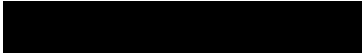


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Emerge contact: 

26 February 2021

Emerge Environmental Services Pty Ltd ABN  
57144772510 trading as Emmerge Associates

Attention: Native Vegetation Regulation  
Department of Water and Environmental Regulation  
Locked Bag 10  
JOONDALUP WA 6919

Delivered by email to: [info@dwer.wa.gov.au](mailto:info@dwer.wa.gov.au)

Dear Sir/Madam

## **CLEARING PERMIT (AREA PERMIT) APPLICATION TO EXPAND VINEYARDS WITHIN PART LOT 32 (NO.325) TOM CULLITY DRIVE, WILYABRUP**

### **1 OVERVIEW**

Emerge Associates (Emerge) have been engaged by Montague VY No. 1 Pty Ltd ATF Montague Trust (the applicant) to provide environmental consultancy services to support approvals for the expansion of an existing winery operation at Lot 32 (No. 325) Tom Cullity Drive, Wilyabrup (herein referred to as 'the site'). The site is located within City of Busselton and is approximately 40.06 ha in size and is shown in **Figure 1**.

The applicant has recently taken ownership of the site and the expansion of the existing operation is proposed to include:

- Clearing of 5.47 ha of existing remnant native vegetation within the eastern portion of the site, as shown within **Figure 1** and is described as the 'application area'. This area is proposed to support viticulture, including planting of additional vineyard areas. The vineyard area is of the type of soil required to support the proposed varieties including merlot, cabernet franc, petit verdot and cabernet sauvignon. The location of the vineyard is shown in **Figure 2**.
- Construction and operation of short stay accommodation in the form of up to six chalets. The proposed design and exact location of the chalets is still to be confirmed and if clearing is required, this will be subject to an exemption pursuant to the Environmental Protection (Clearing of Native Vegetation) Regulations 2004.
- Construction and operation of a new cellar door/winery and potential micro-brewery, to be located in a cleared area adjacent to the dam in the central portion of the site. No removal or modification of native vegetation within this area is proposed.
- Retention of approximately 13.45 ha of existing remnant native vegetation and revegetation of 0.65 ha.

The following letter is provided in support of a clearing permit application (area permit) pursuant to Part V of the *Environmental Protection Act 1986* (EP Act) and includes the following attachments required by the Department of Water and Environmental Regulation (DWER):

- **Attachment 1** – Signed clearing permit application form (Form C1).
- **Attachment 2** – *Detailed Flora and Vegetation Assessment: Lot 32 (No.325) Tom Cullity Drive, Wilyabrup* (Emerge Associates 2020b).
- **Attachment 3** – *Basic Fauna and Targeted Black Cockatoo Assessment: Lot 32 (No.325) Tom Cullity Drive, Wilyabrup* (Emerge Associates 2020a).
- **Attachment 4** – Certificate of Title
- **Email attachments** – a .shp file of the application area has been submitted to DWER as part of the application.

## 2 INTRODUCTION AND BACKGROUND

The site is currently used for viticultural and agricultural purposes, with vineyards located within the western and central portion of the site and open paddocks with an area of overstorey vegetation used for livestock grazing located within the eastern portion of the site. Approximately 18.92 ha of remnant vegetation is located throughout the western and eastern portions of the site. An existing cellar door, a couple of houses and ancillary buildings are located within the western portion of the site. A number of dams are present within the western and central portion of the site.

The proposed expansion of the vineyard will involve the removal of 5.47 ha of native vegetation within the eastern portion of the site for the installation of new vineyards, as shown in **Figure 2**. This area of vegetation has been previously approved for clearing (clearing permit 2267/1) under the Western Australian EP Act, however this approval lapsed before clearing was completed. It is possible that individual trees located on the edge of the proposed vineyard may be retained depending upon the final vineyard layout, however, to assume a worst-case scenario from a clearing perspective these trees have been included within the total area (i.e. 5.47 ha) of native vegetation proposed to be removed.

In accordance with the Environmental Protection Authority's (EPA's) *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA 2016a) a flora and vegetation assessment to the standard required of a 'detailed survey' was undertaken in August and October 2020 (Emerge Associates 2020b), provided as **Attachment 2**. A basic fauna and targeted black cockatoo assessment was also undertaken in accordance with the EPA's *Technical Guidance – Terrestrial fauna Surveys* (EPA 2016b) across the site in August and October 2020 (Emerge Associates 2020a), provided as **Attachment 3**. In addition to the above surveys, a bushfire assessment was undertaken in August 2020 by Emerge Associates (2020).

A summary of the environmental conditions identified through the flora and vegetation and fauna assessments are outlined below.

## 3 SUMMARY OF ENVIRONMENTAL CONDITIONS

### 3.1 Site

The site is approximately 40.06 ha in size and contains 18.92 ha of existing remnant vegetation throughout the site. The vegetation within the site was classified into six plant communities which comprise intact native vegetation, disturbed native vegetation and non-native vegetation (Emerge Associates 2020b), shown in **Figure 3**. Approximately half of the site (50.70%) was mapped as being in completely degraded condition (see **Figure 4**) using the methodology described in the *Bushland Plant Survey: A guide to plant community survey for the community* (Keighery 1994). The remainder of the site was mapped as 'very good' (24.64%), 'good' (18.8%), 'good-degraded' (0.32%) and 'degraded' (3.47%) condition (Emerge Associates 2020b), as shown in **Figure 4**.

The majority of the site is in a modified and disturbed condition as a result of historical land clearing undertaken across the site to support existing viticultural and agricultural purposes. The remnant vegetation within the site, particularly in the western portion, is contiguous with extensive areas of intact native vegetation outside of the site and would contribute to ecological linkages.

### 3.2 Application area

The boundary of the application area reflects the extent of the clearing of native vegetation required to facilitate the installation of the new vineyards. **Figure 1** illustrates the boundary of the application area and its location relative to the site and broader area. The area proposed for the installation of the vineyards is approximately 8.8 ha in size, and comprises 5.47 ha of native vegetation, of which a single plant community was identified during the vegetation assessment (Emerge Associates 2020b). Plant community **CcEm** was identified as being in 'good' condition. The remaining 3.33 ha of the application area is largely devoid of native vegetation, was identified to be in 'completely degraded' condition and was not identified to comprise a native plant community, however, does contain scattered native trees that are proposed to be removed. The clearing permit application is relevant to the areas of native vegetation only which are clearing defined as the 'application area' and shown in **Figure 1**.

### 3.3 Historical clearing

A review of publicly available historical aerial imagery (Landgate 2020) indicates that the majority of the existing cleared areas within the site were cleared prior to 1996 for the installation of viticultural and agricultural areas and the construction of multiple buildings (including ancillary buildings such as sheds) and the internal driveway. Since this time, additional clearing has occurred and was associated with the historical expansion of the vineyards by the previous landowner (Landgate 2020) which was subject to a clearing permit (clearing permit 2267/1) pursuant to Part V of the EP Act.

### 3.4 Flora and vegetation values

A *Detailed Flora and Vegetation Assessment* was undertaken by Emerge Associates on 12<sup>th</sup> and 13<sup>th</sup> of August 2020, with a follow up site visit in spring on the 26<sup>th</sup> to 28<sup>th</sup> October 2020 (**Attachment 2**). The surveys included consideration of whether any conservation significant flora, such as threatened flora species or threatened ecological communities (TECs) listed under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) occur within the site, including the application area.

The following sections provide a summary of the flora and vegetation values pertaining to the broader site and the application area.

#### 3.4.1 Site values

The flora and vegetation assessment (Emerge Associates 2020b) identified five native plant communities and one non-native plant community in the site which are described in **Table 1** shown in **Figure 3**. Representative photographs of each vegetation community are provided in **Plate 1** to **Plate 6**.

Table 1: Description and extent of plant communities identified within the site.

Plant community	Description	Area (ha)
<b>CcAfB</b>	Woodland <i>Corymbia calophylla</i> over tall shrubland <i>Agonis flexuosa</i> over sedgeland <i>Baumea articulata</i> and <i>Baumea juncea</i> with non-native grassland in more disturbed areas ( <b>Plate 1</b> ).	0.16
<b>CcAfL</b>	Open forest <i>Corymbia calophylla</i> over low closed forest <i>Agonis flexuosa</i> with scattered * <i>Sphaeropteris cooperi</i> and closed sedgeland <i>Lepidosperma tetraquetrum</i> in waterway (where present) and closed sedgeland <i>Lepidosperma</i> spp. on banks ( <b>Plate 2</b> ).	2.61
<b>CcAfTICa</b>	Woodland <i>Corymbia calophylla</i> over low closed forest <i>Agonis flexuosa</i> over tall closed shrubland <i>Taxandria linearifolia</i> over mixed native sedeland over herbland <i>Centella asiatica</i> ( <b>Plate 4</b> ).	0.08
<b>CcEm</b>	Open forest <i>Corymbia calophylla</i> and <i>Eucalyptus marginata</i> over sparse native shrubland over sparse native and non-native forbland over non-native grassland ( <b>Plate 4</b> ).	7.08
<b>CcEmHeHh</b>	Open forest <i>Corymbia calophylla</i> and <i>Eucalyptus marginata</i> over scattered low trees <i>Banksia grandis</i> over shrubland <i>Hovea elliptica</i> and <i>Xanthorrhoea preissii</i> over low shrubland <i>Hibbertia hypericoides</i> over mixed native herbland ( <b>Plate 5</b> ).	8.99
<b>Non-native</b>	Heavily disturbed areas dominated by non-native grasses and herbs and planted vegetation with occasional native trees, shrubs and herbs ( <b>Plate 6</b> ).	20.31

Plate 1: Plant community **CcAfB** in 'good – degraded' condition





Plate 2: Plant community **CcAfl** in 'very good' condition



Plate 3: Plant community **CcAftICa** in 'very good' condition





Plate 4: Plant community **CCeM** in 'good' condition



Plate 5: Plant community **CcEmHeHh** in 'very good' condition





Plate 6: Non-native areas in ‘completely degraded’ condition.

As part of the flora and vegetation assessment (Emerge Associates 2020b), a desktop search was conducted for threatened and priority flora that may occur or have been recorded within a 10 km radius of the site using the Department of Agriculture, Water and the Environment (DAWE) *Protected Matters Search Tool* (PMST) (DAWE 2020) and *NatureMap* (DBCA 2020). A search of DBCA’s threatened and priority flora database was also conducted using a 20 km radius, as recommended by DBCA (reference no 10-0820FL).

The database search results identified a total of 17 threatened and 58 priority flora species occurring or potentially occurring within a 10 km to 20 km radius of the site. Based on the background information available for the site, seven threatened flora species and 29 priority flora species were identified as potentially occurring within the site (Emerge Associates 2020b).

The survey included extensive traverses and assessment across multiple site visits and coincided with the main flowering period of the majority of the conservation significant flora identified within the desktop assessment. No listed threatened flora species were identified within the site, whilst only one priority flora species *Chordifex gracilior* (priority 3 (P3)) was identified as occurring within the western portion of the site (Emerge Associates 2020b). It is considered unlikely that any threatened flora or other priority flora species occur within the site due to habitat preferences not being satisfied.

As part of the flora and vegetation assessment (Emerge Associates 2020b), a desktop search was conducted for TECs and PECs that may occur or have been recorded within a 10 km radius of the site using the PMST (DAWE 2020) and DBCA’s threatened and priority ecological communities’ database (reference no 28-0820EC).

The database search results identified two TECs and four PECs occurring or potentially occurring within a 10 km radius of the site (Emerge Associates 2020b).

The flora and vegetation assessment (Emerge Associates 2020b) confirmed that the vegetation identified within the site does not represent a TEC or PEC. Furthermore, based on geomorphology, soils and regional vegetation patterns, no TECs or PECs were considered to have the potential to occur in the site.

### 3.4.2 Application area values

One native plant community was identified within the application area, identified as plant community **CCeM** and is described as ‘open forest *Corymbia calophylla* and *Eucalyptus marginata* over sparse native shrubland over sparse native and non-native forbland over non-native grassland’, shown in **Figure 3**.

Vegetation condition associated with native plant community **CCeM** within the application area was assessed to be in ‘good’ condition, using methods from Keighery (1994). Vegetation condition within the application area is shown in **Figure 4**.

No threatened or priority flora were within the application area, neither were any commonwealth or state-listed TECs or PECs were identified within the area.

## 3.5 Fauna values

A fauna survey (including a targeted black cockatoo habitat assessment) was undertaken by Emerge Associates on the 12<sup>th</sup> and 13<sup>th</sup> August 2020, with a follow up detailed black cockatoo hollow inspection on the 26<sup>th</sup> to 28<sup>th</sup> October 2020 (**Attachment 3**). The following sections provide a summary of the fauna values pertaining to the site and application area.

### 3.5.1 Site values

A search of the PMST (DAWE 2020) and *NatureMap* (DBCA 2020) was undertaken as part of the desktop assessment, which identified 255 fauna species as occurring or potentially occurring within 10 km of the site. Of these species, 63 are conservation significant, including 43 threatened, 4 priority, 14 migratory, one conservation dependent and one other specially protected species.

Based on the fauna survey and identified habitat, only four of threatened species were directly or indirectly ‘recorded’ (i.e. through the presence of scats, tracks, skeletal remains, presence of drey or foraging evidence) within the site during the field survey including, *Calyptorhynchus baudinii* (Baudin’s cockatoo), *Calyptorhynchus latirostris* (Carnaby’s cockatoo), *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo) and *Pseudocheirus occidentalis* (Western ringtail possum).

Overall, the vegetation within the site and broader area is fragmented due to existing agricultural and viticultural practices and it is unlikely to provide suitable habitat for other conservation significant species such as the chuditch.

Fauna habitat areas identified within the site are shown in **Figure 5**, with the ‘marri and jarrah forest’ and ‘marri and peppermint forest’ considered to have the highest fauna habitat values. A single western ringtail possum drey was identified within the site, with its location shown within **Figure 5**.

The targeted black cockatoo habitat assessment (Emerge Associates 2020a) focused on the areas of vegetation proposed to be potentially modified and/or removed within the site and included an internal hollow inspection. Other areas of native remnant vegetation within the site that are considered to be potential breeding habitat for the three black cockatoo species however were not subject to detailed inspections. These detailed assessments for black cockatoo foraging, roosting and breeding habitat completed across the site, are detailed in **Attachment 3** and summarised below.

#### Black cockatoo foraging habitat

The targeted black cockatoo habitat assessment undertaken for the site (Emerge Associates 2020a), defines foraging habitat within the site as either:

- Primary foraging plants, which refers to vegetation with historical and contemporary records of regular consumption by black cockatoos and includes native and non-native species.
- Secondary foraging plants, which are defined as plants that black cockatoos have occasionally been recorded consuming, or that based on their limited extent or agricultural origin, should not be considered a sustaining resource.



The fauna survey (Emerge Associates 2020a) identified approximately:

- 14.39 ha of primary and 0.38 ha of secondary foraging habitat for Baudin's cockatoo
- 14.59 ha of primary and 1.84 ha of secondary foraging habitat for Carnaby's cockatoo
- 14.27 ha of primary and 0.1 ha of secondary foraging habitat for Forest red-tailed black cockatoo.

The potential foraging habitat for the three black cockatoos within the site is shown within **Figure 6** to **Figure 8** respectively.

#### Black cockatoo habitat trees

The habitat tree survey was only completed for a portion of the site, largely associated with areas potentially subject to disturbance and/or could be surveyed in the time allocated. This area is shown in **Figure 9** and includes an area 14.3 ha in size.

A total of 337 habitat trees (trees with a diameter breast height (DBH) >500mm) were identified in the tree survey area (shown in **Figure 9**) of which three trees were identified to contain a 'suitable hollow' for black cockatoo breeding and two trees were identified to have a 'potentially suitable hollow' (Emerge Associates 2020a). No evidence of use by the three black cockatoo species was observed. For the trees identified as having 'potentially suitable hollows', investigation by pole mounted camera and drone could not confirm suitability of these hollows (due to constraints in getting close enough to the hollow) and further investigation using climbing equipment would be required.

The remainder of the habitat trees surveyed (332) in the tree survey area contained either no hollows or hollows that are unsuitable for breeding by black cockatoos (Emerge Associates 2020a).

#### Roosting

The entire site contains tall trees that have the potential to provide roosting habitat for black cockatoos. No signs of roosting were observed during the field survey and the BirdLife Australia dataset (2020) does not include any roosts in the site (Emerge Associates 2020a).

#### Overall habitat quality

Emerge Associates have developed a method to provide a systematic assessment of overall black cockatoo habitat quality and is based on scoring the quality of breeding, roosting and foraging habitat separately and then providing an overall quality score out of ten. The assessment methodology is detailed in **Attachment 3**.

The outcomes of the habitat quality assessment indicate the site has an overall habitat score of:

- Six (out of 10) for Carnaby's cockatoo, which is 'moderate'.
- Five (out of 10) for Baudin's cockatoo, which is 'moderate'.
- Seven (out of 10) for Forest red-tailed black cockatoo, which is 'moderate to high'.

#### 3.5.2 Application area values

The vegetation within the application area would be deemed suitable habitat for all three black cockatoo species, but due to the limited understory and connected canopy it would be considered unlikely for species such as the western ringtail possum and chuditch to occur within this area (Emerge Associates 2020a).

The recovery plan for western ringtail possum (DPaW 2017) describes important habitat for survival of western ringtail possum in the (Swan Coastal Plain management area' (where the site is found) as "*long unburnt mature remnant peppermint woodlands with high canopy continuity and high nutrient foliage with minimal periods of summer moisture stress, and habitat connecting patches of remnants*". The vegetation within the application area, marri and jarrah trees with limited understory, is not considered to be suitable western ringtail possum habitat due to the lack of understory and canopy connection. Western ringtail possum may forage in this area, but it does

not have the characteristics (peppermint trees, connected canopy etc.) that would typically be associated with high usage/critical habitat.

The targeted black cockatoo assessment (Emerge Associates 2020a) identified that vegetation within the application area represents suitable habitat for the three black cockatoo species, including approximately:

- 5.45 ha of primary and secondary foraging species for the Baudin’s cockatoo, as shown in **Figure 6**.
- 5.47 ha of primary and secondary foraging species for the Carnaby’s cockatoo, as shown in **Figure 7**.
- 5.47 ha of primary foraging species for the forest-red tailed black cockatoo, as shown in **Figure 8**.
- 213 habitat trees (i.e., trees with a DBH $\geq$  500 mm), of which:
  - 2 trees contain ‘suitable hollows’;
  - 1 tree contained ‘potentially suitable hollows’ (due to the size and location of tree, the hollow could not be adequately surveyed to categorically determine its suitability); and
  - 210 trees contained ‘no suitable hollows’.
- No roosts or secondary evidence of roosts were identified within the areas of vegetation proposed to be removed.

The location of habitat trees is shown in **Figure 9**.

## 4 APPLICATION OF MITIGATION HIERARCHY

In accordance with *A guide to the assessment of applications to clear native vegetation* (DER 2014), the impact mitigation sequence has been considered as part of the proposed clearing, in order to ensure the environmental impact was kept to a minimum as part of the project.

### 4.1 Avoidance

The location of the proposed vineyard has been considered in detail, with the key constraining factors for the layout being the requirement for the vineyards to be located in an area with adequate soil type and condition, as well as minimising impacts to remnant native vegetation.

As shown within **Figure 4**, the clearing associated with the vineyard is to be located within vegetation that is in ‘good’ condition (Emerge Associates 2020b) and has been historically subject to grazing by the previous landowner. The area consists of a patch of vegetation with predominantly upper storey species (jarrah and marri) with limited to no understorey. The remainder of the area proposed for the installation of the vineyards is in ‘completely degraded’ condition and includes non-native grasses and weeds, with scattered paddock trees (Emerge Associates 2020b). The vineyard area was going to be larger, encompassing all native vegetation within the eastern portion of the site (i.e. all of the CcEm plant community, shown in **Figure 3**) and a small area in the western portion of the site, however the extent of proposed vineyard area and associated clearing was reduced to minimise potential impacts on conservation significant values such as priority flora, black cockatoos and western ringtail possum.

### 4.2 Mitigation

Several mitigation measures will be implemented during the detailed design, construction and operation of the proposed vineyard expansion, including:

- Revegetation of a 20 m-wide corridor adjacent to the eastern boundary of the site (approximately 0.65 ha in size), connecting existing vegetation with retained vegetation in the north-east corner of the site.

- Installation of at least eight (8) artificial hollows within existing trees within the areas of retained remnant native vegetation within the site.
- Clearing activities to be managed to minimise potential impacts. This is likely to include:
  - Clearly defining the extent of the clearing area before any clearing activities commence.
  - Ensuring a suitably qualified zoologist undertakes a fauna inspection of the vegetation to be cleared 1 - 2 days before clearing, and remains on site during clearing activities should any fauna relocation be required.
  - Undertaking vegetation clearing in one direction towards retained vegetation to enable fauna species to move to adjacent habitat.
  - Appropriately managing construction to prevent the potential spread of weeds and dieback into areas of retained vegetation.
  - Where possible, clearing within the black cockatoo breeding season (i.e. August to December) will be avoided to minimise potential disturbance to breeding individuals.

### 4.3 Offset

Whilst avoidance and mitigation measures have been explored and implemented as part of the proposed clearing, if significant residual impact(s) remain, an offset may be required to counterbalance the significant residual impact(s) of a project.

Due to the degraded quality of the vegetation within the application area, the avoidance and mitigation measures that have been considered in the implementation of the vineyard and the extensive areas of existing remnant native vegetation within the site and broader area and ongoing agricultural use, it is not considered that an offset will be required.

## 5 PLANNING INSTRUMENTS AND OTHER ENVIRONMENTAL APPROVALS

The site is currently zoned 'viticulture and tourism' under the City of Busselton Local Planning Scheme (LPS) No. 21.

A clearing permit pursuant to the Part V of the EP Act was historically granted to the previous landowner for clearing in the application area to support the expansion of vineyard operations, however lapsed before it was implemented.

The clearing to support the vineyard expansion is expected to commence in June 2021 and the end date of the clearing and planting is expected to be completed is June 2022. Planting of the new vineyards is proposed to be undertaken in spring 2021.

The proposed clearing has been referred to the federal DAWE for assessment under the EPBC Act due to the potential impacts on a number of Matters of National Environmental Significance (MNES) within the site (including the three black cockatoo species and western ringtail possum) (EPBC referral: 2020/8866). The proposal was determined to be a 'controlled action' under the EPBC Act on the 8 February 2021. The applicant is progressing this approval process separately.

## 6 PROPOSED CLEARING OF NATIVE VEGETATION

As outlined above, the proposed clearing of vegetation is sought to facilitate the implementation of additional vineyards. The area of native vegetation proposed to be subject to clearing is shown in **Figure 2** and includes the removal of 5.47 ha of the plant community **CCeM**, which was assessed to be in 'good' condition (Emerge Associates 2020b).



## 7 RESPONSE TO EP ACT CLEARING PRINCIPLES

Under Section 51C of the EP Act, clearing of native vegetation is an offence unless a clearing permit has been obtained or an exemption applies. When assessing clearing permit applications, DWER has regard to the ten clearing principles contained in Schedule 5 of the EP Act so far as they are relevant to the matter under consideration.

In support of this area permit clearing application, we have considered and responded to the ten clearing principles in the following sections.

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

As discussed above, 5.47 ha of the **CCeM** plant community occurs within the application area. The flora and vegetation assessment (Emerge Associates 2020b) identified the vegetation within the application area to be in ‘good’ condition (as shown in **Figure 4**) and lacks understorey and mid-storey species as a result of historic grazing.

Due to the historical disturbance of the application area to support agricultural purposes, including livestock grazing, and the evidence of weed invasion, the biological diversity is not considered to be high. In addition, the flora and vegetation assessment (Emerge Associates 2020b) did not identify any threatened or priority flora within the application area or the broader site. The native vegetation within the application area does not represent a TEC or PEC.

Similarly, due to the lack of understorey and mid storey species limited faunal habitat is present within area (please refer to **Section 7.2** for further discussion on fauna identified within the site), therefore it is considered unlikely that the application area would support a high level of biological diversity.

The proposed clearing associated with application area is therefore not considered to be at variance with Principle (a).

### 7.2 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 indigenous to Western Australia.

As outlined in **Section 3.5.2**, the application area has limited fauna habitat values due to the historical clearing/disturbance and vegetation degradation. Habitat in this area is largely limited to foraging and potential breeding habitat for the three black cockatoo species. The areas of higher fauna habitat value within the site (including black cockatoo foraging and potential breeding), namely the marri and jarrah forest’ and ‘marri and peppermint forest’, would support conservation significant species and are proposed to be retained as part of the ongoing operation of the winery.

**Table 2** below, provides a summary of the conservation significant fauna species (at both at a state and federal level) that were recorded or deemed possible to occur within the site (Emerge Associates 2020a). **Table 2** also outlines whether the conservation significant fauna species identified are likely to occur within the application area based on the fauna habitat present and consideration of whether the vegetation proposed to be removed is necessary for the maintenance of significant habitat for fauna species. Significant habitat refers to habitat that provides resources (breeding, resting and feeding), connectivity or habitat area for a species or community that is critical for its survival (DER 2014).

Based on the species identified in **Table 3** and review of habitat requirements, black cockatoos are the only conservation significant fauna species likely to utilise the application area to any extent. This is due to the lack of understorey and mid-storey vegetation within the application area making it unsuitable and/or meaning it does not meet the definition of ‘significant habitat’ for other species such as western ringtail possum and the south-western brush tailed phascogale. Instead, these species would preferentially utilise the other areas of more intact vegetation within the site (Emerge Associates 2020a) which are proposed to be retained.

While the proposed clearing will result in the clearing of 5.47 ha of black cockatoo foraging habitat and 213 habitat trees (two which contain suitable hollows and one which contains potentially suitable hollows), at least 13.45 ha of foraging habitat will be retained within the site as well as at least 124 habitat trees within the tree survey area. It is estimated that a further 732 habitat trees may be present within the remainder of the site (based on extrapolation of habitat trees identified in the same vegetation types as part of the tree survey), and the applicant is also proposing to install at least 8 artificial hollows within the areas of intact vegetation.

An assessment of vegetation more broadly (and discussed in **Table 3**) indicates that the proposed clearing within the application area represents 28.9 % of black cockatoo habitat within the site, 0.09% of existing habitat within 6 km of the site and 0.02% within 12 km of the site. Approximately 30% of the remaining vegetation within 12 km of the site is within State controlled lands (including national park and nature reserves) and is unlikely to be developed.

The vegetation within the application area is not considered to be necessary for the maintenance of a significant habitat for black cockatoos or other fauna species. The proposed clearing associated with application area is therefore not considered to be at variance with Principle (b).

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Table 2: Summary of conservation significant fauna species recorded or deemed possible or likely to occur within the site (Emerge Associates 2020a).

Species	Common name	Level of significance		Habitat	Likelihood of occurrence within the site	Likelihood of occurrence within the application area	Significance of the habitat associated with the application area
		BC Act	EPBC Act				
<b>Birds</b>							
<i>Apus pacificus</i>	Pacific swift	Migratory	Migratory	Aerial, migratory species that is most often seen over inland plains and sometimes above open areas, foothills or in coastal areas. Sometimes occurs over settled areas, including towns, urban areas and cities (Pizzey and Knight 2012).	Possible	Possible	May opportunistically occur in or fly over the application area on commute or while searching for prey (Emerge Associates 2020a). The habitat would not be considered significant for this migratory species.
<i>Calyptorhynchus banksii naso</i>	Forest red-tailed black cockatoo	Vulnerable	Vulnerable	Eucalypt and Corymbia forests, often in hilly interior. More recently also observed in more open agricultural and suburban areas including Perth metropolitan area. Attracted to seeding <i>Corymbia calophylla</i> , <i>Eucalyptus marginata</i> , introduced <i>Melia azedarach</i> and other <i>Eucalyptus</i> spp. trees (Johnstone et al. 2017).	Recorded	Recorded	<p>Whilst the application area will require removal of 5.47 ha of black cockatoo foraging habitat and removal of 213 habitat trees (two of which contain suitable hollows and one with a potentially suitable hollow), the site and surrounding region supports a large area of black cockatoo habitat (as shown within <b>Figure 10</b>).</p> <p>No breeding activity or evidence of breeding was observed within the site, even though it was surveyed during the known breeding season. 124 habitat trees will be retained within the tree survey area (including one tree with a suitable hollow and one tree with a potentially suitable hollow), and it is estimated that a further 732 habitat trees may be present within the remainder of the site (based on an extrapolation of habitat trees identified in the same vegetation types that were subject to survey). The proponent will install at least eight (8) artificial hollows within the site to support breeding potential.</p> <p>Continued below.</p>
<i>Calyptorhynchus baudinii</i>	Baudin's cockatoo	Endangered	Endangered	Mainly eucalypt forests. Attracted to seeding <i>Corymbia calophylla</i> , <i>Banksia</i> spp., <i>Hakea</i> spp., and to fruiting apples and pears (Johnstone and Storr 1998).	Recorded	Recorded	Continued below.

Table 2: Summary of conservation significant fauna species recorded or deemed possible or likely to occur within the site (Emerge Associates 2020a).

Species	Common name	Level of significance		Habitat	Likelihood of occurrence within the site	Likelihood of occurrence within the application area	Significance of the habitat associated with the application area
		BC Act	EPBC Act				
<i>Calyptorhynchus latirostris</i>	Carnaby's cockatoo	Endangered	Endangered	Mainly proteaceous scrubs and heaths and adjacent eucalypt woodlands and forests; also plantations of <i>Pinus</i> spp. Attracted to seeding <i>Banksia</i> spp., <i>Dryandra</i> spp., <i>Hakea</i> spp., <i>Eucalyptus</i> spp., <i>Corymbia calophylla</i> , <i>Grevillea</i> spp., and <i>Casuarina</i> spp. (Johnstone and Storr 1998).	Recorded	Recorded	<p>Continued from above.</p> <p>Given the large number of habitat trees that will be retained within the site (outside the application area) and the proposed installation of artificial hollows, the clearing is not likely to disrupt or preclude future potential breeding activity that would result in the sustained reduction in black cockatoo birth rates.</p> <p>The proposed clearing of vegetation is also highly unlikely to increase mortality rates indirectly through a significant reduction of available foraging resources in the region. 13.45 ha foraging habitat will be retained within the site, with approximately 6,350 ha of potential black cockatoo foraging habitat estimated to occur within 6 km of the site, and approximately 21,953 ha within 12 km of the site, as shown within <b>Figure 10</b>. The proposed clearing within the application area represents 28.9 % (of the habitat within the site), 0.09 % (within 6 km) and 0.02 % (within 12 km). Of the potential foraging habitat within the broader area, 1,035 ha is located within conservation areas within 6 km of the site, and 6,557 ha within 12 km of the site. This means approximately 30% of the potential foraging habitat within 12 km of the site is provided with a level of formal protection through land tenure, reservation or other land use planning mechanisms, e.g. Department of Biodiversity, Conservation and Attractions (DBCA) managed lands (including National Parks, Regional Parks, Nature Reserves, State Forest and Conservation Parks). It is also likely that the areas of potential foraging habitat within 12 km of the site contain large mature native trees which may be habitat trees.</p> <p>Given that significant areas of foraging habitat located within 12 km of the application area is contained within State controlled lands and land unlikely to be developed, it is not likely cumulative impacts would result in significant local impacts to the extent that the occurrence of the species locally would be affected.</p>

Table 2: Summary of conservation significant fauna species recorded or deemed possible or likely to occur within the site (Emerge Associates 2020a).

Species	Common name	Level of significance		Habitat	Likelihood of occurrence within the site	Likelihood of occurrence within the application area	Significance of the habitat associated with the application area
		BC Act	EPBC Act				
<b>Birds (continued)</b>							
<i>Falco peregrinus</i>	Peregrine falcon	Other specially protected	-	Mainly found around cliffs along coasts, rivers, ranges and around wooded watercourses and lakes (Johnstone and Storr 1998).	Possible	Possible	May opportunistically occur in or fly over the application area on commute or while searching for prey (Emerge Associates 2020a). The habitat would not be considered significant for this species.
<b>Invertebrate</b>							
<i>Westralunio carteri</i>	Carter's freshwater mussel	Vulnerable	Vulnerable	Occurs in greatest abundance in slower flowing streams with stable sediments that are soft enough for burrowing amongst woody debris and exposed tree roots. Salinity tolerance quite low (Morgan <i>et al.</i> 2011).	Possible	Impossible – no waterway present within application area.	Not applicable.
<b>Mammals</b>							
<i>Dasyurus geoffroii</i>	Chuditch	Vulnerable	Vulnerable	Wide range of habitats from woodlands, dry sclerophyll forests, riparian vegetation, beaches and deserts. Appears to utilise native vegetation along road sides in the wheatbelt (DEC 2012b).	Possible	Unlikely	The vegetation within the application area is fragmented from larger areas of intact vegetation due to agricultural practices and it is unlikely to provide suitable habitat for chuditch. Chuditch requires large natural areas because of their large home ranges and resource requirements (i.e. adequate den resources, adequate prey resources and sizeable areas (>20,000 ha)) (DEC 2012a). Chuditch are rarely found in habitats fragmented by clearing, except as transient animals and may utilise these areas as part of a much larger home range, but is not considered significant habitat for the maintenance of the species.



Table 2: Summary of conservation significant fauna species recorded or deemed possible or likely to occur within the site (Emerge Associates 2020a).

Species	Common name	Level of significance		Habitat	Likelihood of occurrence within the site	Likelihood of occurrence within the application area	Significance of the habitat associated with the application area
		BC Act	EPBC Act				
<b>Mammals (continued)</b>							
<i>Falsistrellus mackenziei</i>	Western false pipistrelle	Priority 4	-	High rainfall forests dominated by jarrah, karri, marri, and tuart. Occupies hollow logs for breeding and resting (Van Dyck and Strahan 2008). Also known to utilise Banksia woodland on the Swan Coastal Plain (Hosken and O'Shea 1995).	Possible	Unlikely	It is likely that the western false pipistrelle would utilise the more intact vegetation (such as the marri and jarrah forest, and marri and peppermint forest (as shown on <b>Figure 5</b> )) within the broader site, compared to the vegetation within the application area (Emerge Associates 2020a). Due to the lack of understory vegetation in the application area would not be considered significant habitat.
<i>Hydromys chrysogaster</i>	Rakali	Priority 4	-	Areas with permanent water, fresh, brackish or marine. Likely to occur in all major rivers and most of the larger streams as well as bodies of permanent water in the lower south west (Christensen and Strahan 1984).	Possible	Impossible – no waterway present within application area.	Not applicable
<i>Isoodon fusciventer</i>	Quenda	Priority 4	-	Dense scrubby, often swampy, vegetation with dense cover up to one metre high (DEC 2012c).	Possible	Unlikely	It is likely the quenda would utilise the more intact vegetation (such as the marri and jarrah forest, and marri and peppermint forest (as shown on <b>Figure 5</b> )) within the broader site, and areas associated with the waterways, compared to the vegetation within the application area (Emerge Associates 2020a). Due to the lack of understory vegetation the application area would not be considered significant habitat.
<i>Phascogale tapoatafa wambenger</i>	South-western brush-tailed phascogale	Conservation dependent	-	Dry sclerophyll forests and open woodlands that contain hollow-bearing trees but a sparse ground cover (Triggs 2003).	Possible	Possible	It is likely the south-western brush tailed phascogale would utilise the more intact vegetation (such as the marri and jarrah forest, and marri and peppermint forest (as shown on <b>Figure 5</b> )) within the broader site, compared to the vegetation within the application area (Emerge Associates 2020a). Due to the lack of understory vegetation and connected canopy, the application area would not be considered significant habitat.

Table 2: Summary of conservation significant fauna species recorded or deemed possible or likely to occur within the site (Emerge Associates 2020a).

Species	Common name	Level of significance		Habitat	Likelihood of occurrence within the site	Likelihood of occurrence within the application area	Significance of the habitat associated with the application area
		BC Act	EPBC Act				
<i>Pseudocheirus occidentalis</i>	Western ringtail possum	Critically endangered	Critically endangered	Dense stands of <i>Agonis flexuosa</i> , as well as <i>Eucalyptus gomphocephala</i> , <i>Corymbia calophylla</i> and <i>Eucalyptus marginata</i> forests (DBCA 2017).	Recorded	Unlikely	<p>Although evidence of the presence of the western ringtail possum was identified within the site (through the presence of a drey, shown in <b>Figure 5</b>), it is considered unlikely that the western ringtail possum would utilise the application area. Habitat critical for the maintenance and survival of western ringtail possums includes (DPaW 2017):</p> <ul style="list-style-type: none"> <li>• High nutrient foliage availability for food</li> <li>• Suitable structure for protection/nesting</li> <li>• Canopy continuity to avoid/escape predation</li> <li>• Linkages between suitable habitat patches.</li> </ul> <p>The 5.47 ha of vegetation proposed to be removed contains foraging sources for the western ringtail possum (i.e. <i>Corymbia calophylla</i> (marri) and <i>Eucalyptus marginata</i> (jarrah)), however would not be considered habitat critical to the survival for western ringtail possum as the plant species present are not 'high nutrient foliage' (i.e. peppermint trees), it is not of a suitable structure (lacking understorey and mid-storey species) and does not have canopy connectivity within the application area or with other areas of contiguous vegetation.</p> <p>It is relevant to note, that the proponent is proposing to revegetate approximately 0.65 ha adjacent to the eastern boundary of the site, which will include a 20 m wide environmental corridor connecting existing vegetation in the north-east corner of the site and retained vegetation along the eastern boundary of the site. This connection currently does not exist and will enhance the existing habitat for species such as the western ringtail possum within the site and increase the ability for movement to occur throughout the site and with neighbouring landholdings (and areas of intact remnant native vegetation with more suitable habitat values).</p>

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**7.3 Principle (c) – Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.**

As outlined in **Section 3.4**, while a number of threatened and priority flora were identified as potentially occurring within the site, the flora and vegetation assessment (Emerge Associates 2020b) only identified one priority flora species *Chordifex gracilior* (priority 3 (P3)) occurring within the western portion of the site. This species was only recorded at one location where it was abundant and was outside of the application area.

No threatened or priority flora have been identified within the application area, nor is it likely that any threatened or priority flora will occur, therefore the proposed clearing is not considered to be at variance with Principle (c).

**7.4 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.**

As outlined in **Section 3.4**, the flora and vegetation assessment (Emerge Associates 2020b) confirmed that the vegetation identified within the site does not represent a TEC or PEC. Furthermore, based on geomorphology, soils and regional vegetation patterns, no TECs or PECs were considered to have the potential to occur in the site.

As no TECs or PECs have been identified within the site (including the application area), the proposed clearing is not considered to be at variance with Principle (d).

**7.5 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.**

Native vegetation is described and mapped at different scales in order to illustrate patterns in its distribution. At a continental scale the *Interim Biogeographic Regionalisation of Australia* (IBRA) places the site on the border of the 'WAR01' (Warren) and 'JAF02' (Southern Jarrah Forest) subregions (Environment Australia 2000), as shown in **Figure 11**.

The majority of the site (including the application area) is contained within the Warren subregion, which is characterised as comprising tall *Eucalyptus diversicolor* (karri) on deep loams or forest or *Eucalyptus marginata* (jarrah) to *Corymbia calophylla* (marri) on leached sands and extensive *Melaleuca* (paperbark) and sedge swamps in valleys (Beard 1990). A small area in the far eastern corner of the site is contained within the Southern Jarrah Forest subregion, which is characterised as mainly containing *Eucalyptus marginata* (jarrah) forest on lateritic soils of the Plateau and on the loam soils of the valleys, with *Corymbia calophylla* (marri) – *Eucalyptus wandoo* (wandoo) woodland on the drier laterite-free soils (Beard 1990).

Variations in native vegetation within the site can be further classified based on regional vegetation associations. Beard *et al.* (2013) mapping shows the application area as comprising vegetation association 'Boranup 3', described as 'mainly jarrah and marri'.

'Boranup 3' association has 38.51% of its pre-European extent remaining in the Warren sub-region with 11.95% protected for conservation purposes (Government of Western Australia 2019). Of the current extent remaining (14,891 ha), 31.03% is protected for conservation purposes (Government of Western Australia 2019).

Studies have indicated that the loss of biodiversity caused by habitat fragmentation is significantly greater once a habitat type falls below 30% of its original extent (Miles 2001). The national objectives and targets for biodiversity conservation established an objective of retaining 30% of the original extent of each vegetation complex (Environment Australia 2001). The percentage protected for conservation of the 'Boranup 3' association falls below the 30% retention objective.

The proposed clearing within the application area represents 0.04 % of the 38.51% of 'Boranup 3' association that is remaining. The 13.45 ha of existing remnant native vegetation within the site (the majority of which was assessed to be in 'very good' condition (Emerge Associates 2020b)) (which represents 0.09 % of the 'Boranup 3' association) will be retained. The proposed clearing will not reduce the remaining 'Boranup 3' association below 30%.

In addition, the vegetation within the application area is not located within an identified ecological linkage. A review of aerial imagery indicates that outside of the application area, the other areas of remnant native vegetation within the site are connected to areas of native vegetation within adjacent landholdings and the broader local area, see **Figure 10**. This will not be affected by the proposed clearing of vegetation within the application area. In addition, the applicant proposes to revegetate approximately 0.65 ha along the eastern boundary of the site, enhancing linkages between retained remnant vegetation within the site and existing vegetation within neighboring landholdings to the north.

Overall, the proposed clearing within the application area will not reduce the extent of the 'Boranup 3' association below 30%, with at least 38.47 % predicted to remain following the proposed clearing. 11.95% of the pre-European extent is located within areas protected for conservation purposes (with 31.03% of the remaining extent of the 'Boranup 3' association protected for conservation purposes). Furthermore, the application area does not form part of an ecological linkage. Accordingly, the proposed clearing within the application area is not considered to be at variance with Principle (e).

**7.6 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.**

The *Geomorphic Wetlands Leeuwin Naturaliste Ridge and Donnybrook to Nannup – Unreviewed* (DBCA 2018) dataset indicates that a palusvale wetland extends in a south-east to north-west direction through the site. This palusvale wetland aligns with the Hydrography Linear dataset (DWER 2020b) which shows two tributaries of a waterway in the western and central portion of the site, which were also observed during the survey work. These features are shown on **Figure 12**.

The palusvale wetland intersects the southern-most portion of the application area, however the tributaries areas are located outside the application area. The wetland mapping dataset is considered to be broadscale in nature, and the topographical contours indicate that this area is higher than the areas that have more wetland features. The flora and vegetation assessment (Emerge Associates 2020b) did not identify any wetland or riparian vegetation within the application area, and therefore it is not considered that wetland values would be impacted.

As there are no watercourses or wetland features located within the application area, the proposed clearing is not considered to be at variance with Principle (f).

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

The southern and western edges of the application area are mapped as having a 'moderate to low' risk of acid sulphate soils (ASS) occurring within 3 m on the natural soil surface, whilst the remainder of the application area is identified as having no known risk of ASS (DWER 2020). ASS will not be a consideration or require management within the application area as the clearing and proposed planting of the vineyard will not result in deep excavation or activities that extend below the permanent groundwater table or result in dewatering.

Soil landscape mapping prepared by the (DPIRD 2019) indicates that the application area is located within the Cowaramup Uplands System which is described as sandy gravel, loamy gravel and grey sandy duplex, shown in **Figure 13**. The key risk for land degradation with this soil association is wind erosion.

The proposed clearing of vegetation within the application area is unlikely to bring about land degradation, as the area will be planted as a vineyard and will maintain vegetative cover (both vines and paddock grasses), and therefore wind and water erosion is highly unlikely within this area. Short-term impacts may occur during clearing, however mitigation measures will be employed to minimise erosion prior to planting occurring, including dust suppression and surface stabilisation where required. Clearing is proposed to occur during winter, when wind (and dust) erosion is generally lowest, and this is to support preparation of the land for planting in spring. Therefore, the period of time within which wind or water erosion could occur will be short and can be well managed.

The proposed clearing of vegetation within the application area is therefore not considered to be at variance to Principle (g).

**7.8 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.**

The application area is not located within or nearby a conservation area. The closest conservation area is the Leeuwin Naturaliste National Park, located approximately 4.6 km to the west of the site. The site and surrounding area has been historically used for agricultural and viticultural purposes and contains fragmented areas of remnant vegetation.

There are no ecological linkages mapped as occurring within or adjacent to the site. Aerial imagery indicates that the vegetation within the site is connected to extensive areas of native vegetation within the local area, as shown within **Figure 10**, although the application area is not directly connected to other areas of native vegetation within the site or nearby. In addition to the proposed retention of 13.45 ha of remnant vegetation within the site, the applicant is proposing to revegetate approximately 0.65 ha along the eastern boundary of the site, which will include a 20 m wide environmental corridor connecting areas of existing vegetation in the north-east corner of the site and retained vegetation along the eastern boundary of the site. This connection currently does not exist and will enhance fauna movement throughout the site and with neighbouring landholdings (and existing areas of intact vegetation).

The proposed clearing of vegetation within the application area will not impact on the environmental values associated with any conservation area, and the retention of 13.45 ha of remnant vegetation within the site as well as the 0.65 ha of proposed revegetation, will maintain and enhance connections to retained vegetation within neighbouring landholdings. Therefore, clearing is not considered to be at variance to Principle (h).

**7.9 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.**

The site and the proposed application area are not located within or nearby to any Public Drinking Water Source Areas (PDWSA) or other sensitive water resources and is unlikely to affect the water balance or ecology of natural lakes, swamps or wetlands with conservation values.

Deterioration in quality of surface water or underground water can be as a result of activities that result in sedimentation, increased nutrient levels, changes to pH (through ASS), salinity or changes in water regimes of groundwater dependent ecosystems. As outlined above, given the vegetation will be replaced by other vegetation (i.e. planted vineyards), and mitigation measures to be employed during clearing (including dust suppression and surface stabilisation where required), the long-term management of exposed surfaces post-clearing (compaction of access tracks and provision of paddock grasses (or similar) between vines), in addition to the management of nutrients (e.g. through the use of fertilisers in line with the manufacturers guidelines) the proposed clearing is not likely to cause a deterioration in water quality.

The applicant has an existing surface water licence (SWL 165860) for 12 500 kL and winery operations, including the expansion, will continue to be managed within the existing licence limit and operating requirements.

In addition, the proposed clearing of vegetation is unlikely to have an effect on the quality of surface or groundwater for the following reasons:

- The southern and western edges of the application area are mapped as having a ‘moderate to low’ risk of ASS occurring within 3 m of the natural soil surface, whilst the remainder of the application area is identified as having no known risk of ASS (DWER 2020). ASS is generally only a consideration where deep excavation/civil works (i.e. the installation of deep service infrastructure) extends below the permanent groundwater table or dewatering is required. None of these activities are proposed or required within the application area and therefore ASS is not considered a risk.
- The proposed expansion of the vineyard will be operated in line with the operational practices currently undertaken elsewhere within the site, with surface water quality expected to be maintained as per current practices.
- Water infiltrated within the application area will be directly from rainfall or irrigation using the surface water harvested from within the site and it is not expected to contain potential contaminants.

It is considered unlikely that the proposed clearing and expansion of the vineyard will result in the deterioration of the quality of surface or groundwater within or nearby to the site. Vineyard operations have been occurring within the site over a long period of time, and the proposed clearing will not change water use or water quality (with both managed in accordance with an existing surface water licence) compared to the existing operations. The proposed clearing is not considered to be at variance with Principle (i).

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

As discussed within **Section 7.7**, the application area is mapped as having sandy gravel, loamy gravel and grey sandy duplex, which are usually associated with free draining soils.

A review of publicly available datasets did not identify any environmental factors that would increase the incidence of flooding, as discussed below:

- Limited regional groundwater level information is available. However, based on the geology it is likely that groundwater is confined by the underlying weathered granite which would act as a low permeability aquitard. Perched groundwater is likely to fluctuate seasonally within the overlying sand formations, flowing from the application area south towards the waterway when present. The application area is not currently subject to flooding or water logging, and will be vegetated with an active crop that will continue to utilise the perched groundwater, where present.
- There are no mapped waterway or watercourses within the application area (DWER 2020b).
- The application area is not mapped as occurring within a floodplain area (DWER 2020a).

In addition, although the remnant vegetation will be cleared from the application area, the area will be utilised for an active crop (i.e. vineyard) and infiltration as it would currently occur will be maintained, as the vineyard area will include minimum hardscape areas.

Based on the above factors, the proposed removal of native vegetation within the application area will not cause or exacerbate an incidence of flooding. The proposed clearing is not considered to be at variance with Principle (j).



## 8 SUMMARY AND CLOSING

The proposed clearing within the application area is to support the expansion of an existing winery, with the planting of the vineyard in an area that was historically approved for clearing. The clearing is proposed to immediately precede the planting of the vineyards, with planting to occur during the spring growing season.

As outlined, the application area is approximately 5.47 ha in size (based on canopy cover), and contains:

- 5.47 ha of native plant community **CCeM** and is in 'good' condition.
- 5.45 ha of primary and secondary foraging species for the Baudin's cockatoo.
- 5.47 ha of primary and secondary foraging species for the Carnaby's cockatoo.
- 5.47 ha of primary foraging species for the forest-red tailed black cockatoo.
- 213 habitat trees (i.e., trees with a DBH ≥ 500 mm), of which:
  - 2 trees contain 'suitable hollows';
  - 1 tree contained 'potentially suitable hollows' (due to the size and location of tree, the hollow could not be adequately surveyed to categorically determine its suitability); and
  - 210 trees contained 'no suitable hollows'.
- No roosts or secondary evidence of roosts were identified within the areas of vegetation proposed to be removed.

13.45 ha of remnant vegetation within the remainder of the site will be retained, the majority of which is in 'very good' condition. These areas of vegetation provide contiguous patches that connect to vegetation within neighbouring landholdings. The applicant is proposing to revegetate approximately 0.65 ha along the eastern boundary of the site, which will include a 20 m wide environmental corridor connecting areas of existing vegetation in the north-east corner of the site and retained vegetation along the eastern boundary of the site. The area proposed to be revegetated is in 'good' and 'completely degraded' condition. This connection currently does not exist and will enhance fauna movement throughout the site and with neighbouring landholdings (and areas of intact vegetation).

The proposed clearing is considered to be consistent with the EP Act clearing principles, as detailed in this letter. **Table 3** provides a summary response to each clearing principle.

Table 3: Summary of response to each clearing principle

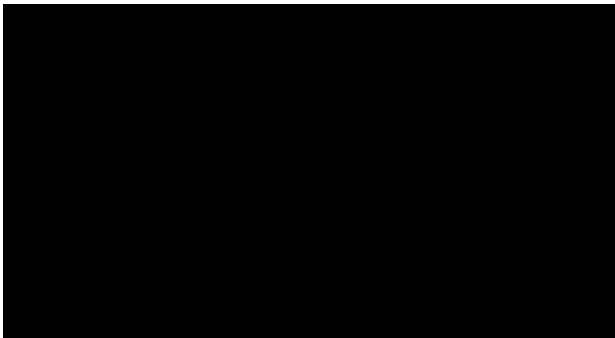
Clearing principle	Response to clearing permit principle
Principle (a)	The native vegetation within the application area has been subject to historical disturbance as a result of agricultural activities (including livestock grazing), and contains limited to no understorey. Due to the degraded nature of the vegetation, the presence of weeds and that no threatened or priority flora was identified within the application area, the application area is not considered to represent a high level of flora diversity. In addition, due to the degraded nature of the vegetation, the application area provides only limited fauna habitat. Therefore, this vegetation does not represent a high level of biological diversity.
Principle (b)	<p>Within the application area, the vegetation is considered to support limited fauna habitat values, with the three black cockatoo species the only conservation significant species likely to utilise the application area to any extent. This is due to the lack of understorey and mid-storey vegetation within the application area making it unsuitable and/or meaning it does not meet the definition of 'significant habitat' for other species such as western ringtail possum and the south-western brush tailed phascogale.</p> <p>While the proposed clearing will result in the clearing of 5.47 ha of black cockatoo foraging habitat and 213 habitat trees (two which contain suitable hollows and one which contains potentially suitable hollows), at least 13.45 ha of foraging habitat will be retained within the site as well as at least 124 habitat trees (one with a suitable hollow and one with a potentially suitable hollow) within the tree survey area, with it estimated that a further 732 habitat trees may be present within the remainder of the site (based on extrapolation of habitat trees identified as part of the tree survey). An assessment of vegetation more broadly indicates that the proposed clearing within the application area represents 28.9 % of black cockatoo habitat within the site, 0.09% of existing habitat within 6 km of the site and 0.02% within 12 km of the site. Approximately 30% of the remaining vegetation within 12 km of the site is within State controlled lands (including national park and nature reserves) and is unlikely to be developed. Overall, the vegetation within the application area is not considered to be necessary for the maintenance of a significant habitat for a fauna species.</p>
Principle (c)	No threatened or priority flora species were recorded within the application area as part of the flora and vegetation assessment and none are considered likely to occur.
Principle (d)	No TECs or PECs were identified within the site or the application area, as part of the flora and vegetation assessment.
Principle (e)	The proposed clearing within the application area will not reduce the extent of the 'Boranup 3' association below 30%, with the clearing within the site only representing 0.04% of the 38.51% of the pre-European extent remaining. The application area does not form part of an identified ecological linkage, nor is it connected to contiguous areas of native vegetation.
Principle (f)	The flora and vegetation assessment did not identify any groundwater dependent vegetation, nor was any riparian vegetation identified within the application area. A palusvale wetland is mapped as intersecting the southern-most portion of the application area, however no wetland features, such as wetland vegetation or waterlogged soils were identified, and no waterways are mapped within the application area.
Principle (g)	The proposed clearing will not cause appreciable land degradation. Based on the identified soils, wind erosion is the main risk for the application area, and as the area will be planted in the long term, wind erosion is not considered a risk. Short term impacts can be managed as part of clearing and prior to planting.
Principle (h)	No conservation areas are identified within the site (or application area) or within close proximity to the site.
Principle (i)	The proposed clearing is not considered to pose a risk in terms of the deterioration of surface or groundwater. Vineyard operations have been occurring within the site over a long period of time, and the proposed clearing will not change water use or water quality (with both managed in accordance with an existing surface water licence) compared to the existing operations.
Principle (j)	The proposed clearing is not likely to cause or exacerbate a risk of flooding given the area is not identified as an area subject to flood risk and it will be utilised for an active crop (i.e. vineyard) and infiltration of rainfall will be maintained.

In addition to the above, it is noted that the location of the proposed vineyard has been considered in detail, with the key constraining factors for the layout being the requirement for the vineyards to be located in an area with appropriate soil type and condition, as well as minimising impacts on the better quality remnant vegetation within the site. The vineyard is to be located within vegetation that is in 'good' condition and has been historically used for grazing purposes, and as a result has limited to no understorey. The remainder of the area proposed for the installation of the vineyards includes non-native grasses and weeds, with scattered paddock trees. In addition, the vineyard area was going to be larger, encompassing all native vegetation within the eastern portion of the site as well as a small area in the western portion of the site, however the extent of proposed clearing was reduced to minimise potential impacts on vegetation and fauna habitat values.

In addition to avoiding clearing through redesign of the vineyard expansion, mitigation is proposed through the revegetation of a 20 m wide environmental corridor (approximately 0.65 ha in size), which connects to retained vegetation in the north-east corner of the site and nearby landholdings, and installation of at least eight artificial hollows within existing trees within the areas of retained remnant native vegetation within the site. Clearing activities will also be managed to minimise any potential impacts on nearby areas and fauna species, including clearly defining the extent of the clearing area, fauna inspections by a qualified zoologist prior to and during clearing activities, clearing in one direction towards retained vegetation, and managing site works to prevent the spread of weeds and dieback into areas of retained vegetation.

Should you have any questions regarding the content of this letter, please do not hesitate to contact the undersigned.

Yours sincerely  
Emerge Associates



cc:  Montague VY No.1 Pty Ltd ATF Montague Trust

Encl: Figure 1: Location of Application Area  
Figure 2: Proposed Vineyard Location  
Figure 3: Plant Communities  
Figure 4: Vegetation Condition  
Figure 5: Fauna Habitat  
Figure 6: Potential Baudin's Cockatoo Foraging Habitat  
Figure 7: Potential Carnaby's Foraging Habitat  
Figure 8: Potential Forest Red-tailed Black Cockatoo Foraging Habitat  
Figure 9: Black Cockatoo Habitat Trees  
Figure 10: Black Cockatoo Habitat Context  
Figure 11: Regional Vegetation Complexes  
Figure 12: Geomorphic Wetlands  
Figure 13: Soil-landscape Mapping  
**Attachment 1:** Clearing Permit Application C1 Form  
**Attachment 2:** Detailed Flora and Vegetation Assessment: Lot 32 (No.325) Tom Cullity Drive, Wilyabrup (Emerge Associates 2020b).  
**Attachment 3:** Basic Fauna and Targeted Black Cockatoo Assessment: Lot 32 (No.325) Tom Cullity Drive, Wilyabrup (Emerge Associates 2020a).  
**Attachment 4:** Certificate of Title

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