GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS
Area Permit Number: 8795/1
File Number: DWERVT5262
Duration of Permit: From 4 June 2020 to 4 June 2030

PERMIT HOLDER
Cooperative Bulk Handling Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE
Lot 31 in Deposited Plan 416005, Hyden, Shire of Kondidin

AUTHORISED ACTIVITY
The Permit Holder shall not clear more than 2.67 hectares of native vegetation within the area cross-hatched yellow on attached Plan 8795/1(a).

CONDITIONS

1. **Avoid, minimise and reduce the impacts and extent of clearing**
   In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in 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.

2. **Dieback and weed control**
   When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the 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 *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.

3. **Revegetation, Rehabilitation and Direct Planting**
   Within 24 months of the clearing authorised under this permit, the Permit Holder must implement and adhere to the revegetation plan approved by the CEO under condition 3(a) of this permit, including but not limited to the following actions:
   (a) within 12 months post the commencement of clearing authorised under this permit, the permit holder must provide a copy of the revegetation plan to the CEO for approval;
   (b) implement the most recent approved version of the revegetation plan as per condition 3(a);
   (c) retain the vegetative material and topsoil removed by clearing authorised under this permit and stockpile the material and topsoil in an area that has already been cleared;
   (d) within 24 months of the commencement of the clearing authorised under this permit, the Permit Holder must commence *revegetation* and *rehabilitation* of the area cross-hatched red on the attached Plans CPS 8795/1(b) by:
      i. laying the vegetative material and topsoil retained under condition 3(c) of this permit;
      ii. re-shaping the surface of the land so it is consistent with the surrounding 5 metres of uncleared land;
      iii. ripping the ground on the contour to remove soil compaction;

iv. deliberately *planting* native vegetation that will result in a similar species composition, structure and density of native vegetation as described by the revegetation plan approved by the CEO under 3(a) of this permit; and
v. ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area.

(e) water planted vegetation between November and March during first year following planning;
(f) implement hygiene protocols by cleaning earth-moving machinery of soil and vegetation prior to entering and leaving the site;
(g) undertake weed control activities annually;
(h) within 24 months of implementing the approved revegetation plan in accordance with condition 3(d) of this Permit, the Permit Holder shall:
i. engage an *environmental specialist* to determine the species composition, structure and density of the areas cross-hatched red on plan 8795/1(b); and
ii. where, in the opinion of an *environmental specialist*, the composition structure and density determined under 3(h)(i) of this Permit will not result in a similar species composition, structure and density to that described in the approved revegetation plan from 3(a) of this permit, undertake infill *planting* and/or *direct seeding* of native vegetation that will result in a similar species composition, structure and density of native vegetation as per the approved revegetation plan from 3(a) of this permit.
(i) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 3(h)(ii) of this permit, the Permit Holder shall repeat condition 3(h)(i) and 3(h)(ii) within 24 months of undertaking the additional planting or direct seeding of native vegetation; and
(j) Where a determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that described in the approved revegetation plan from 3(a) of this permit, as determined in condition 3(h)(i) and (ii) of this permit, that determination shall be submitted for the *CEO's* consideration. If the *CEO* does not agree with the determination made under condition 3(h)(ii), the *CEO* may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 3(h)(ii).

RECORD KEEPING AND REPORTING

4. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

(a) In relation to the clearing of native vegetation of the areas cross-hatched yellow on attached plan 8795/1(a):
i. 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 or decimal degrees;
ii. the date that the area was cleared;
iii. the size of the area cleared (in hectares);
iv. actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 1 of this Permit; and
v. actions taken to minimise the risk of the introduction and spread of *dieback* and *weeds* in accordance with condition 2 of this Permit.

(b) In relation to the *revegetation* and *rehabilitation* of the areas cross-hatched red on attached plan 8795/1(b) pursuant to condition 3 of this Permit:
i. the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
ii. a description of the *revegetation* and *rehabilitation* activities undertaken;
iii. the size of the area *revegetated* and *rehabilitated* (in hectares); and
iv. the species composition, structure and density of *revegetation* and *rehabilitation*;
v. a copy of the *environmental specialist's* report including photographic evidence of the areas *revegetated* and *rehabilitated* under 3(d) of this permit.

5. Reporting

(a) The permit holder must provide to the *CEO*, on or before 30 June of each calendar year, a written report containing:
   i. the records required to be kept under condition 4(a) and 4(b) of this permit; and
   ii. records of activities undertaken by the permit holder under this permit between 1 January and 31 December of the preceding calendar year.

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

(c) The permit holder must provide to the *CEO*, no later than 90 calendar days prior to the expiry date of the permit, a written report of records required under 4(a) and 4(b) of this permit, where these records have not already been provided under 5(a) of this permit.

DEFINITIONS

The following meanings are given to terms used in this Permit:

CEO means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;

dieback means the effect of *Phytophthora* species on native vegetation;

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

environmental specialist means a person who holds a tertiary qualification in environmental science or equivalent, and has a minimum of 2 years work experience relevant to the type of environmental advice that an environmental specialist is required to provide under this permit, or who is approved by the CEO as a suitable environmental specialist;

fill means material used to increase the ground level, or fill a hollow;

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;

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

rehabilitate, rehabilitated, rehabilitation means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate, revegetated and ***revegetation*** means the re-establishment of a cover of native vegetation in an area such that the species composition, structure, density and condition is similar to pre-clearing vegetation types in that area, and can involve regeneration, direct seeding and/or planting;

weed/s 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 Regional Weed Rankings Summary, regardless of ranking; or

(c) not indigenous to the area concerned.

Richard Newman
DIRECTOR
NATIVE VEGETATION PROTECTION

Officer delegated under Section 20
of the Environmental Protection Act 1986

13 May 2020

Plan 8795/1(a)

Legend

- CPS areas approved to clear
- Local Government Authorities
- Cadastre - LGATE 218
- Localities - Landgate

0 75 150 225 300 m

MGA 94
Geocentric Datum of Australia 1994

12 May 2020

Richard Newman, Director Native Vegetation Protection

Officer delegated under section 20 of the
Environmental Protection Act 1986

GOVERNMENT OF
WESTERN AUSTRALIA

Plan 8795/1(b)

Legend

- CPS subject to conditions
- Local Government Authorities
- Cadastre - LGATE 218
- Localities - Landgate

N

0 50 100 150 200 m

MGA 94
Geocentric Datum of Australia 1994

12 May 2020

Richard Newman, Director Native Vegetation Protection

Officer delegated under section 20 of the
Environmental Protection Act 1986

GOVERNMENT OF
WESTERN AUSTRALIA

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1. Application details

Permit application details

Permit application No.: 8795/1
Permit type: Area Permit

Applicant details

Applicant's name: Cooperative Bulk Handling Pty Ltd
Application received date: 30 January 2020

Property details

Property: Lot 31 on Deposited Plan 416005, Hyden
Local Government Authority: Shire of Kondinin
Localities: Hyden

Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.67		Mechanical Removal	Improve truck marshalling, access and additional grain receival and storage facilties at the site.

Decision on application

Decision on Permit Application: Grant
Decision Date: 13 May 2020
Reasons for Decision:

The clearing permit application has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*. It has been concluded that the proposed clearing is at variance to Principle (e), may be at variance to Principles (b) and (h) and is not likely to be at variance to the remaining clearing principles.

Through assessment the delegated officer identified the area sought ot be cleared is broadly suitable habitat for Malleefowl, however no active or inactive mounds were identified and no evidence or suitable habitat for any other conservation significant fauna was identified during the survey (Ecoscape, 2019).

The Delegated Officer determined that one of the mapped vegetation types (BVA 945) retained approximately 18% of its pre-European remnant vegetation extents, however the on-ground vegetation is not representative of any of the mapped vegetation types in the area. The applied clearing area was determined to be within an extensively cleared landscape as the local area (10 km) contains 20.78 percent of its pre-European remnant vegetation extents. The vegetation is made up of relatively small disconnected patches, isolated from the adjacent national park and other vegetate areas by several roads and other previously cleared areas. The vegetation does not contain high levels of biodiversity, threatened or priority flora, significant habitat for threatened fauna or any mapped ecological linkages. The application area is determined to not be significant as a remnant of native vegetation.

Due to the proximity of the Clearing to the Class A Lake Gounter Nature reserve, DWER has conditioned the permit with a weed and dieback condition to assist in limiting the spread of invasive species from the applied clearing area.

The applicant has committed to revegetating 2.7 hectares of native vegetation within the project site and the revegetation plan will be provided to DWER within 24 months of the commencement of clearing.

After giving consideration to the above, the Delegated Officer determined the proposed clearing will not to lead to any unacceptable risk to the environment, and made the decision to grant the permit subject to weed, dieback and revegetation conditions.

2. Site Information

Clearing Description

The application is to clear 2.67 hectares of native vegetation within Lot 31 in Deposited Plan 416005, Hyden, for the purposes of improving truck marshalling and weighing, access to and additional grain receival and storage facilities at the Hyden grain receival site.

Vegetation Description

The vegetation within the application area is mapped as the following Beard vegetation complexes:

519: Shrublands; mallee scrub, Eucalyptus eremophila, over the majority of the survey area; and

945: Mosaic: Medium woodland; salmon gum/Shrublands; mallee scrub, redwood & black marlock. (Heddle, 1980).

The flora and vegetation survey identified four vegetation units within the survey area, based on the structural vegetation types observed in the field. These were identified as *Eucalyptus loxophleba subsp. gratiae low mallee woodland* covering 0.16 (6.13%) hectares of the proposed clearing area, *Maireana brevifolia and Acacia multispicata mid sparse chenopod shrubland/shrubland* covering 0.93 (34.66%) hectares, *Melaleuca hamata, Allocasuarina acutivalvis and Allocasuarina campestris tall open shrubland* covering 1.51 (56.34 %) hectares and completely cleared vegetation covering 0.08 (2.87%) hectares. The results of the vegetation mapping are shown in table 1 below.

Vegetation Units	Area (ha)	Area (%)
Cleared	0.08	2.87
Eucalyptus loxophleba subsp. gratiae low mallee woodland	0.16	6.13
Maireana brevifolia and Acacia multispicata mid sparse chenopod shrubland/shrubland	0.93	34.66
Melaleuca hamata, Allocasuarina acutivalvis and Allocasuarina campestris tall open shrubland	1.51	56.34
Total	2.677	100.00

Table 1. Clearing area with survey Vegetation Units

Vegetation Condition

The vegetation in the clearing area ranged from Completely Degraded to Excellent, as shown in the table 2 below:

Veg Condition	Area (ha)	Area (%)
Excellent	1.39	51.78
Very Good	0.08	3.09
Good	0.19	6.92
Degraded	0.93	34.67
Completely Degraded	0.02	0.67
Cleared	0.08	2.87
Total	2.677	100.00

Table 2. Clearing Area Vegetation Condition

Soil and Landform Type:

The application area is mapped as the following soil type:

Hyden Sandplain 2 Subsystem (250Hy_2): Gently undulating mainly grey lateritic sandplain containing iron stone gravelly soils with associated brown yellow sandy and loamy and sandy earths, interspersed with grey alkaline sodic duplexes.

Comments:

The local area referred to in the assessment of this application is defined as a 10-kilometre radius measured from the perimeter of the application area.

Image 1. Photographic interpretation of the site (from southwest)

Image 2. Photographic interpretation of the site (from southeast)

Image 3. Photographic interpretation of the site (from the east, looking south west)

Image 4. Surveyed vegetation unit **MhAaAcTOS,** as described in section 2.

Image 5. Surveyed vegetation unit **ElLMW,** as described in section 2.

Image 6. Surveyed vegetation unit **MbAcMSCSS,** as described in section 2.

3. Avoidance and minimisation measures

The applicant has advised that the proposed clearing is necessary to allow required development at the site which has been designed to meet the operational requirements to improve truck marshalling and weighing, access to and additional grain receival and storage facilities. The extent of the development is constrained by the existing site cadastral boundaries. The maximum development of the project, subject to future approvals, requires a larger footprint, which would in turn cause a greater impact on existing remnant vegetation than this clearing proposal (Dolling, 2020a). During development of the design of the project at the project concept and pre-feasibility phase, it was recognised that a larger footprint was not required at this time.

On 8 April 2020, the applicant was requested to provide further advice on mitigation measures taken within Lot 31 on Deposited Plan 416005, Hyden. The applicant had previously stated that the clearing was already designed with the minimum area of clearing possible to enable the development of the site (Dolling, 2020a). The Department advised the application that a considerable expansion to the planting conditioned by the projects Development Approval (Dolling, 2020c) from the Shire of Kondinin could act to mitigate the applied clearing.

On 24 April 2020, the applicant proposed 2.7 hectares of revegetation within Lot 31 on Deposited Plan 416005, Hyden. This final landscaping plan has been supplied to the Shire of Kondidin and the applicant's Revegetation Contractor for the development of the landscaping and revegetation plan. The revegetation plan will outline the strategies employed during the planting of 2.7 hectares of native vegetation. The revegetation plan will include, but it not limited to, the following:

- Vegetation condition (current);
- Revegetation techniques;
- Dieback mapping & site hygiene;
- Pre-revegetation establishment weed control;
- Contour ripping;
- Tubestock and direct seeding;
- Topsoil;
- Data to collect and monitoring programs;
- Schedule;
- Maintenance and contingency measures; and
- Monitoring reports.

The revegetation is shown in the attached Plan 8795/1(b) and allows for future development at the site and the associated expansion of the drainage basin within the site (Dolling, 2020d).

4. Applicant submissions

The application applied to clear 2.67 hectares of native vegetation within Lot 31 in Deposited Plan 416005, Hyden for the purpose of improving truck marshalling, access and additional grain receival and storage facilities at the site.

With the submission of the application documents on 18 November 2019, the applicant provided a Flora and Fauna survey, conducted by Ecoscape in September 2019. During the assessment, it was noted part of the application area was missing from the survey report and did not have any data associated. This is shown in Figure 1 below.

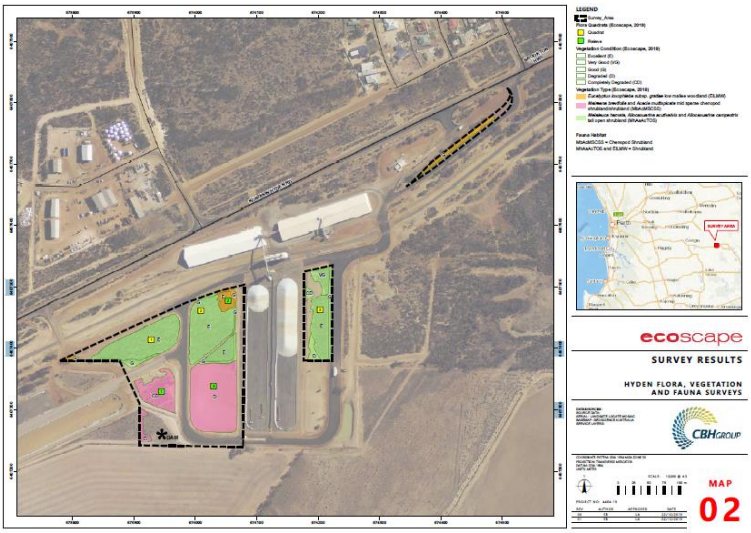

Figure 1. Original survey area indicating vegetation mapping and condition

At DWER's request, the applicant provided an amended survey report on 2 April 2020 with the updated survey area and information on the vegetation condition and mapped vegetation units. This is shown in Figure 2 below. As seen in images 1-3 in section 2, there are several medium sized trees contained within the site. On 3 April 2020, the applicant was requested to confirm that none of these meet the requirements of Black Cockatoo habitat tree species or size (< 500mm DBH) for foraging, breeding or roosting. The applicant responded with comments from Ecoscape indicating some of trees were planted and unlikely to be native tree species, and none of the trees in the images are greater than 500mm DBH or 300mm DBH for salmon gum or wandoo (Dolling, 2020b).

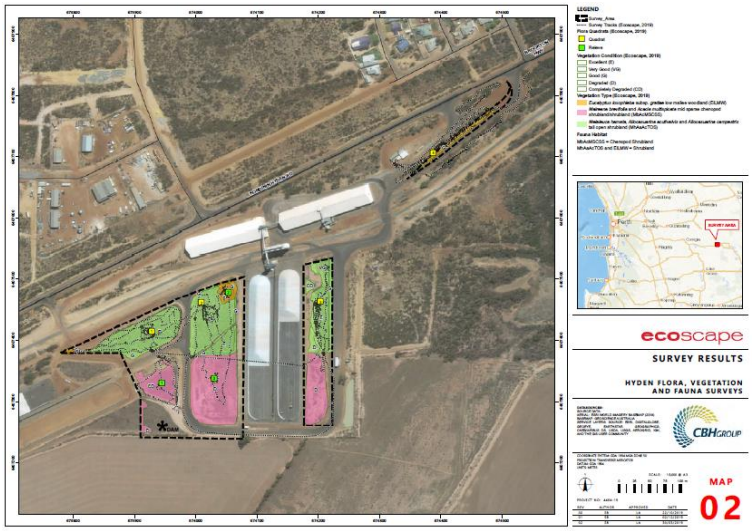

Figure 2. Amended survey area indicating vegetation mapping and condition

5. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Proposed clearing is not likely to be at variance to this principle

The applicant engaged Ecoscape to conduct a detailed flora and vegetation survey and a Level 1 Fauna Survey to identify any significant environmental impacts resulting from the proposed clearing. The flora and vegetation survey was conducted on 10 and 11 September 2019 in accordance with State and Commonwealth requirements for the bioregion and species and communities present, and the Environmental Protection Authority's *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016a). The Fauna survey was conducted on 10 and 11 September 2019 in accordance with *Technical Guidance – Sampling Methods for Terrestrial Vertebrate Fauna* (EPA, 2016b).

This area is located in the central Wheatbelt, a high conservation area of the Western Australian environment, forming part of one of the most botanically rich areas in Australia (DSEWPC, 2012). It is contained within the Mallee IBRA bioregion and the Western Mallee (MAL02) sub-region, located approximately 300 metres to the south east of the DBCA managed Lake Gounter Nature Reserve.

A total of 142 vascular flora were identified by the flora and vegetation survey throughout the applied clearing area (Ecoscape, 2019). A review of the available databases indicated three species, Priority 2 *Acacia concolorans* and Priority 3 *Phebalium brachycalyx* and *Daviesia implexa*, could occur within the applied clearing area. They were targeted during the survey (Ecoscape, 2019). None of the flora identified in the survey were conservation significant listed for protection under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) or the *Biodiversity Conservation Act 2016* (BC Act). Five flora taxa were unable to be identified to the species level due to lack of diagnostic reproductive material caused by poor seasonal conditions (Ecoscape, 2019), however none of these species were similar to any flora of conservation significance.

According to the available databases, a part of the clearing area is mapped as the State listed Priority 3 and Commonwealth listed Critically Endangered TEC *Eucalypt woodlands of the Western Australian Wheatbelt*. However, according to the flora and vegetation survey, the current vegetation within the TEC mapped area is not representative of the key diagnostic characteristics of the TEC (DoE, 2015). None of the vegetation surveyed within the application area was representative of any other State or Commonwealth listed TEC. No other TEC or PEC was mapped with 20 km of the clearing area according to the DBCA databases (Ecoscape, 2019).

As discussed under Principle (b), below, the fauna survey of this application area did not identify any evidence of conservation significant fauna. However, much of the application area indicates habitat broadly suitable for Malleefowl (*Leipoa ocellata*) breeding as it has shrubs, mallees and available leaf litter (Ecoscape, 2019) in good to excellent (Keighery, 1994) condition. No evidence of Malleefowl was found during the survey and habitat that is more suitable exists to the north east of the application area.

The application area is not suitable for Black Cockatoo breeding, foraging or roosting habitat due to the lack of habitat tree species. However, there are two large trees contained with the overall development footprint that may be considered Black Cockatoo habitat trees. Neither of these trees are proposed to be removed during the development and therefore were not assessed (Ecoscape, 2019). Ecoscape identified some of the trees within the application area, as recorded in the survey report, as being planted or not endemic to the region (Dolling, 2020b).

The vegetation within the application area combines several small, disconnected patches of completely degraded to excellent (Keighery, 1994) condition native vegetation. There are no mapped ecological linkages within the local area. The local area retains only 20.78 % of its remnant vegetation, indicating the application area is within an extensively cleared landscape, and increases the conservation value of all the remnant native vegetation in the region. The proposed clearing would likely have an impact on the ecological linkages between existing remnant vegetation patches and flora and fauna movement. However,

the lack of conservation significant flora or fauna within the application area, consistent disturbance by human and vehicle traffic and proximity to the local township reduces the likelihood of the application area forming a significant linkage.

The applicant has committed to planting a continuous double row of native shrubs, endemic to the local area along the southern boundary of Lot 31 to act as a buffer screen to the adjacent agriculture and residential land use on Lot 30, in accordance with the project's development approval. The applicant has also committed to revegetating 2.7 hectares of native vegetation within the project site and the revegetation plan will be provided to DWER within 24 months of the commencement of clearing.

One Declared Pest as listed under the *Biosecurity and Agriculture Management Act 2007* was identified during the flora surveys of the application area. This species was *Moraea miniata,* however, it is in the exempt category under the *BAM Act* and has no management requirements (Ecoscape, 2019). DWER will condition the permit to include dieback and weed management practices.

The proposed clearing is not likely to be at variance to this 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.

Proposed clearing may be at variance to this principle

The applicant engaged Ecoscape to undertake a reconnaissance fauna survey of the application area, conducted on 10 and 11 September 2019. The scope of works included a level 1 fauna survey in accordance with the EPA's *Technical Guidance – Terrestrial Vertebrate Fauna Surveys* (2016b).

Carnaby's Cockatoo and Baudin's Cockatoo are listed as Endangered and Forest Red-Tailed Black Cockatoo are listed as Vulnerable under the EPBC Act. Black cockatoos' nest in hollows in live or dead trees of Karri, Marri, Wandoo, Tuart, Salmon Gum, Jarrah, Flooded Gum, York Gum, Powder Bark, Bullich and Blackbutt (DSEWPC, 2012). Breeding habitat or a 'habitat tree' is defined in the EPBC Act referral guidelines as 'trees of species known to support breeding within the range of the species which either have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow' (DSEWPC, 2012). The survey did not identify any trees of a suitable size to provide Carnaby's cockatoo breeding habitat (Ecoscape, 2019). These included trees with a diameter at breast height of greater than 30 centimetres for wandoo and salmon gum and 50 centimetres for other tree species (DSEWPC, 2012). According to the available datasets, there are no mapped breeding or roosting sites contained with 20 km of the application area, far exceeding general foraging range from a breeding site for this species (DSEWPC, 2012).

The mallee vegetation unit identified from the flora and vegetation survey contained none of the key habitat tree species for Black Cockatoo breeding or roosting (Ecoscape, 2019). The survey broke down the application area into 3 fauna habitat types; Shrubland (1.67 ha, 62.5%), Chenopod Shrubland (0.93 ha, 34.7 %) and no habitat (0.08 ha or 2.9%). Black Cockatoos have a preference for feeding habitat that includes Jarrah and Marri woodlands and forest heathland and woodland dominated by proteaceous plant species such as Banksia sp., Hakea sp. and Grevillea sp. (DSEWPC, 2012). No flora species within the application area offer suitable foraging habitat for Black Cockatoo species (Ecoscape, 2019).

Fauna Habitat	Area (ha)	Area (%)
Chenopod Shrubland	0.93	34.7
Shrubland	1.67	62.5
Cleared	0.08	2.9
Total	2.677	100.0

Table 3. Surveyed Fauna habitat

A review of the available databases identified a total of six conservation significant fauna, listed under the BC Act or the EPBC Act having been recorded in the local area. Of these, three are listed as Vulnerable, one Priority 4, one protected under International Agreement and one other specially protected species. The Level 1 Fauna survey identified 18 vertebrate fauna throughout the survey area including two introduced species (Ecoscape, 2019). None of the fauna species observed during the survey are listed as conservation significant in state or federal legislation.

Prior to the survey, Malleefowl (*Leipoa ocellata*) was considered to have a high likelihood of occurring in the survey area. During the fauna survey, no active or inactive mounds were recorded within the site. Subsequently, Malleefowl was downgraded to a medium likelihood of occurrence and the report stated 'it is not anticipated to be other than a seasonal visitor to the survey area and is not likely to breed within the survey area' (Ecoscape, 2019). The Chenopod shrubland is not considered to be suitable for Malleefowl due to the open structure, insufficient shelter and insufficient leaf litter for nesting (Ecoscape, 2019).

Given the clearing area indicates habitat broadly suitable for Malleefowl and over 50 percent of the application area is classed as excellent (Keighery, 1994), the proposed clearing may be at variance to this principle. However, the Level 1 fauna survey did not identify any evidence of Malleefowl, active or inactive, within the application area. This, coupled with regular disturbance from humans and small to large vehicle traffic, the proximity to the local township, and the contiguous suitable Malleefowl habitat in the bushland to the north (Lake Gounter Reserve), indicates the proposed clearing is not likely to cause significant impacts to habitat for fauna indigenous to Western Australia.

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, Threatened flora.

Proposed clearing is not likely to be at variance to this principle

A review of the available data bases identified *Roycea pycnophylloides*, also known as 'saltmat', listed as Threatened under the EPBC Act and Vulnerable under the BC Act, with a historical record in the local area (10 km). That individual was mapped six kilometres to the northwest of the application area.

Flora surveys of the application area, conducted on 10 and 11 September 2019 did not identify any individuals of this threatened flora species, nor any other threatened flora species, as listed under the BC Act or the EPBC Act.

(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.

Proposed clearing is not likely to be at variance to this principle

As discussed at principle (a) above, although a part of the clearing area is mapped as the State listed Priority 3 and Commonwealth listed Critically Endangered TEC *Eucalypt woodlands of the Western Australian Wheatbelt*, the flora and vegetation survey found that vegetation within the TEC mapped area is not representative of the key diagnostic characteristics of the TEC (DoE, 2015).

The proposed clearing is not likely to be at variance with this 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.

Proposed clearing is at variance to this principle

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

The application area falls within the Mallee Interim Biogeographic Regionalisation of Australia (IBRA) bioregion and the Western Mallee subregion (MAL02), retaining 56.63 percent and 36.95 percent of their pre-European vegetation extents respectively. The application area is mapped as Beard Vegetation Associations 519 and 945 (Shepherd et al, 2001). As per Table 3 below, BVA 519 and BVA 945 retain 61.71 % and 18.5 % of their pre-European vegetation extents respectively (Government of Western Australia, 2019).

BVA 945 covers 0.71 hectares (26.7 %) of the applied clearing area. BVA 945 in the local area (10 km) is mapped as covering 14,991 total hectares, representing 45.8 % of the total current remnant vegetation extent of that vegetation association. Conversely, BVA 519 covers 11,958.5 hectares in the local area, representing 0.83 % of the total remnant revegetation extent of that vegetation association. This indicates BVA 945 is more significant within the local area and represents a significant proportion of the mapped total remnant vegetation for that association.

According to the survey report, the on-ground vegetation mapped as BVA 945 is not representative of that vegetation association (Ecoscape, 2019). BVA 945 is described in section 2 as a *Mosaic: Medium woodland; salmon gum/Shrublands; mallee scrub, redwood & black marlock*. The area on ground was surveyed and found to represent a mix of 2 veg types including tall open shrubland consisting of *Melaleuca hamata*, *Allocasuarina acutivalvis* and *Allocasuarina campestris* over *Borya constricta, Amphipogon caricinus* and *Lepidobolus preissianus,* and a second veg type consisting of *Maireana brevifolia* and *Acacia multispicata* over *Avena barbata*, *Arctotheca calendula* and *Hordeum leporinum*. Neither of these vegetation units are representative of vegetation complex BVA 945 and therefore cannot be considered significant as remnant of native vegetation. The lack of representation of the mapped vegetation complex is likely due to historical modifications to the landscape at a broad scale.

The local area retains approximately 20.78 % of its pre-European vegetation extents and is considered to be part of an extensively cleared landscape. 1.39 hectares of the vegetation proposed to be cleared is in excellent condition and the clearing would reduce the local area remnant vegetation by 0.008%.

Whilst the proposed clearing would occur in an area that has been extensively cleared, the applied area does not contain any conservation significant flora, does not provide habitat for any conservation significant fauna, does not contain high levels of biodiversity nor provide any mapped or recorded ecological linkages. The areas are fragmented, and substantial sections are degraded, and it is arguable that the vegetation to be cleared is not significant as a remnant. However, while this assessment considers that the proposed clearing is at variance with this principle, it is not likely to lead to an unacceptable risk to the environment.

The applicant has committed to planting 2.7 hectares of native vegetation within Lot 31 on Deposited Plan 416005, Hyden, mitigating the clearing.

Table 4: Vegetation representation statistics (Government of Western Australia, 2019)

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed lands (ha)	Extent remaining in all DBCA managed lands (proportion of Pre-European extent) (%)
IBRA bioregion					
Mallee (MAL)	7,395,894.36	4,180,937.68	56.53	30.84	17.43
IBRA sub-region					
Western Mallee (MAL02)	3,981,717.82	1,471,047.68	36.95	24.80	9.16
Beard vegetation association					
519	2,333,413.96	1,440,062.48	61.71	16.95	10.46
945	176,611.70	32,672.36	18.50	11.99	2.22
Beard vegetation association in IBRA bioregion					
519	2,100,313.59	1,248,661.16	59.45	18.09	10.76
945	141,353.72	27,748.20	19.63	8.72	1.71
Beard vegetation association in local area					
519	33 208.15	11958.54	-	-	-
945	33 208.15	14991.48	-	-	-
Local area					
10 km	33 208.15	6 902.23	20.78	-	-

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Proposed clearing is not likely to be at variance to this principle

A review of the available databases indicated no mapped watercourses or wetlands occurring within the application area.

The closest wetland or watercourse to the application area is approximately 320 metres south west, mapped as a major tributary running south from the Camm River, located approximately 2.3 kilometres to the northwest of the application area.

The flora survey did not identify any watercourses or wetlands in the application area, nor did it record any riparian vegetation (Ecoscape, 2019).

The native vegetation within application area is not growing in, nor it is in association with an environment associated with a watercourse or wetland. The proposed clearing is not likely to be at variance with this principle.

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Proposed clearing is not likely to be at variance to this principle

The application area was mapped as *Hyden Sandplain 2 Subsystem* (250Hy_2) soil type which was described as gently undulating mainly grey lateritic sandplain containing iron stone gravelly soils with associated brown yellow sandy and loamy and sandy earths, interspersed with grey alkaline sodic duplexes (DPIRD, 2017).

The land degradation risk categories that apply to this subsystem are as follows (Schoknecht et al., 2004; DPIRD,2017):

- Water Erosion: <3% of map unit has a high to extreme water erosion risk
- Wind Erosion: 30-50% of map unit has a high to extreme wind erosion risk
- Salinity: 3-10% of map unit has a moderate to high salinity risk or is presently saline
- Subsurface Acidification: >70% of map unit has a high subsurface acidification risk or is presently acid
- Flood risk: <3% of the map unit has a moderate to high flood risk
- Water logging: <3% of map unit has a moderate to very high waterlogging risk

The soil type within the applied clearing area has a moderate risk to wind erosion noting the presence and light composition of sandy soils. Given that the surrounding area is extensively cleared for infrastructure and large proportions of the property are currently in use for grain processing and storage, the proposed clearing is unlikely to cause appreciable land degradation. It is not likely to be at variance to this 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.

Proposed clearing may be at variance to this principle

According to the available data sets, the closest conservation area to the application area is 226 m, located directly north west from the application area.

Suitable Malleefowl habitat is located approximately 200 metres away in the form of the Lake Gounter Nature Reserve. This Class A nature reserve covers 3,200 hectares of remnant vegetation with the purpose of conserving flora and fauna (DBCA, 2019). The Wheatbelt Region parks and reserves draft management plan (DBCA, 2019) states Lake Gounter Reserve is vested

in the Commission and is located within the Ballardong People Native Title claim. Given the distance to this reserve, the proposed clearing may contribute to increased pressure placed on the general foraging and habitat resources in the reserve. Whilst the clearing may cause the spread of invasive weed species through passive airborne or fauna related dispersal of seeds, the surrounding land use would indicate that the clearing of the areas subject to the application would not appreciably increase the spread of invasive weed species into the Lake Gounter Reserve.

The proposed clearing may be at variance to this principle. DWER has incorporated a weed and dieback management condition on the permit to assist in limiting the spread of invasive species from the applied clearing area.

(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.

Proposed clearing is not likely to be at variance to this principle

As discussed under principle (g), the clearing area has a mapped groundwater salinity of between 14,000 and 35,000 milligrams per litre Total Dissolved Solids. This level of salinity is considered high to extreme, presenting a heightened risk of the expression of surface salinity and associated run off to nearby watercourses as a result of clearing. However, the relatively permeable sandy soils at the site combined with appropriate surface water management strategies, capturing excess runoff from the proposed works and future development and retaining on site, would act to limit the impacts on the adjacent farmland (Ecoscape, 2019).

The proposed clearing is not likely to cause deterioration in the quality of surface or underground water and is therefore not likely to be at variance to this principle.

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Proposed clearing is not likely to be at variance to this principle

As discussed under principle (g) and (i) the application area is mapped as having a low risk of flooding, presents sandy soils offering reasonable permeability and an acceptable distance to the nearest hydrological feature. This combined with an appropriate surface water management strategy capturing any runoff from the proposed works and future development and retaining on site, would act to limit the impacts on adjacent farmland properties.

The proposed clearing is not likely to cause or exacerbate the incidence or intensity of flooding and is not at variance to this principle.

Planning instruments and other relevant matters.

On 4 February 2020 the applicant provided the results of its Development approval (DAP/19/01672) from the Mid-West/Wheatbelt Joint Development Assessment Panel (JDAP) (Dolling, 2020c). The development was approved in joint accordance with regulation 8 of the *Planning and Development Act 2005* and the provisions of the Shire of Kondidin Local Planning Scheme No. 1.

No Aboriginal sites of significance have been mapped within the application area.

The clearing permit application was advertised on the DWER website on 18 February 2020 with a 21-day submission period. No public submissions were received in relation to this application.

4. References

Dolling, Tim (2020a) Email correspondence from applicant indicating avoid/minimise measures. Received by DWER on 11 March 2020 (DWER Ref: A1876247).

Dolling, Tim (2020b). Email correspondence from applicant indicating tree species and diameter. Received by DWER on 3 April 2020 (DWER Ref: A1882271).

Dolling, Tim (2020c). Email correspondence from the applicant submitting development approval. Received by DWER on 4 February 2020. (DWER REF: A1866482).

Dolling, Tim (2020d). Email correspondence from the applicant submitting the landscaping plan for the property. Received by DWER on 24 April 2020. (DWER REF: A1888211)

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Schoknecht, N., Tille, P. and Purdie, B. (2004) Soil-landscape mapping in South-Western Australia – Overview of Methodology and outputs' Resource Management Technical Report No. 280. Department of Agriculture.

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

Western Australian Herbarium (1998-). FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. https://florabase.dpaw.wa.gov.au/ Accessed March 2019.

5. GIS Datasets

- Aboriginal Sites of Significance
- Bush Forever
- Carnaby's cockatoo: breeding, roosting, feeding
- Clearing Regulations - Environmentally Sensitive Areas
- Contours (DPIRD-073)
- Department of Biodiversity Conservation and Attractions, Tenure
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Geomorphic Wetlands, Swan Coastal Plain
- Groundwater salinity, statewide
- Hydrology, linear
- IBRA Australia
- Land for Wildlife
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- PDWSA, CAWSA, RIWI Act Areas
- Remnant vegetation
- Regional Parks
- SAC Biodatasets (accessed January 2020)
- Soils, statewide
- Statewide forest vegetation complexes
- TECs and PECs
- Threatened Fauna
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Town Planning Scheme Zones
- Wheatbelt Wetlands