores.
Time until ecological benefit (years)	20.00	The vegetation condition is expected to increase with higher foraging resources for Carnaby's cockatoos after 20 years
Confidence in offset result (%)	0.9	There is a high level of confidence that a land acquisition offset, and proposed management measures will provide the ecological benefits to mitigate the impacts of the proposed clearing.
Duration of offset implementation (maximum 20 years)	20.00	The maximum duration of 20 years is applied for land acquisition offset, as per DWER's Guideline for quantifying environmental offsets
Time until offset site secured (years)	2.00	Assuming the offset site will be secured within two years of clearing as to be conditioned on the permit
Risk of future loss WITHOUT offset (%)	20.0%	The offset site is in a rural area with a high risk of loss given the current and ongoing level of grazing
Risk of future loss WITH offset (%)	5%	The applicant committed to secure the offset site in perpetuity via a conservation covenant, which will reduce the risk of loss in the future.

Calculation 1.2 - Carnaby's black cockatoo habitat – Moderate quality foraging habitat

***Area* (impact site)**

Part A: Significant impact calculation *Area*

Significant impact	Description	Quantum of impact	
	Clearing of native vegetation that provide suitable foraging habitat for Carnaby's black cockatoo	Significant impact (hectares)	3.50
		Quality (scale)	5.00
		Total quantum of impact	1.75

Part B: Rehabilitation credit calculation *Area* (onsite)

Rehabilitation Credit	Description	Proposed rehabilitation (area in hectares)		Time until ecological benefit (years)	
		Current quality of rehabilitation site (scale)		Confidence in rehabilitation result (%)	
		Future quality WITHOUT rehabilitation (scale)		Rehabilitation credit	0.00
		Future quality WITH rehabilitation (scale)			

Part C: Significant residual impact calculation *Area*

Significant residual impact		
	Total quantum of impact	1.75
	Rehabilitation credit	0.00
	Significant residual impact	1.75

Environmental value (step 1)	Clearing of native vegetation that provide foraging habitat for Carnaby's black cockatoo	Significant impact (step 2, part A)	3.50
		Rehabilitation credit (step 2, part B)	0.00
		Significant residual impact (step 2, part C)	1.75

***Area* (offset site)**

Offset calculation
Area

Offsets calculation	**Description**	**Proposed offset (area in hectares)**	4.89	**Duration of offset implementation (maximum 20 years)**	20.00	**Offset value**	**1.06**
	Land acquisition within the Lot 291 on Deposited Plan 418426	**Current quality of offset site (scale)**	6.00	**Time until offset site secured (years)**	2.00	What-if Analysis	**60.3%**
		Future quality WITHOUT offset (scale)	5.00	**Risk of future loss WITHOUT offset (%)**	20.0%		
		Future quality WITH offset (scale)	7.00	**Risk of future loss WITH offset (%)**	5.0%	What-if Analysis Reinstate Formula	
		Time until ecological benefit (years)	20.00				
		Confidence in offset result (%)	90.0%			**OFFSET ADEQUATE?**	**NO**

Calculation	Score (Area)	Rationale
Conservation significance		
Description	BC habitat	Application area contains 3.5 ha of foraging habitat of Carnaby's black cockatoo.
Type of environmental value	Species (flora/fauna)	BC species are listed as a threatened fauna species under the Commonwealth EPBC Act and state BC Act.
Conservation significance of environmental value	Endangered	Carnaby's cockatoo is listed as Endangered under both the EPBC Act and BC Act.
Landscape-level value impacted	yes/no	The impact is to an area of foraging habitat in area.
Significant impact		
Description	Clearing of native vegetation that provides suitable habitat for Carnaby's black cockatoo	Application area contains foraging habitat of Carnaby's black cockatoo. The foraging habitat is found mostly within the *Eucalyptus loxophleba* woodland and *Hakea* and *Melaleuca* shrubland fauna habitats, with the majority of the disturbance footprint containing no foraging habitat for the species. Suitable foraging plant species present included *Hakea preissii* and *Eucalyptus loxophleba*, with both species present at a low density (less than 20% cover).
Significant impact (hectares) / Type of feature	3.50	The application area contains 3.5 ha of native vegetation that provide low-moderate quality foraging habitat for Carnaby's black cockatoo.

Calculation	Score (Area)	Rationale
Quality (scale) / Number	5.00	Vegetation was identified to be in Very Good to Degraded (Keighery, 1994) condition, with majority in good condition (2ha). The density of Carnaby foraging plant species (included *Hakea preissii* and *Eucalyptus loxophleba*) was identified as 10-20% or less than 10% (ELA, 2023), therefore the quality of the foraging vegetation is classed as 'low to moderate' or "low" with the score of 3 for site condition (DCCEEW's scoring system). Noting that the application area is mapped within the Carnaby's modelled distribution, with 2 breeding sites mapped within 10 km, and the application area is also located within an extensively cleared part of the species' range and available foraging habitat in the local area is limited; a value of 2 was used for site context, resulting in the total score of 5.
Rehabilitation credit		
Description		The proposed revegetation onsite does not include suitable habitat species for black cockatoos.
Offset		
Description	Land acquisition within the Lot 291 on Deposited Plan 418426	The applicant proposed to place the Lot 291 on Deposited Plan 418426 into conservation covenant and use 23.28 ha within the lot to offset this application. This area contains 9.26 ha of Eucalypt woodland, which is considered provide suitable foraging habitat for Carnaby's cockatoo.
Proposed offset (area in hectares)	4.89	Applicant proposed to use 4.89 ha of areas mapped as providing Moderate foraging habitat (Vegetation type HP Em Ell Ma) (Onshore, 2025). This area can mitigate 60.3% of SRI
Current quality of offset site	6.00	The coverage of CBC foraging species is from 20-30%, classed as "moderate" quality with the score of 4 for site condition. With two known breeding sites within 12 km from the proposed offset site, the value of 2 is given for site context, resulting in the total score of 6 based on DCCEEW's scoring system.
Future quality WITHOUT offset (scale) / Future number WITHOUT offset	5.00	The vegetation condition will be decreased over time due to free access by farming/grazing activities and high occurrence of rabbits onsite.
Future quality WITH offset (scale) / Future number WITH offset	7.00	Applicant proposed to fence the offset site and bait for rabbit (if necessary). The quality of vegetation is expected to increase (at least 30-40% foliage cover) in long term with these measures.
Time until ecological benefit (years)	20.00	The vegetation condition is expected to increase with higher foraging resources for Carnaby's cockatoos after 20 years
Confidence in offset result (%)	0.9	There is a high level of confidence that a land acquisition offset and proposed management measures will provide the ecological benefits to mitigate the impacts of the proposed clearing.
Duration of offset implementation (maximum 20 years)	20.00	The maximum duration of 20 years is applied for land acquisition offset, as per DWER's Guideline for quantifying environmental offsets
Time until offset site secured (years)	2.00	Assuming the offset site will be secured within two years of clearing as to be conditioned on the permit
Risk of future loss WITHOUT offset (%)	20.0%	The offset site is in a rural area with a high risk of loss given the current and ongoing level of grazing
Risk of future loss WITH offset (%)	5%	The applicant committed to secure the offset site in perpetuity via a conservation covenant, which will reduce the risk of loss in the future.

Calculation 2.1 – Extensively cleared landscape – Good condition

***Area* (impact site)**

Part A: Significant impact calculation *Area*			
Significant impact	Description	Quantum of impact	
	Clearing of significant remnant native vegetation a highly cleared area	Significant impact (hectares)	10.60
		Quality (scale)	5.00
		Total quantum of impact	5.30

Part B: Rehabilitation credit calculation *Area* (onsite)					
Rehabilitation Credit	Description	Proposed rehabilitation (area in hectares)	1.14	Time until ecological benefit (years)	12.00
	Revegetation of 1.14 ha within the application area	Current quality of rehabilitation site (scale)	0.00	Confidence in rehabilitation result (%)	90.0%
		Future quality WITHOUT rehabilitation (scale)	0.00	Rehabilitation credit	0.51
		Future quality WITH rehabilitation (scale)	5.00		

Part C: Significant residual impact calculation *Area*		
Significant residual impact	Total quantum of impact	5.30
	Rehabilitation credit	0.51
	Significant residual impact	4.79

Environmental value (step 1)	Clearing of significant remnant native vegetation a highly cleared are	Significant impact (step 2, part A)	10.60
		Rehabilitation credit (step 2, part B)	0.51
		Significant residual impact (step 2, part C)	4.79

***Area* (offset site)**

Offset calculation *Area*							
Offsets calculation	Description	Proposed offset (area in hectares)	4.75	Duration of offset implementation (maximum 20 years)	20.00	Offset value	1.32
	Land acquisition within the Lot 291 on Deposited Plan 418426	Current quality of offset site (scale)	5.00	Time until offset site secured (years)	2.00	What-if Analysis	27.6%
		Future quality WITHOUT offset (scale)	3.00	Risk of future loss WITHOUT offset (%)	20.0%		
		Future quality WITH offset (scale)	6.00	Risk of future loss WITH offset (%)	5.0%	What-if Analysis Reinstate Formula	
		Time until ecological benefit (years)	20.00				
		Confidence in offset result (%)	80.0%			OFFSET ADEQUATE?	NO

Calculation	Score (Area)	Rationale
Conservation significance		
Description	Clearing of significant remnant native vegetation in a highly cleared area	Application area is in the Avon Wheatbelt region which retains only 18.5% of its original native vegetation extent. The two mapped vegetation associations are also underrepresented.
Type of environmental value	Vegetation/habitat	Vegetation
Conservation significance of environmental value	Terrestrial native vegetation complex - <30% extent remaining in the bioregion	Application area is in the Avon Wheatbelt region (18.5% vegetation remaining); The vegetation associations Victoria Plain 631 and 142 retain 13.97% and 6.78% respectively.
Landscape-level value impacted	yes/no	yes - clearing in an extensively cleared landscape
Significant impact		
Description	Clearing of significant remnant native vegetation in a highly cleared area	The application proposed to clear 18.4 ha, including 0.3 ha in Very Good condition, 8.9 ha in Good condition, 1.4 ha in Degraded condition and 7.8 ha in Completely Degraded condition. The area of vegetation in Completely Degraded condition does not require an offset.
Significant impact (hectares) / Type of feature	10.60	Total area of Very Good, Good and Degraded (Keighery, 1994) condition vegetation

Calculation	Score (Area)	Rationale
Quality (scale) / Number	5.00	The majority of the application are requiring an offset (73% of the area) is in Good condition.
Rehabilitation credit		
Description	Revegetation of 1.14 ha within the application area	The applicant proposed to revegetate 1.14 ha onsite. This gives a rehabilitation credit of 0.51.
Proposed rehabilitation (area in hectares)	1.14	As above
Current quality of rehabilitation site / Start number (of type of feature)	0.00	The area will be cleared and will be devoid of native vegetation prior to revegetation
Future quality WITHOUT rehabilitation (scale) / Future number WITHOUT rehabilitation	0.00	The vegetation condition is unchanged without the revegetation
Future quality WITH rehabilitation (scale) / Future number WITH rehabilitation	5.00	The applicant proposed to revegetate with the target to reflect the current vegetation community VC2 - samphire shrubland on saline flats and the revegetated vegetation will be managed in Good condition or better (CBH, 2025)". Assuming that the revegetation will be conducted using a management plan and will result in Good (Keighery, 1994) condition native vegetation.
Time until ecological benefit (years)	12.00	Noting the targeted vegetation communities of the revegetation areas are likely to be shrublands, it is expected all vegetation layers become established and natural cycles stabilised after 12 years.
Confidence in rehabilitation result (%)	0.9	Assuming the revegetation will be undertaken by a suitably qualified specialist, with ongoing monitoring and maintenance to achieve completion criteria to ensure the rehabilitation is successful.
Offset		
Description	Land acquisition within the Lot 291 on Deposited Plan 418426	The applicant proposed to place the Lot 291 on Deposited Plan 418426 into conservation covenant, and use 23.28 ha within the lot to offset this application. According to the site survey report (Onshore, 2025), the offset site includes 5.44ha in Good (Keighery, 1994) condition and 19.79 ha in Degraded (Keighery, 1994) condition. The offset area includes 4.75 ha in Good condition and 18.45 ha in Degraded condition.
Proposed offset (area in hectares)	4.75	The proposed offset area in Good (Keighery, 1994) condition.
Current quality of offset site	5.00	The vegetation is in Good (Keighery, 1994) condition. This area will mitigate the significant residual impacts by 27.6%
Future quality WITHOUT offset (scale) / Future number WITHOUT offset	3.00	Noting the current Good condition of vegetation, it is anticipated that the vegetation condition will be significant decreased after 20 years due to free access by farming/grazing activities
Future quality WITH offset (scale) / Future number WITH offset	6.00	Applicant proposed to fence the offset site and bait the rabbit (if necessary). The quality of vegetation is expected to increase in long term to achieve Good to Very Good (Keighery, 1994)

Calculation	Score (Area)	Rationale
		condition with the fencing as grazing has been identified as one of the major threats of the proposed offset site (Onshore, 2025).
Time until ecological benefit (years)	20.00	The applicant committed to monitor, manage the site and undertake any remedial actions required in 20 years to achieve the targeted condition. The vegetation condition is expected to increase after 20 years, with the regeneration of shrub and herb layers to achieve a Good to Very Good (Keighery, 1994) condition
Confidence in offset result (%)	0.8	There is a medium level of confidence that a land acquisition offset and proposed management measures will provide the ecological benefits to mitigate the impacts of the proposed clearing.
Duration of offset implementation (maximum 20 years)	20.00	The maximum duration of 20 years is applied for land acquisition offset, as per DWER's Guideline for quantifying environmental offsets
Time until offset site secured (years)	2.00	Assuming the offset site will be secured within two years of clearing as to be conditioned on the permit
Risk of future loss WITHOUT offset (%)	20.0%	The offset site is in a rural area with a high risk of loss given the current and ongoing level of grazing
Risk of future loss WITH offset (%)	5%	The applicant committed to place the offset site in perpetuity via a conservation covenant, which will reduce the risk of loss in the future.

Calculation 2.1 – Extensively cleared landscape – Degraded condition

***Area* (impact site)**

Part A: Significant impact calculation *Area*			
Significant impact	Description	Quantum of impact	
	Clearing of significant remnant native vegetation a highly cleared area	Significant impact (hectares)	10.60
		Quality (scale)	5.00
		Total quantum of impact	5.30

Part B: Rehabilitation credit calculation *Area* (onsite)					
Rehabilitation Credit	Description	Proposed rehabilitation (area in hectares)	1.14	Time until ecological benefit (years)	12.00
	Revegetation of 1.14 ha within the application area	Current quality of rehabilitation site (scale)	0.00	Confidence in rehabilitation result (%)	90.0%
		Future quality WITHOUT rehabilitation (scale)	0.00	Rehabilitation credit	0.51
		Future quality WITH rehabilitation (scale)	5.00		

Part C: Significant residual impact calculation *Area*		
Significant residual impact	Total quantum of impact	5.30
	Rehabilitation credit	0.51
	Significant residual impact	4.79

Environmental value (step 1)	Clearing of significant remnant native vegetation a highly cleared are	Significant impact (step 2, part A)	10.60
		Rehabilitation credit (step 2, part B)	0.51
		Significant residual impact (step 2, part C)	4.79

***Area* (offset site)**

Offset calculation
Area

Offsets calculation	**Description**	**Proposed offset (area in hectares)**	18.45	**Duration of offset implementation (maximum 20 years)**	20.00	**Offset value**	**4.58**
	Land acquisition within the Lot 291 on Deposited Plan 418426	**Current quality of offset site (scale)**	2.00	**Time until offset site secured (years)**	2.00	What-if Analysis	**95.5%**
		Future quality WITHOUT offset (scale)	1.00	**Risk of future loss WITHOUT offset (%)**	20.0%		
		Future quality WITH offset (scale)	4.00	**Risk of future loss WITH offset (%)**	5.0%	What-if Analysis Reinstate Formula	
		Time until ecological benefit (years)	20.00				
		Confidence in offset result (%)	80.0%			**OFFSET ADEQUATE?**	**NO**

Calculation	Score (Area)	Rationale
Conservation significance		
Description	Clearing of significant remnant native vegetation in a highly cleared area	Application area is in the Avon Wheatbelt region which retains only 18.5% of its original native vegetation extent. The two mapped vegetation associations are also underrepresented.
Type of environmental value	Vegetation/habitat	Vegetation
Conservation significance of environmental value	Terrestrial native vegetation complex - <30% extent remaining in the bioregion	Application area is in the Avon Wheatbelt region (18.5% vegetation remaining); The vegetation associations Victoria Plain 631 and 142 retain 13.97% and 6.78% respectively.
Landscape-level value impacted	yes/no	yes - clearing in an extensively cleared landscape
Significant impact		
Description	Clearing of significant remnant native vegetation in a highly cleared area	The application proposed to clear 18.4 ha, including 0.3 ha in Very Good condition, 8.9 ha in Good condition, 1.4 ha in Degraded condition and 7.8 ha in Completely Degraded condition. The area of vegetation in Completely Degraded condition does not require an offset.
Significant impact (hectares) / Type of feature	10.60	Total area of Very Good, Good and Degraded (Keighery, 1994) condition vegetation

Calculation	Score (Area)	Rationale
Quality (scale) / Number	5.00	The majority of the application are requiring an offset (73% of the area) is in Good condition.
Rehabilitation credit		
Description	Revegetation of 1.14 ha within the application area	The applicant proposed to revegetate 1.14 ha onsite. This gives a rehabilitation credit of 0.51.
Proposed rehabilitation (area in hectares)	1.14	As above
Current quality of rehabilitation site / Start number (of type of feature)	0.00	The area will be cleared and will be devoid of native vegetation prior to revegetation
Future quality WITHOUT rehabilitation (scale) / Future number WITHOUT rehabilitation	0.00	The vegetation condition is unchanged without the revegetation
Future quality WITH rehabilitation (scale) / Future number WITH rehabilitation	5.00	The applicant proposed to revegetate with the target to reflect the current vegetation community VC2 - samphire shrubland on saline flats and the revegetated vegetation will be managed in Good condition or better (CBH, 2025)". Assuming that the revegetation will be conducted using a management plan and will result in Good (Keighery, 1994) condition native vegetation.
Time until ecological benefit (years)	12.00	Noting the targeted vegetation communities of the revegetation areas are likely to be shrublands, it is expected all vegetation layers become established and natural cycles stabilised after 12 years.
Confidence in rehabilitation result (%)	0.9	Assuming the revegetation will be undertaken by a suitably qualified specialist, with ongoing monitoring and maintenance to achieve completion criteria to ensure the rehabilitation is successful.
Offset		
Description	Land acquisition within the Lot 291 on Deposited Plan 418426	The applicant proposed to place the Lot 291 on Deposited Plan 418426 into conservation covenant, and use 23.28 ha within the lot to offset this application. According to the site survey report (Onshore, 2025), the offset site includes 5.44ha in Good (Keighery, 1994) condition and 19.79 ha in Degraded (Keighery, 1994) condition. The offset area includes 4.75 ha in Good condition and 18.45 ha in Degraded condition.
Proposed offset (area in hectares)	18.45	The proposed offset area is in Degraded (Keighery, 1994) condition which will mitigate the significant residual impacts by 95.5%.
Current quality of offset site	2.00	The vegetation is in Degraded (Keighery, 1994) condition.
Future quality WITHOUT offset (scale) / Future number WITHOUT offset	1.00	The vegetation condition will be decreased due to free access by farming/grazing activities
Future quality WITH offset (scale) / Future number WITH offset	4.00	Applicant proposed to fence the offset site and bait the rabbit (if necessary). The quality of vegetation is expected to increase in long term to achieve Good (Keighery, 1994) condition with the

Calculation	Score (Area)	Rationale
		fencing as grazing has been identified as one of the major threats of the proposed offset site (Onshore, 2025).
Time until ecological benefit (years)	20.00	The applicant commited to monitor, manage the site and undertake any remedial actions required in 20 years to achieve the targeted condition. The vegetation condition is expected to increase after 20 years
Confidence in offset result (%)	0.8	There is a medium level of confidence that a land acquisition offset and proposed management measures will provide the ecological benefits to mitigate the impacts of the proposed clearing.
Duration of offset implementation (maximum 20 years)	20.00	The maximum duration of 20 years is applied for land acquisition offset, as per DWER's Guideline for quantifying environmental offsets
Time until offset site secured (years)	2.00	Assuming the offset site will be secured within two years of clearing as to be conditioned on the permit
Risk of future loss WITHOUT offset (%)	20.0%	The offset site is in a rural area with a high risk of loss given the current and ongoing level of grazing
Risk of future loss WITH offset (%)	5%	The applicant committed to place the offset site in perpetuity via a conservation covenant, which will reduce the risk of loss in the future.

Appendix G. Biological survey information excerpts

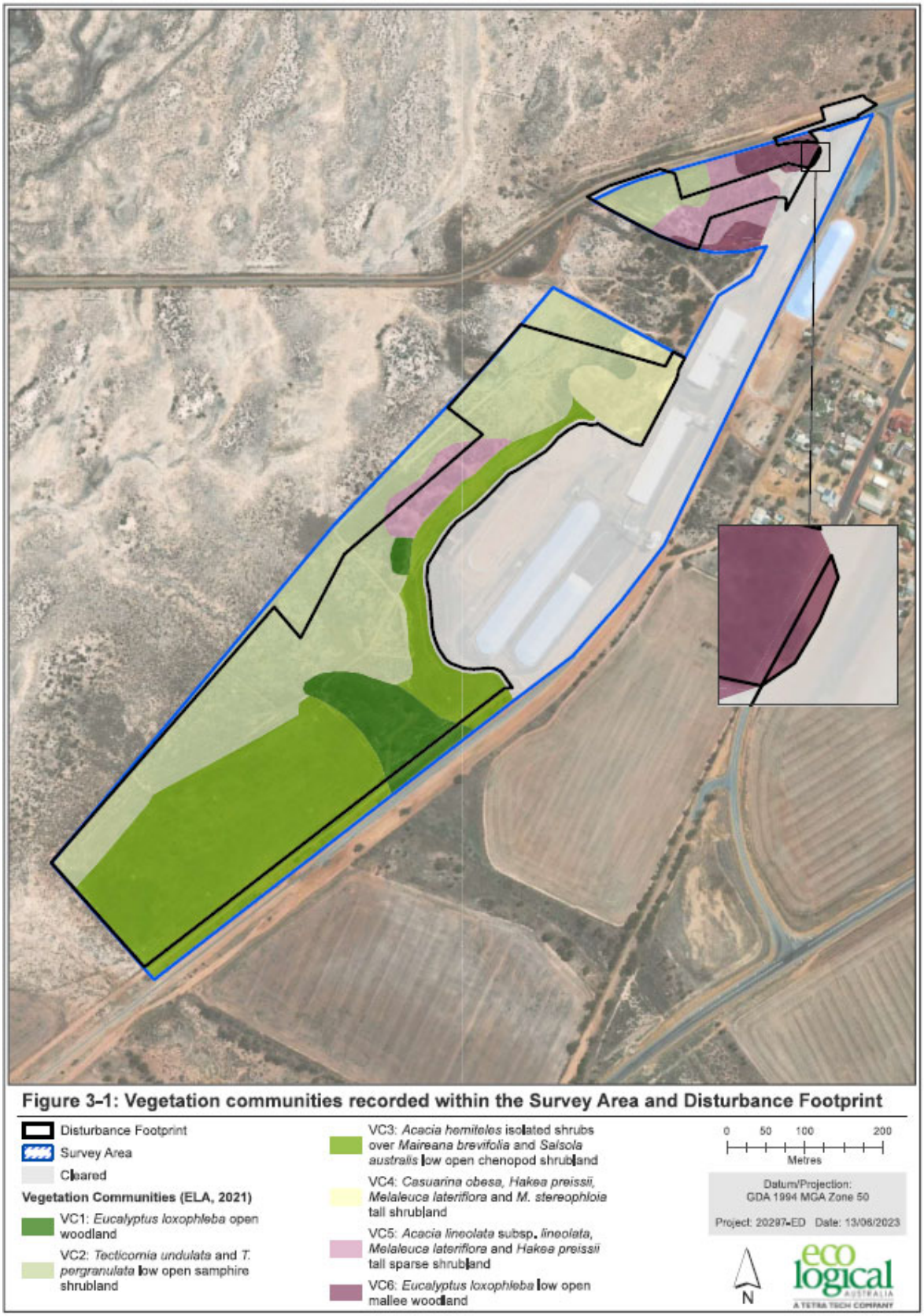

Figure G.1. Mapping of vegetation communities within the application area (ELA, 2023)

Figure G.2. Representative photos of vegetation communities within the application area (ELA, 2023)

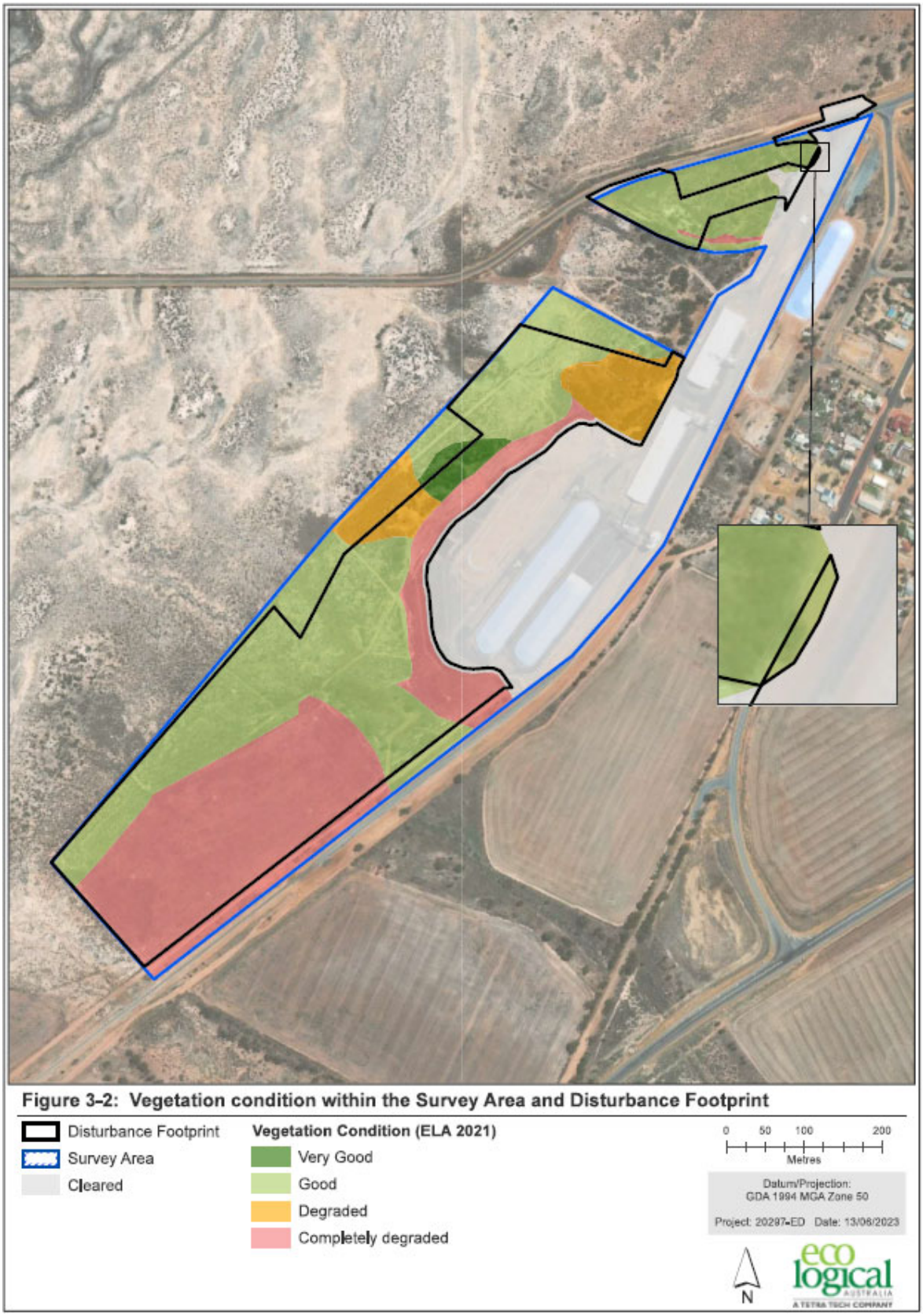

Figure G.3. Mapping of vegetation condition within the application area (ELA, 2023)

Table G.1. Assessment of the Wheatbelt Woodland TEC within the application area (ELA, 2021a)

KEY DIAGNOSTIC CHARACTERISTICS

Key diagnostic characteristics (DotEE 2015)	Outcome
Indicators	
Location and physical environment The distribution of the ecological community is limited to these IBRA bioregions and subregions: • Avon Wheatbelt - subregions AVW01 Merredin and AVW02 Katanning; • Mallee - MAL02 Western Mallee only; and • Jarrah Forest – outlying patches in the eastern parts of JAF01 Northern Jarrah Forests and JAF02 Jarrah Forests adjacent to the Avon Wheatbelt, that are off the Darling Range, and receive less than 600 mm mean annual rainfall. They are effectively an extension of the Avon Wheatbelt landscape in that they comprise areas subject to similar climate, landscape and threats.	Yes. The survey area is located in the Avon Wheatbelt IBRA Bioregion and AVW02 Katanning subregion.
Structure The structure of the ecological community is a woodland in which the minimum crown cover of the tree canopy in a mature woodland is 10% (crowns measured as if they are opaque).	Yes. Crown cover in the woodland community VC1 is >10%. No. Crown cover in the woodland community VC6 is <10%, therefore doesn't fulfil the structure characteristic.
Presence of key species The key species of the tree canopy are species of *Eucalyptus* as identified in Table 2a (DotEE 2015). These are species that typically have a single trunk. One or more of the tree species in Table 2a are dominant or co-dominant within a patch of the ecological community. If other species are present in the tree canopy (e.g. species in Table 2b or other taxa) then these collectively do not occur as dominants in the tree canopy.	Yes. The dominant eucalypt in VC1 and VC6 is *Eucalyptus loxophleba*. There was not enough material to determine if the species was subsp. *Eucalyptus loxophleba* subsp. *loxophleba* (Table 2a) or *Eucalyptus loxophleba* subsp. *lissophloia*, *Eucalyptus loxophleba* subsp. *supralaevis* (Table 2b). Therefore, a precautionary approach was taken, in that the species is a key canopy species.
Presence of native understorey A native understorey is present but is of variable composition, being a combination of grasses, other herbs and shrubs, as specified in section 2.3.2 and in Table A1 of Appendix A (DotEE 2015).	Yes. Native understorey is present. 19 of the 51 native flora taxa recorded in the survey area occur within Table A1 of Appendix A (DotEE 2015). It should be noted that the plant species list in Tables A1 and A4 of Appendix A (DotEE 2015) do not include all plant species that may be encountered in the WA Wheatbelt woodland ecological community.

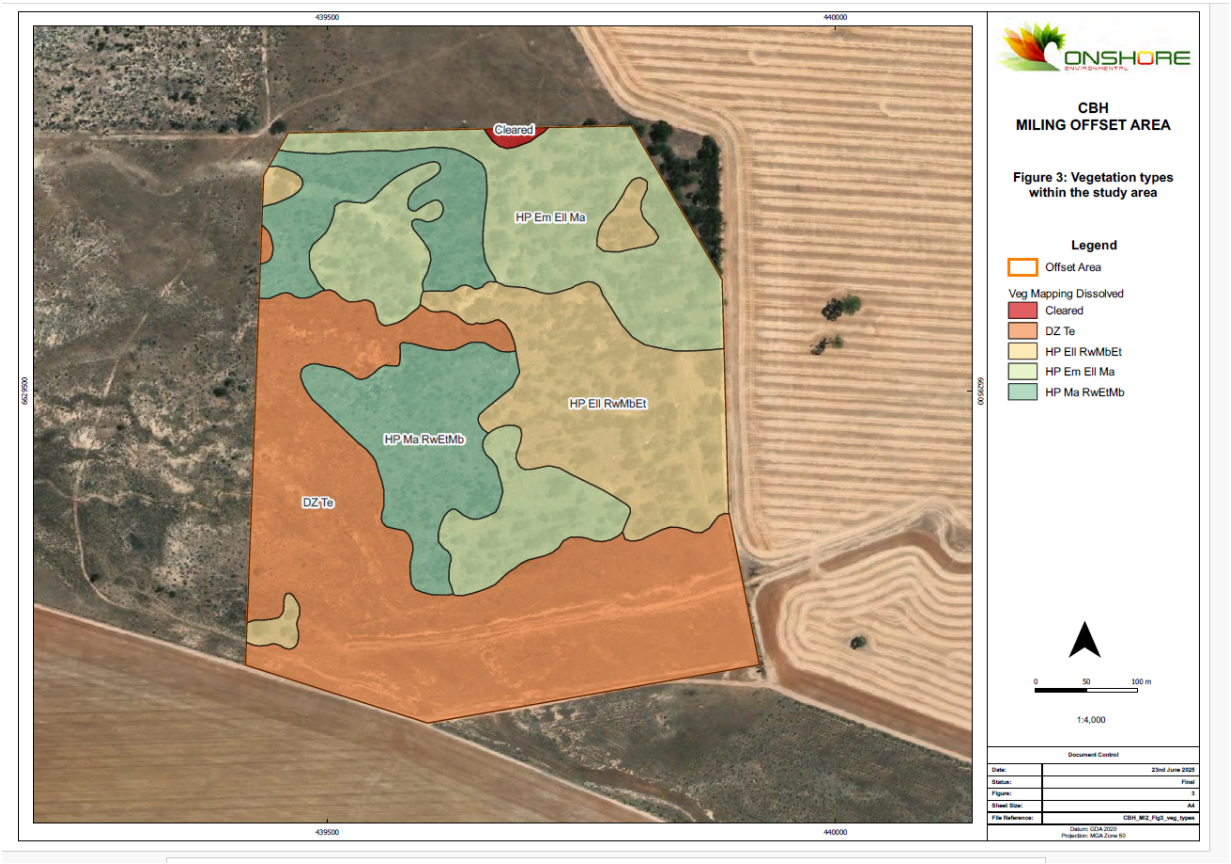

Figure G.4 Mapping of vegetation communities within the offset site. (Onshore Environmental 2025)

Code	HP Em Ell Ma
Broad Floristic Formation	*Eucalyptus* Low Woodland A
Vegetation Type	Low Woodland A of Eucalyptus myriadena (Eucalyptus loxophleba subsp. loxophleba) over Open Scrub of Melaleuca eleuterostachya over Open Dwarf Scrub D of Rhagodia sp. Watheroo (R.J. Cranfield & P.J. Spencer 8183) and Maireana brevifolia over Open Herbs of *Mesembryanthemum nodiflorum and Atriplex codonocarpa on brown sandy loam on hardpan plains and flats

This unit is characterised by the low woodland stratum of *Eucalyptus myriadena*.	
Area (ha)	6.30 ha (24.9% of the study area)
Soils and Geology	Brown sandy loam
Land Form	Hardpan plains and flats
TEC or PEC	Eucalypt woodlands of the Western Australian Wheatbelt: EPBC listed TEC (Critically Endangered), WA listed PEC (Priority 3)
Conservation Significant Flora	None
Vegetation Condition	Good
Disturbances	Currently being grazed by sheep, farm debris, historical ground disturbance, access track, weeds, senescence of older plants
Average Fire Age	Old (6+ yrs)

Code	HP Ell RwMbEt
Broad Floristic Formation	*Eucalyptus* Low Woodland A
Vegetation Type	Low Woodland A (to Open Low Woodland A) of Eucalyptus loxophleba subsp. loxophleba over Open Dwarf Scrub D of Rhagodia sp. Watheroo (R.J. Cranfield & P.J. Spencer 8183), Maireana brevifolia and Enchylaena tomentosa over Open Herbs of *Mesembryanthemum nodiflorum and Sclerolaena diacantha (Atriplex codonocarpa, *Romulea rosea) on brown sandy loam on hardpan plains and flats

This unit is characterised by the low woodland stratum of York Gum.	
Area (ha)	4.65 ha (18.36% of the study area)
Soils and Geology	Brown sandy loam
Land Form	Hardpan plains and flats
TEC / PEC	Eucalypt woodlands of the Western Australian Wheatbelt: EPBC listed TEC (Critically Endangered), WA listed PEC (Priority 3)
Conservation Significant Flora	None
Vegetation Condition	Good to Degraded
Disturbances	Currently being grazed by sheep, evidence of rabbits, farm debris, access tracks, historical ground disturbance, weeds,
Average Fire Age	Old (6+ yrs)

Figure G.5 Vegetation communities within the offset site (Onshore Environmental 2025)

Code	HP Ma RwEtMb
Broad Floristic Formation	*Melaleuca* Scrub
Vegetation Type	Scrub (to Open Scrub) of Melaleuca eleuteroctachya (Melaleuca acuminata subsp. websteri) over Open Dwarf Scrub D of Rhagodia sp. Watheroo (R.J. Cranfield & P.J. Spencer 8183), Enchylaena tomentosa and Maireana brevifolia (Tecticornia spp.) over Open Herbs of *Mesembryanthemum nodiflorum, *Romulea rosea and Hordeum sp. indet. on brown sandy loam on hardpan plains and flats

This unit was characterised by a Scrub to Open Scrub stratum dominated by tall shrubs of *Melaleuca eleuteroctachya*.

Area (ha)	4.43 ha (17.51% of the study area)
Soils and Geology	Brown sandy loam
Land Form	Sandy loam plains and flats
TEC / PEC	None
Conservation Significant Flora	None
Vegetation Condition	Good to Degraded
Disturbances	Currently being grazed by sheep and rabbits, farm debris, historical ground disturbance, access track, weeds, senescence of older plants.
Average Fire Age	Old (6+ yrs)

Code	DZ Te
Broad Floristic Formation	*Tecticornia* Dwarf Scrub D
Vegetation Type	Dwarf Scrub D of Tecticornia lepidosperma, Tecticornia pergranulata subsp. pergranulata, Maireana brevifolia and Enchylaena tomentosa over Open Herbs of *Mesembryanthemum nodiflorum, Podolepis aristata, Atriplex semibaccata and Atriplex codonocarpa over Very Open Low Grass of Eragrostis dielsii on brown clay loam on saline drainage zones and flats

Characterised by the dominance of low samphire shrubs (*Tecticornia lepidosperma, Tecticornia pergranulata* subsp. *pergranulata)* with mixed chenopods on salt effected flats. Evidence that it was previously the *Melaleuca eleuteroctachya* Scrub unit prior to being impacted by salinisation.

Area (ha)	9.85 ha (38.92% of the study area)
Soils and Geology	Brown clay loam, clay sand and light clay
Land Form	Saline flats
TEC / PEC	None
Conservation Significant Flora	None
Vegetation Condition	Degraded (some areas bordering on being rated Completed Degraded)
Disturbances	Impacted by salinisation, currently being grazed by sheep, evidence of rabbits, farm debris, historical ground disturbance, access track, weeds, senescence of older plants.
Average Fire Age	Old (6+ yrs)

Figure G.6 Vegetation communities within the offset site (Onshore Environmental 2025)

Appendix H. Sources of information

H.1. GIS databases

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)

- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

H.2. References

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Co-operative Bulk Handling Limited (CBH) (2023) *Response to DWER's request for further information letter dated 26 September 2023*. Received 7 November 2023 (DWER Ref: DWERDT863478)

Co-operative Bulk Handling Limited (CBH) (2024a) *Response to Item 3 and 4 in DWER's request for further information letter dated 26 September 2023 and items outlined in the email of 27 November 2023*. Received 8 March 2024 (DWER Ref: DWERDT919935)

Co-operative Bulk Handling Limited (CBH) (2024b) *Providing response regarding method to calculate remnant vegetation*. Received 18 April 2024 (DWER Ref: DWERDT942947)

Co-operative Bulk Handling Limited (CBH) (2024c) *Updated response to Item 1 & 3 of the request for further information letter dated 26 September 2023*. Received 21 August 2024 (DWERDT996012)

Co-operative Bulk Handling Limited (CBH) (2025a) *Providing revised revegetation plan and offset proposal for CPS 10262/1*. Received 21 July 2025 (DWER Ref: DWERDT1166997)

Co-operative Bulk Handling Limited (CBH) (2025b) *CBH's agreement with the final offset area for CPS 10262/1*. Received 15 September 2025 (DWER Ref: DWERDT1197417)

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Eco Logical Australia (ELA) (2021b) *Desktop assessment and targeted survey for Western Spiny-tailed Skink for the CBH Miling Expansion Project, Western Australia*. Prepared for CBH Group. IBSA reference number: IBSA-2023-0099.

Eco Logical Australia (ELA) (2021c) *Targeted Flora Survey for the Miling Grain Receival Site project*. Prepared for CBH Group. IBSA reference number: IBSA-2023-0100.

Eco Logical Australia (ELA) (2023) *Miling Grain Receival Site Expansion Native Vegetation Clearing Permit Application Supporting Document*. Prepared for CBH Group (DWER Ref: DWERDT814073).

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