GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9507/1

File Number: DWERVT9084

Duration of Permit: From 22 February 2023 to 22 February 2030

PERMIT HOLDER

Mr Richard Paprzik-Price

LAND ON WHICH CLEARING IS TO BE DONE

Lot 22 on Deposited Plan 415159, Uduc

AUTHORISED ACTIVITY

The permit holder must not clear more than 0.13 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

CONDITIONS

1. Period during which clearing is authorized

The permit holder must not clear any native vegetation after 22 February 2025

2. 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.

3. 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.

4. Vegetation management – revegetation

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

(a) undertake deliberate *planting* of at least 0.26 hectares of *native vegetation* which includes at least six (6) black cockatoo foraging species within the area cross-hatched red in Figure 2 of Schedule 1;

(b) ensure only *local provenance* propagating material of plants 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 native plants in accordance with condition 4(a) of this permit;

  (i) engage an *environmental specialist* to make a determination that at least 0.26 hectares of *native vegetation*, which includes at least six (6) black cockatoo foraging species will survive; and

  (ii) if the determination made by the *environmental specialist* under condition 4(e)(i) that at least 0.26 hectares of *native vegetation* including at least six (6) black cockatoo foraging species will not survive, the permit holder must plant additional native species that will result in at least 0.26 hectares of *native vegetation* which includes at least six (6) black cockatoo foraging species persisting within the area cross-hatched red in Figure 2 of Schedule 1.

(f) Where additional *planting* of native species is undertaken in accordance with condition 4(e)(ii), the permit holder must repeat the activities required by condition 4(b), 4(c), and 4(d) of this permit.

5. 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 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 2; and (f) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 3.
2.	In relation to vegetation management – *revegetation*	(a) Revegetation activities undertaken in accordance with condition 4 of this permit including: (i) the date that *revegetation* activities commenced; (ii) the number of trees planted; specifically, the number of black cockatoo foraging trees planted; (iii) the species planted, including the number of each species planted; (iv) weed control and watering activities undertaken; (v) determination by an *environmental specialist*; and (vi) the date and activities undertaken where additional *planting* is required.

6. Reporting

The permit holder must provide to the *CEO* the records required under condition 5 of this permit when requested by the *CEO*.

DEFINITIONS

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

Table 2: Definitions

Term	Definition
black cockatoo species	means one or more of the following species: (a) *Zanda latirostris* (Carnaby's cockatoo); (b) *Zanda baundii* (Baudin's cockatoo); and/or (c) *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo).
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.
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.
dieback	means the effect of *Phytophthora* species on native vegetation.
EP Act	*Environmental Protection Act 1986* (WA)
fauna specialist	means a person who holds a tertiary qualification specialising in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the *CEO* as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the *Biodiversity Conservation Act 2016*.
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 Interim Biogeographic Regionalisation for Australia (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	optimal time means the period from May to July for undertaking planting.
planting	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species.
revegetate/ed/ion	means the re-establishment of a cover of local provenance native vegetation in an area using methods such as natural regeneration, direct seeding and/or planting, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.
weeds	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or

Term	Definition
	(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

Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

30 January 2023

SCHEDULE 1

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

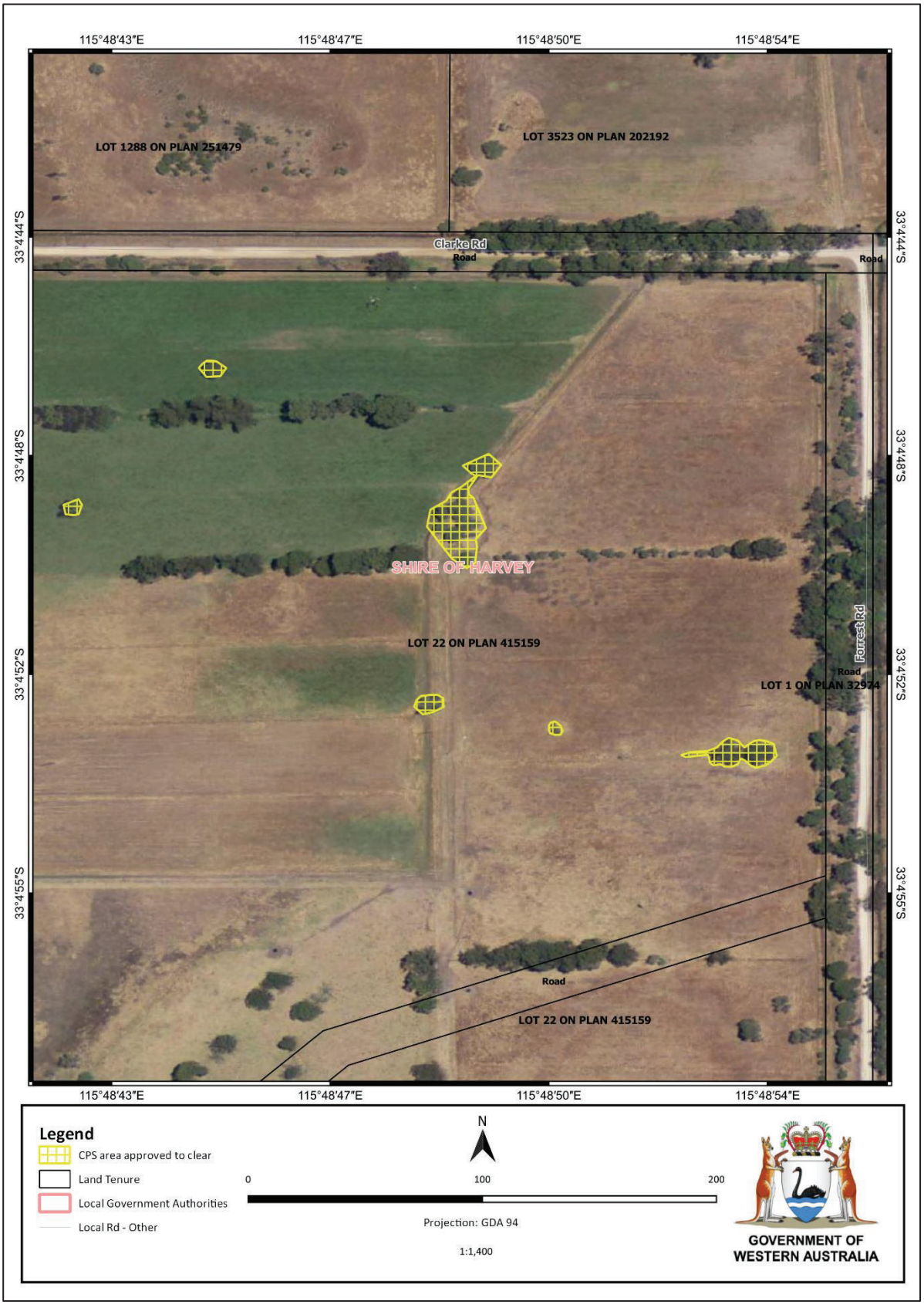

Figure 1: Map of the boundary of the area within which clearing may occur

The boundary of the area subject to conditions is shown in the map below (Figure 2)

Figure 2: Map of the boundary of the area subject to conditions.

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 9507/1
Permit type:	Area permit
Applicant name:	Richard Paprzilk-Price
Application received:	29 November 2021
Application area:	1.95 hectares
Purpose of clearing:	Horticulture
Method of clearing:	Mechanical Clearing
Property:	Lot 22 on Deposited Plan 415159 Lot 21 on Deposited Plan 145159
Location (LGA area/s):	Shire of Harvey
Localities (suburb/s):	Uduc

1.2. Description of clearing activities

The applicant proposes to clear 1.95 hectares of native vegetation for horticulture (growing kiwifruit) (Paprzilk-Price. R, 2021). The applicant has advised that the proposed kiwifruit plantation is intended to be planted in stages, with the works within stage two intended to commence first. The applicant holds a valid Development Approval from the Shire of Harvey for stage two of the proposed horticulture. To commence the plantation of kiwifruit within stage two, the applicant is required to remove 0.13 hectares of native vegetation (Paprzilk-Price. R, 2022).

The 0.13 hectares of proposed clearing is distributed across the property, Lot 22 on Plan 415159 (see Figure 1, Section 1.5). A number of trees proposed for clearing remain isolated from other native vegetation. The proposed clearing includes Melaleuca species and Eucalyptus species (Paprzilk-Price. R, 2022).

1.3. Decision on application

Decision:	Granted (part grant)
Decision date:	30 January 2023
Decision area:	0.13 hectares of native vegetation, out of 1.95 hectares 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 (the department) advertised the application for 14 days and one submission was received. Consideration of matters raised in the public submission is summarised in Appendix B.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix C), relevant datasets (see Appendix H.1), photographs provided by the applicant (see Appendix F), the clearing principles set out in Schedule 5 of the EP Act (see Appendix D), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). It should be noted that this assessment only relates to the area partially granted to the applicant (0.13 hectares) and not the entire application area initially applied for by the applicant (1.95 hectares).

The assessment identified that the proposed clearing of 0.13 hectares will result in:

- the loss of three native trees that may provide foraging resources for black cockatoo species;
- the loss of 0.13 hectares of native vegetation in an area that has been extensively cleared;
- the potential introduction and spread of weeds and dieback into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values; and
- potential land degradation in the form of eutrophication.

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 appreciable land degradation and have long-term adverse impacts on environmental values and can be minimised and managed to present an unacceptable risk to environmental values. The applicant has suitably demonstrated avoidance, minimisation measures and committed to mitigation of environmental impacts (see Section 3).

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

- avoid and minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback;
- undertake deliberate planting and ensure the long-term survival of at least 0.26 hectares of native vegetation, including at least six locally provenanced native species that provides foraging value for the black cockatoo species.

1.5. Site map

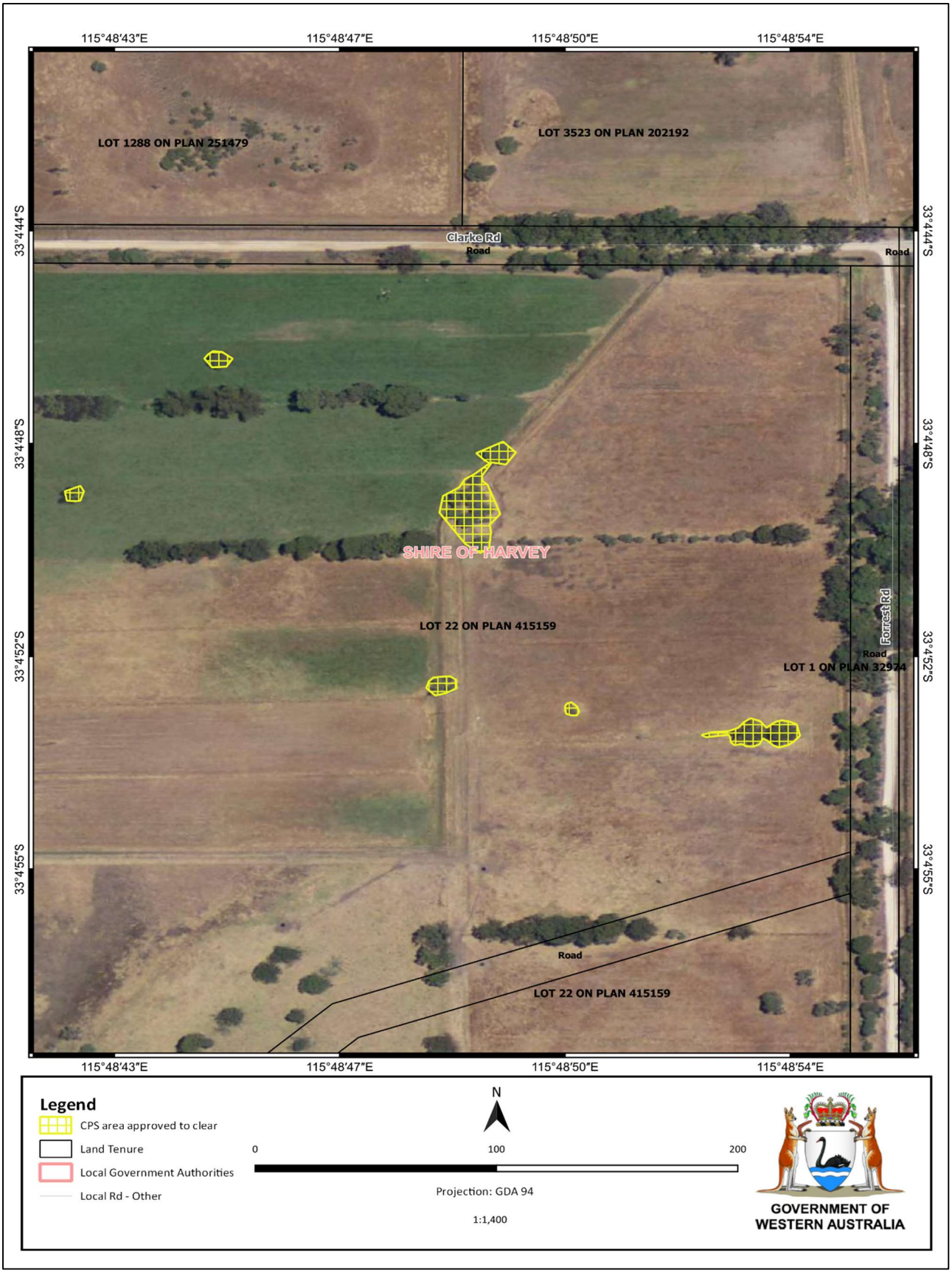

Figure 1 Map of the application area

The area cross-hatched yellow indicates the area authorised to be cleared under the granted clearing permit.

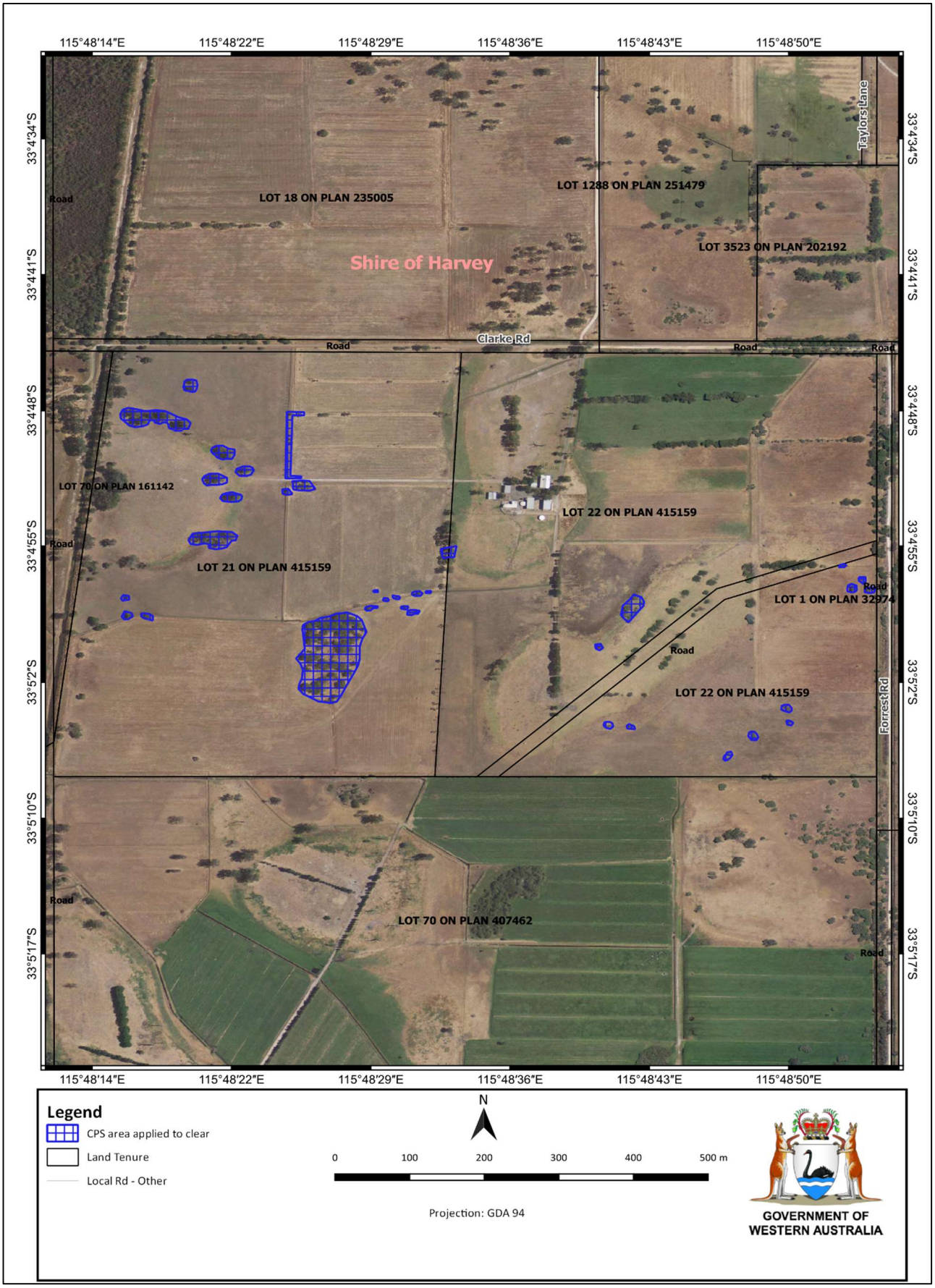

Figure 2 Map of the area not authorised to clear

The area cross-hatched blue indicates area within which clearing is not authorised under this permit.

Figure 3 Map of the area subject to conditions

The area cross-hatched red indicates area subject to conditions under this 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)
-
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Rights in Water and Irrigation Act 1914* (RiWI 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)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The initial clearing permit application received by the department was a proposal to clear up to 4.33 hectares of vegetation (Paprzilk-Price. R, 2021). However, the department noted that the proposed clearing area consisted of non-native and planted vegetation. The applicant has advised the department that the trees were planted to provide shade for livestock on the property. According to the *Environmental Protection Act 1986*, non-native vegetation and vegetation intentionally planted that are not a requirement of the EP Act or another written law, or if planted for the purpose of biodiversity conservation or land conservation where funded partly or wholly by another person, are not regulated under the EP Act. This observation was further clarified and supported by the land degradation assessment report received by the Department of Primary Industries and Rural Development (DPIRD), where it states that “lot of the vegetation has been planted to numerous species” (CSLC, 2022). Based on the above, the applicant was requested to revise the application area to only include native vegetation regulated under the EP Act, within the property. This approach reduced the application area to 1.95 hectares.

Following on from continuous discussion between the applicant and the department, it was decided by the applicant that a decision on 0.13 hectares of native vegetation is sufficient to begin the proposed kiwifruit plantation. This area is consistent with the Development Approval issued by Shire of Harvey.

The application area is located in the Swan Coastal Plain which is an extensively cleared area and an area used by black cockatoos primarily for foraging resources. A key focus for this region is the ongoing viability of foraging resources for black cockatoos, particularly the Carnaby’s cockatoos (DAWE, 2022). Clearing of black cockatoo foraging species, within an extensively cleared landscape may represent a significant impact. Based on the above, the applicant was requested to consider revegetation to mitigate the impact resulting from clearing. The department has considered that revegetation at a 2:1 ratio is appropriate to counterbalance the impact from clearing. Therefore, the applicant is conditioned to revegetate 0.26 hectares of native vegetation, including six species that provide foraging value for the black cockatoos within an area in close proximity to the proposed clearing.

The applicant has advised the department that the proposed clearing is set back 20 metres from the property boundary. Trees within the 20-metre zone will not be cleared.

Given the small extent of the proposed clearing and the proposed revegetation measures, the Delegated Officer was satisfied that the applicant has undertaken reasonable measures to avoid, minimise and mitigate 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 C) and

the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.
The assessment against the clearing principles (see Appendix D) identified that the impacts of the proposed clearing present a risk to biological values, significant remnant vegetation and land and water resources. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values (fauna) - Clearing Principles (b)

Assessment
The proposed clearing includes 0.13 hectares of Melaleuca species and Eucalyptus species (Paprzilk-Price. R, 2022) in a completely degraded condition (Keighery, 1994). According to the photographs provided by the applicant, three trees are identified as Eucalyptus species (Paprzilk-Price. R, 2022).

The desktop assessment identified 34 conservation significant fauna species within the local area, which include 21 birds, one invertebrate, nine mammals, two reptiles and one fish. Majority of the records identified from the local area are *Isoodon fusciventer* (Quenda) followed by the *Zanda latirostris* (Carnaby's cockatoo). A likelihood of occurrence analysis was undertaken for the species previously recorded within the local area and it was determined that habitat for the following species may occur:

- *Calyptorhynchus banksii naso* (Forest red-tailed black cockatoo) – VU
- *Zanda baudinii* (previously *Calyptorhynchus baudinii*) (Baudin's cockatoo) – EN
- *Zanda latirostris* (previously *Calyptorhynchus latirostris*) (Carnaby's cockatoo) – EN

The completely degraded (Keighery, 1994) condition of the native vegetation, and in particular the lack of an understory, the isolation of the application area from areas of native vegetation in good to better condition and the absence of a watercourse excludes the likelihood of migratory, marine and terrestrial ground dwelling fauna of conservation significant occurring within the application area.

Black cockatoos

The application area is mapped within the known distribution zones of the endangered Baudin's cockatoo, Carnaby's cockatoo and the vulnerable Forest red-tailed black cockatoo, together referred to as 'black cockatoos'. However, Baudin's cockatoo is more commonly associated with the forests of the Jarrah Forest Bioregion approximately 11 kilometres to the south, with Carnaby's cockatoo more commonly associated with the Swan Coastal Plain (DAWE, 2022). The Forest red-tailed black cockatoo has become more commonly sighted on the Swan Coastal Plain in recent decades.

Black cockatoo habitat can be considered in terms of breeding, roosting and foraging habitat. Suitable breeding habitat for black cockatoos include trees which either have a suitable nest hollow or are of a suitable Diameter Breast Height (DBH) to develop a nest hollow. For most tree species a suitable DBH is 500 millimetres (Commonwealth of Australia, 2012). The photographs provided by the applicant did not represent trees with hollows or trees likely to develop large hollows required for black cockatoo breeding within the application area (Paprzilk-Price. R, 2022).

Night-roosts are usually located in the tallest trees of an area, and in close proximity to both a food supply and a water source (DAWE, 2022). According to the available databases, trees proposed for clearing are not mapped as any known roost site. The closest known roost site is located 4.8 kilometres to the southwest of the application area. No watercourses are identified within the property. The Melaleuca trees will not provide a roosting habitat for the black cockatoos. Tall Eucalyptus trees near a permanent watercourse with close proximity to high quality foraging habitat are identified as the trees that provides roosting habitat for the black cockatoos (DAWE, 2022). According to the photographs and the location of the application area, it is unlikely these trees would provide for a roosting habitat.

Food resources within the range of breeding sites and roost sites are important to sustain black cockatoo populations. Foraging resources are therefore, viewed in the context of known breeding and night roosting sites. It is considered that foraging habitat within 6 to 12 kilometres of a known roosting and a breeding site are a significant food source (DAWE, 2022). According to the available databases, three known black cockatoo roosting sites and one potential breeding site are mapped within the six kilometre radius buffer of the application area. The closest potential breeding site is located 5.7 kilometres from the application area.

Based on the above, the department's assessment has identified that the three Eucalyptus trees proposed for clearing maybe a potential food source for black cockatoos given the distance to the known roost sites and the

potential breeding site.

A key focus for the Swan Coastal Plain is the ongoing viability of foraging resources for black cockatoos, particularly Carnaby's cockatoo (DAWE, 2022). However, it is noted by the department that according to the available databases, the proposed clearing area is not mapped as a black cockatoo feeding area in the Swan Coastal Plain nor is it mapped as remnant vegetation. Based on the size of the proposed clearing and the isolation of the Eucalyptus trees, it is unlikely that these trees represent a significant foraging resource to support black cockatoo populations.

However, given the rapidly declining foraging resources for the black cockatoos within the Swan Coastal Plain, and the close proximity to the known roost sites and the potential breeding site, it is appropriate that the applicant is conditioned to revegetate an area with black cockatoo foraging species. This approach will mitigate the potential impact to the extent of black cockatoo foraging habitat remaining as a result of the proposed clearing. The applicant has committed to replacing the native trees cleared by planting black cockatoo foraging species within the selected area. It is the department's view that the proposed revegetation will counterbalance the loss of the three Eucalyptus trees.

Conclusion
Based on the above assessment, and the avoidance and mitigation measures provided by the applicant, the Delegated Officer has considered that the potential impacts of the proposed clearing on threatened species of black cockatoos can be managed by the planting of black cockatoo foraging species at a ratio of 2:1.

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

- Planting and ensure the long-term survival of at least 0.26 ha of native vegetation, using locally-provenanced material comprising six species suitable for foraging by black cockatoos.

3.2.2. Significant remnant vegetation - Clearing Principles (e)

Assessment

The proposed application area is located within the Swan Coastal Plain Interim Biogeographic Regionalisation for Australia (IBRA) region of Western Australia. The Swan Coastal Plain bioregion has approximately 38.6 per cent of its original extent of native vegetation remaining (Government of Western Australia, 2019a).

The application area falls within the Pinjarra vegetation association 968, which is described as *Eucalyptus marginata* (Jarrah), *Corymbia calophylla* (Marri) and *Eucalyptus wandoo* (wandoo) (Shepherd et al, 2001) and within the serpentine river complex 35; described as closed scrub of Melaleuca species and fringing woodland of *Eucalyptus rudis* (Flooded Gum) and *Melaleuca rhaphiophylla* (Swamp Paperbark) along streams (Webb et al, 2016). The mapped vegetation complex and the mapped vegetation association retains less than 30 per cent of the vegetation extent remaining.

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 percent of that present prior to the year 1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

The department's assessment notes that the vegetation in the application area consists of native vegetation in a completely degraded condition (Keighery, 1994). Based on the condition of the vegetation, it is unlikely for the proposed clearing to be representative of the vegetation complex and the mapped vegetation association. Therefore, the proposed clearing is not considered significant as a remnant of native vegetation.

Within the local area (10-kilometre radius around the application area), approximately 21.55 per cent of its original native vegetation extent remains, this is below the 30 per cent retention threshold of the Commonwealth of Australia (2001). Based on this, the application area is considered to be within an extensively cleared landscape. Clearing of native vegetation within an extensively cleared landscape is considered a significant impact on the extent of remnant vegetation remaining.

The applicant has committed to revegetating an area to counterbalance the impact from the clearing. Therefore, the department has conditioned the planting of native species at a ratio of 2:1. It is the department's view that the proposed revegetation will counterbalance the loss of native vegetation within an extensively cleared area.

Conclusion

For the reasons set out above, and the mitigation measures provided by the applicant, it is considered that potential impacts of the proposed clearing on remnant vegetation can be managed by planting native vegetation within the area nominated by the applicant.

Condition
To address potential impacts to remnant vegetation from the proposed clearing, the following management measures will be required as a condition on the clearing permit.

- Planting and ensure the long-term survival of at least 0.26 ha of native vegetation, using locally-provenanced material comprising six species suitable for foraging by black cockatoos.

3.2.3. Land and water resources (wind erosion) - Clearing Principles (f and g)

Assessment

Wetland

The entire application area is located within a mapped geomorphic wetland of the Swan Coastal Plain. That is, a multiple use wetland; palusplain. A palusplain is simply a flat that is seasonally water-logged. Multiple use wetlands are considered wetlands with few remaining important attributes and functions. The management objective should be to take all reasonable measures to retain the wetland's hydrological function, but is not incompatible with clearing (DBCA, 2014).

Proposed clearing within the palusplain of the multiple use wetland is unlikely to contribute to degradation of the mapped wetland. Proposed clearing is minimal. Melaleuca trees proposed for clearing are considered to be riparian vegetation, however, the vegetation is in a completely degraded condition (Keighery, 1994) and no natural watercourse is present. The cleared area will be replaced with a kiwifruit plantation (Paprzilk-Price. R, 2021) which is subject to a nutrient and irrigation management plan under the Development Approval (Paprzilk-Price. R, 2022). Based on this, it is unlikely that the proposed clearing would negatively impact the mapped geomorphic wetland of the Swan Coastal Plain.

Land degradation

The application area is mapped within the Pinjarra P3 phase soil landscape map unit, described as; flat to very gently undulating plain with deep, imperfect to poorly drained acidic gradational yellow or grey-brown earths and mottled yellow duplex soils, with loam to clay loam surface horizons (DPIRD, 2019).

Given the purpose of the clearing is for a kiwifruit plantation, the department sought advice from the DPIRD. The following advice was received from the Commissioner of Soil and Land Conservation (CSLC, 2022):

> "*Waterlogging and eutrophication (nutrient export) are limitations to the clearing and proposed landuse. Soils in the CPS area are highly susceptible to waterlogging and have a high risk of nutrient export from intensive horticulture. The identified risk of waterlogging and eutrophication may be minimized by a soil moisture monitoring system to determine the correct application of water and to monitor groundwater leaching during the winter months"*.

It is noted that land degradation issues for horticulture are regulated by the Development Approval. The applicant currently holds a Development Approval which is subject to a Nutrient and Irrigation management plan that is approved by the DWER and DPIRD prior to any work occur on site. As part of the Development Dpproval, the applicant will be planting a tree line around the block boundary for wind protection (Paprzilk-Price. R, 2022).

Conclusion
Based on the above assessment, the proposed clearing will result in clearing of riparian vegetation. However, given the completely degraded condition (Keighery, 1994) of the vegetation and noting multiple use wetlands are classified as having few important ecological attributes and functions remaining, the proposed clearing is not likely to have a significant impact on the values of the wetland. The application area does not include mapped watercourses. It is not likely the loss of native vegetation will have a significant residual impact on the wetland or deteriorate the quality of groundwater or surface water.

Land degradation impacts from the proposed clearing are not considered to be significant given the small extent of clearing in a completely degraded (Keighery, 1994) condition. The land degradation impacts resulting from the

proposed land use is managed through the Development Approval issued by the Shire of Harvey (Paprzilk-Price. R, 2022).

Conditions
No riparian vegetation, wetland and land degradation conditions are required.

3.3. Relevant planning instruments and other matters

Planning instruments
The proposed clearing area is zoned as "Intensive Farming" under the Shire of Harvey's District Planning Scheme No.1. The clearing is consistent with the Shire's Planning Scheme.

The Shire of Harvey has issued Development Approval on 8 November 2022 under the *Planning and Development Act 2005* for stage two of the proposal as illustrated in figure 4. The clearing area granted under this clearing permit corresponds with stage two of the Development Approval.

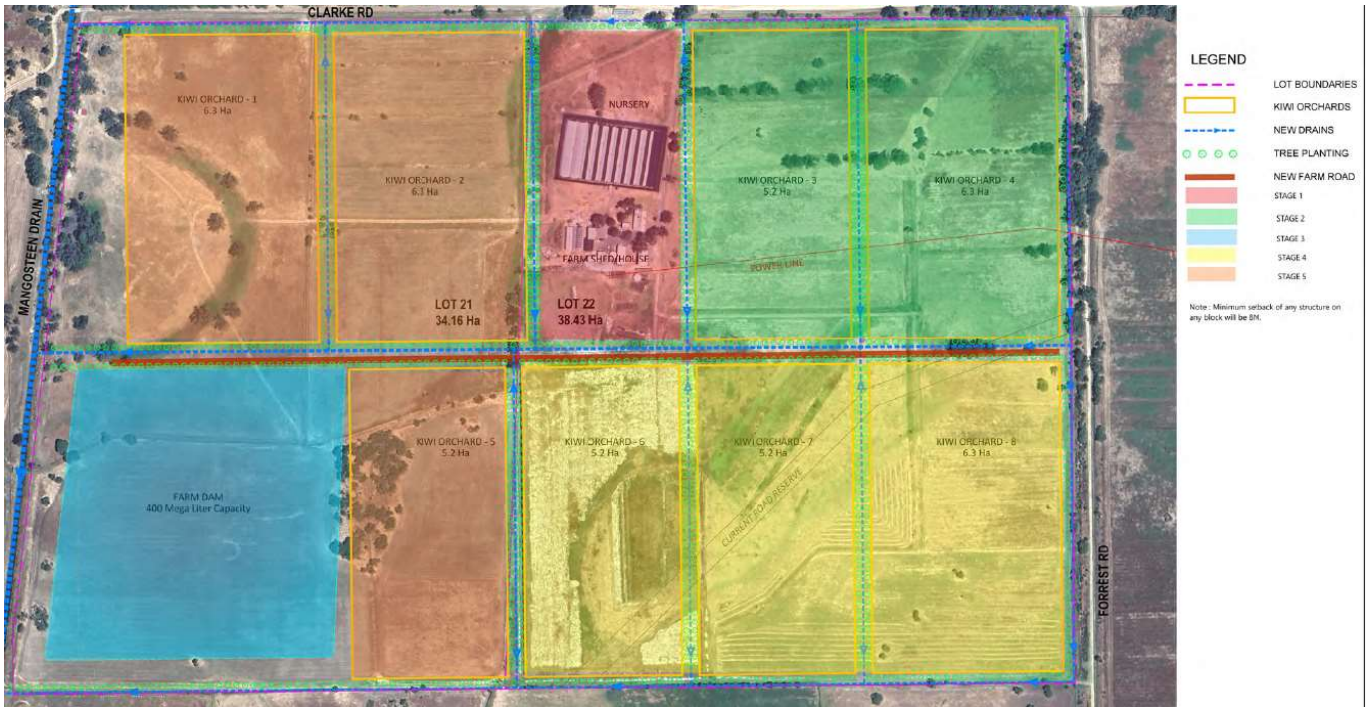

Figure 4: Map of the overall proposed kiwifruit plantation.

Water licence

The application area is mapped within the Harvey Irrigation District surface water area proclaimed under the *Rights in Water and Irrigation Act 1914* (RiWI Act). Given the purpose of the proposed clearing is for horticulture, the department requested internal advice from the South West Bunbury Licensing team in regard to water licencing requirements. The advice received for the initial application area was that "*A surface water licence has been applied for by the applicant and is a requirement for this area*" (DWER, 2021). The applicant has advised the department that Harvey water is available for the stage two area and therefore, the applicant does not require a surface water licence to commence the work within stage two. A DWER officer contacted the South West Bunbury Licencing team on 7 December 2022 to confirm this matter. A senior natural resource management officer has confirmed that the applicant does not require a surface water licence under the RiWI Act for stage two of the Development Approval (DWER, 2022)

Aboriginal sites

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

End

Appendix A. Additional information provided by applicant

Information	Description
Photographs of the trees proposed for clearing (Paprzilk-Price. R, 2022).	The department requested photographs of the vegetation proposed for clearing and the applicant has provided photographs the proposed trees to be cleared (Paprzilk-Price. R, 2022).
Development Approval issued by Shire of Harvey (Paprzilk-Price. R, 2022).	The applicant provided the department with a copy of the Development Approval for stage 2 (Paprzilk-Price. R, 2022).
A map illustrating the area proposed by the applicant for revegetation	The department requested a map of the area proposed for revegetation from the applicant. The applicant submitted a map illustrating the area where revegetation is proposed to occur.

Appendix B. Details of public submissions

Summary of comments	Consideration of comment
Any potential breeding trees (suitable DBH) will be important to retain, particularly any that have large hollows, with or without signs of use. This area was very likely to be a Carnaby's cockatoo breeding area (Submission, 2022).	According to the photographs provided by the applicant (Appendix F), the trees proposed for clearing do not contain hollows suitable for black cockatoo breeding. Section 3.2.1 discuss this matter further.
Any cleared foraging habitat would need to be replaced with at least the same area of foraging vegetation, through revegetation in the range areas of the affected flocks (Submission, 2022).	The applicant has agreed on revegetation of the trees lost through clearing. The department has conditioned revegetation of 0.26 hectares of native vegetation which include at least six black cockatoo foraging species to be planted. See section 3.2.2 of the decision report.
Importance of considering cumulative impacts (Submission, 2022).	Cumulative impacts are considered under the collective consideration of the biodiversity-related clearing principal (e) under section 3.2.2. This proposal includes an assessment of impacts resulting from 0.13 hectares of native vegetation clearing and not the entire proposal that was initially submitted to the department. The remaining area illustrated in Figure 2 of the section 1.5 is considered to be possible future clearing. The department assesses each clearing permit application on its merits. Future stages of the clearing for the kiwifruit plantation will be assessed against the 10 clearing principles and relevant planning and other matters, including consideration of the cumulative impacts when either a new application or an amendment to this permit is received by the department.
Need for mitigation measures that are effective for black cockatoo conservation (Submission, 2022).	The applicant is conditioned to plant native vegetation lost through the proposed clearing at a ratio of 2:1. The revegetation is to also include six plant species which provides foraging value for the black cockatoos.

Appendix C. Site characteristics

C.1. Site characteristics

The information provided below describes the key characterises 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.

Characteristic	Details
Local context	The areas proposed to be cleared are small, isolated remnants in the intensive land use zone of Western Australia. It is surrounded by cleared agricultural land. The property is located approximately eight kilometres west of the Harvey town site, within the Shire of Harvey. Aerial imagery and spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 21.58 per cent of the original native vegetation cover.
Ecological linkage	The area proposed to be cleared is not part of any mapped ecological linkage and is not considered to contribute to any local linkages. The application area is approximately 2.8 kilometres east of a mapped ecological linkage (South West Regional Ecological Linkage).
Conservation areas	The application area is not mapped within a conservation area. The closest conservation area is Myalup State Forest, located approximately 2.3 kilometres west of the application area.
Vegetation description	The photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of Eucalyptus species and Melaleuca species (Paprzilk-Price. R, 2022). Representative photos are available in Appendix F. The broad mapped vegetation type within the application area is: • Beard vegetation association 968, which is described as Jarrah, marri and wandoo *Eucalyptus marginata* (Jarrah), *Corymbia calophylla* (marri) and *Eucalyptus wandoo* (wandoo) (Shepherd et al, 2001). • Serpentine River Complex 35, which is described as closed scrub of Melaleuca species and fringing woodland of *Eucalyptus rudis* (Flooded Gum) and *Melaleuca rhaphiophylla* (Swamp Paperbark) along streams (Webb et al, 2016). The mapped vegetation types retain less than 30 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	Photographs supplied by the applicant (Paprzilk-Price. R, 2022) indicate the vegetation within the proposed clearing area is in completely degraded (Keighery, 1994) condition, described as parkland cleared comprising of weeds or crop species and generally with isolated native trees or shrubs (CSLC, 2022). The full Keighery (1994) condition rating scale is provided in Appendix E. Representative photos are available in Appendix F.
Climate and landform	The southwest of Western Australia experiences a Mediterranean climate of hot dry summers and cool wet winters, and the proposed clearing area is situated within the 'Temperate – distinctly dry and warm summer' Köppen climate class. The property is situated near the 950 millimetre rainfall isohyet (CSLC, 2022). The application area is within the Pinjarra System described as Swan Coastal Plain from Perth to Capel. Poorly drained coastal plain with variable alluvial and aeolian soils. (DPIRD, 2019)

Characteristic	Details
Soil description	The soil is mapped within the Pinjarra P5 Phase described as flat to very gently undulating plain with deep, imperfect to poorly drained acidic gradational yellow or grey-brown earths and mottled yellow duplex soils, with loam to clay loam surface horizons (DPIRD, 2019).
Land degradation risk	The land degradation table C.4. below outlines the land degradation risk levels for Pinjarra P3 Phase.
Waterbodies	The desktop assessment and aerial imagery indicates that no watercourses transect the area proposed to be cleared. However, the application area is mapped within a geomorphic wetland of the Swan Coastal Plain which is identified as a palusplain multiple use wetland.
Hydrogeography	The application area falls within the Harvey Irrigation District surface water area proclaimed under the *Rights in Water and Irrigation Act 1914* (RiWI Act) (DWER-037). The application area is not mapped within a groundwater area proclaimed under the RiWI Act (DWER-034), not within an area subject to the *Country Areas Water Supply Act 1917* clearing control catchments or within any Public Drinking Water Source Areas (DWER-033).
Flora	The desktop assessment identified 31 conservation significant flora species within the local area which comprise of six threatened flora and 25 priority flora. The closest species recorded was the *Acacia semitrullata*, located approximately 1.46 kilometres from the application area.
Ecological communities	The application area is not mapped within a Threatened Ecological Community or within a Priority Ecological Community. The species identified within the application area do not represent a conservation significant ecological community. The nearest mapped ecological community record is the Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region (Banksia woodlands TEC), located approximately 1.4 kilometres to the west of the application area.
Fauna	The desktop assessment identified 34 conservation significant fauna species within the local area which include 21 birds, one invertebrate, nine mammals, two reptiles and one fish. The closest record of the conservation significant fauna species was *Zanda latirostris* (previously *Calyptorhynchus latirostris*) (Carnaby's cockatoo) recorded 1.19 kilometres from the application area. The local area includes one potential black cockatoo breeding site and four black cockatoo roost sites. The application area is located within the mapped distribution for all three black cockatoo species.

C.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Swan Coastal Plain	1,501,221.93	579,813.47	38.62	222,916.97	14.85
Vegetation complex/association					
Beard vegetation association 968 *	136,188.20	9,107.32	6.62	57,784.58	18.46

	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
Heddle / Mattiske vegetation complex 35 **	19,855.41	1,940.18	9.77	517.49	2.61
Local area					
10km radius	31,462	6,782.26	21.55	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

C.3. Fauna analysis table

Conservation significant fauna species identified from the local area that required further consideration.

Species scientific name	Species common name	Conservation status	Year of most recent record	Number of known records (total)	Distance of closest record to application area (km)
Calyptorhynchus banksii naso	forest red-tailed black cockatoo	VU	2018	13	1.54
Zanda baudinii	Baudin's cockatoo	EN	2012	9	6.64
Zanda latirostris	Carnaby's cockatoo	EN	2016	75	1.19
Calyptorhynchus sp. 'white-tailed black cockatoo'	White-tailed black cockatoo	EN	2018	17	3.59

EN: endangered, VU: vulnerable

C.4. Land degradation risk table

Risk categories	*213pj_P3*	*DPIRD comment*
Wind erosion	L1	The risk of wind erosion causing land degradation is low 100% of map unit has a nil to moderate risk
Water erosion	L1	The risk of water erosion causing land degradation is low 100% map unit has a nil to moderate risk
Salinity	L2	The risk of salinity causing land degradation is low 95% of map unit has a nil or partial risk 5% of map unit has a high risk
Subsurface Acidification	H2	The risk of acidification causing land degradation is high. 95% of map unit has a high risk 5% of map unit has a low risk
Flood risk	L1	The risk of flooding causing land degradation is low. 100% of map unit has a nil to very low risk
Water logging	H2	The risk of waterlogging causing land degradation is low 15% of map unit has an extreme risk. 15% of map unit has a very high risk. 25% of map unit has a high risk.
Phosphorus export risk	L1	The risk of eutrophication causing land degradation is low. 100% of map unit has a nil to moderate risk

Appendix D. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared contains three trees that may be suitable for providing foraging habitat to threatened black cockatoo species (Paprzilk-Price. R, 2022). The application area will not provide significant habitat for any other conservation significant fauna or flora species identified within the local area.	Not likely to be at variance	No
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 contain three trees that may provide foraging habitat for black cockatoo species.	May be 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: Based on the extent and the nature of the proposed clearing and the completely degraded condition of the vegetation, the area proposed to be cleared is unlikely to contain habitat for flora species listed as threatened under the BC Act.	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
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 can indicate a threatened ecological community.	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 not considered to be part of a significant ecological linkage in the local area.	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: Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	Not likely to be at variance	No
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: A multiple use wetland is recorded within the application area. However, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality. The proposed clearing will involve removal of riparian vegetation.	At variance	Yes *Refer to Section 3.2.3, above.*
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are susceptible to eutrophication, waterlogging and sub-surface acidification. Noting the extent of the application area, condition of the vegetation and the implementation of a nutrient and irrigation management plan, 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 watercourses, significant wetlands or Public Drinking Water Sources Areas are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality.	Not likely to be at variance	Np

Assessment against the clearing principles	Variance level	Is further consideration required?
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 soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. According to the DPIRD advice, the risk of flooding is low (CSLC, 2022).	Not likely to be at variance	No

Appendix E. Vegetation condition rating scale

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

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

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

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

Appendix F. Photographs of the vegetation (Paprzilk-Price. R, 2022).

Figure 5: Location of the photographs

Figure 6: Photograph of Tree – location 1

Figure 7: Photograph of Tree – location 2

Figure 8: Photograph of Tree - location 3

Figure 9: Photograph of vegetation – location 4 (regeneration of a tree, previously blown away by the wind)

Figure 10: Photograph of trees - location 5

Figure 11: Photograph of trees - location 6

Attachment 1 – Example of non-native species planted along old fence li

Figure 12: Photograph of non-native vegetation along fence lines

Appendix H. Sources of information

H.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

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

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