GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 10257/1
Permit Holder:	Co-operative Bulk Handling Limited
Duration of Permit:	From 23 December 2023 to 23 December 2033

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

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of expanding the Konnongorring Rail Out-loading infrastructure (grain transportation).

2. Land on which clearing is to be done

Lot 10 on Deposited Plan 25798, Konnongorring
Lot 300 on Deposited Plan 425165, Konnongorring
Railway Reserve (PIN 1047836), Konnongorring
Railway Reserve (PIN 12057999), Konnongorring

3. Clearing authorised

The permit holder must not clear more than 0.16 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 23 December 2028.

PART II – MANAGEMENT CONDITIONS

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

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

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

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

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

6. Weed and dieback management

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

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

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

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

7. Directional clearing

The permit holder must:

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

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

8. Mitigation – Rehabilitation

(a) The permit holder must *rehabilitate* 0.37 hectares of *native vegetation* within the area cross-hatched red in Figure 2 of Schedule 2 (Lot 300 on Deposited Plan 425165) of this permit, of which provides suitable foraging habitat for Carnaby's black cockatoo (*Zanda latirostris*).

(b) The *rehabilitation* required under condition 8(a) of this permit, must be undertaken in accordance with the *Revegetation Plan* prepared by Tranen Revegetation Systems (Tranen, 2023), including but not limited to the following:

  (i) undertake *direct seeding* and tubestock *planting* at an *optimal time*, using species listed in Table 1 of Schedule 2 (target species) and density listed in Table 2 of Schedule 2 (Planting density);

  (ii) ensure only *local provenance* seeds and propagating material are used to *rehabilitate;*

  (iii) implement hygiene protocols by cleaning earth-moving machinery of soil and vegetation prior to entering and leaving the *rehabilitation* area;

  (iv) establish at least three 20 x 20 meter quadrat monitoring sites within *rehabilitated* area;

  (v) undertake *weed* control activities bi-annually until the completion criteria as per Table 3 of Schedule 2 (completion criteria) has been met;

  (vi) achieve the completion criteria specified in Table 3 of Schedule 2 (completion criteria) has been met and maintained for a minimum of three years;

  (vii) monitor quadrats specified in condition 8(b)(iv) twice annually until the completion criteria as per Table 3 of Schedule 2 (completion criteria) has been met and maintained for a minimum of three years;

(viii) undertake remedial actions for the *rehabilitation* area where monitoring indicates the completion criteria, outlined in Table 3 of Schedule 2 (completion criteria), has not been met, including:

i. deliberately *planting* and/or *direct seeding native vegetation* that will result in the minimum targets specified in Table 3 of Schedule 2 (completion criteria) ensuring only species listed in Table 1 of Schedule 2 (Target species) are used;

ii. undertake further *weed* control activities; and

iii. continue monitoring of the *rehabilitated* area by an *environmental specialist,* until the completion criteria, outlined in Table 3 Schedule 2 (completion criteria) has been met.

(ix) be maintained in accordance with the specifications detailed in the *Revegetation Plan*, for a period of at least three years; and

(x) where an *environmental specialist* has determined that the completion criteria, outlined in Table 3 Schedule 2 (completion criteria) has been met, that report is to be provided to the *CEO* within three months of the determination being made by the *environmental specialist*.

9. Vegetation management – Fencing

(a) Within 12 months of the commencement of *rehabilitation*, the permit holder must construct a fence enclosing the area cross-hatched red in Figure 2 of Schedule 2 (Lot 300 on Deposited Plan 425165) of this permit.

(b) The fence should allow for the movement of wildlife by being raised 15 centimetres from the ground.

(c) The permit holder must notify the *CEO* within three months of the completion of the fence constructed under 9(a).

PART III - RECORD KEEPING AND REPORTING

10. Records that must be kept

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

Table 1: Records that must be kept

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

No.	Relevant matter	Specifications
		in accordance with condition 5; (g) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 6; and (h) evidence of fencing undertaken in accordance with condition 9.
2.	In relation to *rehabilitation* pursuant to condition 8	(a) a description of the *rehabilitation* activities undertaken; (b) the size of the area *rehabilitated* (in hectares); (c) the date the *rehabilitation* works began; (d) the boundaries of the area *rehabilitated* (recorded digitally as a shapefile); (e) any remediation works undertaken; (f) determinations made by an *environmental specialist;* (g) the date the completion criteria are considered to be met; and (h) other actions taken in accordance with condition 8.

11. Reporting

The permit holder must provide to the *CEO* the records required under condition 10 of this permit when requested by the *CEO*.

DEFINITIONS

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

Table 2: Definitions

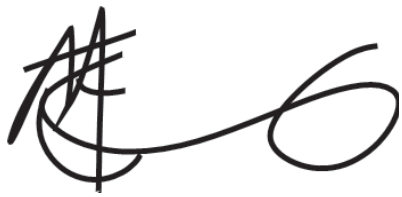
Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
dieback	means the effect of *Phytophthora* species on native vegetation.
direct seeding	means a method of re-establishing vegetation through establishment of a seed bed and the introduction of seeds of the desired plan species.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
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 *CEO* as a suitable environmental specialist.
EP Act	*Environmental Protection Act 1986* (WA)
fill	means material used to increase the ground level, or to fill a depression.
local provenance	means native vegetation seeds and propagating material from natural sources within 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 optimal time for undertaking direct seeding and planting for that region.
planting(s)/plant	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species.
proposed clearing area	means the area of clearing required for the construction of the Konnongorring Rail Out-loading infrastructure (grain transportation).
revegetation plan	means the revegetation plan produced by Tranen revegetation systems for this permit and approved by the CEO (Tranen, 2023).
rehabilitate/rehabilitated/ rehabilitation	means actively managing an area containing *native vegetation* in order to improve the ecological function of that area using methods such as natural regeneration, direct seeding and/or planting, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.
weeds	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

REFERENCES

Tranen (2023) *P1011A Konnongorring Grain Receival Facility and Rain Expansion Revegetation Plan*. Prepared for CBH'. Received 03 June 2023 (DWER Ref: DWERDT813198).

END OF CONDITIONS



Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

29 November 2023

Schedule 1

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

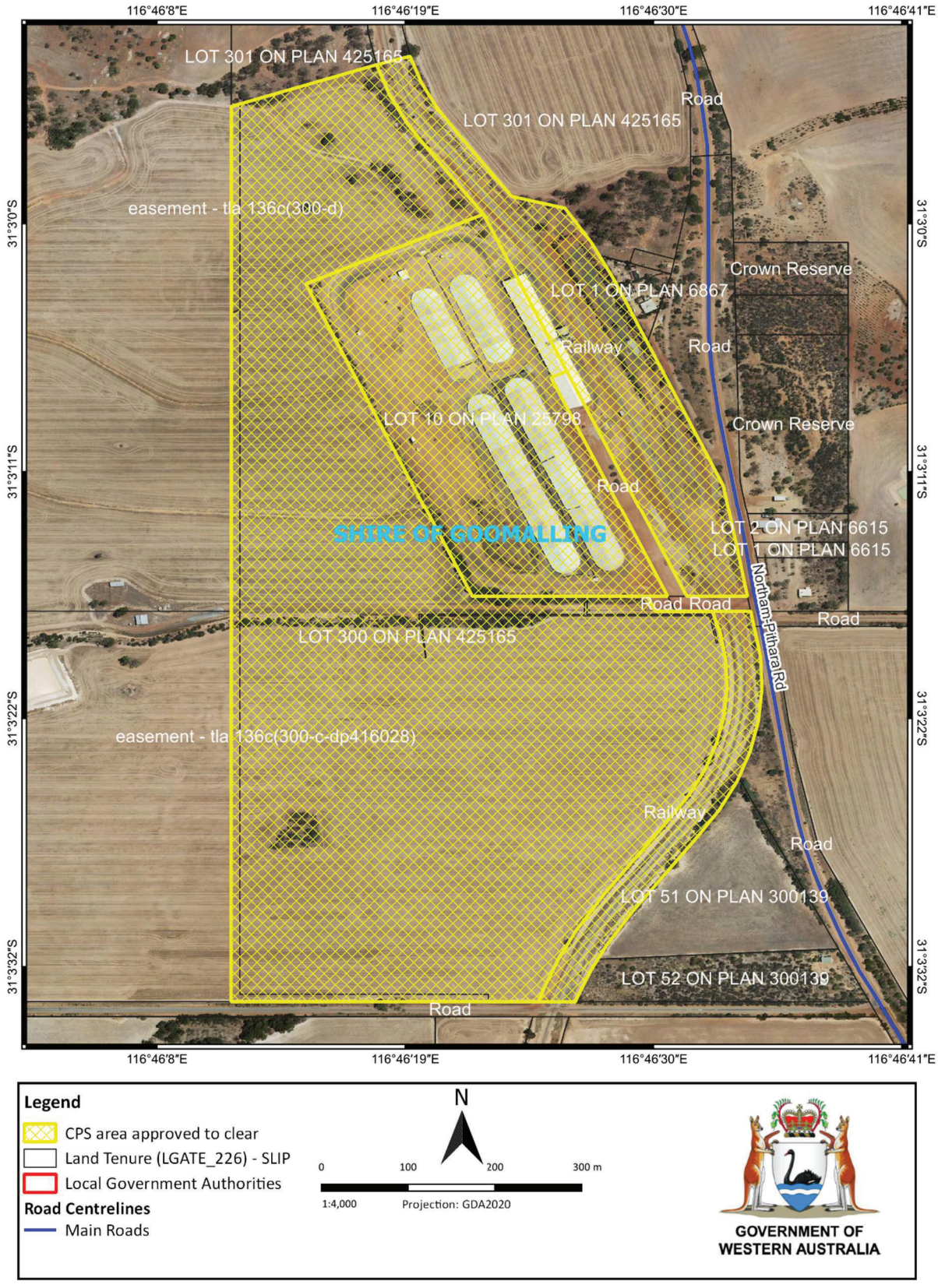


Figure 1: Map of the boundary of the area within which clearing may occur

Schedule 2

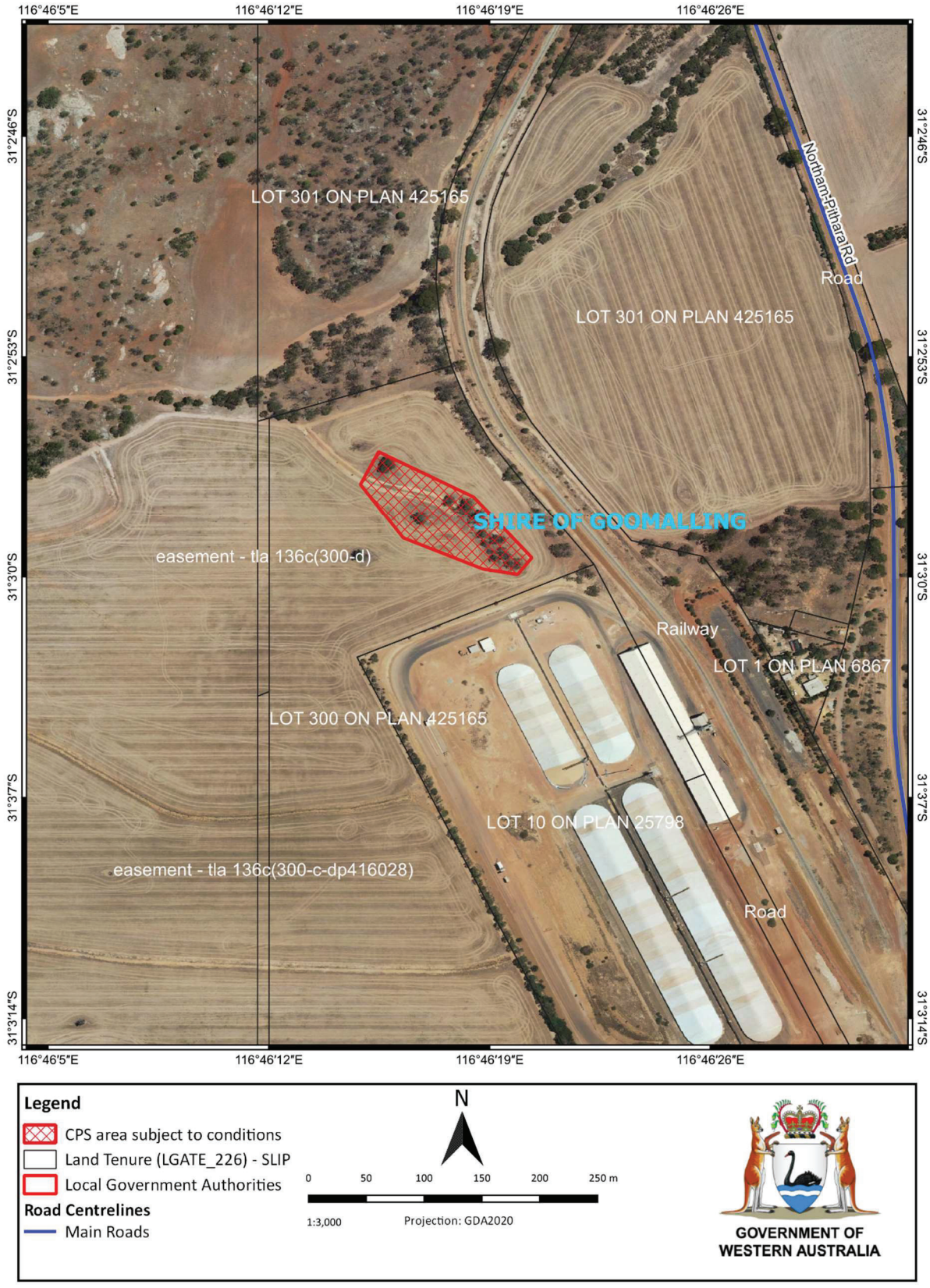


Figure 2: Map of the boundary of the area within which conditions apply.

Target Species

Table 1: Target species for tubestock supply and *direct seeding* for the *rehabilitation* within the areas cross-hatched red in Figure 2 on Schedule 2.

Species	Form	Nursery	Seed	Height range (meters)	Cockatoo value F (Foraging), N (Nesting), R (Roosting), U (Unknown).
Acacia acuminata	Tree	X		1.00 - 7.00	U
Acacia assimilis subsp. *assimilis*	Shrub		X	1.00 - 3.00	U
Allocasuarina campestris	Shrub		X	1.0 - 3.00	U
Austrostipa elegantissima	Grass		X	0.35 - 2.00	U
Dianella revoluta	Shrub	X		0.30 - 1.50	U
Enchylaena tomentosa	Shrub		X	0.10 - 0.60	U
Eucalyptus loxophleba	Tree	X		15.00	F,N
Eucalyptus wandoo	Tree	X		3.00 -25.00	F,N,R
Gastrolobium trilobum	Shrub		X	1.80	U
Grevillea biternata	Shrub		X	0.30 - 1.80	U
Maireana brevifolia	Shrub	X		0.20 - 1.00	U
Neurachne alopecuroidea	Grass		X	0.15 - 0.50	U
Ptilotus divaricatus	Shrub		X	0.30 - 1.50	U
Ptilotus exaltatus	Herb		x	0.10 - 1.20	U
Ptilotus polystachyus	Herb		X	0.15 - 1.50	U
Rhagodia preissii	Shrub	X		0.5 - 4.00	U
Santalum acuminatum	Tree		X	1.00 - 7.00	U
Solanum hoplopetalum	Herb		X	0.05 - 0.30	U

Planting density

Table 2: Plant installation density for the *rehabilitation* within the areas cross-hatched red in Figure 2 of Schedule 2.

Species	Target
Tree species planting	250 per hectare
Shrub species planting	1000 per hectare
Total	1250 per hectare

Completion Criteria

Table 3: Completion criteria for the *rehabilitation* within the areas cross-hatched red in Figure 2 of Schedule 2.

Aspect	Completion criteria	Monitoring
Survival rate to be achieved	The *revegetation* site needs to ensure a survival rate of at least 70 per cent of the seedlings initially planted to be established	The species in the *revegetation* area will be counted twice annually by an *environmental specialist* in spring and autumn or for a minimum of three years after the last year plants were established.
Vegetation Structure	Vegetation in the *revegetation* site to be broadly representative of Wandoo	The structure is to be assessed twice annually by an *environmental specialist*

Aspect	Completion criteria	Monitoring
	woodland by establishing overstory and midstory species and providing conditions suitable for expanding remnant understory species across the site.	in spring and autumn for a minimum of three years after the last year plants were established.
Patch size of bare ground	Native plant coverage will be estimated with a normal target range of 40 per cent.	The number of surviving plants in the *revegetation* site will be monitored twice annually by an *environmental specialist* in spring and autumn for a minimum of three years after the last year plants were established.
Percentage of weeds present	Reduction of more than 70 per cent of the population of weeds within the *revegetation* area.	Monitor the *revegetation* site for weeds by quadrates twice annually in spring and autumn for a minimum of three years after the last year plants were established.
Patch size of bare ground	The *revegetation* area has no more than 30 meters squared of bare ground.	The patch size of bare ground is to be assessed twice annually by an *environmental specialist* in spring and autumn for a minimum of three years after the last year plants were established.
Gate and boundary fence	Installation of a simple high rural perimeter fencing around the *revegetation* area.	Condition of the gates and fence in the revegetation site is to be assessed twice annually in spring and autumn for a minimum of three years after the last year plants were established.

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10257/1
Permit type:	Purpose permit
Applicant name:	Co-operative Bulk Handling Limited (CBH)
Application received:	30 June 2023
Application area:	0.16 hectares of native vegetation within a 59.82 hectares development area
Purpose of clearing:	Expanding the Konnongorring Rail Out-loading infrastructure (grain transportation)
Method of clearing:	Mechanical
Property:	Lot 10 on Deposited Plan 25798 Lot 300 on Deposited Plan 425165 Railway Reserve (PIN 1047836) Railway Reserve (PIN 12057999)
Location (LGA area/s):	Shire of Goomalling
Localities (suburb/s):	Konnongorring

1.2. Description of clearing activities

Co-operative Bulk Handling Limited (CBH) is proposing to clear 0.16 hectares of native vegetation distributed across three separate areas in the intensive land use zone of Western Australia, Konnongorring (see Figure 1, Section 1.5). The proposed clearing will expand the Konnongorring rail out-loading infostructure.

The application was revised during the assessment process in response to a request for information. The changes resulted in an increase of the total area footprint, from a clearing footprint of 0.16 hectares to a broader 59.82 hectare footprint. The area required to be cleared remained the same. The increase in footprint also included Lot 300 on Deposited Plan 425165 (see Section 3.1 for further details).

1.3. Decision on application

Decision:	Granted
Decision date:	29 November 2023
Decision area:	0.16 hectares of native vegetation within a 59.82 hectare development 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 a total of 28 days across two separate timeframes. No submissions were received during either consultation.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix A), relevant datasets (see Appendix E.1), the findings of a flora and vegetation assessment (BCE, 2023), a flora and fauna survey (Eco Logical, 2022), a geotechnical investigation (Golder, 2023), clearing permit application supporting documents (CBH 2023b; CBH 2023c; Eco Logical 2023) (see Appendix D), the clearing principles set out in Schedule 5 of the EP Act (see Appendix B), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration that the objective of the proposal is to support the expansion of the Konnongorring rail out-loading infrastructure to cater for the growing quantities of grain receivals from the surrounding catchments.

The assessment identified that the proposed clearing will result in:

- the loss of 0.15 hectares of native vegetation that is suitable foraging habitat for Carnaby's black cockatoo;
- the loss of 0.16 hectares of native vegetation considered significant as a remnant of native vegetation in an area that has been extensively cleared;
- risk to surrounding vegetation from the introduction and spread of weeds and dieback; and
- potential impacts to fauna present at the time of clearing.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see section 3.1), the Delegated Officer determined that the impacts of the proposed clearing, including impacts to fauna present at the time of clearing and the potential to facilitate the introduction of weeds and dieback, can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values through permit conditioning. The Delegated Officer determined that the revegetation of 0.37 hectares of native vegetation within Lot 300 on Deposited Plan 425165 was sufficient to counterbalance the significant residual impact to Carnaby's black cockatoo habitat and extensively cleared landscape (see Section 3.1).

The Delegated Officer, therefore decided to grant a clearing permit subject to the following conditions, which have been imposed on the clearing permit, to manage and address the impact of clearing:

- avoidance and minimise measures to reduce the impacts and extern of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback;
- undertake slow, progressive one-direction clearing to allow terrestrial fauna to move into adjacent habitats ahead of the clearing activity;
- undertake revegetation within Lot 300 (see Section 3.1); and
- fence the revegetation activities within Lot 300.

1.5. Site maps

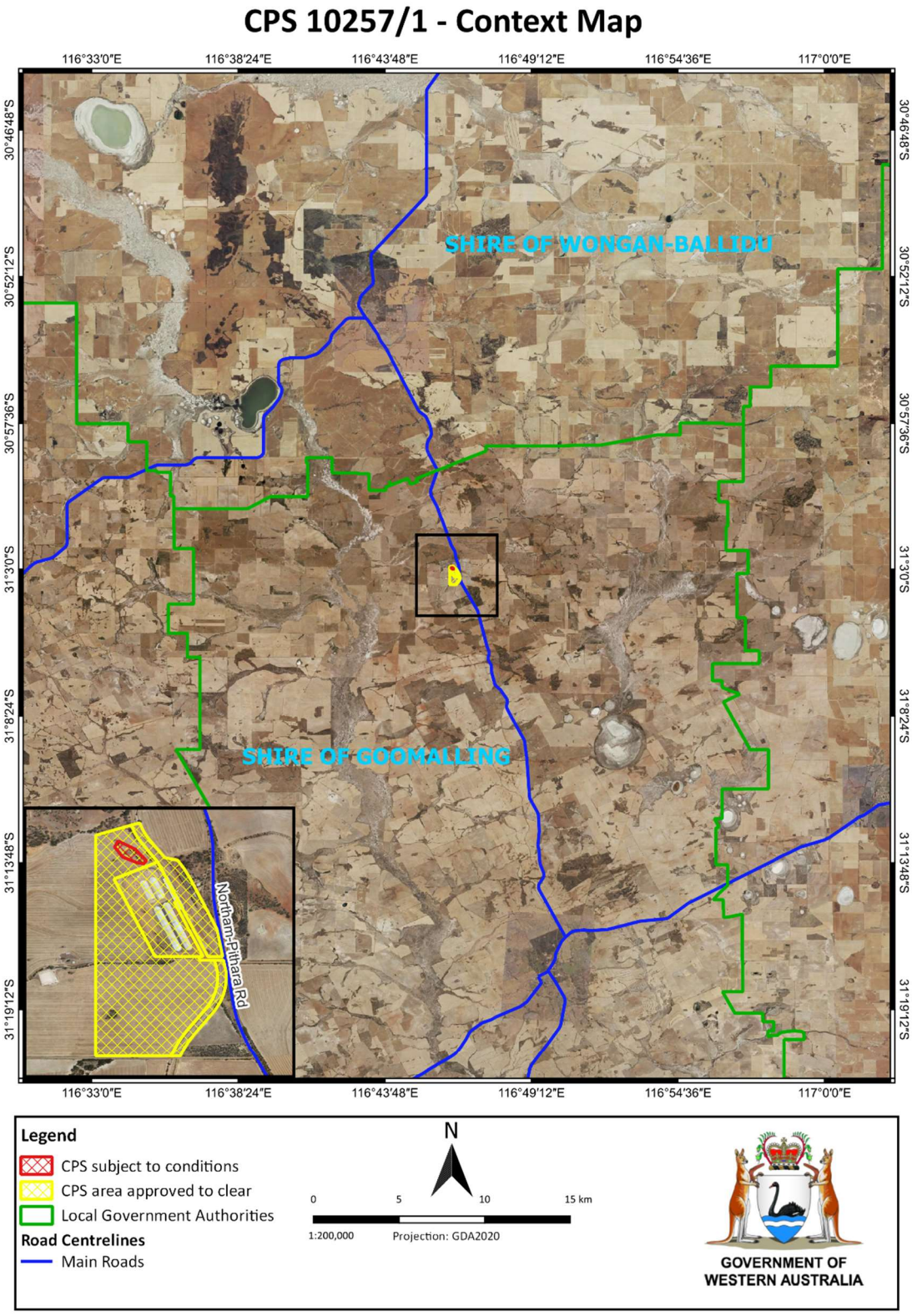


Figure 1: Context map of the application area. The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit.

CPS 10257/1 - Map

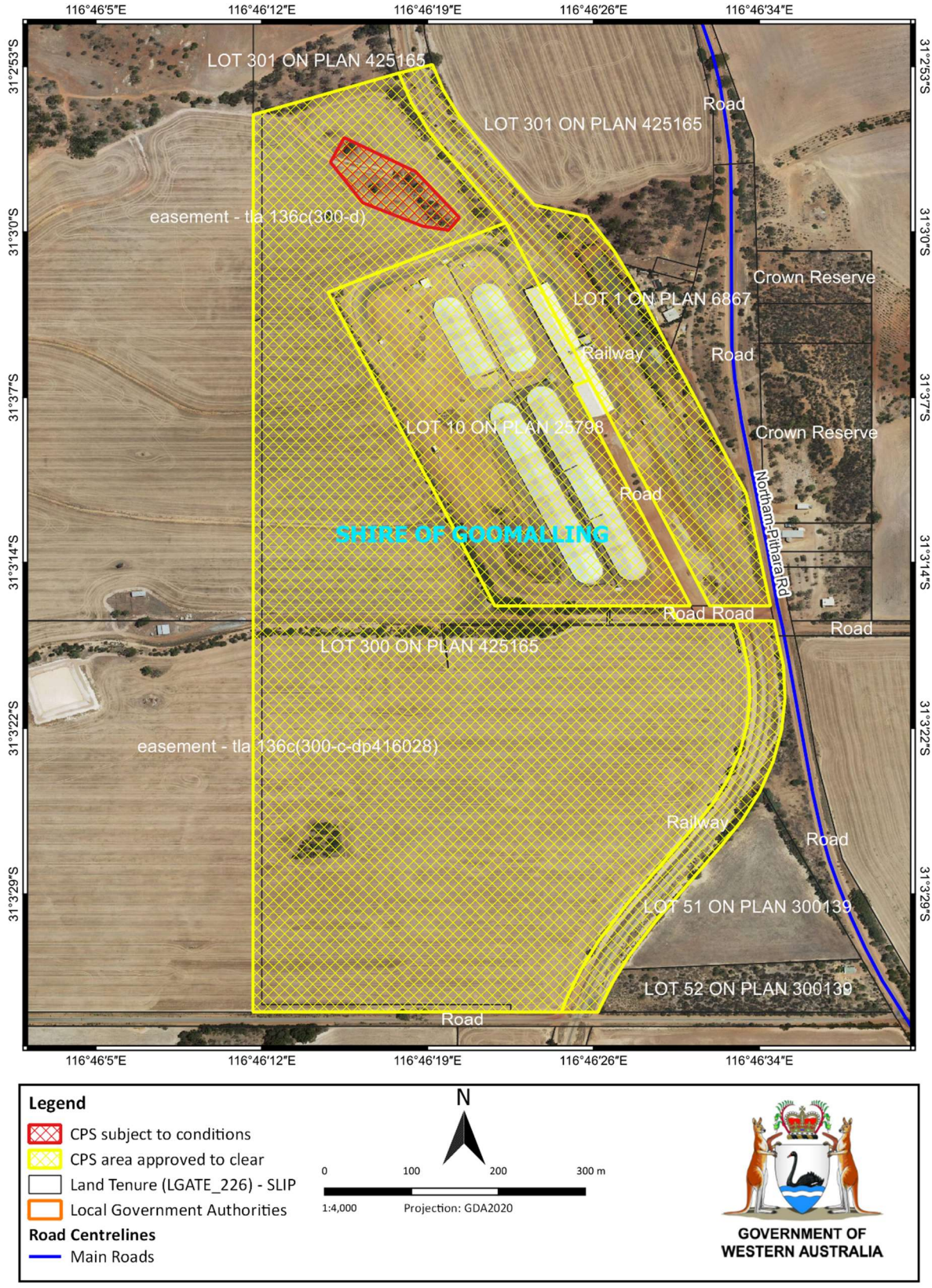


Figure 2: Map of the application area. The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit. The areas crosshatched red indicate the areas subject to conditions.

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)
- *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)

Relevant policies considered during the assessment include:

- *Environmental Offsets Policy* (2011)

The key guidance documents which inform this assessment are:

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

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Pre-clearing actions

Within the broader application area CBH has provided the exact areas that they are proposing to clear and have specified that they will not clear outside of these boundaries (CBH, 2023a; CBH 2023b) (See Figure 3).

Furthermore, CBH designed six rail siding and facility placement locations to determine the location with the least impact on native vegetation. Each option was assessed from its environmental impact, with aims of avoiding vegetation clearing and, where this was not feasible, reducing clearing to the smallest extent possible while also avoiding high-value vegetation areas as much as possible. The final design avoided approximately 98 per cent of extant native vegetation within AECOMs Survey area (CBH, 2023b; AECOM, 2023). The redesigns reduced the total clearing from 6.77 hectares of native vegetation to 0.35 hectares of native vegetation (see Appendix D, Figure 4).

The environmental values found within the 6.77 hectares that was avoided by the designs include:

- 1.16 hectares of native vegetation in a Very good condition,
- 5.94 ha of suitable foraging habitat for Carnaby's cockatoos,
- 30 potential breeding/roosting trees,
- 0.2 hectares of potential breeding habitat, and
- 1.3 hectares of potential roosting habitat.

Of the 0.35 hectares of native vegetation to be cleared, the northernmost section of the proposed clearing was further reduced due to updates to the design. Removing the need to clear an additional approximately 0.19 hectares of additional clearing (see Appendix D, Figure 5).

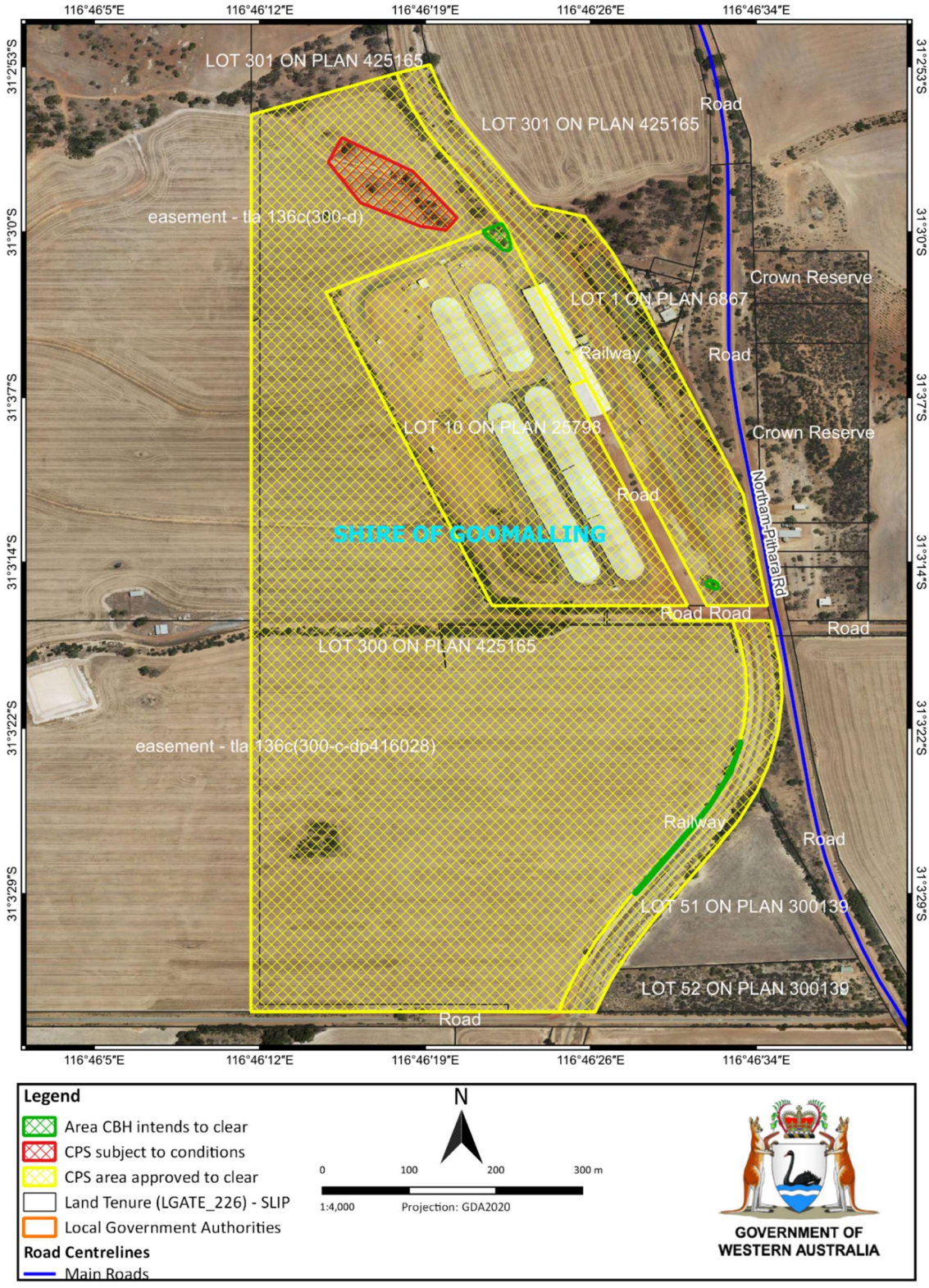


Figure 3: Map of the application area. The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit. The areas crosshatched red indicate the areas subject to conditions. The areas crosshatched green indicate the areas CBH has indicated the clearing will take place within.

Post clearing actions

CBH has advised that they are developing an environmental management plan (EMP) to manage the potential impacts associated with clearing and construction. CBH proposes the EMP will assist in managing:

- degradation of surrounding areas of native vegetation and Carnaby's cockatoo habitat
- weeds and/or disease

- wastewater or stormwater run-off
- excessive dust
- contamination from hazardous materials.

After consideration of the avoidance and mitigation measures provided by CBH, it was determined that further avoidance and/or mitigation measures were required to counterbalance the significant residual impacts to black cockatoo habitats and clearing within an extensively cleared landscape. To mitigate the loss of vegetation, CBH has committed to the revegetation of 0.84 hectares of native vegetation within Lot 300 on Deposited Plan 425165 (see Appendix D, Figure 6) (Tranen, 2023).

A revegetation plan was submitted by CBH (CBH, 2023b) detailing methods of the revegetation of 0.84 hectares that aims to:

- revegetate *Eucalyptus wandoo* woodland that is in a degraded (Keighery, 1994) condition,
- re-establish the overstory and midstory vegetation structure of the Wandoo woodland and to provide conditions suitable for the expansion of the remnant understory species across the site,
- retention of all native vegetation within the designated revegetation site,
- retention of a heritage value aboriginal scar tree within the footprint of the revegetation site,
- implement fencing around the revegetation site,
- planting trees in a ratio of 250 per hectare and shrub species in a ratio of 1,000 per hectare,
- weed management strategies including herbicide spraying, and physical removal each spring and autumn as necessary within the revegetation site, and
- vegetation monitoring and performance criteria for the two-year management period.

An assessment of the revegetation was undertaken using the WA Environmental Offset Metric and having consideration for the Environmental Offset Policy (2011) and the Environmental Offset Guidelines (2014). To ensure adequate suitability of the revegetation balancing the significant residual impacts of the loss of foraging habitat and significant remnant vegetation, the calculation identified that the revegetation of 0.37 hectares of native vegetation would be sufficient to ensure that no significant residual impacts remain.

Considering the above, 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 Delegated Officer additionally had regard for the avoidance and mitigation measures (see section 3.1), where it was identified that the broader environmental envelope of the area applied to be cleared has environmental values greater than CBH's confirmed clearing area within the application area (see Figure 3). Based on the information provided by CBH, the department's assessment of the impacts on environmental values will be evaluated on the smaller 0.16-hectare footprint, as that is the area where clearing will be undertaken.

The assessment against the clearing principles (see Appendix B) identified the impacts of the proposed clearing present a risk to fauna habitat, significant remnant vegetation and land degradation. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with section 51H and 51I of the EP Act, is set out below.

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

Assessment

The application area is located within the Goomalling region within the Wheatbelt. A flora and fauna survey (Eco Logical, 2022) and a flora and vegetation assessment (AECOM, 2023) identified that the vegetation within the intended clearing area consists of vegetation in a completely degraded (Keighery, 1994) condition.

According to available database, 14 conservation significant fauna species have been recorded within the local area (20-kilometre radius), comprising of one Priority 3, one Priority 4, three Endangered, three Vulnerable, one critically endangered, four migratory, and one specially protected species (OS) fauna taxa. Noting the habitat requirements,

the distribution of the recorded species, the mapped vegetation types, and the condition of the vegetation within the intended clearing area, the intended clearing area may comprise of suitable habitat for the following species.

- *Rostratula australis* (Australian painted snipe) (EN)
- *Zanda latirostris* (Carnaby's Cockatoo, White-tailed Short-billed Black Cockatoo) (EN)

Australian Painted Snipe

The Australian painted snipe (APS) is listed as an endangered species under the EPBC Act and is also listed as a migratory species under the EPBC Act. The APS is usually found in shallow inland wetlands, either freshwater or brackish water that can be either perennial or not (DCCEEW, 2003; DSEWPC, 2013). The species has a scattered distribution throughout Australia, with some individuals being nomadic or temporally occupying areas where suitable habitat exists (DCCEEW, 2003). The APS is an omnivorous species hunting near and around water edges on mudflats, predominantly feeding on invertebrate species; however, is known to feed on seeds (DSEWPC, 2013).

Although the habitat preferences were not found within the intended clearing area, the species has been recorded within the broader application area, giving rise to its consideration. The APS single record within a 20-kilometre radius of the application area is an old record from 2002. It is likely that the individual was in transit across the application area and utilising waterlogged areas associated with the nearby farm (Eco Logical, 2022). The proposed clearing area is unlikely to affect any surrounding wetlands or environments and also does not contain the preferred habitat for this species. Therefore, it is unlikely that the clearing will impact the Australian-painted snipe.

Carnaby's Cockatoo

When considering the habitat of Black Cockatoos, it can be categorized into three distinct groups: foraging, breeding, and roosting. Black Cockatoos typically forage within a 12-kilometre radius of their active breeding site (Commonwealth of Australia, 2022). Following breeding, they will flock in search of food sources within six kilometres of their night roost (Commonwealth of Australia, 2022). However, they may travel up to 20 kilometres or more (Commonwealth of Australia, 2022). To maintain their populations, it is crucial to have an abundance of food resources within the range of breeding and roosting sites. Consequently, foraging resources are evaluated based on known breeding and night roosting sites, primarily within 12 kilometres of a breeding or roosting site (Commonwealth of Australia, 2022). The application area is located within the modelled breeding range of Carnaby's Cockatoo. The range of the species has contracted west and south from its historical range. A black cockatoo habitat assessment determined that the Carnaby's cockatoo is expected to be an irregular visitor to the application area (Bamford, 2023).

Breeding Habitat

Black cockatoo species are known to nest in hollows of live and dead trees, including *Corymbia calophylla* (marri), *Eucalyptus marginata* (jarrah), *Eucalyptus diversicolor* (karri), *Eucalyptus wandoo* (wandoo), *Eucalyptus gomphocephala* (tuart), *Eucalyptus rudis* (flooded gum), and other *Eucalyptus spp*. (Commonwealth of Australia, 2022). 'Breeding habitat' for black cockatoos includes trees of these species that either have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow, where suitable DBH for nest hollows is ≥ 50 centimetres for most tree species (Commonwealth of Australia, 2022). A black cockatoo survey did not identify any breeding trees with suitable hollows within the survey area. However 30 potential breeding trees with a suitable DBH were recorded (Eco Logical, 2022). One of the 30 potential breeding trees is recorded within the proposed clearing area. The loss of this tree with no suitable hollows is not likely to significantly impact the availability of potential breeding habitat for Carnaby's cockatoo.

Foraging habitat

Carnaby's cockatoo forage on a variety of seeds, nuts, flowers, and plants, including Proteaceous species (*Banksia* spp., *Hakea* spp., and *Grevillea* spp.), as well as *Allocasuarina* and *Eucalyptus* species, marri, and a range of introduced species (Valentine and Stock, 2008). Although the application area occurs within the predicted occurrence and breeding range of the Carnaby's, no evidence of foraging on site has been observed by either of the two black cockatoo assessments (Eco Logical, 2022; Bamford, 2023). Black cockatoos generally breed and forage within a 6-to-12-kilometre radius of their nesting site (Commonwealth of Australia, 2022). According to spatial data, there is one record of a White-tailed black cockatoo breeding hollow within 12 kilometres of the application area, being approximately 6.49 kilometres North of the application area. Approximately 0.15 hectares of low to negligible quality foraging habitat is mapped within the intended clearing area (Eco Logical, 2022) (see Table 1 and Figure 8). The Delegated officer determined that the proposed clearing of 0.15 hectares of suitable foraging habitat within 12 kilometres of a known breeding location in an extensively cleared landscape to be significant.

Table 1: Quality of Carnaby's cockatoo habitat within the intended clearing area (Eco logical, 2022)

Quality	Criteria	Hectares
Low	Low foraging value including:	0.07

Quality	Criteria	Hectares
	• Primary food sources (i.e. shrubby Banksias, Marri or Jarrah trees or open woodland, open Eucalypt Woodland/Mallee of small-fruited species) present at 2-5 per cent • Secondary food sources (i.e. Woodlands with secondary food items such as Peppermint, Tuart, York Gum, Wattles being dominant.) present at 10-20 per cent projected foliage cover; • Vegetation in Degraded condition • Short-term and/or seasonal food sources such as paddocks with melons or other known food-source weeds (e.g. Erodium spp.).	
Negligible to Low	Negligible to low foraging value including: • Primary food sources at < 2 per cent projected foliage cover, or secondary food sources at <10 per cent projected foliage cover. This could include urban area areas or cleared paddocks with scattered foraging trees • Vegetation in Degraded or lower condition • Short-term and/or seasonal food sources such as paddocks party vegetation with melons or weeds (e.g. *Erodium spp*.).	0.08
No foraging habitat	No foraging value. No Proteaceae, eucalypts or other potential sources of food.	0.01

Roosts

Black cockatoo species will utilise a wide range of native and non-native trees situated within a variety of land-use types to roost. Black cockatoos will usually roost in tall (average of >25 metres) trees species that have a relatively thick trunk (DBH of 1 metre) and medium foliage density (average of 50%) (Le Roux, 2017). According to available databases, there are no known roost sites within the local area (12-kilometre radius). The closest known roost site for black cockatoo species is approximately 26.95 kilometres south of the application area. Roosting typically occurs within suitable trees that are in close proximity to an important water source and within an area of quality foraging habitat (Commonwealth of Australia, 2022). Eco Logical (2022) black cockatoo survey identified that within the survey area there is approximately 1.3 hectares of potential habitat for Carnaby's Cockatoos none of which is within the footprint of CBH's area proposed to be cleared. Additionally no evidence of roosting by black cockatoo species during was recorded (Eco logical, 2022). The Delegated Officer considered it is unlikely that the proposed clearing will result in the loss of significant roosting habitat for any black cockatoo species.

Conclusion

Based on the above assessment, the proposed clearing will result in the loss of 0.15 hectares of native vegetation that is significant foraging habitat for black cockatoos. CBH have agreed to undertaking revegetation within Lot 300 with suitable black cockatoo foraging species to mitigate impacts to fauna. The mitigation planting proposed was input into the WA Environmental Offsets Metric Calculator to determine the area required to mitigate the loss of 0.15 hectares of native vegetation that is significant foraging habitat for black cockatoos. From this, 0.37 hectares is required to be revegetated to mitigate the loss. CBH have proposed to revegetate 0.84 hectares, which exceeds the minimum required. The proposed revegetation was determined to be a suitable mitigation measure. A significant residual impact does not remain following the mitigation revegetation. DWER considers the mitigation revegetation aligns with the WA Environmental Offsets Policy (2011) and WA Environmental Offsets Guideline (2014).

The proposed clearing is not likely to impact Australian Painted Snipe as the species has a large home range and the application area is likely to be used as transitional habitat only. Mechanical clearing activates may pose a risk for any fauna species that may transitionally use the application area. Slow, directional clearing should be undertaken to allow dispersal of species to other areas of remnant vegetation to mitigate this risk.

Conditions

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

- avoidance and minimisation to reduce the impacts and extent of clearing;
- undertake progressive directional clearing to allow fauna to move ahead of clearing;
- revegetation within Lot 300 on Deposited Plan 425165 (as described in Section 3.1); and
- fencing of the revegetation area

3.2.2. Significant remnant vegetation and conservation areas (extensively cleared) - Clearing Principle (e)

Assessment

The national objectives and targets for biodiversity conservation in Australia have a target to prevent the clearing of ecological communities 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). The application area is located within the Avon Wheatbelt IBRA region, which currently retains 18.51 per cent of the pre-European vegetation extent (Government of Western Australia, 2019a).

At a local scale, the application area is mapped within the Guangan_1024 vegetation complex, described as 'Wattle, *Casuarina* and Teatree, *Acacia-Allocasuarina-Melaleuca* alliance'. The Guangan_1024 complex retains approximately 7.01 per cent of its pre-European extent (Government of Western Australia, 2019b). The flora and vegetation survey mapped two vegetation types within the survey area that encompassed the application area, which are broadly described as Tall open shrubland of *Allocasuarina campestris*, *Leptospermum erubescens* and *Grevillea paniculata* over a low sparse grassland and herbland. The extent of native vegetation within the local area (10-kilometre radius from the application area) retains approximately 16.78 per cent native vegetation cover and is inconsistent with the national target (Commonwealth of Australia, 2021).

As mentioned above (section 3.2.1), the application area contains foraging habitat for black cockatoos. Given this, the application area is considered a significant remnant within an extensively cleared landscape. To mitigate the impacts of the proposed clearing, the applicant has proposed to revegetate and area within Lot 300 on Deposited Plan 425165 post-clearing (see Section 3.1) as per the revegetation plan outlined in the Konnongorring Grain Receival Facility and Rail Expansion Revegetation plan (Tranen, 2023). Undertaking weed and dieback management activities will minimise any indirect impacts to adjacent vegetation as a result of the clearing and revegetation activities.

Conclusion

Based on the above assessment, the proposed clearing will result in the loss of 0.16 hectares of native vegetation that is significant remnant within an extensible cleared landscape. For the reasons set out about, it is considered that the impacts of the proposed clearing is significant. The 0.37 hectares required to be revegetated to mitigate the loss was determined to be a suitable mitigation measure. A significant residual impact does not remain following the mitigation revegetation (see Section 3.2.1).

Conditions

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

- weed and dieback management activities;
- revegetation within Lot 300 on Deposited Plan 425165 (as described in Section 3.1); and
- fencing of the revegetation area.

3.2.3. Land and water resources (land degradation) - Clearing Principle (g)

Assessment

The mapped soil type within the application area (Ewarts 1 Phase) is described as hillslopes containing sand and loamy sand over yellowish clay soils, with some gravel ridges, and some heavier soils that often occur immediately below a breakaway. The soil type has a medium risk of wind erosion and has a high risk of phosphorous export, waterlogging, and subsurface acidification.

Subsurface acidification

The soil typing within the application area is mapped as having more than 70 per cent a high to extreme risk of subsurface acidification. A geotechnical investigation within the area surrounding the proposed clearing areas was conducted in which 16 samples were tested to screen for the presence of acid sulphate soils (ASS). A result of PH level ≤4 would be classified as acidic. None of the 16 screening samples indicated the presence of actual acid sulphate soils (AASS) or Potential acid sulphate soils (PASS) at the site (see Appendix D Figure 7). Based on the results of the ASS investigation, it is unlikely that AASS or PASS will be encountered at the site or that the clearing will not lead to appreciable land degradation (Golder, 2023).

Wind erosion

According to available databases, clearing of the proposed native vegetation is likely to have a medium to high risk of wind erosion. This is due to the sandy and loamy nature of the topsoil across the application area. As the purpose of the proposed clearing is to expand the Konnongorring Rail Out-loading infrastructure (grain transportation), and the soils will not be dug to an excessive depth. Wind erosion may to a minor extent be negatively affected by the removal of native vegetation over the application area. Noting the size of the clearing area, this is expected to be minimal.

Phosphorus export

Although the soil of the application area is mapped as having a high risk of phosphorous export, the clearing is unlikely to be a risk due to the small amount of clearing, 0.16 hectares, being split between three separate locations. Furthermore, given the proposed expansion to the existing Konnongorring rail out-loading infrastructure over the top of the area to be cleared, it is unlikely the clearing will have negative impacts on phosphorous export as the development of infrastructure will be placed over the top of the cleared vegetation.

Waterlogging

According to available databases, clearing of the proposed native vegetation is likely to have a medium to high-risk of waterlogging. Given the elevation to the east of the application area is 300 meters Isohyet, and the west of the application is 260 meters Isohyet, the rainfall within the surrounding environment area is likely to follow westward through the natural contours of the landscape and not remain within the application area. Furthermore, given that the area surrounding the application area is extensively cleared, it is unlikely that the small amount of clearing will negatively impact the potential waterlogging occurring within the surrounding area.

Conclusion

Based of the above assessment, the Delegated Officer has determined that the proposed clearing is not likely to lead to appreciable land degradation.

Conditions

Nil conditions are required in relation to this environmental value.

3.3. Relevant planning instruments and other matters

The application originally applied to clear 0.16 hectares of native vegetation within Lot 10 on Deposited Plan 25798 and Railway Reserves (PIN 1047836 and 12057999), Konnongorring, for the proposed of expand the Konnongorring rail out-loading infostructure. The application was advertised for public comment on 1 August 2023 for a 21-day period, with no submissions received.

The applicant wrote to DWER requesting that the application area be revised to clear 0.16 hectares within 59.84 hectare footprint, which was re-advertised on 27 September 2023 for a 7-day period to reflect the change in the size of the application area (increase of 59.68 hectares). No submissions were received.

The applicant may have notification responsibilities under the EPBC Act for impacts to Carnaby's cockatoo and their habitats, as set out in the EPBC Act. The applicant has been advised to contact the federal Department of Climate Change, Energy, the Environment and Water (DCCEEW) to discuss EPBC Act referral requirements.

The Shire of Goomalling (the Shire) held a council meeting on November 24, 2023. During the meeting, a motion was passed (resolution: 719) to grant development approval to CBH Group for a new rail siding on various land parcels at Konnogorring, subject to certain conditions (CBH, 2023d). The department acknowledges that CBH has received development approval from the Shire for the proposed works.

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

End

Appendix A. Site characteristics

A.1. Site characteristics

The information provided below describes the key characteristics of the area intended to be cleared within CBH's broader application area and is based on the best information available to the department at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix B.

<table>
<tr><th>Characteristic</th><th>Details</th></tr>
<tr><td>Local context</td><td>The area intended to be cleared comprises three separate remnant vegetation areas within the broader application area, totalling 0.16 hectares of native vegetation. These three separate areas are situated within an extensively cleared landscape in western Australia's intensive land use zone. The intended clearing area is not surrounded by a any Threatened Ecological Communities (TEC's). Two reserves are located approximately 0.28 and 0.10 kilometres from the Intended clearing areas, respectively. The proposed vegetation to be cleared is native trees over partial weeds.

The application area is located within the northern portion of the Avon Wheatbelt IBRA bioregion. Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 16.78 per cent of the original native vegetation cover.</td></tr>
<tr><td>Ecological linkage</td><td>The Intended clearing area is not attached or resides within any ecological linkages. The closest ecological linkage is the Roadside conservation (15724), located approximately 64 meters from the Intended clearing area and the Roadside conservation (15087), located approximately 160 metres from the Intended clearing area. The proposed clearing is unlikely to negatively affect any ecological linkages.</td></tr>
<tr><td>Conservation areas</td><td>The Intended clearing area is surrounded by the following conservation areas.

<table>
<tr><th>Conservation area type</th><th>Name/ID</th><th>Approximate Distance from application area (km)</th><th>Direction from application area</th></tr>
<tr><td>Unnamed reserve (recreational)</td><td>4888</td><td>0.28</td><td>East</td></tr>
<tr><td>Unnamed reserve</td><td>3153</td><td>0.10</td><td>East</td></tr>
<tr><td>Conservation Covenant</td><td>3330</td><td>1.10</td><td>Southeast</td></tr>
<tr><td>Unnamed reserve</td><td>3826</td><td>1.09</td><td>South</td></tr>
<tr><td>Unnamed reserve</td><td>3075</td><td>1.09</td><td>South</td></tr>
<tr><td>Unnamed reserve</td><td>24688</td><td>1.15</td><td>South</td></tr>
<tr><td>Unnamed reserve (Trigonometrical station)</td><td>39</td><td>5.46</td><td>North</td></tr>
<tr><td>Unnamed reserve (waterway)</td><td>2910</td><td>9.77</td><td>West</td></tr>
</table>
Clearing is unlikely to negatively affect any Conservation areas.</td></tr>
<tr><td>Vegetation description</td><td>The flora and fauna survey (Eco logical, 2022) indicate the vegetation types within the surveyed area consists of the following:

• Tall open shrubland AcAe, described as Allocasuarina campestris, Leptospermum erubescens and Grevillea paniculata tall open shrubland over Austrostipa elegantissima, Dianella revoluta and Waitzia acuminata var. acuminata mixed low sparse grassland and herbland</td></tr>
</table>

<table>
<tr><th>Characteristic</th><th>Details</th></tr>
<tr><td></td><td>
Tall open shrubland GpAb, described as Grevillea paniculata, Acacia acuminata and Acacia acuaria tall open shrubland over *Avena barbata, Austrostipa elegantissima and *Ursinia anthemoides mixed mid open grassland and herbland.
This is likely to be a very degraded remnant of the mapped vegetation type being Guangan – 1024 described as Wattle, casuarina and teatree Acacia – Allocasuarina - Melaleuca alliance.
The mapped vegetation type retains approximately 7.01 per cent of the original extent (Government of Western Australia, 2019).
</td></tr>
<tr><td>Vegetation condition</td><td>
AECOM (2023) flora and vegetation assessment and Eco Logical (2022) flora and fauna survey indicate the vegetation within the Intended clearing area is in completely degraded (Keighery) condition.

The full Keighery (1994) condition rating scale is provided in Appendix C. Representative photos and survey descriptions and mapping are available in Appendix D.
</td></tr>
<tr><td>Climate and landform</td><td>
The climate experienced in the application area is Mediterranean, characterized by hot and dry summers and cool and wet winters. According to the Bureau of Meteorology (2022), the average annual rainfall in the application area is 387.7 millimetres, mostly falling between May and August (Bureau of Meteorology, 2022). The closest weather station with recent temperature observations is the Wongan Hills (ID 008137) located approximately 33 km from the township of Konnongorring.

The elevation of the Intended clearing area is 280 meters Isohyet the surrounding elevation is 300 meters Isohyet to the east of the application area and the west of the application being 260 meters Isohyet, gently sloping to the west of the application area.
</td></tr>
<tr><td>Soil description</td><td>
There is only one mapped soil across the intended clearing area.

<table>
<tr><td>Name</td><td>Ewarts 1 Phase</td></tr>
<tr><td>Soils</td><td>256MbES1</td></tr>
<tr><td>Description</td><td>Hillslopes containing sand and loamy sand over yellowish clay soils, with some gravel ridges, and some heavier soils that often occur immediately below a breakaway.</td></tr>
</table>
</td></tr>
<tr><td>Land degradation risk</td><td>
The degradation risk factors mapped over the intended clearing area are detailed below:

<table>
<tr><th></th><th>Ewarts 1 Phase</th></tr>
<tr><td>Wind erosion</td><td>M2 30-50% of the map has a high to extreme risk</td></tr>
<tr><td>Water erosion</td><td>L1<3% of the map has a high to extreme risk</td></tr>
<tr><td>Salinity risk</td><td>L2 3-10% of the map has a high to extreme risk</td></tr>
<tr><td>Phosphorous export</td><td>M1 50-70% of the map has a high to extreme risk</td></tr>
<tr><td>Waterlogging</td><td>M1 50-70% of the map has a high to extreme risk</td></tr>
</table>
<table>
<tr><td>Subsurface acidification</td><td>H2 >70% of the map has a high to extreme risk</td></tr>
<tr><td>Acid sulphate soils</td><td>Unavailable/ not mapped</td></tr>
</table>
<table>
<tr><td>Flooding</td><td>L2 3-10% of the map has a high to extreme risk</td></tr>
<tr><td>Floodplains</td><td>blank</td></tr>
</table>
</td></tr>
<tr><td>Waterbodies</td><td>The desktop assessment and aerial imagery indicated that the intended clearing area does not intersect or occur within any waterbodies. Both natural and artificial perennial waterbodies surround the Intended clearing area. The closes two are a granite outcrop located approximately 780 metres southeast and a manmade perennial wetland located</td></tr>
</table>

<table>
<tr><th>Characteristic</th><th>Details</th></tr>
<tr><td></td><td>approximately 680 metres west of the intended clearing area both separated by historically cleared agricultural land, railway infrastructure and remnant vegetation.

The intended clearing area does not transect any water resources proclaimed under either the Rights in Water and Irrigation Act 1914 (RIWI Act), Metropolitan Water Supply Sewerage and Drainage Act 1909, or Country Areas Water Supply Act 1947 (CAWS Act).

The proposed clearing is not considered likely to negatively impact any waterbodies within the surrounding area.</td></tr>
<tr><td>Hydrogeography</td><td>
<table>
<tr><td>Hydrological Zone</td><td>Northern Zone of Rejuvenated Drainage</td></tr>
<tr><td>Basin</td><td>Avon River (615)</td></tr>
<tr><td>Hydrographic Catchment</td><td>SwanAvon_Mortlock</td></tr>
</table>
<table>
<tr><td>RIWI Act Surface Water and Irrigation District</td><td>Yes</td><td>Aron River Catchment Area</td></tr>
<tr><td>RIWI Act Rivers</td><td>No</td><td></td></tr>
<tr><td>RIWI Act Groundwater Areas</td><td>No</td><td></td></tr>
<tr><td>CAWS Act Clearing Control Catchment</td><td>No</td><td></td></tr>
<tr><td>Public Drinking Water Source Areas</td><td>No</td><td></td></tr>
<tr><td>Wellhead Protection Zone</td><td>No</td><td></td></tr>
<tr><td>Reservoir Protection Zone</td><td>No</td><td></td></tr>
</table>
The salinity of the application area is mapped at 14000-35000 total dissolved solids milligrams per litre.</td></tr>
<tr><td>Flora</td><td>According to available database, 15 conservation significant flora species have been recovered within the local area (10-kilometre buffer). Comprising three Priority 1, one Priority 2, eight Priority 3, and three threatened flora taxa.

Seven species were found to have similar soil types and vegetation types however lack suitable habitat features as the intended clearing area is trees over pastoral weeds.

AECOM (2023) Flora and Vegetation Assessment undertook a field survey on 21 November 2022. During this survey no threatened or priority flora species listed under the EPBC Act or the BC Act or listed by DBCA were recorded during the field survey.

It is unlikely that the clearing will negatively affect any threatened flora species.</td></tr>
<tr><td>Ecological communities</td><td>According to spatial data, the Eucalyptus Woodlands of the Western Australian Wheatbelt (Wheatbelt Woodlands), a TEC listed as critically endangered under the Commonwealth EPBC Act and Priority 3 by the Department of Biodiversity Conservation and Attraction (DBCA), have 51 records within a 10-kilometre radius of the intended clearing area. The closest recorded TEC to the intended clearing area is approximately 2.79 kilometres northwest. No Wheatbelt Woodlands TEC was recorded during the survey (AECOM 2023).
It is unlikely that the clearing will negatively affect any TECs.</td></tr>
<tr><td>Fauna</td><td>According to the available databases, 14 conservation significant fauna species have been recorded within the local area (20-kilometre radius). Comprising of one Priority 3, one Priority 4, three Endangered, three Vulnerable, one critically endangered, four migratory, and one specially protected species (OS) fauna taxa.</td></tr>
</table>

Characteristic	Details
	Of the 14 conservation species, 10 are avian species, with the closest being *Rostratula australis*, approximately 0.02 kilometres from the intended clearing area. Of the non-avian fauna, the closest species are two trapdoor spider species, the *Idiosoma clypeatum* and *Idiosoma nigrum*, approximately 6.78 and 6.94 kilometres from the intended clearing area, respectively. Neither two the species are likely to be found within the application area. The targeted vertebrate survey (Eco Logical, 2022) found no direct or indirect evidence of threatened or migratory vertebrate fauna species within the application or surrounding survey areas. Based on the available database on the suitable vegetation type and suitable habitat features contained within the application area, one species is considered to potentially occur within the application area, the *Zanda latirostris* (Carnaby's cockatoo). Carnaby's cockatoo has been observed within a 20-kilometre radius of the application area, which falls within the known distribution zone of the Carnaby's cockatoo where breeding is likely to occur. There are 21 records of Carnaby's cockatoo within a 20-kilometre radius of the application area, with only one record within a 10-kilometre radius, approximately 6.49 kilometres from the intended clearing area, recorded in 1996. There are no black cockatoo roosts within a 12-kilometre radius of the application area. One breeding hollow (natural) is recorded 6.69 kilometres north of the intended clearing area.

A.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Avon Wheatbelt	9,517,109.95	1,761,187.42	18.51	174,980.68	1.84
Vegetation complex**					
Guangan_1024	417,383.34	29,277.28	7.01	3,573.83	0.86
Local area					
10km radius	33,376.23	5,601.75	16.78	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

A.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), and Eco Logical, 2022's flora and fauna survey, 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]
Acacia cochlocarpa subsp. *cochlocarpa*	T	N	Y	Y	4.65	1	Y
Acacia trinalis	1	N	Y	N	5.35	1	Y
Banksia horrida	3	N	Y	Y	5.72	2	N
Conostephium wonganense	1	N	Y	N	7.00	1	N
Eucalyptus sargentii subsp. *onesis*	3	N	Y	Y	5.51	1	Y
Guichenotia impudica	3	N	Y	Y	0.57	9	N
Jacksonia debilis	1	N	Y	Y	0.24	3	N
Lepidosperma sp. Meckering (R. Davis WW 27-32)	3	N	N	N	5.31	1	N
Microcorys eremophiloides	T	N	N	N	5.38	1	Y
Stylidium periscelianthum	3	N	Y	N	9.31	1	N
Styphelia caudata	3	N	Y	N	7.00	1	Y
Styphelia tamminensis	2	N	N	N	7.00	1	N
Thomasia tenuivestita	3	N	Y	Y	0.57	2	N
Daviesia euphorbioides	T	N	Y	Y	3.57	1	Y
Eucalyptus macrocarpa x pyriformis	3	N	Y	N	9.48	1	Y

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

A.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)	Are surveys adequate to identify? [Y, N, N/A]
Birds						
Calidris acuminata (sharp-tailed sandpiper)	MI	N	N	13.46	10	Y
Calidris ferruginea (curlew sandpiper)	CR	N	N	13.47	4	Y
Calidris ruficollis (red-necked stint)	MI	N	N	13.47	8	Y
Zanda latirostris (Carnaby's Cockatoo, White-tailed Short-billed Black Cockatoo)	EN	Y	Y	6.49	21	Y
Falco peregrinus (peregrine falcon)	OS	N	N	13.13	2	Y
Leipoa ocellata (malleefowl)	VU	N	Y	17.46	2	Y
Rostratula australis (Australian painted snipe)	EN	N	N	0.02	2	Y
Thinornis rubricollis (Hooded Plover, Hooded Dotterel)	P4	N	N	13.58	2	Y
Tringa glareola (wood sandpiper)	MI	N	Y	13.58	3	Y
Tringa nebularia (Common Greenshank, greenshank)	MI	N	N	13.58	3	Y

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]
Mammals						
Lagostrophus fasciatus fasciatus (Banded hare-wallaby, mernine)	VU	N	N	17.46	1	Y
Macrotis lagotis (bilby, dalgyte, ninu)	VU	N	N	16.15	1	Y
Invertebrates						
Idiosoma clypeatum (trapdoor spider)	P3	N	N	6.78	3	N
Idiosoma nigrum (Black rugose trapdoor spider)	EN	N	N	6.94	10	N

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

A.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]
Eucalypt woodlands of the Western Australian Wheatbelt	Priority 3	N	N	Y	2.79	51	Y

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

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared does contain significant habitat for fauna species. A portion of the application area is significant habitat for black cockatoo species. No TECs or Priority Ecological Communities or conservation significant flora will be impacted by the proposed clearing.	At variance	Yes *Refer to Section 3.2.1, above.*
Principle (b): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."* Assessment: The area proposed to be cleared contains foraging habitat for conservation significant fauna.	At variance	Yes *Refer to Section 3.2.1, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The area proposed to be cleared does not contain habitat for threatened flora species, as it is native trees over paddock weeds. AECOM (2023) Flora and Vegetation Assessment and Eco Logical (2022) Flora and Fauna Survey did not find any threatened flora within the application area.	Not at variance	No
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: The area proposed to be cleared does not contain species that indicate a TEC. The closest TEC is 2.79 kilometres northwest of the intended clearing area. AECOM (2023) Flora and Vegetation Assessment and Eco Logical (2022) Flora and Fauna Survey did not identify any species that would indicate a TEC within the intended clearing area.	Not at variance	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of the mapped vegetation type is inconsistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared is considered to be part of a significant remnant.	At variance	Yes *Refer to Section 3.2.2, above.*
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: Due to the footprint of the clearing and distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of adjacent or nearby conservation areas.	Not at variance	No
Environmental value: land and water resources		

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Given no water courses or wetlands are recorded within the intended clearing area and the closest watercourse or wetland is approximately 780 metres south, the proposed clearing is not growing in, or in association with, an environment associated with a watercourse or wetland.	Not at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are moderate to highly susceptible to wind erosion, phosphorous export, and subsurface acidification. Noting the extent of the clearing within the intended clearing area and the condition of the vegetation, the proposed clearing is not likely to have an appreciable impact on land degradation.	Not likely to be at variance	Yes *Refer to Section 3.2.3, above.*
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: Given no water courses or wetlands are recorded within the intended clearing area and the surrounding wetlands are manmade and granite outcroppings, the proposed clearing is unlikely to impact surface or ground water quality.	Not at variance	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The mapped soil and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. Although the soils indicate a high susceptibility to waterlogging, given that no wetlands are recorded within the intended clearing area, the topographical contours of the intended clearing area slop westward away from the clearing, and the small footprint of the area proposed to be cleared, the proposed clearing is unlikely to contribute to waterlogging.	Not at variance	No

Appendix C. 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.

Condition	Description
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 D. Biological survey information excerpts and site photos

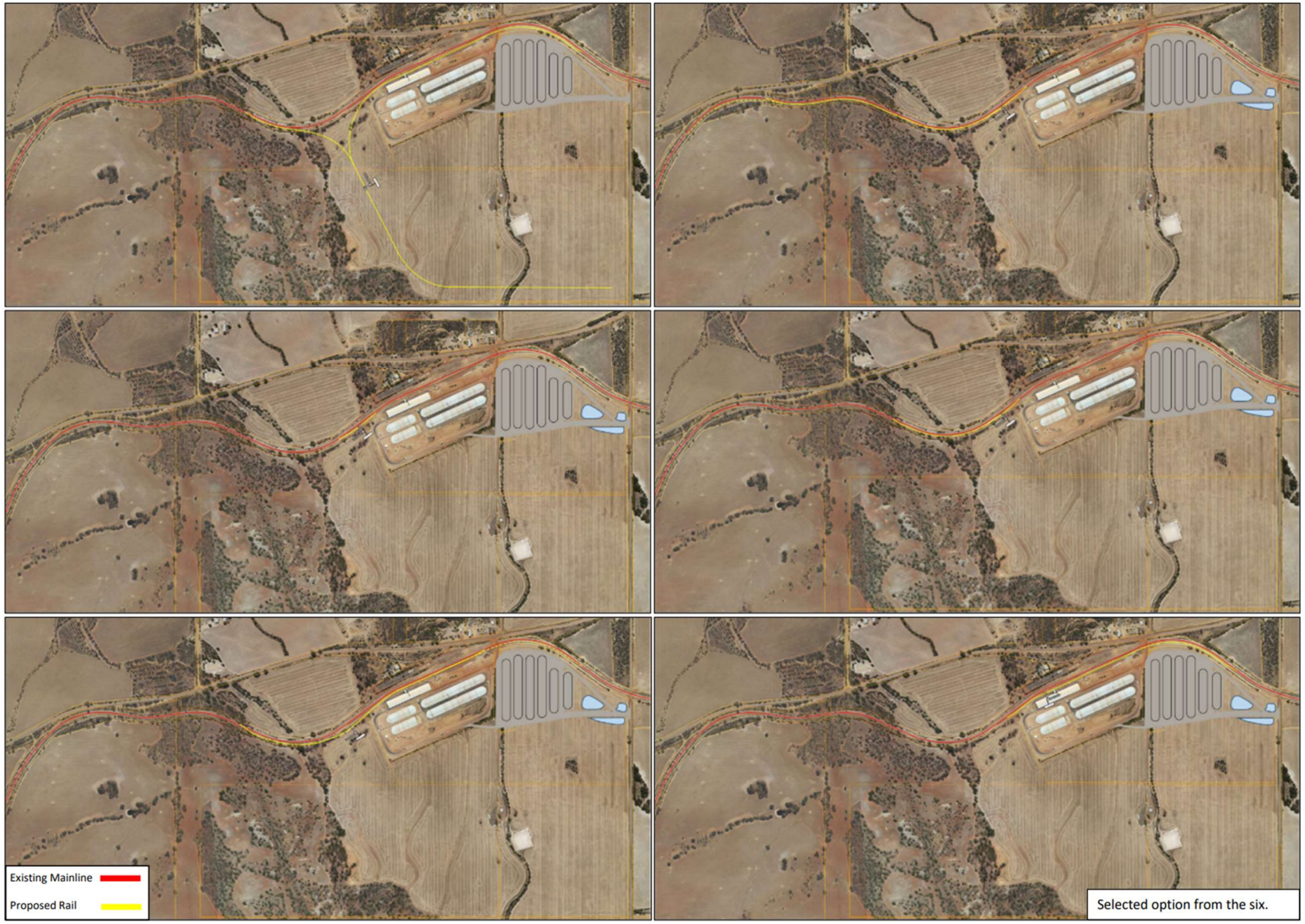


Figure 4: Co-operative bulk handling limited six rail siding and facility placement options (CBH, 2023b).

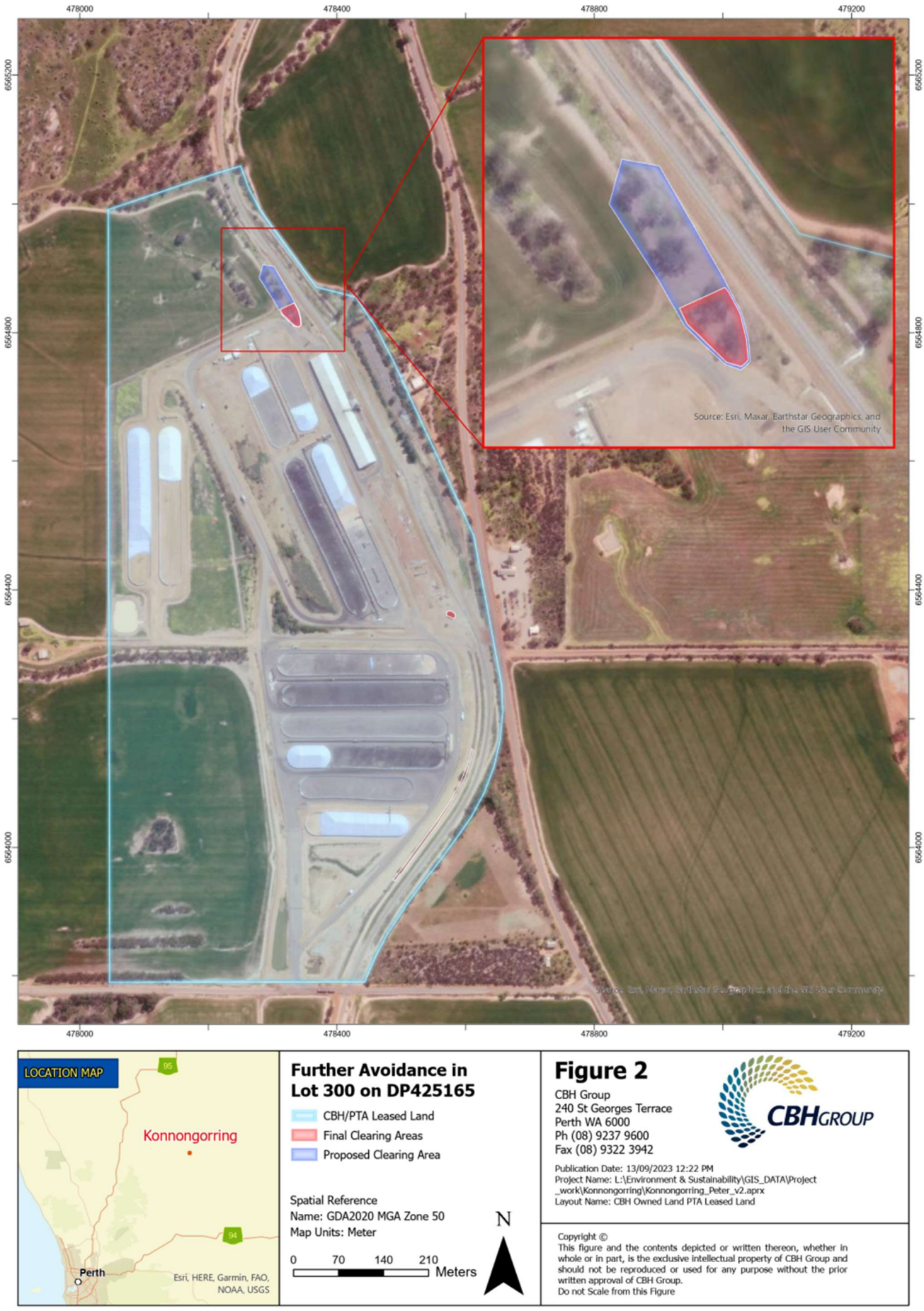


Figure 5: Co-operative bulk handling limited clearing area with avoidance of approximately 0.19 hectares of native vegetation (CBH, 2023).

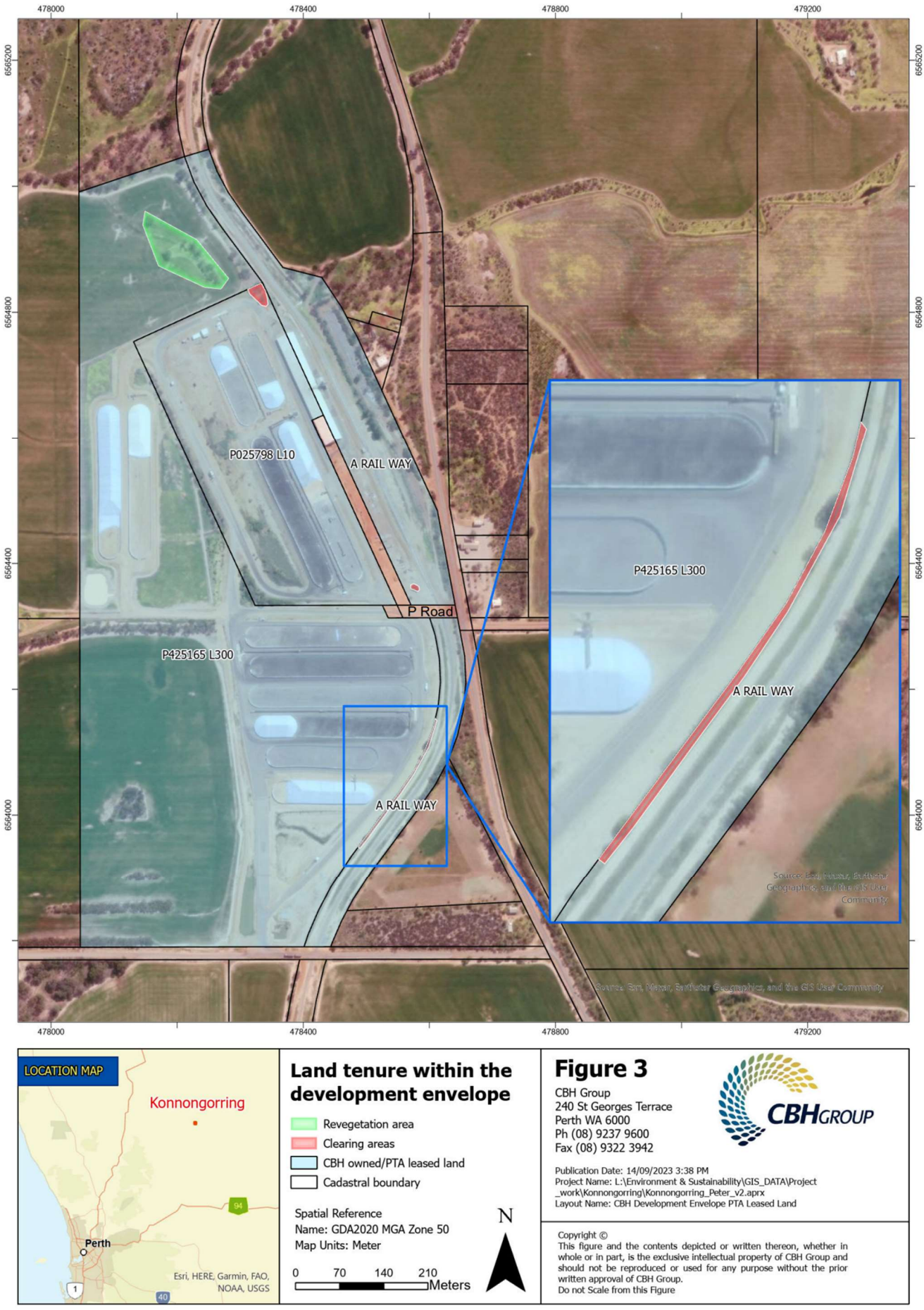


Figure 6: Co-operative bulk handling limited clearing area with proposed revegetation area (CBH, 2023b).

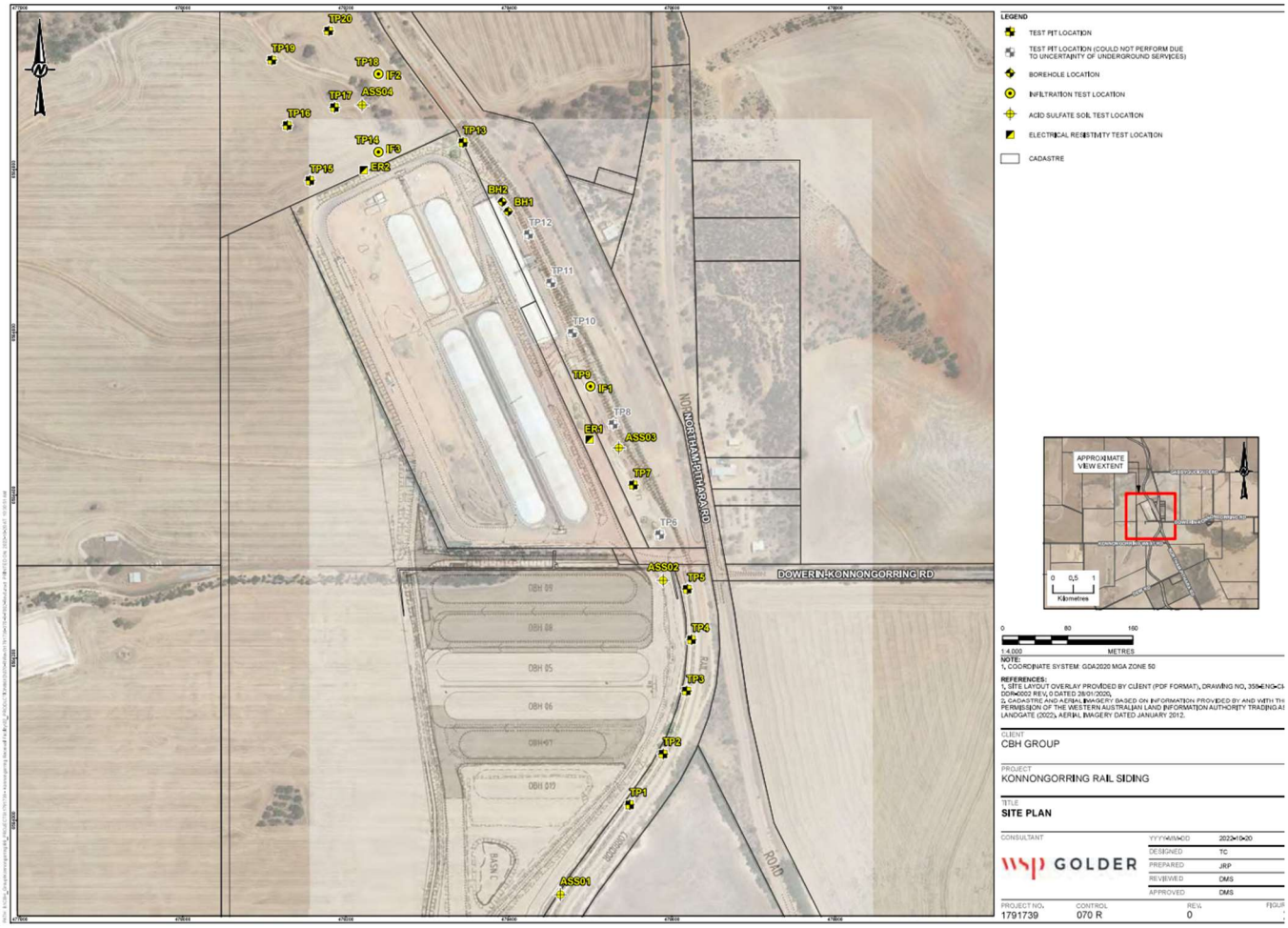


Figure 7: Acid sulfate soils test locations (Golder, 2023).

Table 2: Acid sulfate soil Chemical laboratory Certificates (Golder, 2023).

		<4		<3			
		4-5					
Golder Sample ID	ALS Sample Number	pH (water)	Colour of soil & water	pH (peroxide)	Colour of soil & peroxide	Reaction strength	pH (water) - pH (peroxide)
ASS01 - Ground Surface	EP2212121-001	6.95	light brown	4.87	light brown	SI	2.08
ASS01 - 0.5 m blg	EP2212121-002	6.29	light brown	4.85	light brown	SI	1.44
ASS02 - Ground Surface	EP2212121-003	6.89	light brown	5.14	light brown	SI	1.75
ASS02 - 0.5 m blg	EP2212121-004	6.71	light brown	5.21	light brown	SI	1.50
ASS02 - 1.0m blg	EP2212121-005	6.94	light brown	5.26	light brown	M	1.68
ASS03 - Ground Surface	EP2212121-006	6.91	brown	5.66	brown	M	1.25
ASS03 - 0.5 m blg	EP2212121-007	5.44	brown	3.90	brown	M	1.54
ASS03 - 1.0m blg	EP2212121-008	**4.92**	brown	3.28	brown	M	1.64
ASS04 - Ground Surface	EP2212121-009	6.23	light brown	4.61	light brown	M	1.62
ASS04 - 0.5 m blg	EP2212121-010	6.33	light brown	4.72	light brown	SI	1.61
ASS04 - 1.0m blg	EP2212121-011	6.43	light brown	4.69	light brown	SI	1.74
ASS05 - Ground Surface	EP2212121-012	7.14	brown	5.16	brown	M	1.98
ASS05 - 0.5 m blg	EP2212121-013	6.02	brown	4.11	brown	SI	1.91
ASS BH02 - Ground Surface	EP2212121-014	7.66	brown	6.08	brown	SI	1.58
ASS BH02 - SPT@1.5 m	EP2212121-015	5.61	grey	4.45	grey	SI	1.16
ASS BH02 - SPT@3.0 m	EP2212121-016	5.52	grey	4.07	grey	SI	1.45

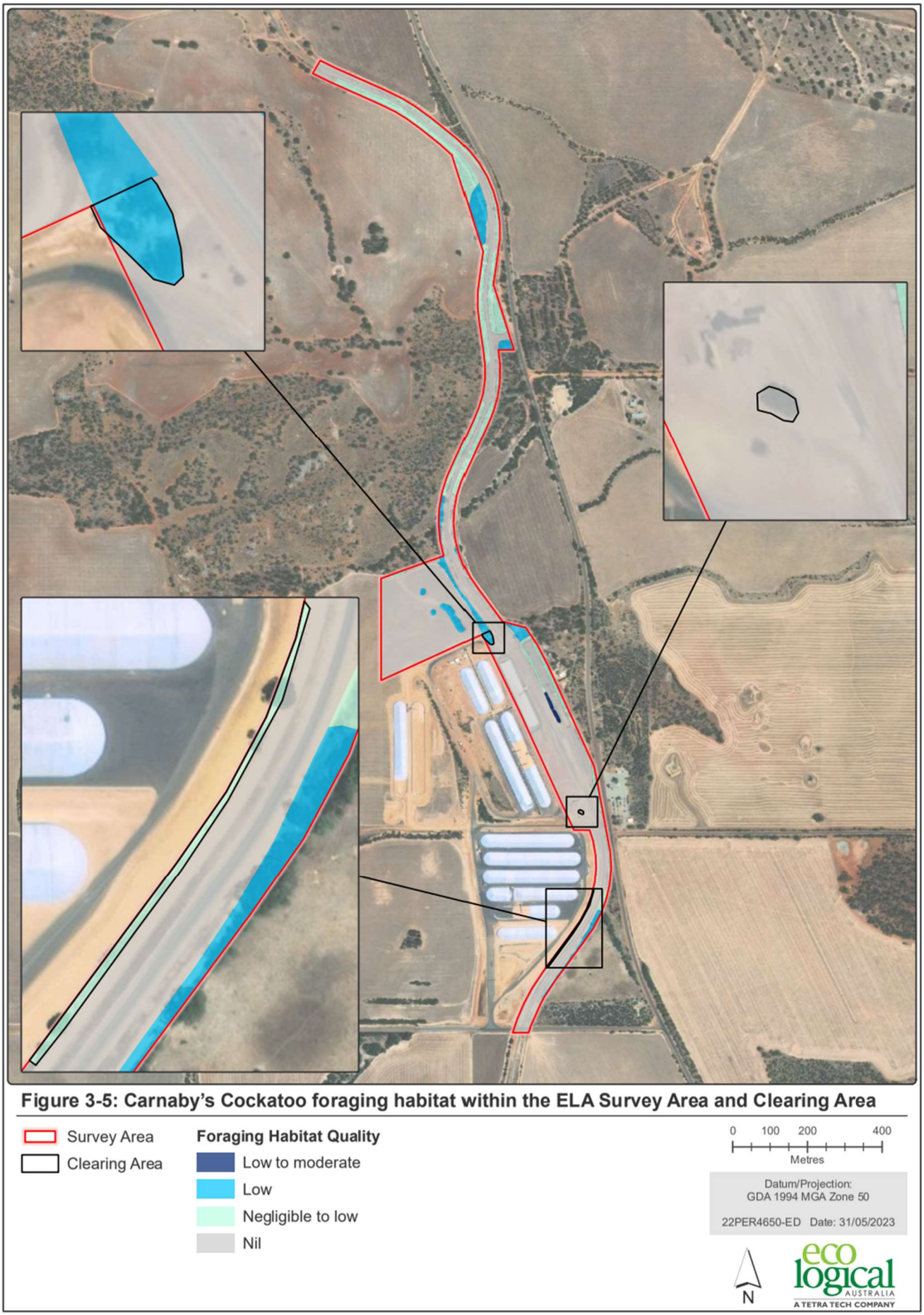


Figure 8: Carnaby's cockatoo foraging habitat quality mapping within Application area (Eco logical, 2023).

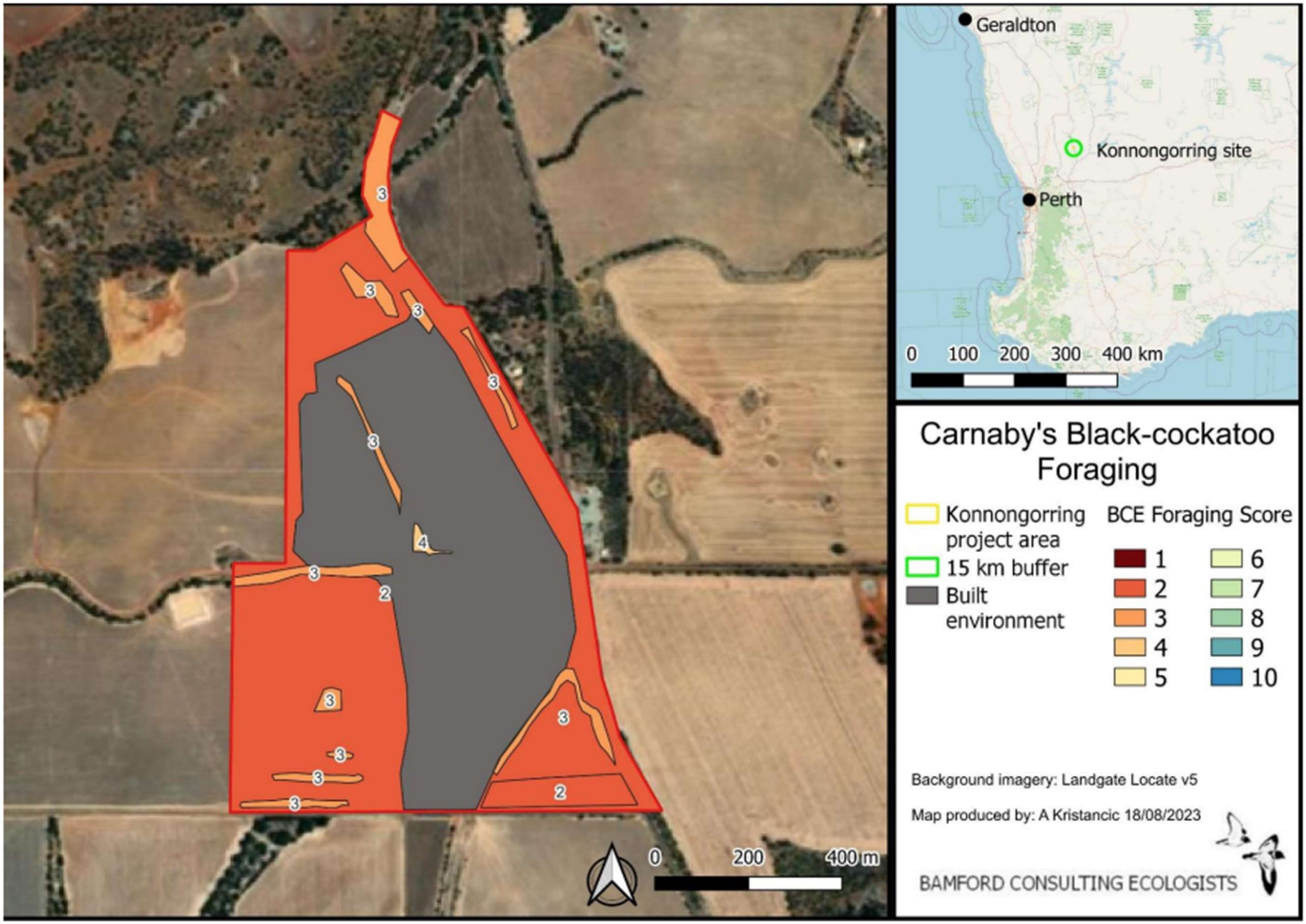


Figure 9: Carnaby's cockatoo foraging habitat quality mapping within Application area (Bamford Consulting Ecologists, 2023).

Figure 10: Google earth photo of the application area, facing southwest (Google earth July 2023).

Figure 11: Google earth photo of the application area, facing west (Google earth July 2023).

Appendix E. Sources of information

E.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)

E.2. References

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Co-operative Bulk Handling Limited (2023c) *Supporting information for clearing permit application, Request for further information response CPS 10257/1,* received 15 September 2023 (DWER Ref: DWERDT836142).

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