



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 9801/1
Permit Holder:	CBH Group
Duration of Permit:	From 12 November 2022 to 12 November 2032

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 Brookton railway extension.

2. Land on which clearing is to be done

Lot 100 on Deposited Plan 37403, Brookton
Lot 422 on Deposited Plan 213828 (Crown Reserve 34325), Brookton
Lot 29190 on Deposited Plan 193004 (Crown Reserve 34325), Brookton
Lot 550 on Deposited Plan 416002, Brookton
Sewell Road Reserve (PIN 11291070), Brookton

3. Clearing authorised

The permit holder must not clear more than 0.85 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 12 November 2027.

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. Wind erosion management

The permit holder must commence construction activities no later than three (3) months after undertaking the authorised clearing activities to reduce the potential for wind erosion.

8. Revegetation and rehabilitation – Mitigation planting

The permit holder must within 24 months of undertaking clearing authorised under this permit:

- (a) undertake deliberate *planting* of at least 18 (eighteen) trees within the area cross hatched red in Figure 1 of Schedule 1;
- (b) ensure only *local provenance* species are used;
- (c) ensure *planting* is undertaken at the *optimal time*;
- (d) undertake *weed* control and watering of *plantings* for at least three years post planting;
- (e) the permit holder must within 24 months of *planting* the 18 trees in accordance with condition 8(a) of this permit:
 - i. engage an *environmental specialist* to make a determination that the eighteen trees will survive.
 - ii. if the determination made by the *environmental specialist* under condition 8(e) that 18 trees will not survive, the permit holder must plant additional trees that will result in 18 trees persisting within area cross hatched red in Figure 1 of Schedule 1.
- (f) where additional *planting* of trees is undertaken in accordance with condition 8(e), the permit holder must repeat the activities required by condition 8(b), 8(c) and 8(d) of this permit.

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 Geocentric Datum Australia 1994 (GDA94), 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 introduction and spread of <i>weeds</i> and <i>dieback</i> in accordance with condition 6; (g) actions taken in accordance with condition 7; (h) planting activities undertaken in accordance with condition 8 of this permit.

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 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 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.
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.
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of

Term	Definition
	environmental advice that an environmental specialist is required to provide under this Permit, or who is approved by the <i>CEO</i> as a suitable environmental specialist.
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
local provenance	means <i>native vegetation</i> seeds and propagating material from natural sources within 50 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 period from May to July for undertaking <i>planting</i> .
planting	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species.
weeds	means any plant – <ul style="list-style-type: none"> (a) that is 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



Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

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

19 October 2022

Schedule 1

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

Plan 9801/1

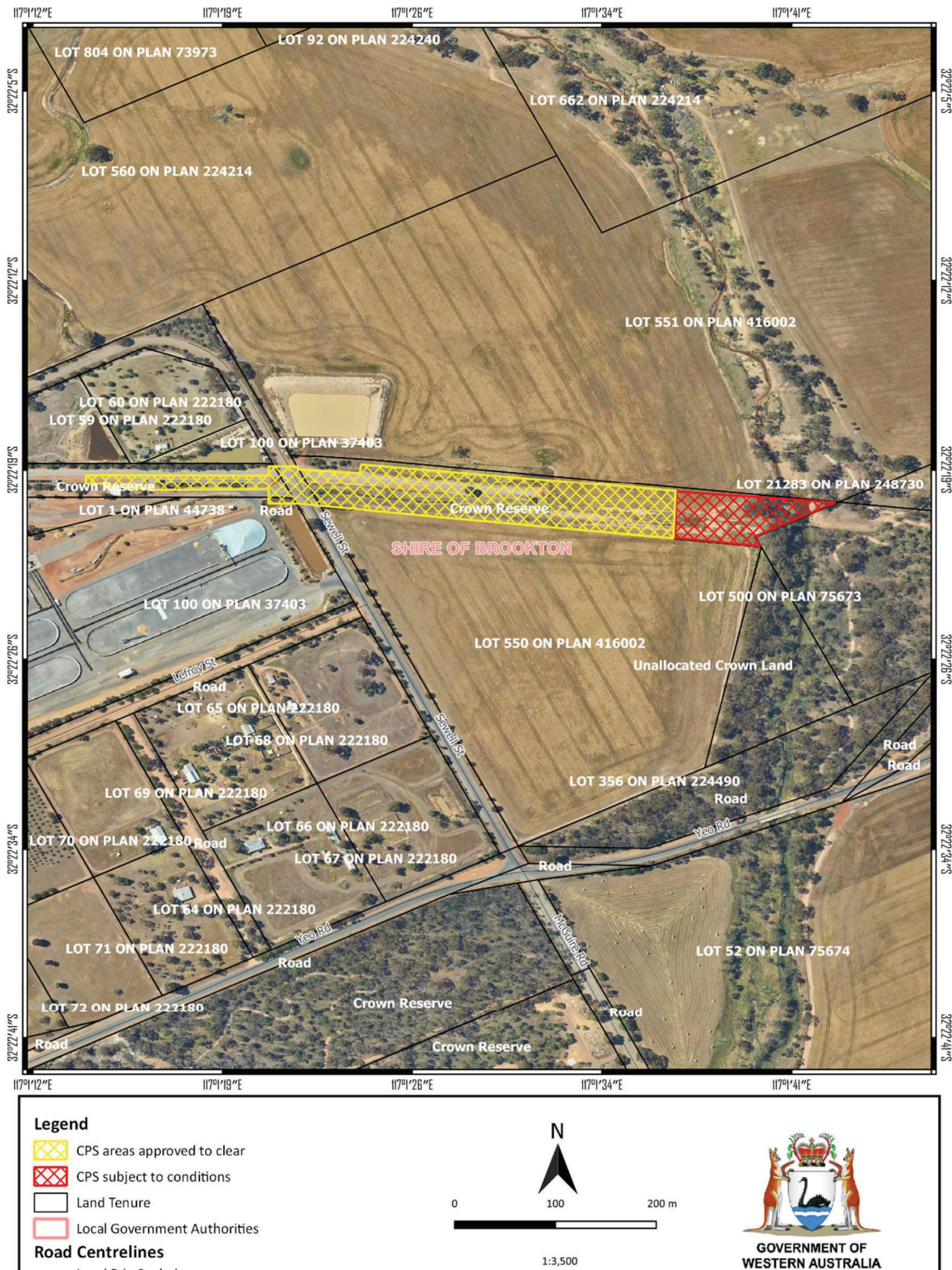


Figure 1: Map of the boundary of the area within which clearing may occur (crosshatched yellow) and specific *conditions* apply – *revegetation* (crosshatched red).



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9801/1
Permit type:	Purpose permit
Applicant name:	Cooperative Bulk Handling Limited (CBH)
Application received:	8 July 2022
Application area:	0.85 hectares of native vegetation within 2.4 hectare footprint
Purpose of clearing:	Brookton railway extension
Method of clearing:	Mechanical
Property:	Lot 100 on Deposited Plan 37403 Lot 550 on Deposited Plan 416002 Lot 422 on Deposited Plan 213828 (Crown Reserve 34325) Lot 29190 on Deposited Plan 193004 (Crown Reserve 34325) Sewell Road Reserve (PIN 11291070)
Location (LGA area/s):	Shire of Brookton
Localities (suburb/s):	Brookton

1.2. Description of clearing activities

The proposed clearing is 0.85 hectares of native vegetation within a 2.4 hectare clearing footprint for the extension of the Brookton railway (see Figure 1, Section 1.5). The project to extend the Brookton rail forms part of the larger CBH grain receipt and transport operations in the Wheatbelt region of Western Australia.

1.3. Decision on application

Decision:	Granted
Decision date:	19 October 2022
Decision area:	0.85 hectares of native vegetation within 2.4 hectare 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 Biological 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 Delegated Officer also took into consideration the purpose and extent of the clearing. The Delegated Officer noted the applicant's effort to avoid and minimise clearing and associated impacts (see Appendix A).

In particular, the Delegated Officer has determined that:

- The proposed clearing area is situated in an extensively cleared landscape. The local area and the mapped vegetation type retain approximately 14 percent of their original extents, which is below the national target of biodiversity conservation of a minimum 30 percent native vegetation cover.
- Given the vegetation condition, historical disturbance, proximity of records of conservation significant flora and fauna and extent of clearing proposed, the vegetation within the application area is not likely to comprise significant habitat for conservation significant flora and fauna.
- The proposed clearing has the potential to cause the introduction and spread of weeds and dieback into the nearby vegetation, which could impact on the quality of the vegetation and quality as fauna habitat.
- The proposed clearing has the potential to contribute to land degradation in the form of wind erosion.
- Whilst the clearing area is 0.85 hectares, the majority of the vegetation is *Maireana brevifolia* low sparse chenopod shrubland over low mixed exotic herbs and grasses. There are only 14 trees, mainly *Allocasuarina*, that are proposed to be cleared.

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 to lead to unacceptable impacts to the environment.

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;
- construction activities to commence within three months of clearing to minimise wind erosion; and
- undertake deliberate planting of at least 18 trees of local provenance species within the adjacent vegetation to mitigate the loss of 14 trees within an extensively cleared landscape.

1.5. Site map

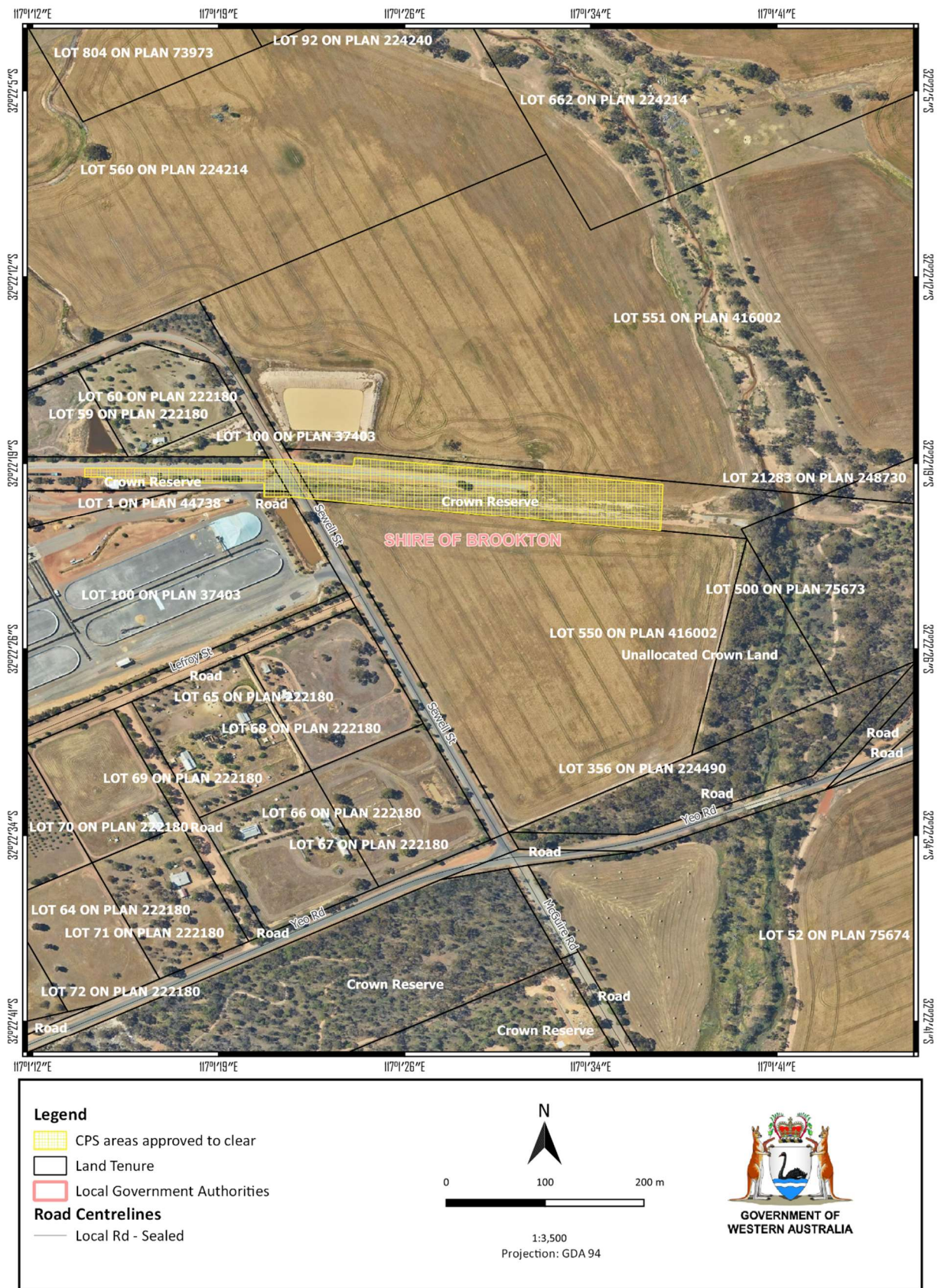


Figure 1. Map of the application area. The area crosshatched yellow indicates the area authorised to be cleared under the granted clearing permit.

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)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Soil and Land Conservation Act 1945* (WA)

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)
- 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

Evidence was submitted by the applicant (CBH, 2022a), demonstrating that CBH has explored a number of alternative locations, however, in all cases clearing would be required. Avoidance and mitigation measures proposed by the applicant include:

- The proposed clearing area has been designed to include the smallest extent possible to meet the needs of train movements.
- The extent of the rail design was reduced to remove the proposed crossing of the Avon River and impacts to possible Black Cockatoo foraging and breeding habitat trees lining the Avon River due to their environmental significance.
- The final decision on the eastern boundary extent was determined after consultation with the traditional owners, representatives of the Gnaala Karla Booja (GKB).
- CBH will prepare a Construction Environmental Management Plan (CEMP) to manage the potential environmental impacts associated with clearing and construction. The CEMP will include the management of potential threatening processes such as dust, erosion, waste and hazardous materials, noise and vibration, introduced flora and fauna species and disease to the adjacent vegetation.
- To mitigate the loss of 14 trees, CBH has committed to plant 18 trees within Lot 29190 on Deposited Plan 193004 (Crown Reserve 34325) (see Appendix A).

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

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix A) 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 B) identified that the impacts of the proposed clearing present a risk to biological values (fauna and flora) and remnant vegetation within an area which has been extensively cleared. 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 value (fauna) - Clearing Principle (b)

Assessment:

A reconnaissance Biological survey was undertaken across the application area in June 2020 and September 2021 (ELA, 2022). The survey did not identify any direct (observations) or indirect (scats, tracks, diggings) evidence of conservation significant fauna species within the application area or broader survey area.

According to available databases, 12 fauna of conservation significance occur within the local area (10 kilometres of the application area). Comprising one extinct, two Priority 4, one Priority 3, three Endangered (EN), one specially protected species (OS), one Critically Endangered (CR), two Vulnerable (VU) and one conservation dependent (CD). None of these records occur within the application area.

In determining the likelihood of conservation significant fauna occurring within the application area, considerations were given to number of records in the local area, preferred habitat types and typical home ranges, proximity of records to the application area, the type and condition of the vegetation within the application area and historical nature of the records. A summary of fauna recorded within the local area and their potential of occurrence within the application area is presented in Appendix B.

Two fauna habitats were recorded within the application area (ELA, 2022): *Eucalyptus loxophleba* low isolated trees and Mixed isolated *Eucalyptus* spp./*Allocasuarina* trees. Both habitats are considered to provide poor quality Black Cockatoo foraging habitat. Approximately 70 metres east of the application area, nine potential black cockatoo breeding trees were recorded within a portion of *Eucalypt rudis* Woodland, however, no suitable hollows were observed. The vegetation within the application area is largely isolated from areas of intact vegetation (ELA, 2022).

The application area is situated within the mapped breeding distribution for *Zanda latirostris* previously *Calyptorhynchus latirostris* (Carnaby's cockatoo, EN) and on the edge of the mapped breeding distribution of *Calyptorhynchus banksii naso* (Forest red-tailed black cockatoo, VU). Carnaby's cockatoo has been recorded in two locations within the local area, both over 6 kilometres from the application area (one in 2011 and the other from 1980). No evidence of black cockatoo roosts or breeding has been recorded within the local area. Given the absence of hollow-bearing trees necessary for black cockatoo species and poor quality foraging habitat within the application area, proximity of records and extent of clearing proposed, the vegetation within the application area is considered unlikely to comprise significant habitat for Carnaby's cockatoos or Forest red-tailed black cockatoos.

Many of the records identified within the local area, including records of *Myrmecobius fasciatus* (numbat, EN), *Macrotis lagotis* (bilby, EN), *Bettongia penicillata ogilbyi* (woylie, CR) *Acanthophis antarcticus* (southern death adder, P3) and *Isodon fusciventer* (quenda, P4), are historical records. Given the results of the biological survey (ELA, 2022) and the lack of recent records, the application area is not likely to comprise significant habitat for these species, nor be significant for the continued survival of these species.

Phascogale calura (Red-tailed phascogale, CD) has been recorded more recently and frequently within the local area (55 records), however, the majority of these (51 records) are located within the Weam Nature and Pingeculling Nature reserves, over 6 kilometres from the application area. Red-tailed phascogale were translocated from Dryandra State Forrest, located approximately 9.6 kilometres southwest of the application area, to the Weam Nature and Pingeculling Nature reserves as part of the species' conservation actions. Given the results of the biological survey (ELA, 2022), a lack of connectivity between the proposed clearing area and surrounding remnant vegetation, the application area is not likely to comprise significant habitat for this species, nor be significant for the continued survival of this species.

Falco peregrinus (Peregrine falcon, OS) and *Platycercus icterotis xanthogenys* (western rosella, P4) are both known to inhabit open woodlands. Peregrine falcon has been recorded twice within the local area, approximately two kilometres west of the application area. Western rosella was recorded once within the local area, 8 kilometres south east of the application area. Both species are possible transient visitors to the application area. However, given the lack of suitable habitat (i.e. canopy cover), the application area is not likely to comprise significant habitat for these species, nor be significant for the continued survival of these species.

The vegetation within the application area contains many exotic herbs and grasses, therefore, the clearing activities have the potential to cause and/or exacerbate the introduction and spread of weeds and dieback into nearby vegetation, which could impact on the quality of fauna habitat.

Conclusion:

Given the results of the biological survey (ELA, 2022), the lack of recent records within the local area, a lack of connectivity between the proposed area to be cleared and surrounding remnant vegetation, the application area is not likely to comprise significant habitat for conservation significant fauna, nor be significant for the continued survival of conservation significant fauna. The clearing activities have the potential to cause and/or exacerbate the introduction and spread of weeds and dieback into nearby vegetation, which could impact on the quality of fauna habitat.

Condition:

To address potential impacts to nearby native vegetation from the proposed clearing, weed and dieback management measures will be required as a condition on the clearing permit to mitigate impacts to adjacent vegetation.

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

Assessment

A Biological survey was conducted by Eco Logical Australia in June 2020 and September 2021. The surveys recorded the vegetation within the application area in completely degraded condition (ELA, 2022). No conservation significant flora species or Threatened Ecological Community (TEC) listed under the BC Act or EPBC Act were recorded within the proposed clearing area or broader survey area.

According to available databases, a total of 14 conservation significant flora species have been recorded within the local area. Of these, four are listed as threatened, with the remaining listed as Priority 2, 3 and 4. None of the records occur within the application area. The majority of the records are located within DBCA tenure including Weam and Pingeculling Nature Reserves located approximately 7 kilometres east of the application area.

The likelihood of each taxa occurring within the application area has been assessed based on soil type, habitat preference and proximity to the application area, as summarised in Appendix B. Due to the completely degraded condition of the vegetation within the application area and the lack of suitable habitat, none of the conservation significant flora identified within the local area are considered likely to occur within the application area.

The local area contains many occurrences of the TEC Eucalypt woodlands of the Western Australian Wheatbelt (Eucalypt Woodlands). The nearest occurrence is 0.06 kilometres to the east of the application area. The vegetation within the application area is in completely degraded condition and no TECs listed under the BC Act or EPBC Act were recorded within the proposed clearing area. The area surveyed by Eco Logical Australia extended east of the application area and covered a portion of the mapped Eucalypt woodlands TEC (see Appendix E). The vegetation within this area has a species composition and structure comprising elements of the Eucalyptus woodlands TEC, however, the vegetation is considered to be in completely degraded condition and therefore does not meet the minimum condition thresholds to be representative of the TEC.

The vegetation within the application area contains many exotic herbs and grasses, therefore, the clearing activities have the potential to cause the introduction and spread of weeds and dieback into nearby vegetation, which could impact on the quality of the mapped Eucalypt woodlands TEC.

Conclusion:

Due to the completely degraded condition of the vegetation within the application area, and the lack of conservation significant flora recorded during the biological survey, the proposed clearing area is unlikely to contain conservation significant flora species or communities. The proposed clearing, however, has the potential to cause the introduction and spread of weeds and dieback into nearby vegetation, which could impact on the quality of the vegetation. The proposed clearing is unlikely to result in a long-term detrimental impact on the environmental values of the Eucalypt Woodlands TEC patches nearby.

Conditions:

To address potential impacts to nearby native vegetation from the proposed clearing, weed and dieback management measures will be required as a condition on the clearing permit to mitigate impacts to adjacent vegetation.

3.2.3. Significant remnant vegetation - Clearing Principle (e)

Assessment

The national objectives and targets for biodiversity conservation in Australia has 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) (Commonwealth of Australia 2001). This is the threshold level below which species loss appears to accelerate exponentially at an ecosystem level.

The application area falls within the 'Avon Wheatbelt' IBRA which is extensively cleared and currently retains approximately 17.3 per cent of the pre-European vegetation (Government of Western Australia, 2019). The application area is broadly mapped as Beard vegetation associated Pingelly 352: York gum, salmon gum etc. (*Eucalyptus loxophleba*, *E. salmonophloia*). Across the Avon Wheatbelt, the Pingelly association retains approximately 11.4 per cent of the original extent (Government of Western Australia, 2019). A review of available databases determined that the local area retains approximately 14.1 per cent of its pre-European native vegetation extent. The local area and mapped vegetation type is inconsistent with the national target of biodiversity conservation of Australia (Commonwealth of Australia, 2001).

A Biological survey conducted across the application area considered the vegetation to be in completely degraded condition, with large portions of the application area containing exotic weeds and herbs (ELA, 2022). While the vegetation proposed to be cleared is in completely degraded condition, the majority of the vegetation has been mapped as *Eucalyptus loxophleba* low isolated trees over *Maireana brevifolia* low sparse chenopod shrubland over low mixed exotic herbs and grasses. This vegetation type is considered to be a degraded representative of the Pingelly 352 vegetation complex.

Whilst the proposed clearing is located within an extensively cleared landscape, the application area does not contain any conservation significant flora, does not provide significant habitat for any conservation significant fauna, does not contain high levels of biodiversity nor provide any mapped or recorded ecological linkages. Given the above, it is considered that the impact of clearing can be mitigated through appropriate onsite revegetation.

The applicant has committed to planting 18 trees to mitigate the clearing of 14 trees, to ensure the clearing will not contribute to the decline of vegetation within the local area (see Appendix A). DWER has assessed the suitability of this mitigation measure. Due to the vegetation within the application area being in completely degraded condition, the isolated *Eucalyptus loxophleba* and *Allocasuarina huegeliana* trees are considered to provide the most ecological value within the application area. Therefore, the proposed mitigation was assessed based on mitigating the individual 14 trees rather than the total 0.85 hectares. The *Maireana brevifolia* low sparse chenopod shrubland over low mixed exotic herbs and grasses was not considered to be required to be mitigated due to the completely degraded nature and minimal ecological value this vegetation provides. The mitigation planting proposed was input into the *WA Environmental Offsets Metric Calculator* to determine the ratio required to mitigate the loss of 14 trees. From this, 18 trees were determined to be a suitable mitigation measure. A significant residual impact does not remain following the mitigation planting. DWER considers that the mitigation planting aligns with the *WA Environmental Offset Policy* (2011) and *WA Environmental Offsets Guideline* (2014).

Conclusion:

Given the limited extent of clearing and the completely degraded condition of the vegetation proposed to be cleared, it is considered that the impact of clearing can be mitigated through appropriate onsite revegetation. A significant residual impact does not remain following the mitigation planting.

Conditions:

To ensure there is no net loss of trees within the local area, the following management measure will be required as a condition on the clearing permit:

- Planting of 18 trees of local provenance within Lot 29190 on Deposited Plan 193004 (Crown Reserve 34325)

3.2.4. Land and water resources - Clearing Principle (g)

Assessment:

The application area is located within the Brookton and Pingelly soil systems. The soils are mapped as having low risk to water erosion and a moderate to high risk of wind erosion and subsurface acidification. Portions of the application area are also mapped as having a moderate to high risk of phosphorus export and are susceptible to salinity, flooding and waterlogging.

Considering the purpose and extent of clearing, the clearing of 0.85 hectares of native vegetation may cause land degradation in the form of wind erosion.

Conclusion:

Based on the above assessment, the proposed clearing may lead to appreciable land degradation in the form of wind erosion.

Conditions:

To address the above impacts, construction activities will be required to commence within three months of clearing to minimise the impact of wind erosion.

3.3. Relevant planning instruments and other matters

The proposed clearing footprint is located within Lot 422 on Diagram 231828 and Lot 29190 on Plan 193004, managed by the Shire of Brookton (the Shire). CBH's development application has been approved by the Shire (Brookton, 2022).

Several Aboriginal sites of significance have been mapped within the local area, however none 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.

Appendix A. Additional information provided by applicant

On the 6 October 2022 DWER requested additional mitigation measures, specifically requesting the planting of trees to mitigate the loss of trees proposed to be cleared within the application area.

As a mitigation strategy CBH has committed to planting 18 trees of local provenance to replace the proposed clearing of 14 trees (CBH, 2022b). The trees will be planted within vegetation to the east of the application area, within the Lot 29190 on Deposited Plan 193004 (Crown Reserve 34325). This mitigation measure will ensure the clearing will not contribute to the decline of the local vegetation extent.

Appendix B. 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 C.

B.1. Site characteristics

Characteristic	Details
Local context	<p>The application area is located within the intensive land use zone of the Wheatbelt region of Western Australia. It is surrounded by rural industry, farms, dwellings and intact remnant native vegetation, some of which are mapped as the Eucalypt Woodlands TEC.</p> <p>Aerial imagery indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 14.1 per cent of the original native vegetation cover.</p>
Ecological linkage	<p>The application area is not located within any mapped formal ecological linkages. Due to the degraded condition and sparsity of the vegetation within the application area, it is unlikely that this vegetation serves any potential linkage function.</p>
Conservation areas	<p>The application area is not located within a conservation area. The nearest conservation area is the Weam Nature Reserve and Pingeculling Nature reserve located approximately 6.6 and 7.6 kilometres east of the proposed clearing.</p>
Vegetation description	<p>Photographs and Vegetation survey report supplied by the applicant (ELA, 2022) indicate that the proposed clearing areas consists of two vegetation types:</p> <ul style="list-style-type: none"> • <i>Eucalyptus loxophleba</i> low isolated trees (0.78 ha), and • Mixed isolated <i>Eucalyptus</i> spp./<i>Allocasuarina</i> trees (0.07 ha) <p>Survey descriptions and maps are available in Appendix E.</p> <p>The vegetation within the application area is typical of the Avon Wheatbelt bioregion's vegetation, and consistent with the mapped Pingelly Vegetation Complex, which is described as medium woodlands of <i>Eucalyptus</i> and York Gum (Shepherd et al., 2001).</p> <p>The mapped vegetation type retains approximately 11.4 per cent of the original extent (Government of Western Australia, 2019)</p>
Vegetation condition	<p>The Vegetation survey report provided indicate the vegetation within the proposed clearing area is in completely degraded condition (Keighery, 1994) condition.</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix D. Survey descriptions and mapping are available in Appendix E.</p>
Climate and landform	<p>The climate of the application area is characterised by a mean temperature that ranges between 4.5°C (minima) in July and 33.0°C (maxima) in January and a mean annual rainfall of 447.9 mm. Most of the rain falls in the wet months between May and September.</p>
Soil description	<p>The soil is mapped as:</p> <ul style="list-style-type: none"> • Brookton 1 subsystem (257Br_1): Alluvial valley flats surrounding Brookton, with shallow to deep sandy and loamy duplexes. Vegetated by Wandoo/Jam woodland and Ti-tree scrub with minor Salmon gum and Sheoak.

Characteristic	Details
	<ul style="list-style-type: none"> Pingelly 3 subsystem (257Pn_3u): Granitic and colluvial slopes with sandy and loamy duplexes and red/brown loams, vegetated by York Gum and Wandoo woodland.
Land degradation risk	The application area and its local context are mapped as having low risk to water erosion and a moderate to high risk of wind erosion and subsurface acidification. Portions of the application area are mapped as having a moderate to high risk of phosphorus export and are highly susceptible to salinity, flooding and waterlogging.
Waterbodies	The desktop assessment and aerial imagery indicated that the proposed clearing area will not intersect any watercourses or waterbodies. The nearest waterway is the Avon River tributary, located 132 metres to the east of the application area.
Hydrogeography	The proposed clearing area is within the Avon River Catchment Area, proclaimed under the RIWI Act. Water degradation risk in the Basin is mostly associated with nutrient load due to agricultural practices (Department of Water, 2015).
Flora	<p>A total of 14 conservation significant flora records occur within in local area. The nearest record is <i>Caladenia williamsiae</i> (T) located 0.84 kilometres from the application area. Of these, 10 taxa are found on the same soil type as the application area, however none are found within the application area.</p> <p>The vegetation survey (ELA, 2022) did not record any conservation significant flora species within the application area or broader survey area.</p>
Ecological communities	<p>The proposed clearing area does not intersect any mapped Priority or Threatened Ecological Communities. One TEC has been recorded within the local area with the nearest occurrence 0.06 kilometres east of the application area.</p> <p>The Wheatbelt Woodlands TEC is listed as Critically Endangered under the EPBC Act and Priority 3 under the State criteria.</p> <p>In the local context, 609 patches of vegetation are mapped as the Eucalypt Woodlands TEC. These mapped Eucalypt Woodlands vary in size, ranging from below 1 hectare to 1,899.8 hectares.</p> <p>The vegetation survey (ELA, 2022) did not record any conservation significant communities within the application.</p>
Fauna	<p>There are records of 12 fauna of conservation significance within the local area, none of which occur within the application area. Most of the records are located within the Weam and Pingeculling Nature reserve.</p> <p>The application area is located within the mapped breeding distribution of Carnaby's cockatoo and on the edge of the breeding distribution of Forest re-tailed black cockatoo. The closest known black cockatoo roost 30 km west.</p>

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*					
Avon Wheatbelt	630,577.61	108,887.52	17.27	10,191.45	1.62
Vegetation system*					
Pingelly	322,243.43	44,100.19	13.69	5,606.50	1.74
Vegetation association*					
Pingelly_352	82,862.74	9,414.26	11.36	181.05	1.92
Local area					
10km radius	32047.40	4508.12	14.07	-	-

*Government of Western Australia (2019)

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>Caladenia williamsiae</i>	T	N	N	Y	0.87	9	Y
<i>Thomasia montana</i>	T	N	Y	Y	1.36	14	Y
<i>Lasiopetalum rotundifolium</i>	T	N	Y	Y	3.55	26	Y
<i>Lasiopetalum</i> sp. Weam Reserve (M. Hislop 2755)	2	N	Y	Y	3.95	4	Y
<i>Acacia adjutrices</i>	3	N	N	Y	4.84	2	Y
<i>Anigozanthos bicolor</i> subsp. <i>exstans</i>	3	N	Y	Y	5.82	4	Y
<i>Stylidium tenuicarpum</i>	4	N	Y	Y	6.92	4	Y
<i>Beaufortia burbridgeae</i>	3	N	N	Y	7.17	6	Y
<i>Leucopogon audax</i>	2	N	N	Y	7.36	2	Y
<i>Hibbertia glomerata</i> subsp. <i>wandoo</i>	3	N	N	Y	8.18	1	Y

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

B.4. Fauna 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 fauna required further consideration.

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)	Are surveys adequate to identify? [Y, N, N/A]
<i>Bettongia penicillata ogilbyi</i> (woylie)	CR	N	N	1.08	1	Y
<i>Isoodon fusciventer</i> (quenda)	P4	Y	Y	1.08	1	Y
<i>Falco peregrinus</i> (Peregrine falcon)	OS	Y	Y	2.02	2	Y
<i>Macrotis lagotis</i> (bilby)	VU	N	N	2.02	1	Y
<i>Myrmecobius fasciatus</i> (numbat)	EN	N	N	2.02	7	Y
<i>Phascogale calura</i> (red-tailed phascogale)	CD	N	N	2.02	55	Y
<i>Acanthophis antarcticus</i> (southern death adder)	P3	N	N	2.02	1	Y
<i>Calyptorhynchus latirostris</i> (Carnaby's cockatoo)	EN	Y	Y	6.94	1	Y
<i>Calyptorhynchus</i> sp. 'white-tailed black cockatoo' (White-tailed black cockatoo)	EN	Y	Y	7.22	1	Y
<i>Platycercus icterotis xanthogenys</i> (western rosella)	P4	Y	Y	8.00	1	Y

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

B.5. Land degradation risk table

Risk categories	Soil: Brookton 1 (257Br_1)	Soil: Pingelly 3 (257Pn_3u)
Wind erosion	H2: >70% of the map unit has a high to extreme hazard	M2: 30-50% of the map unit has a high to extreme hazard
Water erosion	L1: <3% of the map unit has a very high to extreme hazard	L2: 3-10% of the map unit has a very high to extreme hazard
Salinity	M2: 30-50% of the map unit has a moderate or high hazard or is presently saline	L1: <3% of the map unit has a very high to extreme hazard
Subsurface Acidification	H2: <70% of the map unit has a high susceptibility	H2: >70% of the map unit has a high susceptibility
Flood risk	H2: >70% of the map unit has a moderate to high hazard	L1: <3% of the map unit has a moderate to high hazard
Water logging	H2: >70% of the map unit has a moderate to very high to risk	L2: 3-10% of the map unit has a moderate to very high to risk
Phosphorus export risk	H2: >70% of the map unit has a high to extreme hazard	L2: 3-10% of the map unit has a high to extreme 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> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared does not contain any records of conservation significant flora, fauna or communities. The biological survey (ELA, 2022) recorded low value foraging habitat for black cockatoo within portions of the habitat area. Given the extent of clearing and the completely degraded condition of the vegetation, the proposed clearing is not considered to comprise a high level of biodiversity.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
<p><u>Principle (b):</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 significant habitat for fauna.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared contains completely degraded vegetation and therefore provides very little value as habitat for significant fauna. No conservation significant fauna were recorded during the Biological survey (ELA, 2022). The survey identified low value foraging habitat for black cockatoos (Carnaby’s and potentially Forest red-tailed black cockatoo) within portions of the application area.</p> <p>Due to the extent and completely degraded nature of the vegetation within the area proposed to be cleared, it is not considered necessary for the maintenance of, a significant habitat for fauna.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u></p> <p>A Biological survey conducted across the application area recorded no conservation significant flora taxa. Due to the completely degraded nature of the application area, and the results of the survey, the proposed clearing area is unlikely to contain flora species listed under the BC Act or EPBC Act or be necessary for the continued existence of any threatened flora.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.2, above.</i>

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><u>Assessment:</u></p> <p>The local area contains many occurrences of the Eucalypt Woodlands TEC. The vegetation within the application area is in completely degraded condition and no TECs listed under the BC Act or EPBC Act were recorded within the proposed clearing area.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
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><u>Assessment:</u></p> <p>The extent of the mapped vegetation type and native vegetation in the local area are below 30%, which is inconsistent with the national objectives and targets for biodiversity conservation in Australia.</p>	May be at variance	Yes <i>Refer to Section 3.2.3, 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><u>Assessment:</u></p> <p>Given the distance to the nearest conservation area is approximately 6.5 kilometres, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.</p>	Not likely to be 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><u>Assessment:</u></p> <p>The nearest waterway is an Avon River tributary, located 132 metres to the east of the application area. Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact an environment associated with a watercourse or wetland.</p>	Not 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><u>Assessment:</u></p> <p>The application area is mapped as having low risk to water erosion and a moderate to high risk of wind erosion and subsurface acidification. Portions of the application area are mapped as having a moderate to high risk of phosphorus export and are highly susceptible to salinity, flooding and waterlogging.</p>	May be at variance	Yes <i>Refer to Section 3.2.4, above.</i>
<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><u>Assessment:</u></p> <p>No water courses or wetlands are recorded within the application area. The proposed clearing will not intercept any surface or groundwater resources. Therefore, the proposed clearing is unlikely to impact surface or ground water quality.</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (j)</u>: “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</p> <p><u>Assessment</u>:</p> <p>The mapped soils and topographic contours in the surrounding area indicate the potential for the proposed clearing to contribute to increased incidence or intensity of flooding.</p> <p>Given the extent and purpose of the proposed clearing and given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging.</p>	Not likely to be 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 and photographs of the vegetation (ELA, 2022)

CBH engaged Eco Logical Australia (ELA) to conduct a Reconnaissance flora and vegetation survey, Basic fauna survey and black cockatoo habitat assessment of the proposed clearing area.

A portion of the survey area was assessed by ELA in June 2020. In 2021, due to a change in project area and subsequent survey area, ELA re-surveyed the areas assessed in 2020 as well as the new areas as part of the 2021 survey. The total survey area comprised approximately 9.49 hectares (Figure 2).

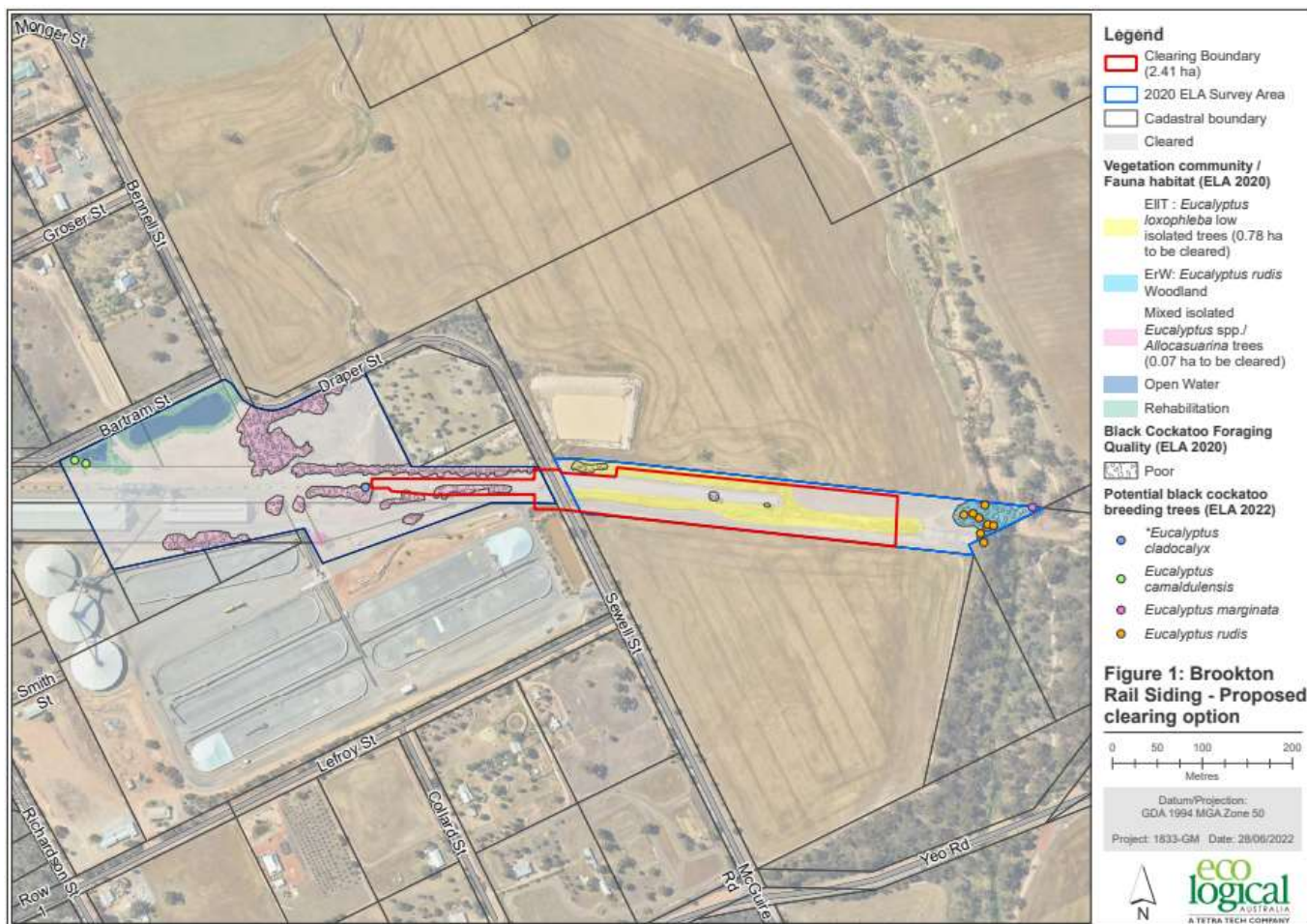


Figure 2. Application area within the ELA survey area, mapped vegetation types and fauna habitat by ELA (ELA, 2022)



Figure 3. Vegetation unit within the application area; EIIT: *Eucalyptus loxophleba* low isolated trees over *Maireana brevifolia* low sparse chenopod shrubland over low mixed exotic herbs and grasses (ELA, 2022)



Figure 4. Vegetation unit within the application area; EIAhT: **Eucalyptus cladocalyx*, **Eucalyptus leucoxyton*, *Allocasuarina huegeliana* low fringing isolated clumps of trees over low mixed exotic grasses and herbs (ELA, 2022).

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)

F.2. References

CBH (2022a) *Clearing permit application CPS 9801/1*, received 8 July 2022 (DWER Ref: DWERT10556).

CBH (2022b) *Additional information for clearing permit application CPS 9801/1*, received 13 October 2022 (DWER Ref: DWERT671270).

Eco Logical Australia (2022) *Brookton NVCP. Prepared for CBH*, received 8 July 2022 (DWER Ref: DWERT629390).

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