



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 10486/1
Permit Holder:	Co-operative Bulk Handling Limited
Duration of Permit:	From 19 July 2024 to 19 July 2034

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 grain handling facilities.

2. Land on which clearing is to be done

Lot 150 on Deposited Plan 67780, Borden

3. Clearing authorised

The permit holder must not clear more than 0.27 hectares of *native vegetation* within the area 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 19 July 2029

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:

- avoid the clearing of *native vegetation*;
- minimise the amount of *native vegetation* to be cleared; and
- 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 conduct clearing activities in a slow, progressive manner in the direction of adjacent vegetation to allow fauna to move into adjacent *native vegetation* ahead of the clearing activity.

8. Revegetation and rehabilitation

Within 18 months of the commencement date of the permit, the permit holder must implement and adhere to the rehabilitation and revegetation strategy stated in the *Rehabilitation Management Plan*, including but not limited to the following actions:

- (a) establish one (1) *reference quadrat* within the AaLoF vegetation community;
- (b) record the location of the *reference quadrat* established under Condition 8(a) using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings;
- (c) commence *revegetation* and *rehabilitation* over a minimum of 0.31 hectares within the area cross-hatched red in Figure 2 of Schedule 1 by:
 - (i) deliberately *planting* native vegetation that will result in similar species composition, structure and density of native vegetation to the surrounding vegetation;
 - (ii) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area.
 - (iii) undertake weed control;
 - (iv) remove rubbish from the area to be *revegetated* and *rehabilitated*.
- (d) achieve the following completion criteria after the 5-year monitoring period for area *revegetated* and *rehabilitated* under this Permit and for the vegetation to be maintained for the period of two years from the date of the completion criteria having been met:

Item	Criterion	Objectives / targets	Monitoring	Timing
1	Cover and density – number of plants /m2 in each structural	Achieve a similarity in the density of endemic plants to the <i>reference quadrat</i> across upper and mid storey.	Minimum 80% of the number of plants / m2 in upper and mid storey, based on the reference quadrat.	Annually by an <i>environmental specialist</i> until completion criterion has been met and maintained for two years (i.e. three

	layer.			successive monitoring events).
2	Weeds	Weed cover is no greater than the baseline at the <i>reference quadrat</i>	Weed cover shall be no greater than the baseline recorded at the <i>reference quadrat</i> .	Annually by an <i>environmental specialist</i> until completion criterion has been met and maintained for two years (i.e. three successive monitoring events).
3	Weeds	No priority, high impact or highly invasive weeds present	No weeds present that are listed as Priority Alert, High Impact or Rapid invasiveness on the DBCA Wheatbelt Region Impact and Invasiveness Ratings list as updated from time to time.	Annually by an <i>environmental specialist</i> until completion criterion has been met and maintained for two years (i.e. three successive monitoring events).
4	Bare ground	No more than 5 per cent greater than the baseline at the reference site	The <i>rehabilitated area</i> must not have bare ground more than 5 per cent greater than the baseline recorded at the <i>reference site</i> .	Annually by an <i>environmental specialist</i> until completion criterion has been met and maintained for two years (i.e. three successive monitoring events).
5	Gates and boundary fence	Gates and boundary fence to be in good condition with no obvious damage that will enable access by the general public and fauna, including livestock and kangaroos.		Annually until completion criteria 1 – 5 has been met

- (e) engage an *environmental specialist* to make a determination that at least 0.31 hectares of *native vegetation* will survive and meet the completion criteria stated in Condition 8(d) of this permit.

- (f) if the determination made by the *environmental specialist* under condition 8(e) that *revegetation/rehabilitation* has not met the completion criteria outlined in Condition 8(d), undertake remedial action for areas *revegetated* and *rehabilitated*, including:
 - (i) revegetate the area by deliberately *planting* native vegetation that will result in the minimum targets set out in Condition 8(d) and ensuring only *local provenance* seeds and propagating material are used;
 - (ii) undertake further weed control activities; and
 - (iii) annual monitoring of the *revegetated* and *rehabilitated* areas by an *environmental specialist* until the completion criteria, outlined in Condition 8(d) are met.

PART III - RECORD KEEPING AND REPORTING

9. 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	<ul style="list-style-type: none"> (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; and (f) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> and <i>dieback</i> in accordance with condition 6.
2.	In relation to rehabilitation management pursuant to condition 8	<ul style="list-style-type: none"> (a) the location and size of <i>the reference quadrat</i> in accordance with condition 8 recorded using a GPS unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings or decimal degrees; (b) the baseline data recorded for the reference quadrat, including species richness, density, vegetation structure, bare ground cover, weed cover and vegetation condition;

No.	Relevant matter	Specifications
		<ul style="list-style-type: none"> (c) a description of the <i>revegetation</i> and <i>rehabilitation</i> activities undertaken each year, once commenced, outlined in a report produced by an <i>environmental specialist</i>; (d) the location and size of the areas <i>revegetated</i> and <i>rehabilitated</i> (in hectares) recorded using a GPS unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings or decimal degrees; (e) the date that <i>revegetation</i> and <i>rehabilitation</i> works began; (f) at least two photographs of the areas <i>revegetated/ rehabilitated</i> recorded annually at the same location each year; (g) the species composition, structure, density of the areas <i>revegetated/rehabilitated</i> recorded annually; (h) a description of the extent of bare ground cover, weed cover and vegetation condition of the areas <i>revegetated/ rehabilitated</i>, recorded annually; (i) a species list identifying those species <i>planted</i>; (j) the assessment of the <i>revegetation</i> and <i>rehabilitation</i> against criterion outline in Condition 8(d); (k) a copy of the <i>environmental specialist</i> report and activities undertaken during monitoring; and (l) other actions taken in accordance with conditions 8.

10. Reporting

The permit holder must provide to the *CEO* the records required under condition 9 of this permit when requested by the *CEO*.

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 <i>Environmental</i>

Term	Definition
	<i>Protection Act 1986.</i>
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
fill	means material used to increase the ground level, or to fill a depression.
dieback	means the effect of <i>Phytophthora</i> species on native vegetation.
department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent and has a minimum of two (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.
local provenance	means native vegetation seeds and propagating material from natural sources within 100 kilometres 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.
planting	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;
reference quadrat	means a sample plot established for the purpose of data collection and monitoring vegetation characteristics, for example species composition, structure, density, foliage cover, vegetation condition (Keighery, 1994), weed species and extent, and extent of bare ground. Measurements from fixed reference quadrat or plot where biodiversity components are measured are used to set measurable completion criteria for revegetation projects.
Rehabilitation Management Plan	means the management plan which includes the rehabilitation and revegetation strategy relevant to this Permit, as provided in the document titled ' <i>Borden Enhancement Project - Rehabilitation Management Plan</i> ' (CBH Group, 2024), dated 24 May 2024.
rehabilitation sites	means the area cross-hatched red on Figure 1 of Schedule 1
rehabilitate rehabilitated/ rehabilitation	/ means actively managing an area containing native vegetation in order to improve the ecological function of that area.
revegetate/ revegetated/ revegetation	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,

Term	Definition
	structure and density is similar to pre-clearing vegetation types in that area.
weeds	<p>means any plant that is:</p> <ul style="list-style-type: none"> (a) a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i>; 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

REFERENCES

Co-operative Bulk Handling Limited (CBH) (2024c). *Clearing permit application CPS 10486/1. Borden Enhancement Project Rehabilitation Management Plan*. Received 24 May 2024 (DWER Ref: DWERDT953662)



Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

26 June 2024

Schedule 1

The boundary of the area authorised to be cleared is shown in the map below (Figure 1).



Figure 1: Map of the boundary of the approved area.

The area cross-hatched yellow indicates the area within which clearing may occur.



Figure 2: Map of the boundary of the revegetation and rehabilitation area

The area cross-hatched red indicates the area within which revegetation and rehabilitation is required under this permit.



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10486/1
Permit type:	Purpose permit
Applicant name:	Co-operative Bulk Handling Limited
Application received:	17 January 2024
Application area:	0.27 hectares (ha) of native vegetation within a 1.25 ha clearing footprint
Purpose of clearing:	Expanding grain handling facilities
Method of clearing:	Mechanical
Property:	Lot 150 on Deposited Plan 67780
Location (LGA area/s):	Shire of Gnowangerup
Localities (suburb/s):	Borden

1.2. Description of clearing activities

The proposal is to clear up to 0.27 ha of native vegetation within a clearing footprint of 1.25 ha within Lot 150 on Deposited Plan 67780.

The area proposed to be cleared is located at Co-operative Bulk Handling Limited's (CBH) grain handling facility in Borden. The facility has been operational since 1976 and is surrounded by areas that have been historically cleared for farming. The vegetation condition within the application area has been impacted through disturbance from operational activities at the facility.

The proposed clearing is required for the upgrades and expansion of the grain handling facilities due to the increased production and demand for the grain. The project includes an upgrade and relocation of the weighbridge, construction of bulkhead storages, access roads, bypass lanes and stormwater drainage infrastructure.

The size of the clearing footprint was revised during the assessment, with the clearing footprint increased to 1.25 ha from the original application area of 0.34 ha. The amount of clearing proposed remained unchanged.

1.3. Decision on application

Decision:	Granted
Decision date:	26 June 2024
Decision area:	0.27 ha of native vegetation within a 1.25 ha clearing footprint 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 no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix B), relevant datasets (see Appendix F.1), the findings of a reconnaissance flora and vegetation survey, (see Appendix E), the clearing principles set out in Schedule 5 of the EP Act (see Appendix C), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

The assessment identified that the proposed clearing would result in:

- the loss of 0.27 ha of native vegetation considered significant as a remnant of native vegetation within an extensively cleared landscape,
- the removal of remnant vegetation that may be used as a refuge and corridor for movement of fauna in the local area.
- the risk to surrounding vegetation from the introduction and spread of weeds and dieback.

After consideration of the available information, as well as the applicant’s minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing is unlikely lead to an unacceptable risk to environmental values. The applicant has suitably demonstrated avoidance and minimisation measures and the revegetation and rehabilitation activities proposed will address the impacts to remnant native vegetation within the application area (see 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;
- revegetation and rehabilitation of 0.31 ha of vegetation in a Degraded to Completely Degraded (Keighery, 1994) condition within Lot 150 on Deposited Plan 67780.

1.5. Site map

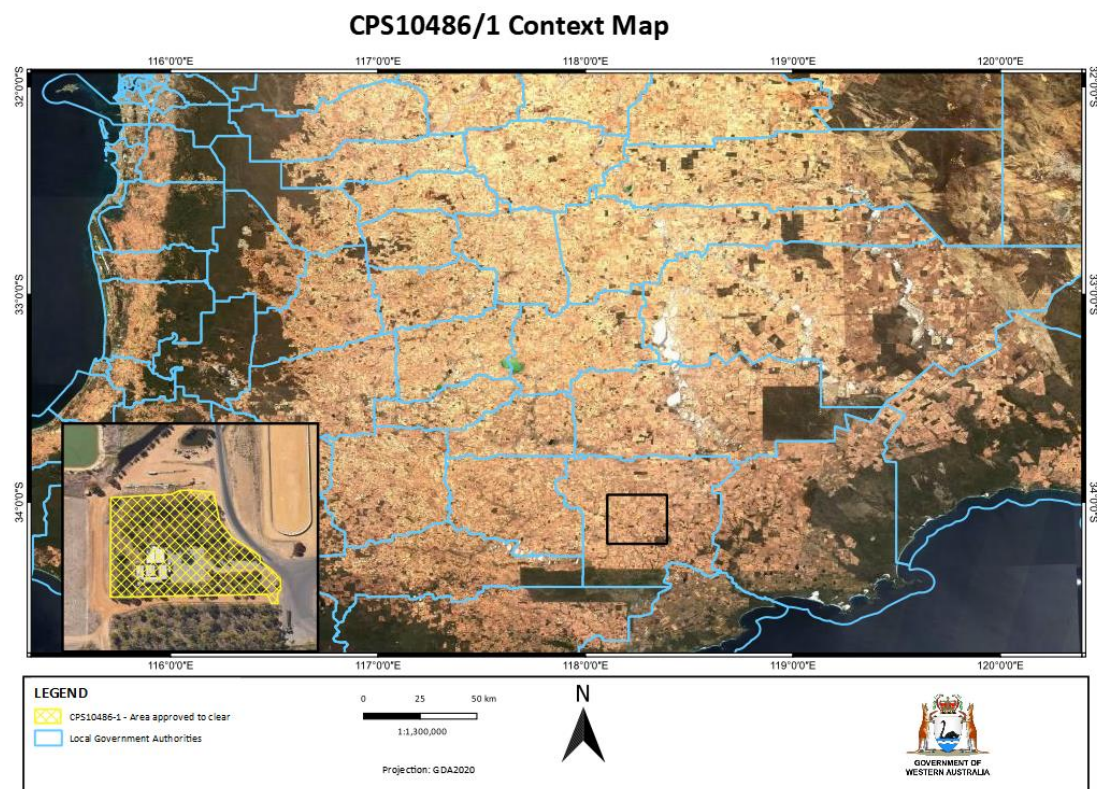


Figure 1. Context map of the application area. The area cross-hatched yellow indicates the area authorised to be cleared under the granted clearing permit.



Figure 2. Map of the application area

The area cross-hatched yellow indicates the area within which clearing is authorised under the granted clearing permit. The area cross-hatched red indicates the area subject to rehabilitation conditions.

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 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)
- *Planning and Development Act 2005* (WA) (P&D 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)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Within the application area, the applicant has provided an indication of the areas that they are proposing to clear and have specified that they do not intend to clear outside of these boundaries (CBH, 2024a; 2024b) (see figure 3).



Figure 3: Map of the application area. The area cross-hatched yellow indicates the area within which clearing is authorised under the granted clearing permit. The area cross-hatched red indicates the area subject to conditions. The areas cross-hatched green show the areas within which the applicant has indicated the clearing will take place.

The applicant conducted an evaluation of various options for the project and advised that the clearing area was selected to avoid impacts on environmental values. A biological survey was conducted to support the selection of the areas proposed to be cleared.

The environmental values found within the broader 49.5 ha survey area that have been avoided in the selection of the proposed areas to be cleared include:

- mixed Eucalyptus woodland that provides suitable foraging habitat for Carnaby’s black cockatoo.
- vegetation containing priority flora species.

A Construction Environmental Management Plan (CEMP) has also been prepared for the project. The CEMP includes plans and measures to protect vegetation and fauna, management of weeds and dieback, prevention of hydrocarbon spills and environmental induction of personnel engaged in clearing and construction works.

After consideration of the avoidance and mitigation measure, it was determined that further mitigation measures are required to counterbalance the loss of 0.27 ha of significant remnant vegetation from an extensively cleared landscape (see Section 3.2.1.)

The applicant proposed the revegetation and rehabilitation of a 0.31 ha of an area within Lot 150 to mitigate the impact of clearing native vegetation within an extensively cleared area. The location of the proposed rehabilitation site is depicted in the area cross-hatched red in Figure 2. The proposed rehabilitation site has been subject to historical disturbance and threatening processes, including weed infestation associated with edge effects. It is characterised as lacking mid-storey vegetation with understory being dominated by weedy herbs and grasses. The rehabilitation is intended to improve vegetation condition from Degraded and Completely Degraded, to at least Good (Keighery) condition.

A rehabilitation management plan was submitted by the applicant detailing the methods of rehabilitation. The plan was prepared in accordance with the Department of Water and Environmental Regulation (DWER) 'A Guide to Preparing Revegetation Plans for Clearing Permits' (2018) (CBH, 2024c).

The objectives of the rehabilitation are as follows:

- rehabilitate an area (Rehabilitation Area) to a basic vegetation structure, or the ability to regenerate it;
- manage aggressive weed species;
- manage over grazing of vegetation.

Given the objective to rehabilitate the vegetation to at least Good (Keighery, 1994) condition, the applicant proposed to infill plant the Rehabilitation Area with native vegetation species similar to that of nearby vegetation patches. A previous survey of the application area and surrounds identified the native flora species listed in Table 1 below as occurring within nearby patches of vegetation. Although the rehabilitation is primarily intended to counterbalance the loss of significant remnant vegetation, the applicant will endeavour to select and target locally available shrubs and tree species for planting which are listed by the Department of Environment and Conservation (2011) as suitable for nesting and feeding by the Carnaby's black cockatoo.

Noting the relatively small extent of the IBRA subregion (Western Mallee) within which the rehabilitation area is located and the location of the project area near to the borders of the Mallee, Esperance Plains, Jarrah Forest, and Avon Wheatbelt IBRA regions, the Delegated Officer recognises the challenge the applicant may have in sourcing seed and propagating materials for rehabilitation from within the same sub-bioregion. On that basis, the Delegated Officer considers that it is acceptable for seed and propagating materials to be sourced from within 100km of the application area.

Table 1. Flora species identified during botanical surveys and to be planted for rehabilitation

Species	Form	Priority for planting for Carnaby's (DEC, 2011)	Targeted species for this rehabilitation
<i>Acacia acuminata</i>	Tree		
<i>Acacia consobrina</i>	Shrub		
<i>Acacia saligna</i>	Shrub	Low	Yes
<i>Allocasuarina fraseriana</i>	Tree		
<i>Austrostipa compressa</i>	Grass		
<i>Calothamnus quadrifus</i>	Shrub		
<i>Eucalyptus longicornis</i>	Tree	Low	Yes
<i>Eucalyptus occidentalis</i>	Tree	Low	Yes
<i>Hakea lisocarpha</i>	Shrub	Medium	Yes
<i>Melaleuca hamata</i>	Shrub		
<i>Melaleuca undulata</i>	Shrub		
<i>Melaleuca drummondii</i>	Shrub		
<i>Santalum acumiatum</i>	Tree		
<i>Thysanotus patersoni</i>	Herb		

An assessment of the rehabilitation management plan was undertaken and using the Western Australia Environmental Offsets Metrics and having consideration for the Environmental Offset Policy (2011) and the Environmental Offset Guidelines (2014), it was determined that the proposed revegetation of 0.31 ha of Degraded and Completely Degraded vegetation is adequate to counterbalance the loss of 0.27 ha of significant remnant vegetation within the extensively cleared landscape. The calculation identified that the revegetation would be sufficient to ensure that no significant residual impacts remain.

Based on the above, the Delegated Officer was satisfied that the applicant has undertaken reasonable measures to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix B) 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 Appendix C) identified that the impacts of the proposed clearing present a risk to biological values (fauna and TEC) and significant remnant vegetation. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values - Significant remnant vegetation and TEC - Clearing Principles (d) and (e)

Assessment

Eucalypt Woodlands of the WA Wheatbelt TEC

The vegetation proposed to be cleared is mapped as the Pallinup (938) vegetation association within the Western Mallee subregion of the Mallee Bioregion, described as York gum, salmon gum etc. *Eucalyptus loxophleba*, *E. salmonophloia*. Goldfields; gimlet, redwood etc. *E. salubris*, *E. oleosa*. Riverine; rivergum *E. camaldulensis*. Tropical; messmate, woolybush (Shepherd et al, 2001). The majority of the application area is also mapped as the Eucalypt Woodlands of the Australian Wheatbelt TEC.

The Approved Conservation Advice for the Eucalypt Woodlands of the WA Wheatbelt TEC (Department of the Environment, 2015) described (WA Wheatbelt Woodlands) as vegetation dominated by a complex mosaic of eucalypt species with a tree or mallet form over an understorey that is highly variable in structure and composition. The trees typically are spaced, and the canopy is relatively open. The WA Wheatbelt Woodlands ecological community is endemic to south-western WA. It occupies a transitional zone between the wetter forests associated with the Darling Range and the southwest coast, and the low woodlands, mallee and shrublands of the semi-arid to arid interior. The understorey beneath the woodland tree canopy is highly variable in both structure and composition across the wheatbelt. The highly biodiverse nature of the wheatbelt landscape, where the composition of plant species can vary markedly from patch to patch, means it is difficult to prepare a comprehensive list of plant species for the WA Wheatbelt Woodland ecological community.

Condition thresholds provide guidance on when a patch of an ecological community retains sufficient conservation values to be considered a 'Matter of National Environmental Significance', as defined under the EPBC Act.

A patch of the WA Wheatbelt Woodlands must show the following key diagnostic characteristics:

- 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.
- 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).
- The key species of the tree canopy are species of Eucalyptus as identified in Table 2, below. These are species that typically have a single trunk. One or more of the tree species in Table 2 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 3 or other taxa) then these collectively do not occur as dominants in the tree canopy.
- A native understorey is present but is of variable composition, being a combination of grasses, other herbs and shrubs.

Table 2. Tree canopy species of the WA Wheatbelt Woodlands ecological community.

One or more of these species are dominant or co-dominant within a given patch of the ecological community (Department of the Environment, 2015)

Scientific name	Common name/s
<i>Eucalyptus accedens</i>	powder-bark; powder-bark wandoo
<i>Eucalyptus aequioperta</i>	Welcome Hill gum
<i>Eucalyptus alipes</i>	Hyden mallet
<i>Eucalyptus astringens</i> subsp. <i>astringens</i>	brown mallet
<i>Eucalyptus capillosa</i>	wheatbelt wandoo
<i>Eucalyptus densa</i> subsp. <i>densa</i>	narrow-leaved blue mallet
<i>Eucalyptus extensa</i>	yellow mallet
<i>Eucalyptus falcata</i>	silver mallet
<i>Eucalyptus gardneri</i> subsp. <i>gardneri</i>	blue mallet
<i>Eucalyptus goniocarpa</i>	Lake King mallet
<i>Eucalyptus kondininensis</i>	Kondinin blackbutt
<i>Eucalyptus longicornis</i>	red morrel
<i>Eucalyptus loxophleba</i> subsp. <i>loxophleba</i>	York gum
<i>Eucalyptus melanoxydon</i>	black morrel
<i>Eucalyptus mimica</i> subsp. <i>continens</i>	hooded mallet
<i>Eucalyptus mimica</i> subsp. <i>mimica</i>	Newdegate mallet
<i>Eucalyptus myriadena</i>	small-fruited gum; blackbutt
<i>Eucalyptus occidentalis</i>	flat-topped yate
<i>Eucalyptus ornata</i>	ornamental silver mallet; ornate mallet
<i>Eucalyptus recta</i>	Mt Yule silver mallet; Cadoux mallet
<i>Eucalyptus rudis</i> subsp. <i>rudis</i>	flooded gum
<i>Eucalyptus salicola</i>	salt gum; salt salmon gum
<i>Eucalyptus salmonophloia</i>	salmon gum
<i>Eucalyptus salubris</i>	gimlet
<i>Eucalyptus sargentii</i> subsp. <i>sargentii</i>	salt river gum
<i>Eucalyptus singularis</i>	ridge-top mallet
<i>Eucalyptus spathulata</i> subsp. <i>spathulata</i>	swamp mallet
<i>Eucalyptus spathulata</i> subsp. <i>salina</i>	Salt River mallet
<i>Eucalyptus urna</i>	merrit
<i>Eucalyptus wandoo</i> subsp. <i>pulverea</i>	wandoo
<i>Eucalyptus wandoo</i> subsp. <i>wandoo</i>	wandoo

Table 3. Associated canopy species that may be present within the ecological community but are not dominant or co-dominant. The list is not comprehensive and presents the more common taxa encountered. (Department of the Environment, 2015)

Scientific name	Common name/s
<i>Acacia acuminata</i>	jam
<i>Allocasuarina huegeliana</i>	rock sheoak
<i>Corymbia calophylla</i>	marri
<i>Eucalyptus annulata</i>	prickly-fruited mallee
<i>Eucalyptus arachnaea</i> subsp. <i>arachnaea</i>	black-stemmed mallee
<i>Eucalyptus arachnaea</i> subsp. <i>arrecta</i>	black-stemmed mallet
<i>Eucalyptus armillata</i>	flanged mallee
<i>Eucalyptus calycogona</i> subsp. <i>calycogona</i>	square-fruited mallee
<i>Eucalyptus camaldulensis</i> subsp. <i>arida</i>	river red gum

<i>Eucalyptus celastroides</i> subsp. <i>virella</i>	wheatbelt mallee
<i>Eucalyptus cylindriflora</i>	Goldfields white mallee
<i>Eucalyptus decipiens</i>	redheart; moit
<i>Eucalyptus drummondii</i>	Drummond's mallee
<i>Eucalyptus eremophila</i>	sand mallee
<i>Eucalyptus erythronema</i> subsp. <i>erythronema</i>	red-flowered mallee
<i>Eucalyptus erythronema</i> subsp. <i>inornata</i>	yellow-flowered mallee
<i>Eucalyptus eudesmioides</i>	Kalbarri mallee
<i>Eucalyptus flocktoniae</i> subsp. <i>flocktoniae</i>	Flockton's mallee
<i>Eucalyptus gittinsii</i> subsp. <i>illucida</i>	northern sandplain mallee
<i>Eucalyptus incrassata</i>	ridge-fruited mallee
<i>Eucalyptus kochii</i> subsp. <i>plenissima</i>	Trayning mallee
<i>Eucalyptus leptopoda</i> subsp. <i>leptopoda</i>	Merredin mallee; Tammin mallee
<i>Eucalyptus loxophleba</i> subsp. <i>gratae</i>	Lake Grace mallee
<i>Eucalyptus loxophleba</i> subsp. <i>lissophloia</i>	smooth-barked York gum
<i>Eucalyptus loxophleba</i> subsp. <i>supralaevis</i>	blackbutt York gum
<i>Eucalyptus macrocarpa</i>	mottlecah
<i>Eucalyptus marginata</i>	jarrah
<i>Eucalyptus moderata</i>	redwood mallee
<i>Eucalyptus obtusiflora</i>	Dongara mallee
<i>Eucalyptus olivina</i>	olive-leaved mallee
<i>Eucalyptus orthostemon</i>	diverse mallee
<i>Eucalyptus perangusta</i>	fine-leaved mallee
<i>Eucalyptus phaenophylla</i>	common southern mallee
<i>Eucalyptus phenax</i> subsp. <i>phenax</i>	white mallee
<i>Eucalyptus pileata</i>	capped mallee
<i>Eucalyptus platypus</i> subsp. <i>platypus</i>	moort
<i>Eucalyptus polita</i>	Parker Range mallet
<i>Eucalyptus sheathiana</i>	ribbon-barked mallee
<i>Eucalyptus sporadica</i>	Burngup mallee
<i>Eucalyptus subangusta</i> subsp. <i>subangusta</i>	grey mallee

A flora survey identified the vegetation within the application area as *Acacia acuminata* Low Forest, comprising of a dominant overstorey of jam wattle (*Acacia acuminata*) with scattered sheoak (*Allocasuarina fraseriana*) and occasional mixed eucalypts, with a lack of mid-storey vegetation and weed dominated understorey (Biodiverse (2023) in EndPlan (2024)). The vegetation map and representative pictures of the vegetation is provided in Figure 4 and 5 below. Surrounded by agricultural properties and the historical disturbance, the vegetation within the application area is identified as being in Degraded to Completely Degraded condition (Keighery, 1994) condition (Figure 6).

Being dominated by *A. acuminata* and *A. fraseriana* and infested by weeds, the vegetation is not considered representative of the Pallinup 938 vegetation association. With its structure and Completely Degraded condition, the vegetation within the application area does not meet the diagnostic criteria and threshold condition of the WA Wheatbelt Woodlands. Given the above, the proposed clearing is unlikely to directly impact the TEC. However, clearing may spread weeds to the nearby vegetation and subsequently reduce the quality of this vegetation unless stringent weed control measures are implemented.



Figure 4. Map of the vegetation types within the application area and surrounds (Biodiverse (2023) in EndPlan, (2024).



Figure 5. Representative photograph of vegetation within the application area indicating the dominance of *A. acuminata* over weeds (Biodiverse, 2023).



Figure 6. Map of vegetation condition within the application area and surround (Biodiverse, 2023; EndPlan, 2024).

Although several conservation significant flora species are recorded from the local area and the application area has similar soils and mapped vegetation associations with some of the records, the survey over the application area and surrounds did not identify any conservation significant flora species. On the contrary, the survey found that understorey was dominated by weedy herbs and grasses, namely, ursinia (**Ursinia anthemoides*), Guilford grass (**Romulea rosea*) and perennial veldt grass (**Ehrharta calycina*) (Biodiverse, 2023; EndPlan, 2024).

Significant remnant vegetation

The Wheatbelt region within which the application area is located has undergone extensive clearing, mainly for agricultural purposes. The local area (20 km radius of the application area) retains approximately 13.3% of its original native vegetation cover. The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of native vegetation with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

Although the vegetation does not represent the Pallinup 938 vegetation association mapped within the application area, the vegetation proposed to be cleared is considered to represent significant remnant vegetation within an extensively cleared landscape. It is noted that vegetation is not mapped as a formal ecological linkage, however, given the extensively cleared surrounds, the vegetation is likely to contribute ecological services to the fauna in the area. The vegetation is likely to provide refuge and contribute to a corridor for fauna movement between highly fragmented remnant vegetation. The removal of vegetation from the application area is considered a significant residual impact, necessitating further avoidance and / or mitigation measures to counterbalance it. To mitigate the loss of 0.27 ha of native vegetation that is significant remnant vegetation, the applicant has committed to the revegetation and rehabilitation of 0.31 ha of native vegetation in Degraded to Completely Degraded condition as discussed in Section 3.1. This has been assessed as sufficient to ensure that no residual impacts remain.

Conclusion

The proposed clearing will not directly impact on the conservation status of the WA Wheatbelt Woodlands TEC. Indirect impact of clearing through the spread and introduction of weeds into the nearby TEC can be mitigated through the application of stringent weed control measures. The clearing will remove native vegetation from an extensively cleared landscape.

Conditions

To address the above impacts, the following conditions are imposed on the clearing permit:

- weed and dieback management;
- revegetation and rehabilitation of 0.31 ha of vegetation located within Lot 150 on Deposited Plan 67780

3.2.2. Biological values – Fauna - Clearing Principles (b)

Assessment

A total of fifteen (15) fauna species have been recorded from the local area (20 km radius from the application area). Many of the records are more than 25 years old, with the most recent record from 2018. Malleefowl (*Leipoa ocellata*) and Carnaby's black cockatoo (*Zanda latirostris*) are the most frequently recorded species, with sixteen (16) and seventeen (17) records respectively. These two species are also the most recently recorded i.e. 2018 and 2005, respectively. A more detailed assessment on potential impacts to conservation significant fauna species is detailed below.

Malleefowl (*Leipoa ocellata*)

There are 16 records of malleefowl within the local area. The closest record to the application area was made in 1970, and is located approximately 1 km east of the application area, whilst the most recent record of a mound was made in 2018, approximately 15 km from the application area. The National Malleefowl Recovery Plan states that this fauna species is found principally in the semi-arid to arid zone in shrublands and low woodlands dominated by mallee (Frith 1962a) and associated habitats (Malleefowl Recovery Plan, 2015) such as Broombush (*Melaleuca uncinata*) (Woinarski 1989a; Woinarski 1989b) and Scrub Pine (*Callitris verrucosa*). In Western Australia they are also found in some shrublands dominated by acacia, and occasionally in woodlands dominated by eucalypts such as Wandoo (*E. wandoo*), Marri (*Corymbia calophylla*) and Mallet (*E. astringens*) (Benshemesh, 2007). The *National Recovery Plan for Malleefowl Leipoa ocellata* notes that habitat loss has been and continues to be the major factor in the decline of malleefowl in southern Australia. Habitat fragmentation and isolation and predation are also listed as major threats to malleefowl.

The remnant Eucalypt woodlands in the local area may represent the typical habitat of malleefowl, particularly where the woodlands are in good condition. However, noting the level of disturbance and fragmentation of native vegetation in the area, it is unlikely that the application area and immediate surrounds constitute a significant habitat for this species. Notwithstanding the above, slow and directional clearing can further minimise and mitigate any potential impact on malleefowl individuals if present during clearing.

Carnaby's black cockatoo (*Zanda latirostris*)

Impacts on black cockatoo habitat can be considered in terms of breeding habitat, night roosting habitat, and foraging habitat. Black cockatoos will generally forage up to 12 kilometres from an active breeding site (DSEWPaC 2012; DPaW 2013). Following breeding, they will flock in search of food, usually within six kilometres of a night roost (DSEWPaC 2012; DPaW 2013) but may range up to 20 kilometres (Commonwealth of Australia 2017). Black cockatoo night roosts are usually located in the tallest trees of an area, and in close proximity to both a food supply and surface water (Commonwealth of Australia 2017). Flocks will use different night roosts, often for weeks, or until the local food supply is exhausted. Flocks show some fidelity to night roosts with sites used in most years to access high-quality feeding sites. However, not all-night roosts are used in every year (DPaW 2013).

The Carnaby's black cockatoo breeds between late July and December in the inland wheatbelt region of its distribution, in areas receiving between 300 and 750 millimetres of annual average rainfall (Saunders, 1974). During the non-breeding season (January to July) the majority of the birds move to the higher rainfall coastal regions of their range including the midwest coast, Swan Coastal Plain and south coast (Saunders, 1980; Saunders, 1990; Berry, 2008; Johnstone *et al.*, 2011).

Carnaby's black cockatoo nests in large hollows in tall, living or dead eucalypts. It nests most commonly in smooth-barked wandoo and salmon gum but has also been recorded breeding in red morrel (*E. longicornis*), York gum (*E. loxophleba*), tuart, flooded gum (*E. rudis*), swamp yate (*E. occidentalis*), gimlet (*E. salubris*) and marri, and are said to nest in any species of eucalypt with a suitable hollow (Department of Parks and Wildlife, 2013). Carnaby's black cockatoo night roosts are usually located in the tallest trees of an area, and near both food supply and surface water (DAWE 2020; Le Roux (2017)). Flocks will use different night roosts, often for weeks, or until the local food supply is exhausted. Flocks show some fidelity to night roosts with sites used in most years to access high-quality feeding

sites. However, not all night-roosts are used in every year (DPaW 2013). The bird's preferred habitat is remnant native eucalypt woodlands, especially those of salmon gum (*Eucalyptus salmonophloia*) and wandoo (*E. wandoo*), and in shrubland or kwongkan heathland dominated by plants of the Proteaceae family. It also occurs in forests containing marri, jarrah, karri (*E. diversicolor*) and tuart (*E. gomphocephala*) (Department of Parks and Wildlife, 2013).

Within the local context, the application area is within the modelled distribution area for the Carnaby's black cockatoo. While several Carnaby's records are known from the local area, no breeding site is recorded within a 12 km radius of the application area. The nearest breeding sites of Carnaby's black cockatoo are located approximately 15.5 km southeast of the application area, which were recorded in 1985 and 2000. No roosting site is recorded within a 12 km radius of the application area. The nearest active roosting site is situated 20 km west of the application area, near to the Hawke National Park.

Although no specific fauna survey was carried out for the clearing application, the vegetation survey performed over the area did not identify potential breeding or roosting trees within the application area. With vegetation comprising of mostly *A. acuminata* over non-native weeds, the application area is unlikely to provide suitable foraging habitat for the Carnaby's in the local area. The proposed clearing, therefore, is considered unlikely to result in a significant residual impact to the Carnaby's black cockatoo.

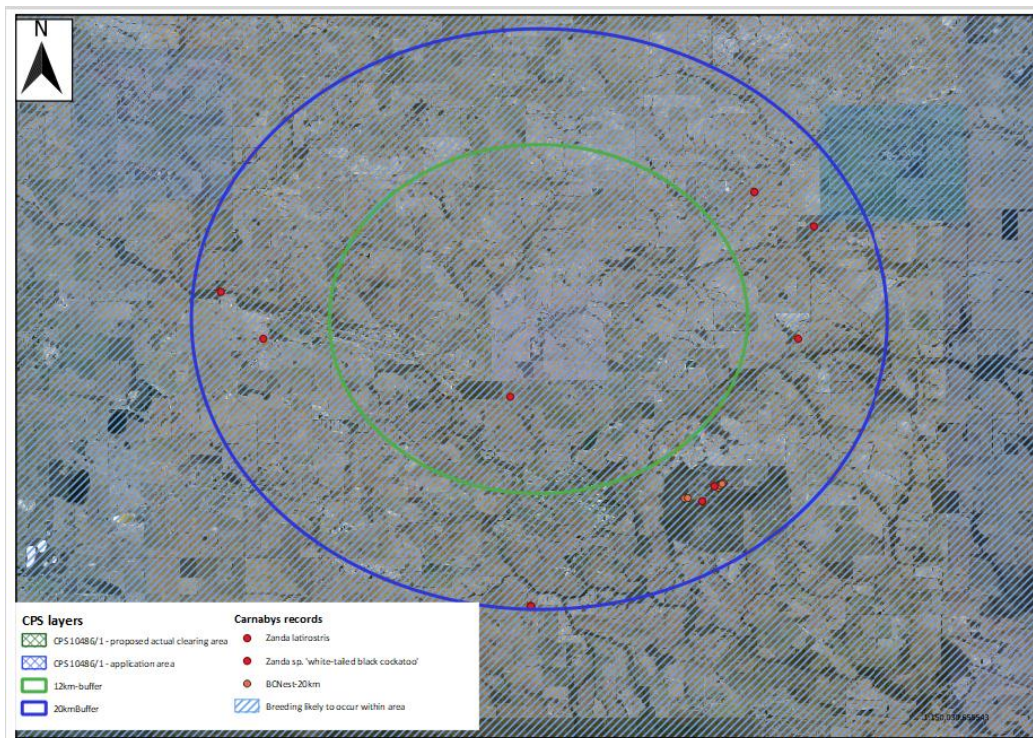


Figure 7. Carnaby's black cockatoo modelled distribution and records within 12 and 20 km radius of the application area

Impact to fauna

As discussed above, the proposed clearing is unlikely to directly impact on significant habitat for conservation significant fauna species. However, within the context of highly fragmented and extensively cleared landscape, the vegetation also is likely to provide refuge for fauna in the local area. While the vegetation is not mapped as a formal ecological linkage, the proposed clearing will reduce the width of a patch of vegetation which contributes to ecological linkage function at a landscape level. The revegetation discussed in Sections 3.2.1 and 4 can mitigate this potential impact on fauna that may utilise the application area.

Conclusion

The proposed clearing will not impact on significant habitat for the malleefowl and Carnaby's black cockatoo. However, clearing reduces the environmental values of the remnant vegetation as a refuge and corridor for fauna movement for any fauna which disperse or transit through the application area.

Conditions:

To mitigate the potential impacts of clearing on fauna, the following conditions have been imposed:

- clearing in slow and directional manner to avoid impact on any fauna individuals present at the time of clearing;
- rehabilitation and revegetation of an adjacent area to improve the condition of fauna habitat.

3.3. Relevant planning instruments and other matters

The property within which clearing is proposed is zoned 'Industry' under the Shire of Gnowangerup's (the Shire) Local Planning Scheme No. 2. In their advice to DWER, the Shire confirmed the following:

- clearing of the land for industrial uses / development is consistent with the zoning;
- the proposed project is consistent with the Local Planning Strategy recommendations for the CBH site in Borden. The clearing of the land for industrial uses/development would be consistent with this zoning (Shire of Gnowangerup, 2024).

A Development Approval has been granted by the Shire for the development works at the CBH site over many years. The Shire approved a modification to the Development Approval on 4 April 2023 which covers the works that are subject to the clearing permit application.

The proposed clearing and development footprint is located within the Wagyl Kaip nation but is not located within a heritage site. A registered site (site 4476) is nearby. 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.

End

Appendix A. Additional information provided by applicant

During assessment, the Department requested the applicant to provide a further mitigation measure to counterbalance the significant residual impacts due to the loss of 0.27 ha of significant remnant vegetation from an extensively cleared landscape. The applicant agreed with the Department's assessment and provided a revegetation and rehabilitation plan for the mitigation measure (CBH, 2024c). The implementation of the revegetation and rehabilitation plan is required as a condition of the permit.

Appendix B. Site characteristics

B.1. Site characteristics

Characteristic	Details
Local context	<p>The area proposed to be cleared is part of a patch of native vegetation in the Mallee Interim Biogeographical Regionalisation for Australia (IBRA) Bioregion and Western Mallee (MAL02) subregion in the intensive land use zone of Western Australia. It is surrounded by agriculture properties, farms and rural dwellings.</p> <p>Spatial data indicates the local area (20-kilometre radius from the centre of the area proposed to be cleared) retains approximately 13.34 percent of the original native vegetation cover. The Mallee Bioregion retains approximately 56.53 per cent of its Pre-European native vegetation extent</p>
Ecological linkage	The proposed clearing area does not comprise a formal and significant ecological linkage. However, within the context of the highly fragmented vegetation in the extensively cleared landscape, it is a part of a patch of remnant vegetation that may function as corridor for the movement of fauna between fragmented remnants.
Conservation areas	The application area does not intersect any conservation area. The nearest conservation area is the Stirling Range National Park located approximately 27 km south of the application area.
Vegetation description	<p>A vegetation survey (BioDiverse, 2023) indicates the vegetation within the proposed clearing area consists of:</p> <p><i>Acacia acuminata</i> Low Forest: The vegetation unit is characterised by a dominant overstorey of jam wattle (<i>Acacia acuminata</i>) with scattered sheoak (<i>Allocasuarina fraseriana</i>) and occasional mixed eucalypts. The vegetation unit was generally lacking a mid-storey with a few scattered species present. The understorey was dominated by weedy herbs and grasses, namely, ursinia (<i>*Ursinia anthemoides</i>), Guilford grass (<i>*Romulea rosea</i>) and perennial veldt grass (<i>*Ehrharta calycina</i>).</p> <p>Representative photos, full survey descriptions and maps are available in Appendix G.</p> <p>This vegetation type recorded during the surveys is inconsistent with the mapped Pallinup 938 vegetation association, which is described as York gum, salmon gum etc. <i>Eucalyptus loxophleba</i>, <i>E. salmonophloia</i>. Goldfields; gimlet, redwood etc. <i>E. salubris</i>, <i>E. oleosa</i>. Riverine; rivergum <i>E. camaldulensis</i>. Tropical; messmate, woolybush (Shepherd et al, 2001). The Pallinup vegetation association retains approximately 14.59 per cent of the original extent (Government of Western Australia, 2019).</p>
Vegetation condition	The vegetation survey (BioDiverse, 2023) indicated the vegetation within the proposed clearing area is in Completely Degraded to Degraded (Keighery, 1994) condition.
Climate and landform	<p>The climate in the area is characterised by an average annual temperature of between 5.7C and 28.8C and an annual total rainfall of 386.5 mm.</p> <p>The landform is that of gently undulating rises in the Pallinup Zone.</p>

Characteristic	Details
Soil description	The soil is mapped as the Upper Pallinup 3 subsystem (241Up_3) The Upper Pallinup 3 subsystem is described as “ <i>Lower to upper slopes and crests associated with shallow granite and dolerite. Soils are mainly grey sandy duplex soils (generally shallow) and minor areas of red duplex soils</i> ”.
Land degradation risk	Soils in the application area and surround has low risks of degradation due to erosion, flood, water logging, salinity or nutrient export. It has a medium risk from sub-surface acidification.
Waterbodies	The application area is directly adjacent to the Warperup Creek to the north. There are no significant waterways or wetland within the application area.
Hydrogeography	The proposed development footprint lies within the Beaufort Inlet-Pallinup River Hydrographic Catchment and the Pallinup River Hydrographic Sub-catchment. It is not within any areas proclaimed under the RIWI Act or CAWS Act. It is not within any Public Drinking Water Source areas. Groundwater salinity in the area is between 14,000 and 35,000 mg/L.
Flora	Several conservation significant flora species are recorded in the local area (20 km radius from the application area). The flora and vegetation survey did not identify any conservation significant flora species within the application area and surrounds.
Ecological communities	Part of the application area is within the mapped Eucalypt Woodlands of the Western Australian Wheatbelt TEC. The vegetation within the application area is not representative of the TEC.
Fauna	There are several conservation significant fauna records from the local area, with many of these records considered historical. The area is within the mapped distribution of the Carnaby's black cockatoo where breeding may also occur. The most recent records of breeding and nesting by the Carnaby's black cockatoo were made in 1985 and 2005, respectively.

B.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*					
Mallee	7,395,894.36	4,180,937.68	56.53	-	-
Western Mallee sub-region	3,981,717.82	1,471,047.68	36.95	-	-
Vegetation Association					
Beard vegetation association Pallinup (938)	77,552.22	16,919.86	21.82	1,271.48	1.64
Local area					
20km radius	126,356.07	16,859.12	13.34	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

B.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix F.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 (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Acacia declinata</i>	4	Y	Y	Y	1.67	1	Y
<i>Acacia keigheryi</i>	3	Y		N	17.04	2	Y
<i>Acacia mutabilis</i> subsp. <i>rhynchophylla</i>	3	Y	Y	N	15.40	1	Y
<i>Banksia pseudoplumosa</i>	T	Y	Y		13.02	1	Y
<i>Bossiaea divaricata</i>	4	Y	Y	Y	19.85	1	Y
<i>Brachyloma mogin</i>	3	Y	Y	Y	5.89	2	Y
<i>Eucalyptus brandiana</i>	2	Y	Y	Y	0.88	1	Y
<i>Eucalyptus dissimulata</i> subsp. <i>dissimulata</i>	4	Y	Y	Y	12.46	2	Y
<i>Eucalyptus vesiculosa</i>	4	Y	Y	Y	12.44	1	Y
<i>Eutaxia nanophylla</i>	3	Y	Y	Y	12.91	1	Y
<i>Grevillea newbeyi</i>	3	Y	N	N	16.62	1	Y
<i>Hakea oldfieldii</i>	3	Y	Y	N	16.95	1	Y
<i>Hibbertia priceana</i>	T	Y	N	N	16.62	3	Y
<i>Leucopogon florulentus</i>	3	Y	N	N	18.15	1	Y
<i>Leucopogon newbeyi</i>	3	Y	Y	N	17.27	4	Y
<i>Melaleuca polycephala</i>	3	Y	Y	Y	11.46	3	Y
<i>Orthrosanthus muelleri</i>	4	Y	Y	Y	2.68	2	Y
<i>Spyridium mucronatum</i> subsp. <i>Recurvum</i>	3	Y	Y	Y	1.10	2	Y
<i>Stylidium diuroides</i> subsp. <i>nanum</i>	2	Y	Y	N	16.01	1	Y
<i>Styphelia disjuncta</i>	T	Y	Y	N	19.34	2	Y
<i>Thelymitra psammophila</i>	T	Y	Y	Y	1.10	6	Y
<i>Verticordia coronata</i>	3	Y	Y	Y	4.10	1	Y

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

B.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 (total)	Year of last record	Are surveys adequate to identify? [Y, N, N/A]
<i>Actitis hypoleucos</i> (common sandpiper)	MI	Y	Y	8.04	1	2015	N/A
<i>Falco peregrinus</i> (peregrine falcon)	OS	Y	Y	0.92	1	0	N/A
<i>Psophodes nigrogularis oregon</i> (western whiplark (western mallee))	P4	Y	Y	0.55	14	2017	N/A
<i>Tringa nebularia</i> (common greenshank)	MI			8.04	1	2015	N/A
<i>Zanda latirostris</i> (Carnaby's cockatoo)	EN	Y	N	5.58	5	2005	N/A
<i>Zanda</i> sp. 'white-tailed black cockatoo' (white-tailed black cockatoo)	EN	Y	N	14.88	12	1999	N/A

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

B.5. Ecological community analysis table

Community 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 (total)	Are surveys adequate to identify? [Y, N, N/A]
	WA	Commonwealth						
Eucalypt woodlands of the Western Australian Wheatbelt	Priority 3	Critically Endangered	N	N	Y	0	1160	Y

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

B.6. Land degradation risk table

Risk categories	Land Unit 1
Wind erosion	M1: 10-30% of the map unit has a high to extreme hazard
Water erosion	L1: <3% of the map unit has a moderate to high hazard
Salinity	L2: 3-10% of the map unit has a moderate or high hazard or is presently saline
Subsurface Acidification	M2: 30-50% of the map unit has a high susceptibility
Flood risk	L1: <3% of the map unit has a moderate to high hazard
Water logging	L1: <3% of the map unit has a moderate to high hazard
Phosphorus export risk	L1: <3% of the map unit has a moderate to high hazard

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p>The area proposed to be cleared is in Degraded and Completely Degraded (Keighery, 1994) condition and is located adjacent to an active industrial facility. The vegetation in the application area does not contain locally or regionally significant flora, fauna, habitats or assemblages of plants.</p>	Not likely to be at variance	No
<p><u>Principle (b):</u> "Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."</p> <p>The area proposed to be cleared is within the mapped distribution area for the Carnaby's black cockatoo, however, does not provide suitable habitat for this species. The vegetation proposed to be cleared may provide refuge for dispersing fauna.</p>	Not likely to be at variance	Yes Refer to Section 3.2.2, above.
<p><u>Principle (c):</u> "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."</p> <p>The area proposed to be cleared does not contain threatened flora species listed under the BC Act.</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (d):</u> <i>“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.”</i></p> <p>The vegetation within the application area and surrounds is mapped as the Eucalypt Woodlands of the Western Australian Wheatbelt TEC. A vegetation survey over the area did not indicate that the vegetation proposed to be cleared and surrounds contain species that support the TEC.</p>	Not likely to be at variance	Yes Refer to Section 3.2.1, above
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p>The extent of remnant native vegetation within the local area and the mapped vegetation association are below the national objectives and targets for biodiversity conservation in Australia. The vegetation is a significant remnant vegetation within an extensively cleared landscape.</p>	At variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (h):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.”</i></p> <p>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.</p>	Not at variance	No
Environmental value: land and water resources		
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p>The application area does not intersect any watercourse or wetland. The vegetation is situated approximately 200 m upslope of a creek. The vegetation is not identified as riparian vegetation.</p>	Not likely to be at variance	No
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p>The surveyed soils are not susceptible to wind and water erosion, nutrient export, salinity or waterlogging. The proposed clearing is not likely to have an appreciable impact on land degradation.</p>	Not likely to be at variance	No
<p><u>Principle (i):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.”</i></p> <p>The groundwater of the area is mapped as having high salinity. The clearing activities are unlikely to intercept groundwater and impact the groundwater quality.</p>	Not likely to be at variance	No
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p>The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding.</p>	Not at variance	No

Appendix D. 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 E. Biological survey information excerpts (EndPlan Environmental, 2024)

To assist in understanding the potential impact of the project upon the existing environment, CBH commissioned BioDiverse Solutions (BDS) to undertake a spring reconnaissance flora and vegetation survey including a targeted Threatened/Priority Ecological Community (TEC/PEC) (BioDiverse, 2023).

The survey area comprised 49.5 ha which included the proposed development footprint and immediate surrounds (Figure 8). Desktop reviews of published Western Australian and Commonwealth databases pertaining to a 20-30 km study area buffer were undertaken to source data and information relating to Threatened and Priority Flora, Threatened Ecological/Priority Communities, Environmentally Sensitive Areas, groundwater dependent ecosystems, heritage, remnant vegetation, geology and soils. The surveys were summarised by EndPlan Environmental (2023) as a supporting information attached to the clearing permit application.

The spring reconnaissance flora and vegetation and targeted Threatened/Priority Ecological Community (TEC/PEC) survey conducted in September 2023 identified the following from the within the survey area:

- A total of 153 vascular flora taxa were recorded from relevés and opportunistic observations including 49 non-native species or introduced species;
- No species of Threatened or Priority flora were identified;
- Three vegetation units were identified *Allocasuarina fraseriana* Open Forest, Mixed Eucalyptus Woodland and *Acacia acuminata* Low Open Forest (Table 4)
- The native vegetation condition ranged from Completely Degraded to Degraded. Approximately 40.3 ha of the 49.5 ha survey area was considered to be cleared, consisting of roads, CBH infrastructure or agricultural land; and

- While the Mixed Eucalyptus Woodland bore similarities to the *Eucalyptus Woodlands of the Western Australian Wheatbelt* (Wheatbelt Woodlands) TEC/PEC, it was determined not to meet the criteria due to floristic composition and degradation.

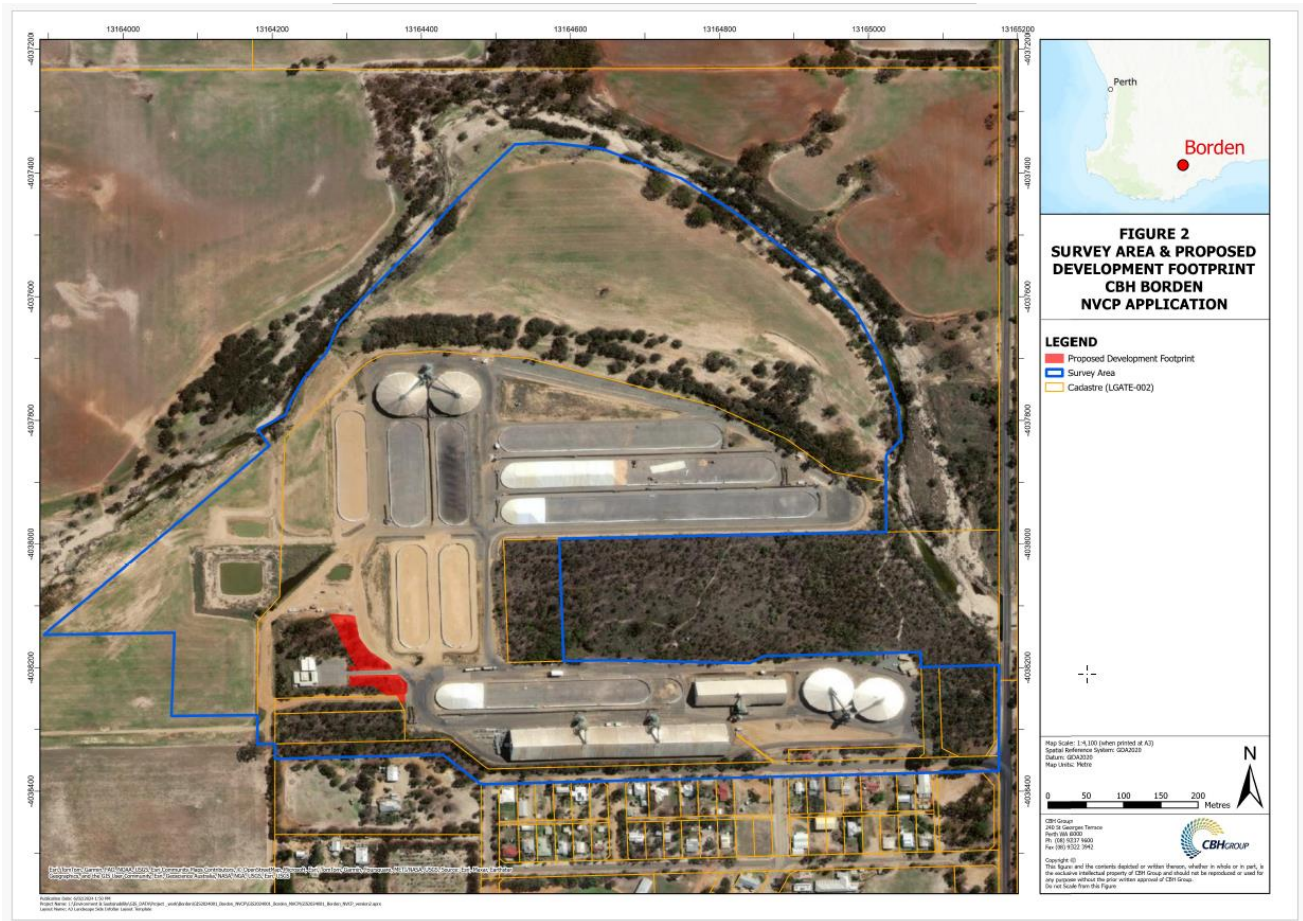




Figure 8. Map of the survey area (EndPlan, 2024)

Table 4. Vegetation unit identified within the survey area (EndPlan, 2024)

Vegetation unit	Representative photographs	
<p><i>Allocasuarina fraseriana</i> open forest (AfOF)</p>		

<p>Mixed Eucalyptus Woodland (MEW)</p>		
<p><i>Acacia acuminata</i> Low Open Forest (AcLOF)</p>		

Appendix F. Sources of information

F.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)
- 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)

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