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Attention: Native Vegetation Regulation
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Delivered by email to: info@dwer.wa.gov.au

Dear Sir/Madam

CLEARING PERMIT (AREA PERMIT) APPLICATION TO SUPPORT PHASED CAPPING OF EXISTING LANDFILL WITHIN PART LOT 5011 DAVIS ROAD, FOREST GROVE

With regard to the letter content outlined below, please keep in mind the following key terms as they relate to this clearing application:

- **Site boundary** – this refers to the broader Lot 5011 Davis Road landholding in which the landfill facility is located, and within which the landfill capping works will occur. The site is 48.73 ha in size, with approximately 33.23 ha (68% of the landholding) composed of native vegetation and 15.5 ha (32% of the landholding) composed of cleared/non-vegetated areas, associated with the landfill operations.
- **Application area** – this refers to the area of native vegetation that is proposed to be cleared and is the subject of this clearing permit application. The extent of native vegetation in this area has been surveyed and is clearly understood. This area is 2.75 ha in size and is proposed to be cleared to as part of implementing the closure plan for the landfill facility, including developing the restorative soil borrow pit, and supporting the reprofiling of the landfill cells and development of the associated vehicle access and drainage infrastructure.
- **Survey area** – this refers to the area over which the ecological surveys (flora, vegetation, basic fauna, and targeted black cockatoo assessment) were completed based on the proposed extent of clearing, and is 3.02 ha in size. This area aligns with the area specified in the separate licence amendment application. The area includes native and non-native vegetation, and is why the survey area extent is different to the application area extent.

1 OVERVIEW

Emerge Associates (Emerge) have been engaged by the Shire of Augusta Margaret River (the applicant) to prepare a clearing permit application pursuant to Part V of the *Environmental Protection Act 1986* (EP Act), to support capping (closure) works for the landfill cells at the Davis Road Recycling and Waste Management Facility, located at Lot 5011 Davis Road, Forest Grove (herein referred to as ‘the site’). The site is shown in **Figure 1** and is 48.73 hectares in size.

To implement the required phased capping works as part of the closure plan, a borrow pit as well as access roads and drainage areas have been identified within the site and will require the removal of native

vegetation. This is discussed further in **Section 3**. The area of native vegetation removal is herein referred to as the 'application area' and is 2.75 ha in size.

The following ecological values were identified within the survey area based on the ecological surveys (and are discussed in more detail further below):

- A total of 2.75 ha of native vegetation and 0.27 ha of non-native vegetation.
- Within the native vegetation:
 - 2.45 ha of native vegetation is in 'very good' condition.
 - 0.21 ha of native vegetation is in 'good' condition.
 - All of the native vegetation (2.75 ha) is considered to be high-quality foraging habitat for the three conservation significant black cockatoo species (Carnaby's, Baudin's and forest red-tailed), and would also be suitable for other conservation significant species such as western ringtail possums.
 - 168 black cockatoo habitat trees were identified, based on having a diameter at breast height (DBH) of 500 mm or greater. Following a detailed hollow inspection, none were identified to contain suitable hollows.
 - No signs of roosting or nesting by black cockatoos were observed during the survey.

Based on the values identified, the area of native vegetation proposed to be cleared requiring approval is 2.75 ha.

The following letter is provided in support of the clearing permit application (area permit) form (provided separately and labelled '**Attachment 1**') pursuant to Part V of the *Environmental Protection Act 1986* (EP Act) and is to be read in conjunction with the following attachments (provided as part of the permit application):

- **Attachment 1** – Signed clearing permit application form (Form C1).
- **Attachment 2** – Additional information - clearing principles letter (which is this letter).
- **Attachment 3**– *Detailed Flora and Vegetation Assessment - Part Lot 5011 Davis Road, Forest Grove*
- **Attachment 4**– *Basic Fauna and Targeted Black Cockatoo Assessment – Part Lot 5011 Davis Road, Forest Grove*
- **Attachment 5**– Certificate of Title
- **Attachment 6** –Landfill Cell and Borrow Pit Summary Plan
- **Email attachments** - A shape (.shp) file of the native vegetation clearing area has been submitted to Department of Water and Environmental Regulation (DWER) as part of the application.

2 INTRODUCTION AND BACKGROUND

The applicant is seeking a clearing permit to create a borrow pit and supporting infrastructure, as part of implementing the closure plan for the landfill cells within the Davis Road Recycling and Waste Management Facility. The proposed activity will involve the removal of 2.75 ha of native vegetation within the eastern portion of the site, as shown in **Figure 1**.

The site is currently used as a waste management facility for disposal of domestic waste, recycling, scrap metal, and green waste, with three different areas used for these purposes. These areas are located in the northern, southern and eastern portions of the site. The landfill cell is in the eastern portion of the site.

In accordance with the Environmental Protection Authority's (EPA's) *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA 2016) a flora and vegetation assessment to the standard required of a 'detailed' survey was undertaken in November 2023 (provided as **Attachment 3**)

A basic fauna assessment and targeted habitat assessment for black cockatoos was also undertaken in accordance with the EPA *Technical Guidance – Terrestrial fauna Surveys for environmental impact assessment* (EPA 2020) in April 2024 (provided as **Attachment 4**).

A summary of the environmental conditions identified through the flora, vegetation and fauna assessments as relevant to the application area are outlined in **Section 4** below.

3 LANDFILL REHABILITATION AND CAPPING

The applicant operates a Class II Putrescible Landfill at the Davis Road Recycling and Waste Management Facility under licence (L6989/1997/14) pursuant to Part V of the EP Act. A Landfill Closure Management Plan (LCMP) that details the progressive ‘capping’ and rehabilitation of the historic and inactive landfill cells was provided to the DWER as part of fulfilling the applicants Part V licence obligations.

Capping of the historic landfill cells involves reprofiling the existing waste mass to a more favourable shape, installing an impermeable geotextile reinforced liner and topping the liner with approximately 1-1.4m of ‘restoration’ grade soils where a thin layer of vegetation will be planted to further stabilise the slopes and rehabilitate the landform. The restoration soil is required to exhibit certain ‘structural fill’ characteristics which resists liquefaction, landslides and minor seismic forces and must be compatible with the reprofiled slopes. Capping also significantly reduces the volume of ‘leachate’ produced by the landfill mass, due to stormwater being restricted from mixing with the landfill mass. By capping the landfill, stormwater cannot enter the waste mass within the landfill, which is potentially hazardous. Instead, the stormwater is directed to a series of open and piped drainage structures to a detention basin which will be constructed as part of the closure works.

A range of investigations have been undertaken by the applicant to investigate potential sources of restorative soils at the volumes required, which is modelled to be approximately 50,000 m³ or approximately 90,000 tonnes of restoration soils. The restorative soils require very particular characteristics to be achieved, in order to meet the requirements of the Capping Stability Risk Assessment within the Closure and Post-Closure Management Plan. A thorough Construction Quality Assurance report is required to be kept throughout construction to verify construction of the landfill cap is in accordance with industry and best practice environmental standards and the technical specifications of the licence and applicable requirements. The landfill cap is a piece of ‘Critical Containment Infrastructure’ under the Part V licence and the Construction Quality Assurance report is required to achieve signoff and compliance from DWER following construction.

There is a severe lack of surplus material existing throughout the Shire of Augusta Margaret River that could be utilised as potential stockpiles for restoration soils. Soils within the site were tested as part of understanding possible source material (given the site is vested in the applicant for gravel extraction and waste management) and was found to meet the necessary technical requirements. To address the requirement for restorative soils to supporting the closure plan capping, two options were determined, namely:

- Excavation of soil material within the site, to a depth of a few metres.
- Externally sourced material, which would be hauled to the site by road and stockpiled on site.

Under both scenarios, a similar amount of native vegetation (at least 2 ha) would be required due to the necessary stockpiling of material, as well as accommodating the new capped landfill profile, drainage infrastructure, new internal access roads displaced by the increase of the footprint of the landform and the new stormwater detention basin.

The use of material onsite is preferred as it will significantly reduce costs and carbon emissions associated with implementing the project, including haulage from an external pit/quarry, stockpiling on site and double handling of material, as well as impacts on the community as a result of increased truck movements on public roads (approximately 4000, if material were to be trucked to the site). The material

within the site is also highly known, is not considered to be contaminated from external sources and will require fewer individual batch tests to ensure the material is of the required standard.

Overall, these works are an important project necessary for meeting the applicants closure plan obligations under their Part V licence (L6989/1997/14) for the landfill and moving the applicant towards its (and the State Government) zero waste goals. Further detail on the proposed works and design is available within the separate licence amendment application.

4 SUMMARY OF ENVIRONMENTAL CONDITIONS

4.1 Historical clearing

Within the site, a review of available historical aerial images (from 1971 onwards), indicates heavy disturbance and clearing of native vegetation to support the establishment of the waste management facility, including the site office and recycling area, the green waste, metals, tyres and other material storage/sorting areas and the landfill cells (Landgate 2024). An extension of the landfill cells and construction of a new leachate pond occurred in 2019 under and approved licence and clearing permit.

4.2 Flora and vegetation values

Emerge Associates completed a detailed flora and vegetation assessment in November 2023 (see **Attachment 3**) for the survey area. This assessment was undertaken to identify plant communities and vegetation condition, as well as the presence of priority or threatened flora species and ecological communities. The following provides a summary of the values identified within the survey area, with **Attachment 3** able to be referred to for more detail.

The site is found within the Margaret River Plateau subregion in the South West Forest region. The survey area predominantly contains vegetation of the Wilyabrup Complex (W1, uplands and W includes the:

- ‘Wilyabrup’ (W1) vegetation complex which is described as “tall open forest of *Eucalyptus diversicolor*-*Corymbia calophylla*-*Allocasuarina decussata*-*Agonis flexuosa* on deeply incised valleys in the hyperhumid zone”;
- ‘Wilyabrup’ (Ww1) vegetation complex (which is described as “tall open forest of *Eucalyptus diversicolor*-*Agonis flexuosa*-*Callistachys lanceolata* with some *Corymbia calophylla* on flats and valleys in the hyperhumid zone”; and
- ‘Cowaramup’ (C1) vegetation complex which is described as “open to tall open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*-*Banksia grandis* on lateritic uplands in the hyperhumid zone”.

Three plant communities were identified within the survey area and are described in **Table 1** and shown in **Figure 2**. These communities are more aligned with the Cowaramup vegetation complex.

Vegetation condition, shown in **Figure 3**, varied from ‘completely degraded’ to ‘very good’ and had been outlined in **Table 1** based on the identified plant communities. The majority of the vegetation (2.45 ha) was in very good condition.

Table 1: Vegetation values identified within the survey area.

Plant community and description (see Figure 2)	Vegetation condition (see Figure 3)	Area (ha)
EmCcHh – Open forest to woodland <i>Eucalyptus marginata</i> and <i>Corymbia calophylla</i> over shrubland <i>Hibbertia hypericoides</i> , <i>Macrozamia riedlei</i> , <i>Hovea elliptica</i> , <i>Hakea amplexicaulis</i> and <i>Hakea lissocarpa</i> over open forbland <i>Scaevola calliptera</i> , <i>Agrostocrinum hirsutum</i> , <i>Patersonia babianooides</i> and <i>Patersonia occidentalis</i> over scattered grasses/sedges <i>Microlaena stipoides</i> , <i>Tetrarrhena laevis</i> , <i>Morelotia octandra</i> and <i>*Anthoxanthum odoratum</i> . (see Plate 1).	'Very Good'	1.54
	'Good'	0.21
	'Good-degraded'	0.09
EmCcTo - Open forest <i>Eucalyptus marginata</i> and <i>Corymbia calophylla</i> over tall shrubland <i>Trymalium odoratissimum</i> subsp. <i>trifidum</i> over low open shrubland <i>Tremandra stelligera</i> , <i>Hovea elliptica</i> and <i>Pteridium esculentum</i> over scattered herbs/grasses including <i>Lagenophora huegelii</i> , <i>Opercularia hispidula</i> and <i>Tetrarrhena laevis</i> . Located on lower slopes. (see Plate 2).	'Very Good'	0.91
Non-native – Heavily disturbed areas comprising non-native flora with scattered native plants. Tracks and areas of bare ground were also included in this unit. (see Plate 3).	'Completely Degraded'	0.27
Total		3.02

**Plate 1: Plant community EmCcHh in 'Very good' condition**



Plate 2: Plant community EmCcTo in 'Very good' condition



Plate 3: Plant community Non-native in 'Very degraded' condition

A number of threatened and priority flora species were identified in the desktop assessment as possibly occurring within the survey area. All would have been visible at the time of the survey, however none were identified. Accordingly, none are considered to occur within the survey and/or application area.

The threatened and priority ecological communities identified as possibly occurring within the survey area are associated with vegetation types and landforms (such as caves) which do not occur in the site and so confirming their absence was straightforward. No threatened or priority flora or ecological communities were identified within the survey and/or application area.

4.3 Fauna values

A basic fauna assessment and targeted black cockatoo survey was to determine suitability of habitat for threatened, specially protected and priority fauna, with a particular focus on black cockatoos. The following provides a summary of the fauna values identified in the survey area, and **Attachment 4** can be referred to for further detail.

The basic fauna survey assessed the various habitat types and overall site conditions and the likelihood for values identified to provide suitable habitat for threatened, specially protected and priority fauna. Two broad fauna habitats were identified within the site and are shown on **Figure 4** and include:

- Eucalypt forest (2.75 ha); and
- Cleared/bare ground (0.27 ha).

The 'eucalypt forest' habitat provides the better habitat and is contiguous with surrounding areas within the site and adjacent land, including Lot 5012 which is under the management of the applicant.

Based on the outcomes of the desktop assessment, eight (8) conservation significant fauna species were considered 'possible' to occur and are summarised in **Table 2** below. Three of these species, namely Baudin's black cockatoo, Carnaby's black cockatoo and forest red-tailed black cockatoo (FRTBC), were recorded within the survey area during the assessment based foraging evidence and/or observance. Habitat within the survey area for these three species is summarised in further detail below.

Table 2: Conservation significant fauna species recorded within the local area or deemed possible to occur within the survey area based on available databases and habitat values identified during site assessment (Emerge Associates 2023)

Scientific name	Common name	Conservation code (state and federal)	Preferred habitat	Likelihood of occurrence within application area based on habitat values identified
Birds				
<i>Apus pacificus</i>	Fork-tailed swift	Migratory (state and federal)	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: May opportunistically occur in or fly over the clearing area on commute but only for short periods of time.
<i>Zanda baudinii</i>	Baudin's Cockatoo	Vulnerable (state and federal)	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: From foraging evidence on Marri fruit within the clearing area.
<i>Calyptorhynchus banksii naso</i>	Forest red-tailed black cockatoo	Vulnerable (state and federal)	Eucalypt and <i>Corymbia</i> 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 <i>et al.</i> 2017).	Recorded: Observed flying over the site.
<i>Zanda latirostris</i>	Carnaby's cockatoo	Endangered (state and federal)	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: From foraging evidence on Marri fruit within the clearing area.
<i>Falco peregrinus</i>	Peregrine falcon	Other specially protected (state)	Mainly found around cliffs along coasts, rivers, ranges and around wooded watercourses and lakes (Johnstone and Storr 1998).	Possible: May opportunistically occur in or fly over the clearing area on commute or while searching for prey but only for short periods of time.
<i>Tyto novaehollandiae novaehollandiae</i>	Australian masked owl	Priority 3 (state)	Forests, open woodlands, farmlands with large trees. E.g. river red gums, adjacent cleared country, timbered watercourses, paperbark woodlands and caves (Pizzey & Knight 2012).	Possible: Suitable habitat occurs in the clearing area and if used would form part of a broader range.

Table 2: Conservation significant fauna species recorded within the local area or deemed possible to occur within the survey area based on available databases and habitat values identified during site assessment (Emerge Associates 2023) (continued)

Scientific Name	Common Name	Conservation Code	Habitat	Likelihood of occurrence within clearing area based on habitat values identified within the site
Mammals				
<i>Isoodon fusciventer</i>	Quenda	Priority 4 (state)	Dense scrubby, often swampy, vegetation with dense cover up to one metre high.	Possible: No diggings were seen during the survey, however quenda are likely to inhabit the surrounding forest and likely visit the survey area periodically to forage.
<i>Notamacropus irma</i>	Western brush wallaby	Priority 4 (state)	Dry sclerophyll forest, <i>Banksia</i> spp. woodlands and shrublands, typically favouring dense low vegetation that provides dense cover.	Possible: Habitat within the survey area is suitable for the species. However, it is unknown whether western brush wallaby inhabits the patch of forest surrounding the site as records appear to be concentrated around the larger extent of forest near the coast.
Phascogale tapoatafa wambenger	South-western brush-tailed phascogale	Conservation dependent (state)	Dry sclerophyll forests and open woodlands that contain hollow-bearing trees but a sparse ground cover (Triggs 2003).	Possible: The species has previously been recorded approximately 1.2 km north of the survey area. The survey area contains suitable habitat which is contiguous with the vegetation that extends north to the existing record. It is likely that the species uses the site as part of a larger home range. Hollows in the site would provide suitable refuge habitat for this species.
<i>Pseudocheirus occidentalis</i>	Western ringtail possum, ngwayir	Critically endangered (state and federal)	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).	Possible: Numerous records of the species occurs in the area with the closest being 450 m to the west. While no dreys or secondary evidence of the species were observed within the survey area, there is a high likelihood that western ringtail possum occurs periodically due to the abundance of suitable vegetation and hollows within the site and adjacent areas.
Amphibians				
<i>Anstisia alba</i>	White-bellied frog	Critically endangered (state and federal)	Swampy flows along drainage depressions in an area of subdued topography (relief < 80m) near the junction of the Leeuwin-Naturaliste Ridge and Blackwood Plateau. Breeding sites are typically associated with sandy soils, dense overstorey vegetation dominated by <i>Homalospermum firmum</i> , <i>Agonis linearifolia</i> , <i>Astartea fascicularis</i> , and a dense ground layer of rhizomatous vegetation, usually composed of <i>Pseudoloxocarya</i> sp., <i>Loxocarya</i> sp. and <i>Tetrarrhena laevis</i> .	Possible: This species is known from small populations recorded in Forest Grove, with the closest record approximately 2.2 km east from the survey area. No records have occurred since the 1990s. The southern portion of the site was suspected to provide potential suitable habitat being close to a drainage channel. However, the vegetation does not match their historical habitat and the drainage channel was considered too dry at the time of the survey to sustain a population.

Black cockatoo habitat values

The targeted black cockatoo habitat assessment identified 168 habitat trees (trees with a diameter at breast height (DBH) of 500 mm or greater) within the survey area. None of the trees were identified to contain suitable hollows for breeding, based on a detailed hollow assessment. The location of the habitat trees is shown in **Figure 5**.

No evidence of roosting activity such as droppings, feathers or branch clippings were observed within the survey area.

The 2.75 ha of eucalypt forest habitat was assessed to also represent 'high-quality' foraging habitat for the three black cockatoo species and is shown in **Figure 5**, and further detailed in **Attachment 4**. Extensive areas of foraging habitat (approximately 23,198 ha of Carnaby's, Forest red-tailed, and Baudins black cockatoo) are present within 12 km of the site, and are shown in **Figure 6**. The vegetation within the application area represents 0.01% of vegetation in the broader area.

5 APPLICATION OF MITIGATION HIERARCHY

In accordance with *A guide to the assessment of applications to clear native vegetation* (DER 2014), the clearing has been considered in the context of the impact mitigation hierarchy and outlined below.

5.1 Avoidance

As outlined in **Section 3**, capping of the landfill cells is a requirement of the Part V licence (L6989/1997/14) and requires soils that meet specific technical specifications in order to achieve the standards in the Capping Stability Risk Assessment. Regardless of the source of the restorative soil material (internal or external), clearing of native vegetation will be required within the site to provide a safe landform for the landfill cells as well as meeting the necessary material stockpiling, vehicle access and drainage infrastructure requirements.

The clearing application area is located in an area that:

- Avoids removal of vegetation identified through the previous approvals (under license L6989/1997/14) for retention/protection, including where artificial hollows have been installed.
- Utilises existing cleared areas for the borrow pit (see **Attachment 6**) to minimise the extent of clearing of new areas of native vegetation and maximises the use of existing internal vehicle access (e.g. soils in the central portion of the site could also be suitable for restorative soils and capping, but have been avoided to reduce the extent of additional infrastructure that would be required to service this area and result in more clearing).

The landfill cells are existing, and clearing around the perimeter of these cannot be avoided as part of the capping process. While complete avoidance of clearing is not possible, the location of the borrow pit for the restorative soils source within the site makes use of existing areas that are partially cleared and minimises the extent of new access tracks or similar that would be required if located elsewhere within the site, avoiding impacts.

5.2 Minimise

The applicant operates under a range of strategies and policies that guide the Shire of Augusta Margaret River in its operations. The Shire has a strong commitment to the protection of native vegetation and fauna habitat detailed across a number of strategies and policies including (but are not limited to):

- *Strategic Community Plan 2040*, which outlines the overall values and goals of the Shire and all development.
- *Erosion and Sediment Control Local Law 2019*, which outlines the requirement to prevent erosion and escape of soils and sediments. This is supported by guidance material on appropriate treatments.

- *Infrastructure Policy 16 – Management of Vegetation on Shire Reserves 2018*. This document outlines the Shire’s goal to minimise clearing in areas of environmental significance and the requirement for consent.

A key commitment under the policy framework is to “minimise or aim to avoid clearing in conservation and environmentally significant areas where possible”. While vegetation proposed to be cleared provides habitat for conservation significant fauna species, the clearing is being balanced with meeting obligations related to the landfill licence (L6989/1997/14) and creating a safe finished landform, meeting the Shire’s waste minimisation goals and reducing greenhouse gas emissions.

Measures that will be implemented during the landfill capping works with the intent to minimise the duration, intensity and extent of impacts from the clearing of native vegetation include:

- Use existing cleared areas within the site as much as possible for the borrow pit, and to stockpile materials and machinery.
- Clearly demarcate the extent of native vegetation clearing permitted, using flagging tape and/or fencing, in addition to being clearly detailed on the works drawings.
- Manage clearing and capping works to prevent the potential spread of weeds and dieback into areas of retained vegetation, including ensuring all machinery, vehicles, tools and footwear is cleaned down of soil material before entering the works area and minimising activities (where possible) during wet conditions.
- Conducting clearing in a progressive manner towards surrounding remnant vegetation to the south, to allow fauna to escape the clearing area.
- Ensuring a suitably qualified fauna specialist undertakes an inspection of the vegetation ahead of clearing, and to be present during clearing activities to assist with fauna management/relocation to adjacent areas where fauna is identified.
- Limit vehicle speeds within the works area to reduce the chance of fauna vehicle strike.
- Maintaining works in a clean and tidy manner, to prevent fauna from entering the works area.
- Drainage management infrastructure to be designed to proactively manage surface water, to manage the 1 in 20 year Average Recurrence Interval (ARI) rainfall event (5% Annual Exceedance Probability), with controlled discharge points to be installed.
- Where applicable during works, temporary control measures such as the installation of silt traps/sediment control measures to slow surface run off and minimise erosion and subsequent sedimentation during rain events will occur, along with dust management including suppression during dry/windy weather periods and/or halting work during adverse weather.

5.3 Rehabilitation

As part of the landfill capping works, the upper surface of the restorative soils within the capped cells will be comprised of 100 mm deep growing medium of topsoil mixed with compost and mulch, which will be revegetated (via seeding) with shallow rooted native species from within the area. The native species are intended to assist with binding the surface materials and replicating the appearance of the broader area. Hydromulch will be applied to the capped surface as an interim measure, to minimise the potential for erosion while the native plant species become established.

While trees will not be planted, as they will damage the capping and structural integrity of the landfill cell, the native vegetation species planted will still contribute to increasing vegetative cover (approximately 5.3 ha when fully implemented) compared to current conditions, and over the life of the works will improve habitat availability, particularly for smaller species.

A further four (4) additional artificial black cockatoo hollows are proposed to be installed in the uncleared areas immediately to the north and south of the landfill cell, in line with the similar ratio for artificial hollow installation, previously specified as part of the approved clearing for the construction of a landfill cell and the leachate pond (CPS 8228/1).

5.4 Offset

Based on the extensive areas of remaining native vegetation within the Margaret River Plateau subregion (within the South West Forests mapping), the proposed clearing represent a very small area of the vegetation remaining (0.01%). This is discussed further in addressing the clearing principles in **Section 8**.

Given the outlined avoidance, mitigation and rehabilitation activities, no offset is proposed. Removal of the vegetation within the application area would not significantly reduce the available vegetation (see discussion in **Section 8**), its connectivity or the vegetation available to fauna species in the area, particularly when considering the capping works and proposed revegetation. No residual significant impact is anticipated.

6 PLANNING INSTRUMENTS AND OTHER ENVIRONMENTAL APPROVALS

A Part V licence amendment application pursuant to the EP Act has been submitted to DWER for the approval of the closure and post closure management plan, in accordance with the requirements of the current approved licence (L6989/1997/14).

No further planning approvals are required to support the capping works.

7 PROPOSED CLEARING OF NATIVE VEGETATION

As outlined above, the proposed clearing of native vegetation is sought to facilitate the capping of the landfill cells within the site.

The area of native vegetation proposed to be subject to clearing is shown in **Figure 1** and includes :

- 1.84 ha of plant community **EmCcHh**, which was assessed to be in 'Very good' (1.54 ha), 'Good' (0.21 ha), and 'Good – degraded' (0.09 ha) condition (Emerge Associates 2024); and
- 0.91 ha of plant community **EmCcTo** which was also assessed to be in 'Very good' condition (Emerge Associates 2024).

A total of 2.75 ha of native vegetation is proposed to be removed to facilitate the required works under the closure and post-closure management plan for the landfill cells in the site.

8 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.

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

It is acknowledged that the application area is located in the Busselton-Augusta area which is recognised as a biodiversity hotspot (DER 2014). Biological diversity can be hard to measure, as acknowledged by DWER (DER 2014) but is typically associated with richness in numbers of species and endemism of species, as well as the conservation significance of values, particularly threatened or priority species and ecological communities.

As outlined in **Section 4.2**, the site is found within South West Forest region of Western Australia. Vegetation within the application area is associated with the:

- ‘Wilyabrup’ (W1) vegetation complex, which based on the state government mapping encompasses approximately 2.66 ha (96.7%) of the application area. There is 3,916 ha of this vegetation complex remaining and 1,820 ha is protected for conservation (approximately 25% of the remaining vegetation). The application area represents 0.068% of the remaining area.
- ‘Wilyabrup’ (Ww1) vegetation complex, which based on the state government mapping encompasses approximately 0.04 ha (1.5%) of the application area. There is 1,218 ha of this vegetation complex remaining and 423 ha is protected for conservation (approximately 19% of the remaining vegetation). The application area represents 0.003% of the remaining area.
- ‘Cowaramup’ (C1) vegetation complex, which based on the state government mapping encompasses approximately 0.05 ha (1.8%) of the application area. There is 6,541 ha of this vegetation complex remaining and 2,066 ha is protected for conservation approximately 11% of the remaining vegetation). The application area represents 0.001% of the remaining area.

The vegetation complexes provide a useful way to consider the vegetation of similar values that are present in the wider area, both in terms of the diversity and the size.

As outlined above, the majority of the application area is associated with the **EmCcHh** plant community (1.84 ha), comprising predominantly *Eucalyptus marginata* (jarrah) and *Corymbia calophylla* (marri) trees, over a predominant midstorey layer of *Hibbertia hypercoides*. A smaller portion of the application area is associated with the **EmCcTo** plant community (0.91 ha), comprising predominantly jarrah and marri over a midstorey of *Trymalium odoratissimum*. The majority of the vegetation was identified in ‘very good’ condition (1.54 ha for **EmCcHh** and 0.91 ha for **EmCcTo**), which means that the vegetation structure is altered and there are obvious signs of disturbance (Keighery 1994). A small portion of the survey area (0.27 ha) is associated with heavy disturbance including vehicle access tracks and areas of bare ground that are described as the **non-native** plant community and is in ‘completely degraded’ condition. This is excluded from the application area.

A total of 75 native and 17 non-native species (included a declared pest) were recorded within the survey area representing 41 families and 74 genera (Emerge Associates 2024). The number of species recorded is in line with the predicted species richness (predicted to be between 78 and 80). Surveys were undertaken at a time when all conservation significant species would be visible based on their standard flowering seasons and no threatened or priority flora species, or threatened or priority ecological communities were identified within the survey or application area (Emerge Associates 2024).

While the clearing of native vegetation would include vegetation in very good condition, the vegetation was not assessed to contain conservation significant species or communities, and is associated with well represented vegetation complexes (with large areas of vegetation with formal protection).

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

8.2 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 discussed in **Section 4.3**, three fauna species of conservation significance (Carnaby’s cockatoo, Baudin’s black cockatoo, and Forest red-tail black cockatoo) were observed occurring within the survey area, while a further eight conservation significant fauna species deemed likely or possible to occur based on observed habitat (see **Attachment 4** for further detail). A small proportion (8.94%) of the survey area was identified as ‘**Bare ground**’ habitat which is low in microhabitat complexity and provides limited value to fauna species. It aligns with the non-native plant community. The highest fauna habitat values were associated with the ‘**Eucalypt forest**’ habitat (which is 91.06% of the application area), which was assessed to contain high microhabitat complexity and tree hollows for avifauna and arboreal mammals.

Key conservation significant species either observed or likely to utilise habitat within the site include western ringtail possum and the three black cockatoo species (Carnaby’s cockatoo, Baudin’s black cockatoo, and Forest red-tail black cockatoo). The potential impacts on these species is discussed in further detail below.

Overall, while the application area contains 2.75 ha of quality foraging and/or refuge habitat for conservation significant fauna, given the abundance of very similar or better-quality vegetation within the site (which would still contain approximately 30.5 ha of native vegetation following clearing of the application area), within Lot 5012 (R 22987 which is 25 ha in size and under the management of the applicant) immediately to the south, and the broader local area (more than 23,000 ha), the clearing in the application area will not fragment vegetation or significantly reduce resources available to fauna species.

Clearing of native vegetation within the application area is not considered likely to significantly impact fauna species, conservation or other more common species or be at variance to Principle (b).

8.2.1 Western ringtail possum habitat

The marri and jarrah trees in the application area are likely to provide foraging, refuge and/or breeding habitat for western ringtail possum (as well as other arboreal mammals, such as southwestern brush-tailed phascogale). No dreys or secondary evidence of the species was observed during the surveys. While no evidence was found, no targeted survey for western ringtail possum has been undertaken and it is assumed the species could be present periodically as part of a broader home range.

Western ringtail possums are known to have an average home range that varies between 0.3 ha to 2.7 ha (DPaW 2017), with the larger more representative of the typical home range in eucalypt dominated habitat (like the application area). Home ranges do overlap for this species (up to 70%), and previous work indicates 1 ha of jarrah forest could support potentially 4 individuals (DPaW 2017). Resources important to the survival of western ringtail possum include: high nutrient foliage availability for food, suitable structures for protection/nesting, and canopy continuity to avoid/escape predation and other threats.

The application area is within the 'Swan Coastal Plain management zone', which is associated with habitat described as stands of myrtaceous trees (usually peppermint (*Agonis flexuosa*) trees) and habitat critical for survival in this zone is described as long unburnt mature remnant peppermint woodlands with high canopy continuity and high nutrient foliage (DPAW 2017). This habitat does not occur within the site. Instead, the habitat within the site would be more closely aligned with the 'southern forest management zone' which is described as jarrah or marri dominated forests in adjacent stands of riparian vegetation. Habitat critical to survival comprises forests with limited human disturbance (unlogged or lightly logged, and a low intensity and low frequency fire history), that are intensively fox-baited and have low indices of fragmentation. Due to the presence of the landfill activities, the site would not be considered forest that has limited human disturbance. From a habitat availability perspective, vegetation mapped as suitable for black cockatoos in **Figure 6** and **Figure 7** would be similar to the habitat suitable for western ringtail possums.

The vegetation in the application area forms part of a larger contiguous home range for western ringtail possums and removal of the vegetation would not fragment the vegetation or prevent the species from moving across the site via a connected canopy given the retention of other areas of surrounding vegetation within Lot 5011 and Lot 5012. Removal of the vegetation within the application area would not impact significant habitat for western ringtail possums.

8.2.2 Black cockatoo foraging habitat

The 2.75 ha of native vegetation within the application area is considered primary native foraging habitat (native species that are consumed regularly) for the three black cockatoo species, namely Carnaby's black cockatoo, Baudin's black cockatoo and the forest red-tailed black cockatoo. The extent of foraging habitat within the application area is shown in **Figure 5**.

The majority of the mapped extent of remnant native vegetation within 12 km of the site would provide suitable foraging resources for the three black cockatoo species, with most of it being eucalypt dominated woodlands or forests. The extent of black cockatoo foraging habitat within 12 km of the site is shown on **Figure 6**. A total of approximately 23,256 ha of Carnaby's, Forest red-tailed, and Baudin's Black Cockatoo foraging habitat exists within 12km of the site respectively, with the foraging habitat within the application area (2.75 ha) representing 0.012% for each black cockatoo species respectively. Approximately 71% (16,560 ha) of black cockatoo foraging habitat is within state or local protected land (e.g. national park,

state forest, parks and recreation reserves). These values have been calculated based on a review of the vegetation complex data and native vegetation extent remaining, along with consideration of the Shire of Augusta Margaret River local planning scheme and zonings/reservations that protect vegetation. The proposed clearing would not result in cumulative impacts on the three black cockatoo species to the extent that the occurrence of the species locally or regionally would be affected.

Overall, the black cockatoo foraging habitat within the application area, while not insignificant, does not represent a significant area of habitat for the three black cockatoo species based on the vegetation present within 12 km (approximately 23,256 ha of which approximately 16,560 ha has some form of protection). The foraging habitat within the clearing area extends over a small area and there are areas of vegetation immediately adjacent to the application area within applicant managed lands that will remain (e.g. within the site and Lot 5012) and within the greater local area.

8.2.3 Black cockatoo breeding and roosting habitat

The targeted black cockatoo habitat assessment identified 168 black cockatoo habitat trees (which are native *Corymbia* and *Eucalyptus* species and stag (unknown species) trees with diameter at breast height (DBH) ≥ 500 mm). None of these trees were identified to contain suitable hollows for breeding by black cockatoos following a detailed hollow inspection via drone and pole camera.

A dusk roost survey was not undertaken but no secondary evidence of roosting such as branch clippings, droppings or feathers were observed within the site. Therefore, there is no reason to suspect that roosting by black cockatoos has recently occurred in the application area. Nevertheless, the site contains many tall trees and groups of tall trees that may provide roosting habitat for black cockatoos, but the vegetation in the application area is no different to the vegetation immediately adjacent to the application area in the site (or within the immediate broader area) which is not proposed to be removed.

No suitable breeding habitat was identified nor was roosting observed within the site. The proposed clearing is not considered to result in a significant residual impact, particularly in the context of the habitat in the nearby state forest and national park (discussed above in **Section 8.2.2**).

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

The flora and vegetation survey (which was undertaken within the known flowering period for all potential priority or threatened flora species that require flowering to be identified), did not identify any threatened or priority flora within the application area (Emerge Associates 2024).

As no threatened or priority flora have been identified within the application area the proposed clearing is not considered to be at variance with Principle (c).

8.4 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**, the flora and vegetation assessment found that the plant communities identified within the application area do not represent a threatened ecological community (TEC) or priority ecological community (PEC). The TECs and PECs identified as potentially occurring in the survey area are associated with vegetation types and landforms (such as caves) which do not occur in the survey area.

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

8.5 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.

The EPA's *Guidance Statement No. 33 Environmental Guidance for Planning and Development* has identified a level of 30% retention of pre-European extent of each vegetation association/complex outside

of the areas constrained of urban development, stating a region with levels below 30% should be fully retained (EPA 2008).

The application area is located within the Warren sub-region of the Interim Biogeographic Regionalisation for Australia (IBRA) dataset. It is comprised of the 'Boranup' system which has 53.56% of its pre-European extent remaining, with the vegetation being associated with 'Boranup 3' which is described as mainly Jarrah and Marri and has approximately 38.51% (14,891.02 ha) of its pre-European (1750) (38,671.83 ha) vegetation extent remaining as of 2018 (Government of Western Australia 2019b).

Of the remaining Boranup 3 vegetation association (14,891.02 ha), 31% is reserved for conservation (Government of Western Australia 2019b). The clearing within the application area (2.75 ha) would represent 0.02% of remaining area of the Boranup 3 vegetation association. This is summarised in **Table 3**

At a more localised scale (and as outlined within **Section 8.1**), the application area is in an area primarily mapped within the 'Wilyabrup (W1) complex' under the South-west forest mapping, while a small portion is within the 'Cowaramup (C1) complex' (Government of Western Australia 2019a). The vegetation complexes are shown in **Plate 5** and details of the remaining area of vegetation for each is outlined in **Table 3**. All the remaining vegetation for the vegetation complexes in the survey area are above 30% of the pre-European extent.

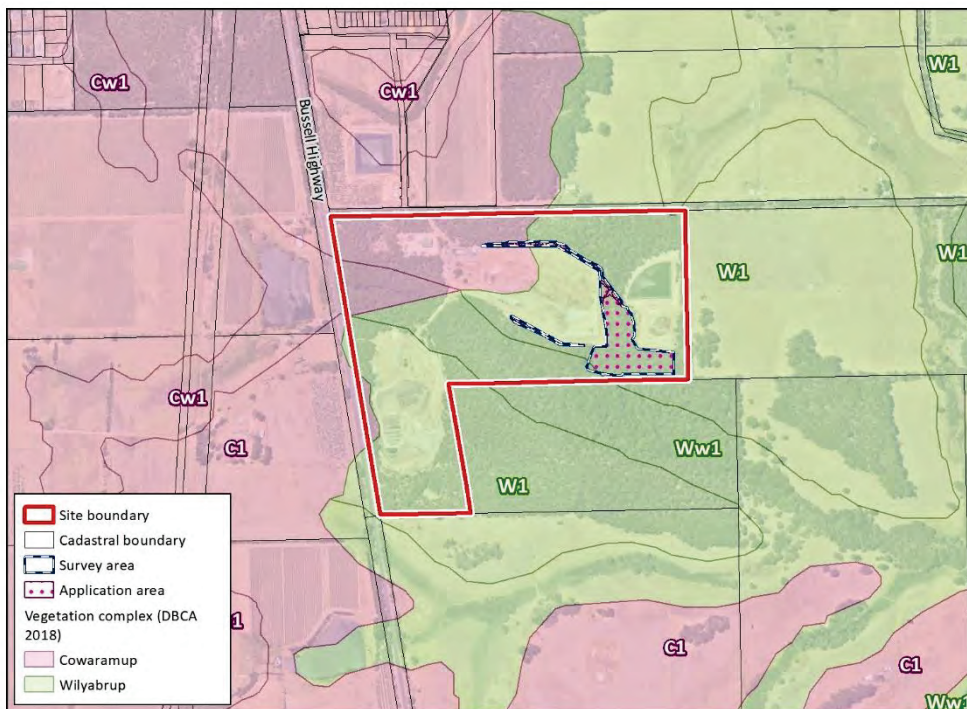


Plate 4: South West Forest Vegetation Complexes within or nearby to the site.

Table 3: Vegetation type and corresponding representation at regional and local scales (Government of Western Australia 2019b, a)

Southwest Forest Sub-region	Vegetation complex and class	Pre-European (ha)	Current extent (ha)	Remaining (%)	Current extent protected for conservation
Warren and Boranup	Boranup 3	38,671.83	14,891.02	51.73	31.03% (4,621.05 ha).
Margaret River Plateau	Wilyabrup - W1	7,296.19	3,915.60	53.67	24.95 % (1,820.16 ha)
	Cowaramup - C1	18,981.79	6,540.87	34.46	10.88 % (2,065.87 ha)
	Wilyabrup - Ww1	2,267.64	1,218.01	53.71	18.65 % (422.85 ha)

The majority of the vegetation proposed to be cleared is within the Wilyabrup (W1) vegetation complex which is a well-represented based on the remaining current extent and the area currently identified for protection through existing reserves or local planning scheme restrictions (e.g. the bushland protection zone). This is the same for Cowaramup (C1), which the vegetation in the survey area is more representative of. Proximal vegetation protected for conservation is shown in **Figure 7**. Clearing of the vegetation in the application area would not fragment existing stands, with landscape connections still maintained around the perimeter and through the central portion of the site.

The proposed clearing is not considered to be at variance with Principle (e) given the small area of native vegetation being cleared (2.75 ha) in the context of the size of the site (48.73 ha, of which 33.23 ha is native vegetation) and the remaining vegetation within the Margaret River Plateau subregion, including that with some form of protection as identified through the local planning scheme.

8.6 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.

No Ramsar wetlands, geomorphic wetlands or other wetlands were identified within or in close proximity to the application area based on a review of publicly available databases, as shown in **Figure 8**.

Two watercourses were identified in proximity to the application area, one to the immediate south and one further to the north, as shown in **Figure 8**. The **EMCcHh** plant community comprises a dryland community, while the **EmCcTo** plant community represents a lower lying community that extends into a *Eucalyptus diversicolor* (karri) dominated riparian forest further to the south-west of the application area. None of the vegetation was specifically identified as riparian vegetation or vegetation dependent on intermittently waterlogged soils.

While the **EmCcTo** plant community extends to riparian vegetation to the south-west, clearing of this vegetation is not considered to be at variance with Principle (f). The clearing of this vegetation can be managed through the construction of the proposed stormwater management infrastructure, to manage impacts on the watercourse further to the south-west.

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

A review of soil landscape mapping (DPIRD 2018b) indicates that the application area is within the ‘Wilyabrup Valleys System’ (see **Figure 8**), which contains ‘loamy gravel, sandy gravel and loamy earth’ (DPIRD 2019). The soil group is identified as moderately permeable soil in elevated landscape positions (as the application area is located within) and are therefore not likely to cause appreciable land degradation in the form of water erosion or waterlogging. Water erosion is one of the key risks following the removal of vegetation within the application area.

Salinity mapping (DPIRD-09) indicates <3% of the Wilyabrup Valley Systems map unit has a moderate to high salinity risk or is presently saline.

Any risk of land degradation will be mitigated through controls applied during clearing and excavation processes (such as dust suppression, mulching, sedimentation control and silt traps as required), and through the stabilisation of the landfill cells and construction of appropriately sized stormwater swales and basins. The application area will be lower than the surrounding landform as material is removed for use on the landfill cells, and as a result is unlikely to cause offsite erosion or destabilisation of the surrounding land. The management of stormwater is an important part of satisfying the required Capping Stability Risk Assessment within the Closure and Post-Closure Management Plan and will be carefully managed by that process, and the required quality assurance reporting.

The proposed clearing is therefore unlikely to cause land degradation and is not likely to be at variance to Principle (g).

8.8 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 in close proximity to any environmentally sensitive areas (ESAs), as shown in **Plate 5** below. While a number of ESAs are nearby, the application area is more than 200 m from these areas (both associated with wetland features) and will not impact on any vegetation within these areas or in close proximity.

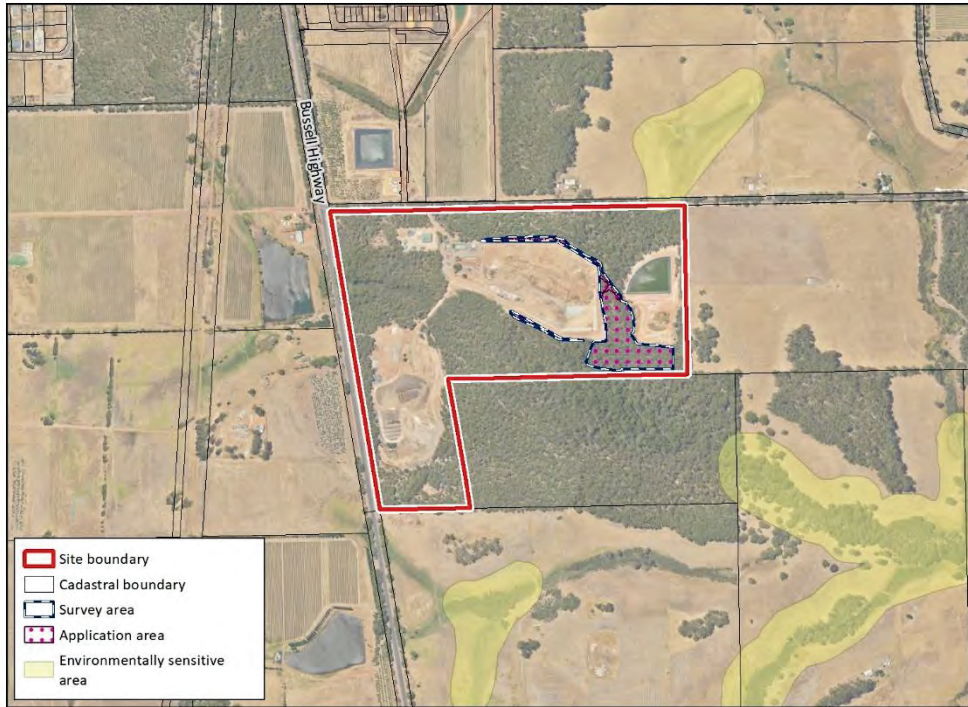


Plate 5: Environmentally Sensitive Areas (ESAs) nearby to the site

No conservation areas are located in close proximity to the site. The nearest is a parks and recreation reserve (associated with the Wadandi Track) 660 m to the west of the site and is separated from the site by existing farmland and Bussell Highway. A state forest is located 2.5 km to the east and is separated from the site by mostly cleared agricultural land. Proximal vegetation protected for conservation is shown in **Figure 7**. Lot 5012 immediately to the south of the site is a reserve managed by the applicant composed of native vegetation, but is vested for sand and gravel extraction.

The proposed clearing will not be at variance to Principle (h). Based on the current footprint of vegetation proposed to be cleared, no portion of an environmentally sensitive area or conservation reserve/areas will be impacted by the clearing of vegetation within the application area.

8.9 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.

Deterioration in quality of surface or underground water can be the culmination of activities that result in sedimentation, increased nutrient levels, changes to pH (through acid sulphate soils), salinity or changes in water regimes of surface and groundwater dependent ecosystems. Groundwater and surface water quality is already closely monitored across the site as part of the Part V licence (L6989/1997/14) for the facility, and is expected to be an ongoing requirement following the licence amendment. The relevant hydrological features (waterways) are depicted in **Figure 8**.

The proposed works relate to the phased capping of the landfill cells within the site, and will require the excavation of restorative soils from a borrow pit and construction of vehicle access and stormwater management infrastructure. The capping of the landfill cells is proposed reduce the volume of leachate generated by the facility (since stormwater will no longer be able to interact with the landfilled material),

with stormwater instead directed over the stabilised landform and via a mix of open and piped drainage structures to a stormwater detention basin that forms part of the proposed works. The detention basin has been sized to accommodate the 5% AEP event.

One of the key risks from the proposed works is the potential deterioration in the quality of surface water through increased erosion and sedimentation during clearing and excavation (including stockpiling and capping processes), and as part of ongoing use and development of the borrow pit (noting the borrow pit will be largely lower than the surrounding vegetation, so run-off is unlikely). No long-term change to the surface or groundwater conditions is likely as part of the phased capping works.

As part of the proposed works, a stormwater detention pond will be constructed to collect stormwater unable to infiltrate into the underlying soil. To minimise the potential for erosion, the structures have been designed to accommodate the likely volume of water that will move through the existing water features and slow stormwater flows prior to discharge to the surrounding area. The soil material placed on top of the landfill cells will be stabilised temporarily by hydromulch and long-term through the planting of shallow rooted native species across the entire landfill surface. Acid sulfate soils (ASS) are not expected to be mobilised by the proposed works, and groundwater and surface water quality monitoring in accordance with the Part V licence for the landfill facility within the site will continue. This monitoring will be able to identify possible changes in water quality, and can support rectification or increased management if required.

If required (and will be based on conditions during construction, particularly if rainfall occurs or is forecast), temporary sedimentation control features will be implemented, including sediment traps (sand bags/filter socks), sedimentation fences, straw bale filters or similar, particularly while borrow pit works are underway.

As outlined in **Section 8.7**, the management of stormwater is a key requirement for the successful implementation of the Capping Stability Risk Assessment within the Closure and Post-Closure Management Plan and will be carefully managed by that process (as part of the Part V licence for the facility), and the required quality assurance reporting. The proposed design accommodates treatments for managing surface water and the potential risks of erosion and associated sedimentation. Issues that could cause a deterioration in water quality within the site have been considered as part of the design detailed in the Closure and Post-Closure Management Plan. The proposed clearing is not considered to be at variance with Principle (i).

8.10 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 detailed in **Section 8.9**, managing stormwater is a key consideration and requirement for the successful implementation of the Closure and Post-Closure Management Plan for the landfill operations within the site. The stormwater infrastructure has been designed to manage the 5% AEP event and will not increase or change pre-development rates at which stormwater leaves the site. The capping of the landfill cell will minimise creation of leachate, which historically has required the construction of large containment infrastructure due to the potential for flooding. The clearing is not associated with any waterways.

The proposed clearing is not considered to be at variance with Principle (j) and is not anticipated to cause or exacerbate the incidence or intensity of flooding.

9 SUMMARY AND CLOSING

The site is 48.73 ha in size and works area associated with the capping contains 2.75 ha of native vegetation that is proposed to be cleared to support the outlined landfill cell capping program. This includes the excavation of restorative soil material from the application area and existing cleared areas within the site.

The application area contains:

- 2.45 ha of the native plant communities **EmCcHh** and **EmCcTo** in ‘very good’ condition.
- 0.21 ha of the native plant community **EMCcHh** in ‘good’ condition.
- 0.09 ha of the native plant community **EMCcHh** in ‘good - degraded’ condition
- Fauna habitat, including:
 - 2.75 ha of high-quality black cockatoo foraging habitat, which would also be suitable for western ringtail possums.
 - 168 black cockatoo habitat trees, none of which were identified to contain suitable hollows.

While 2.75 ha of native vegetation is proposed to be removed, Emerge Associates believe that the proposed clearing can be consistent with the EP Act Clearing Principles, particularly given the broader landscape context for the site which includes extensive areas of protected vegetation of the same vegetation complexes as that within the application area. A summary of the clearing principles has been provided in **Table 4**.

Table 4: Summary of response to each clearing principle

Clearing principle	Response to clearing permit principle
Principle (a)	The application area is in a portion of the state with well represented remaining native vegetation. The vegetation was not identified to contain conservation significant flora species or communities and is associated with well represented vegetation complexes protected for conservation. The native vegetation clearing is not considered to be at variance with this principle.
Principle (b)	The application area contains 2.75 ha of quality foraging and/or refuge habitat for conservation significant fauna, however given the abundance of very similar or better quality vegetation within the site, the bordering lot 5012 to the south (also under the management of the applicant), and broader local area (including large areas protected for conservation purposes), the clearing is not likely to alter the extent to which species would reside in the area. For western ringtail possums, the removal of vegetation from the application area would not fragment or prevent the species from traversing across the site due to the retention of other vegetation and presence of a connected canopy. No suitable black cockatoo breeding habitat was identified nor was roosting observed within the site. The proposed clearing of native vegetation within the application area is not considered to significantly impact fauna species, conservation or other more common species.
Principle (c)	No state or federally listed threatened or priority flora species were identified within the application area or are considered likely to occur.
Principle (d)	No state or federally listed threatened or priority ecological communities were identified within the application area or are considered likely to occur.
Principle (e)	The proposed clearing is associated with an area of vegetation in predominantly very good condition. Based on the South West forest vegetation complexes, the application area comprises 0.068 % of the remaining Wilyabrup W1 complex; 0.001% of the Cowaramup C1 complex, and 0.003% of the Wilyabrup Ww1 complex, and therefore the clearing represents a small proportion of the remaining vegetation for each (less than 1%) and would not significantly change the remaining extent.
Principle (f)	No Ramsar wetlands, geomorphic wetlands or other wetlands were identified within or in close proximity to the application area based on a review of publicly available databases. While the EmCcTo plant community transitions to the adjacent riparian vegetation to the south-west, clearing of this vegetation is not considered to be at variance with Principle (f). The clearing of this vegetation can be managed through the construction of the proposed stormwater management infrastructure, to manage impacts on the watercourse further to the south-west.

Table 4: Summary of response to each clearing principle (continued)

Clearing principle	Response to clearing permit principle
Principle (g)	The proposed clearing will not cause appreciable land degradation in the form of water erosion or waterlogging, due to the underlying moderately permeable soil in an elevated landscape. Water erosion and sedimentation is the main risk for the clearing area and can be mitigated through controls required as part of implementing the Closure and Post-Closure Management Plan, which will be a condition of the Part V licence for the landfill facility.
Principle (h)	The clearing of vegetation in the application area is not located in an ESA and will not remove vegetation associated with any ESAs or conservation areas.
Principle (i)	The proposed clearing is not considered to pose a risk in terms of the deterioration of surface or groundwater given the requirements of the Capping Stability Risk Assessment, with management of surface water and improving water quality a key consideration from this assessment and addressed through the Closure and Post-Closure Management Plan. There is an ongoing requirement for the monitoring of surface water and groundwater as part of the Part V licence. The proposed design accommodates treatments for managing surface water and potential risks of erosion and sedimentation (which are the main considerations associated with addressing this principle).
Principle (j)	The proposed clearing is not likely to cause or exacerbate the risk of flooding given the management of stormwater is a key consideration and requirement for successful implementation of the Closure and Post-Closure Management Plan under the Part V licence, and the stormwater infrastructure has been designed to manage 5% AEP event.

Clearing activities will 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, and managing site works to prevent the spread of weeds and dieback into areas of retained vegetation.

Fauna species will be allowed to move into the areas of retained vegetation within the site and adjacent Lot 5012 which is under the management of the applicant. Stormwater management (and potential associated land degradation) is a key design consideration for the landfill closure plan and is factored in as part of the clearing within the site and required to be satisfactorily addressed in order to ensure long-term stability of the capped landfill cells.

Revegetation of the capped landfill cell will contribute to returning biodiversity and fauna habitat compared to the current bare mineral earth areas, but will be limited to lower growing vegetation (due to managing the long-term viability of the landfill capping).

Thank you for your consideration of this application. Should you have any questions regarding the content of this letter, please do not hesitate to contact the undersigned on 9758 8159.

Yours sincerely
Emerge Associates



Kirsten Knox
PRINCIPLE ENVIRONMENTAL CONSULTANT

cc: Chris Yates -- Shire of Augusta Margaret River
Simon Woodward -- Shire of Augusta Margaret River

Encl: Figure 1: Location of Site and Application Area

Figure 2: Plant Communities

Figure 3: Vegetation Condition

Figure 4: Fauna Habitat

Figure 5: Black Cockatoo Habitat trees

Figure 6: Black Cockatoo Habitat Context

Figure 7: Protected Vegetation in Proximity to the Site

Figure 8: Soils and Hydrology

Related documents:

Attachment 1: Signed clearing permit application (Form C1)

Attachment 2: Clearing principles letter (this document)

Attachment 3: Detailed Flora and Vegetation Assessment – Part Lot 5011 Davis Road, Forest Grove

Attachment 4: Basic Fauna and Targeted Black Cockatoo Assessment – Part Lot 5011 Davis Road, Forest Grove

Attachment 5: Certificate of Title

Attachment 6: Landfill cell and borrow pit summary plan

Attachment 7: Aboriginal heritage survey

Digital shape file of application area – provided with email.

10 REFERENCES

10.1 General References

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Keighery, B. 1994, *Bushland Plant Survey: A guide to plant community survey for the community*, Wildflower Society of WA (Inc), Nedlands.

Shire of Augusta Margaret River 2024, *Local Planning Scheme 1 map* Western Australia

<<https://www.amrshire.wa.gov.au/planning-and-building/local-planning-and-mapping/property-mapping-and-zoning>>.

10.2 Online References

The online resources that have been utilised in the preparation of this report are referenced in **Section Error! Reference source not found.**, with access date information provided in **Table R 1**.

Table R 1 Access dates for online references

Reference	Date accessed	Website or dataset name
(DBCA 2019)	3 June 2024	Vegetation Complexes – South West Forest region
(DPIRD 2018a)	3 June 2024	Pre-European Vegetation
(DPIRD 2020)	3 June 2024	Native Vegetation Extent
(DWER 2018a)	3 June 2024	Clearing Regulations Environmentally Sensitive Areas
(Shire of Augusta Margaret River 2024)	27 May 2024	Shire of Augusta Margaret River Local Planning Scheme 1 map
(DWER 2018b)	4 June 2024	Hydrography Linear
(DBCA 2017)	4 June 2024	Ramsar Sites

Figures



Figure 1: Location of Site and Application Area

Figure 2: Plant Communities

Figure 3: Vegetation Condition

Figure 4: Fauna Habitat

Figure 5: Black Cockatoo Habitat trees

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Figure 7: Protected Vegetation in Proximity to the Site

Figure 8: Soils and Hydrology



Figure 1: Location of Site and Application Area

Project: Clearing Permit Application
Part Lot 5011 Davis Road, Forest Grove
Shire of Augusta Margaret River

Client: Shire of Augusta Margaret River

Plan Number: EP23-108(04)-F13
Drawn: CTH
Date: 26/06/2024
Checked: DTA
Approved: KK
Date: 02/06/2024

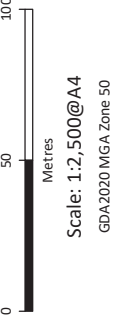
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GDA2020 MGA Zone 50

emerge ASSOCIATES

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- Site boundary
- Cadastral boundary
- Survey area
- Application area
- Sample
- Vegetation unit
- EmCGHh (1.84 ha)
- EmCCTo (0.91 ha)
- Non-native (0.27 ha)



Plan Number: EP23-108(04)-F14
 Drawn: CTH
 Date: 26/06/2024
 Checked: DIA
 Approved: KK
 Date: 02/06/2024

Figure 2: Plant Communities

Project: Clearing Permit Application
 Part Lot 5011 Davis Road, Forest Grove
 Shire of Augusta Margaret River

Client: Shire of Augusta Margaret River

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Figure 3: Vegetation Condition

Project: Clearing Permit Application
Part Lot 5011 Davis Road, Forest Grove
Client: Shire of Augusta Margaret River

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0 50 100
Metres
Scale: 1:2,500@A4
GDA2020 MGA Zone 50

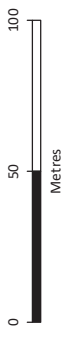


Plan Number:
EP23-108(04)-F16
Drawn: CTH
Date: 26/06/2024
Checked: DTA
Approved: KK
Date: 02/06/2024

Figure 4: Fauna Habitat

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Part Lot 5011 Davis Road, Forest Grove
Client: Shire of Augusta Margaret River

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GDA2020 MGA Zone 50

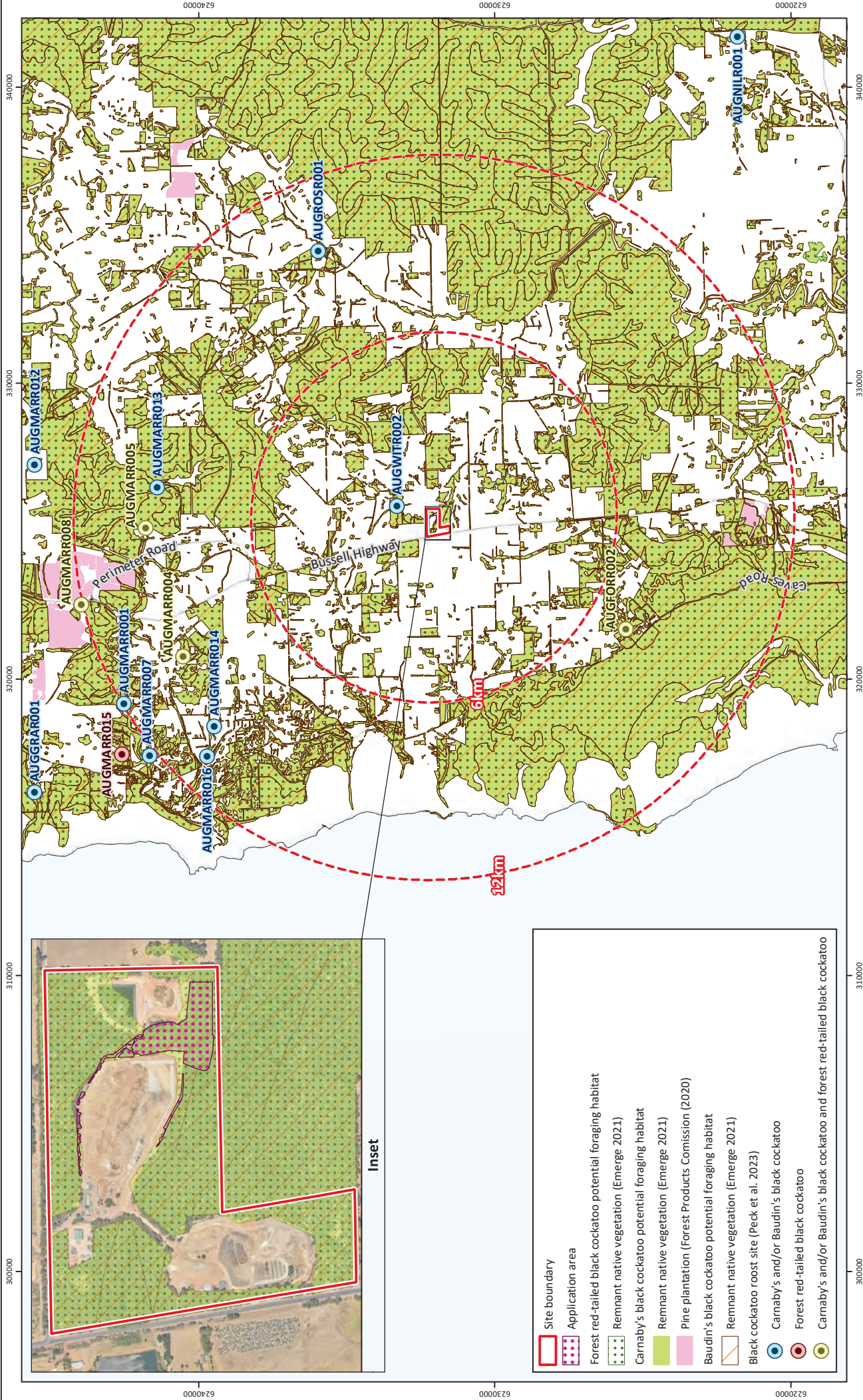


Plan Number: EP23-108(04)-F17
Drawn: CTH
Date: 26/06/2024
Checked: DIA
Approved: KK
Date: 02/06/2024

Figure 5: Black Cockatoo Habitat trees

Project: Clearing Permit Application
Part Lot 5011 Davis Road, Forest Grove
Client: Shire of Augusta Margaret River

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Inset

- Site boundary
- Application area
- Forest red-tailed black cockatoo potential foraging habitat (Emerge 2021)
- Remnant native vegetation (Emerge 2021)
- Carnaby's black cockatoo potential foraging habitat
- Remnant native vegetation (Emerge 2021)
- Pine plantation (Forest Products Commission (2020))
- Baudin's black cockatoo potential foraging habitat
- Remnant native vegetation (Emerge 2021)
- Black cockatoo roost site (Peck et al. 2023)
- Carnaby's and/or Baudin's black cockatoo
- Forest red-tailed black cockatoo
- Carnaby's and/or Baudin's black cockatoo and forest red-tailed black cockatoo

Figure 6: Black Cockatoo Habitat Context

Plan Number: EP23-108(04)-F18
 Drawn: CTH
 Date: 26/06/2024
 Checked: DTA
 Approved: KK
 Date: 02/06/2024



0 2 4 6
 Kilometers
 Scale: 1:170,000@A4
 GDA 2020 MGA Zone 50



Project: Clearing Permit Application
 Part Lot 5011 Davis Road, Forest Grove
 Shire of Augusta Margaret River

Client:

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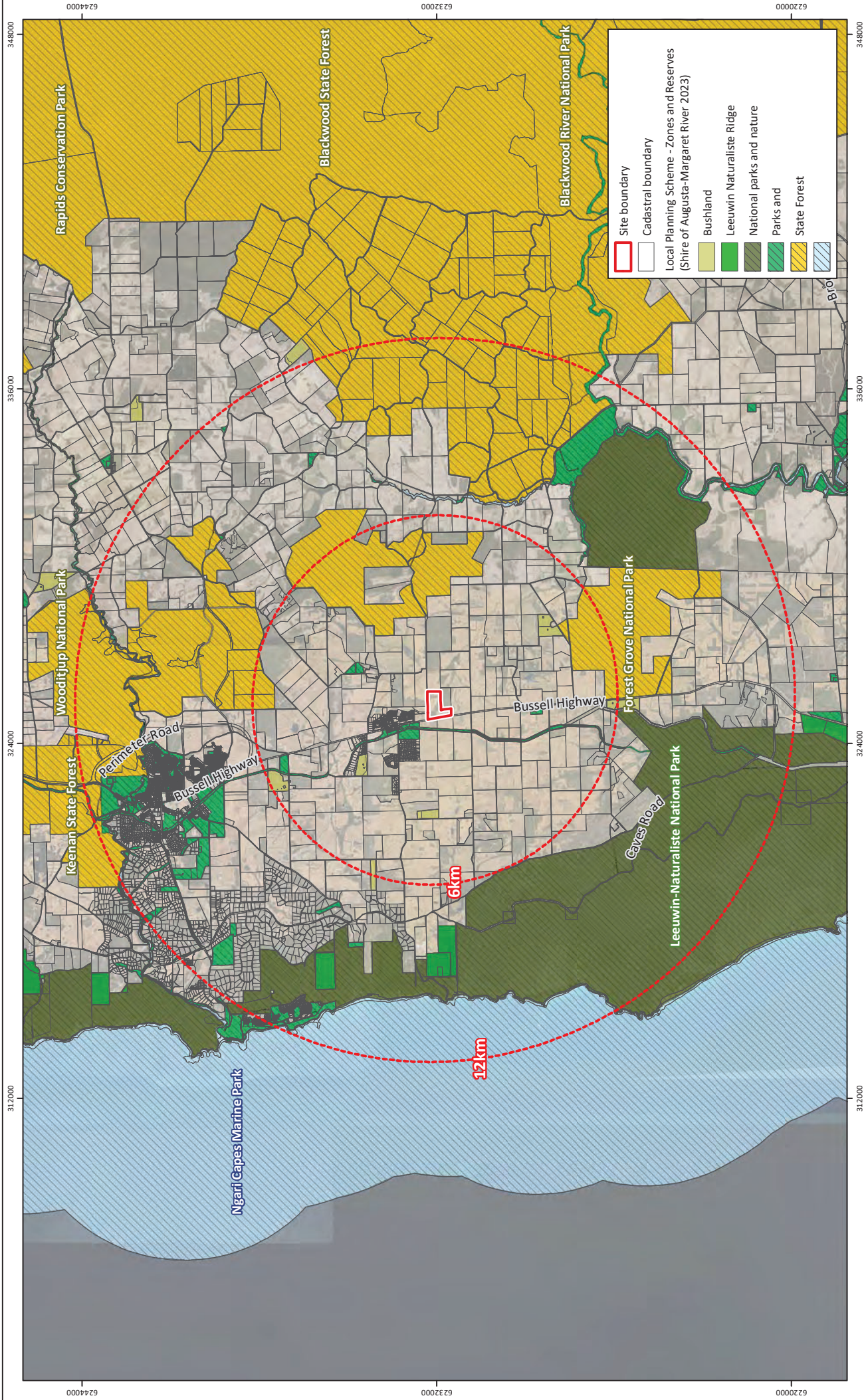
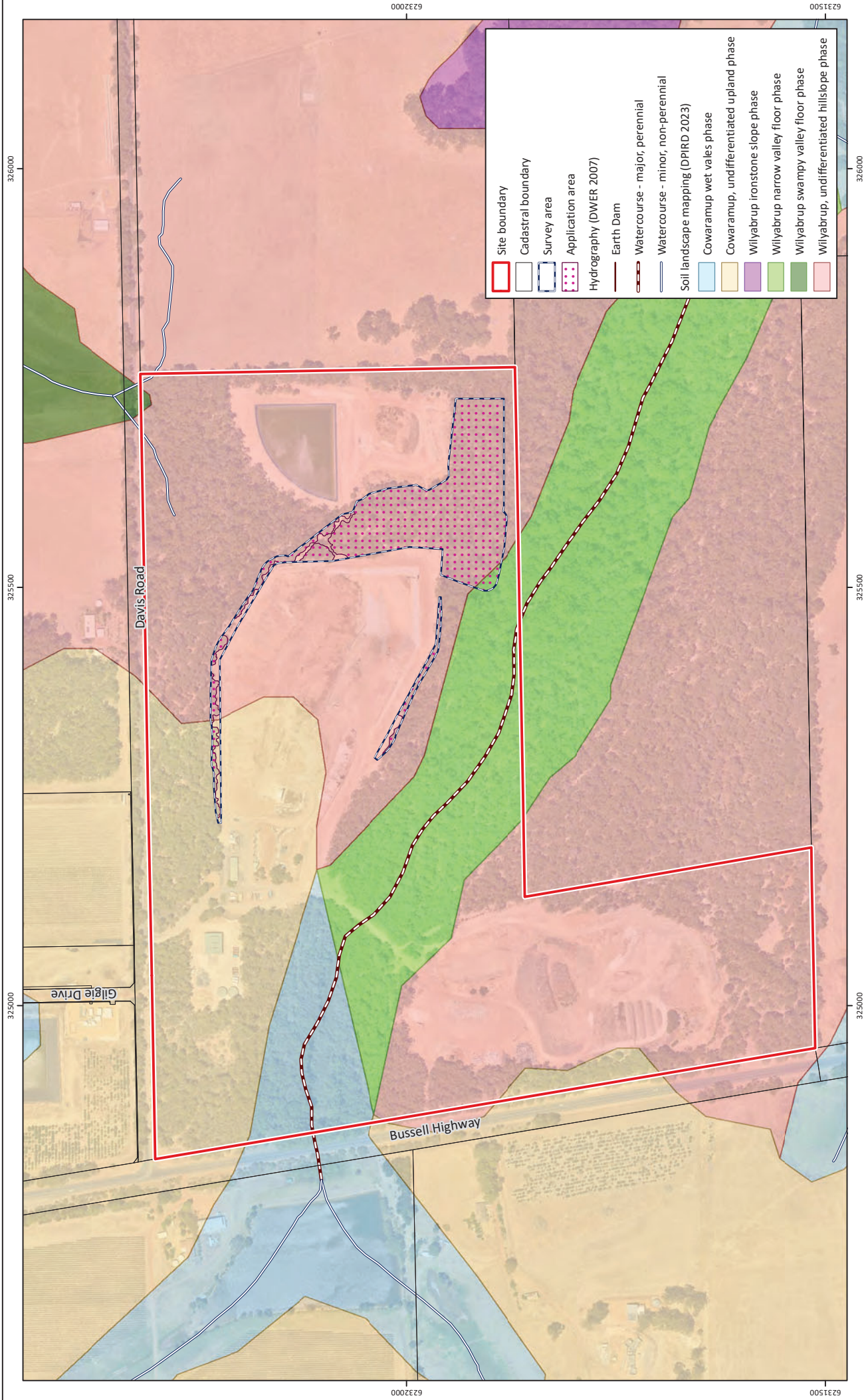


Figure 7: Protected Vegetation in Proximity to the Site

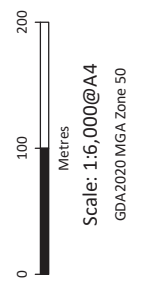
Project: Clearing Permit Application
 Part Lot 5011 Davis Road, Forest Grove
 Shire of Augusta Margaret River

Client: Shire of Augusta Margaret River

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	Site boundary
	Cadastral boundary
	Survey area
	Application area
	Hydrography (DWER 2007)
	Earth Dam
	Watercourse - major, perennial
	Watercourse - minor, non-perennial
	Soil landscape mapping (DPIRD 2023)
	Cowaramup wet vales phase
	Cowaramup, undifferentiated upland phase
	Wilyabrup ironstone slope phase
	Wilyabrup narrow valley floor phase
	Wilyabrup swampy valley floor phase
	Wilyabrup, undifferentiated hillslope phase



Plan Number: EP23-108(04)-F20
Drawn: CTH
Date: 26/06/2024
Checked: DTA
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Date: 02/06/2024

Figure 8: Soils and Hydrology

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Client: Shire of Augusta Margaret River

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