REHABILITATION OFFSET MANAGEMENT PLAN (EPBC 2006/2834)

PORTION LOTS 217 - 219 BUSSELTON BYPASS, VASSE (BROADWATER NATURE RESERVE)



Prepared for: RAY VILLAGE AGED SERVICES INCORPORATED T/A CAPECARE 20 RAY AVENUE BUSSELTON WA 6280

Report Date: 6 December 2017 Document No. RVA292_43_V6

PO BOX 138 NORTH FREMANTLE WA 6159 | M: 0447 366 460 | E: admin@endplanenvironmental.com.au | R

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1. To the best of my knowledge, all the information contained in, or accompanying this Rehabilitation Offset Plan is complete, current and correct.

2. I am duly authorised to sign this declaration on behalf of the approval holder.

3. I am aware that:

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Full name: STEPHEN FREDERIC BUSSELL CARMODY

Organisation: RAY VILLAGE AGED SERVICES INCORPORATED TRADING AS CAPECARE

Date: 6 DECEMBER 2017

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1. INTRODUCTION

Ray Village Aged Services (Inc.) trading as Capecare (Capecare) proposes to develop Lot 600 Naturaliste Terrace, Dunsborough (development area) as an aged care facility.

The development area is situated within the municipal boundary of the City of Busselton and is located approximately 500 m north of the business centre of the town of Dunsborough. The development area is bounded by Armstrong Place to the south, Gifford Road to the east and Naturaliste Terrace to the west (refer to **Figure 1**).

Previously comprising Lots 111, 115, 116, 117 Naturaliste Terrace and a 9994 m² portion of Lot 257 Naturaliste Terrace (**Figure 2**), in accordance with the Western Australian *Town Planning and Development Act 2005*, rezoning of the development area has been undertaken resulting in the amalgamation of the previous lots into a single lot (Lot 600 on Deposited Plan 403383 Armstrong Place, Dunsborough). Lot 600 is now the legal responsibility of Capecare and will be retained as one Title in perpetuity. The remainder of Armstrong Reserve has subsequently been gazetted into three separate lots: the City of Busselton will retain the vesting of Reserve 25339 (Lots 3000 and 601) for the purpose of 'Landscape Protection', while the Department of Water and Environmental Regulation (DEWR) will retain the vesting of Reserve 40445 (Lot 258) for the purpose of 'Drainage' (refer to **Appendix 1**).

1.1 Purpose and Scope

This Rehabilitation Offset Management Plan (ROMP) has been commissioned by Capecare to fulfil the requirements of **Condition 5** of the conditions of approval for EPBC 2006/2834 as varied on 18 October 2017 (refer to **Appendix 2**).

The ROMP will be implemented within the designated offset site which comprises a portion of Lots 217 - 219 (on Deposited Plan 4918 / Volume 1918 / Folio 406) Busselton Bypass, Vasse (offset site) situated within the Dunsborough region (refer to **Figure 3**). The offset site is vested in the Western Australian Conservation and Parks Commission and the Department of Biodiversity Conservation and Attractions (DBCA)¹ and forms part of the Broadwater Nature Reserve (refer to **Figure 4**).

The ROMP identifies rehabilitation strategies, management actions, monitoring activities, contingency measures, auditing and reporting requirements to be undertaken to satisfy Condition 5 of the EPBC 2006/2834, as varied (refer to **Appendix 2**).

Table 1 (over the page) details the requirements of Condition 5 and the section(s)/table(s) of the ROMP in which the requirement is addressed.

¹ Previously the Department of Parks and Wildlife (DPaW)

TABLE 1EPBC 2006/2834 APPROVAL CONDITION 5 AND WHERE THE REQUIREMENTS ARE ADDRESSED INTHE ROMP

CONDITION No.	REQUIREMENT	SECTION OF REPORT
5	To offset the impacts of the action on the Western Ringtail Possum, the person taking the action must prepare and submit a Rehabilitation Offset Management Plan (ROMP). The ROMP must be prepared in consultation with the Western Australian Department of Biodiversity Conservation and Attractions (DBCA) and must:	Evidence of consultation with DBCA is included in accompanying documents (refer to Appendix 3).
a.	specify an offset site of at least 1 ha in size within the area shown at <u>Attachment B</u> ;	Refer to Appendix 2, Section 1.1 and Figure 3.
b.	provide for the planting of at least 2,500 Peppermint trees (<i>Agonis flexuosa</i>) per hectare within the offset site;	The proposed species and densities to be planted are identified in Tables 4 and 5 and Section 3 .
с.	include a methodology for ensuring a survival rate of 80% of the 2,500 Peppermint trees is maintained per hectare 5 years after planting;	Methodology is detailed in Section 4 . Objectives, targets and indicators are detailed in Tables 4 and 6 . Completion criteria are detailed in Section 3.3 . Timeframes for the implementation and completion of the above measures / programs /reporting are detailed in Section 4.8 and Tables 6 and 7 .
d.	describe monitoring and contingency measures if the survival rate (item c) is not met; and	Refer to Section 5, Chart 3 and Table 7.
e.	contain measures to minimise human access, and the impacts of herbivores, unplanned fire, weeds and Dieback (<i>Phytophthora cinnamomi</i>) within 3 years following commencement of rehabilitation works.	Refer to Section 4.

1.2 Project Overview

1.2.1 Approval

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), sets out the way in which the Commonwealth Government regulates the environmental impacts of projects or 'actions'. An 'action' is defined broadly in the EPBC Act and includes a project, a development, an undertaking, an activity or series of activities, or an alternation of any of these things (Commonwealth of Australia, 2009).

On the 30 May 2006, Capecare referred a proposal to develop an aged care facility at Armstrong Reserve, Naturaliste Terrace, Dunsborough, Western Australia to the then Commonwealth Department of the Environment and Heritage (now the Department of the Environment and Energy - DotEE) for a decision as to whether or not an approval was required under Chapter 4 of the EPBC Act.

On the 28 June 2006, Capecare was advised that the proposal was determined to be a 'Controlled Action' due to potential impacts on the *Pseudocheirus occidentalis* (Western Ringtail Possum). The

Western Ringtail Possum was, at the time of the referral decision, listed as 'Vulnerable' under the EPBC Act and as 'Critically Endangered' under the Western Australian *Wildlife Conservation Act 1950*.

An Approval for the proposed action, made under sections 130(1) and 133 of the EPBC Act, was issued to Capecare on the 25 February 2013. The Approval decision, which has effect until the 31 December 2021², related to the Controlling Provision being listed threatened species and communities (sections 18 and 18A) and was subject to 13 conditions (refer to **Appendix 4**). Condition 5 required Capecare to provide an environmental offset in lieu of the clearing of approximately 9,020 m² of Western Ringtail Possum habitat within the development area.

An environmental offset is a conservation action that compensates for the negative environmental impacts of an action, such as a development. Under the EPBC Act environmental offsets policy, offsets should directly correlate to the impact of a proposed action (Commonwealth of Australia, 2012).

Following further consultation with the DotEE regarding the environmental complexities of the offset site, and with respect to the request by the DBCA that Capecare undertake additional overstorey and understorey planting across all landscape elements of the offset site, a delegate of the Federal Minister for the Environment and Energy varied the Conditions of Approval on the 18 October 2017 (refer to **Appendix 2**).

1.2.2 Project Components

Capecare proposes to develop the 1.28 ha development area that is to be zoned "Special Purposes -Aged Persons Housing" under the City of Busselton's (City) Local Planning Scheme No. 21. The remainder of Armstrong Reserve has been gazetted as Lots 3000 and 601 Naturaliste Terrace (Reserve 25229) for the purpose of 'Landscape Protection' vested in the City of Busselton and Lot 258 (Reserve 40445) for the purpose of 'Drainage' vested in the Department of Water and Environmental Regulation (refer to **Appendix 1**).

While approximately 4,332 m^2 of the development area has historically been cleared, a further 9,020 m^2 area of Western Ringtail Possum habitat will be required to be cleared to enable construction of the aged care facility. To compensate for the removal of this area of habitat, rehabilitation of 1 ha of degraded Western Ringtail Possum habitat is required to be undertaken at the designated offset site (refer to **Figure 3**).

Since the EPBC Act Approval was issued, Capecare has liaised with the DotEE and the DBCA with respect to the requirements of Condition 5. Given that the offset site is vested in the DBCA, specific revegetation requirements have been requested by the DBCA to be implemented. The requirements are identified in **Section 4.5.4**.

² Capecare has applied to the Minister for a variation to the implementation period of the Approval requesting that it be extended to 2025 to enable completion of the management period of this ROMP.

1.3 Definitions

Department: Is the Australian Government Department administering the EPBC Act 1999.

DBCA: The Western Australian Department of Biodiversity Conservation and Attractions (or equivalent agency).

DWER: The Western Australian Department of Water and Environmental Regulation.

Minister: Is the Minister administering the EPBC Act 1999 and includes a delegate of the Minister.

Proposed development footprint: The area identified as '*Proposed Development Footprint*' at Attachment A of the EPBC Act Approval (refer to **Appendix 2**).

Rehabilitation: Acknowledges that vegetation has been permanently altered, but seeks to return a native plant community that has elements that are compatible with surrounding vegetation.

Revegetation: The planting or direct seeding of native species in areas that have been cleared or highly modified.

Weed: Any plant species (native or more frequently exotic to a region) which has the potential to impact on the ecology of a natural area.

2. ENVIRONMENTAL SETTING

The offset site is located on the southern portion of the Swan Coastal Plain; a narrow plain approximately 30 km wide extending from Jurien Bay in the north to almost Cape Naturaliste in the south. The land is associated with the flat, inland Yoongarillup Plain that is characterised by low ridges and swales with a thin cover of siliceous sands over limestone (Churchward and McArthur, 1980).

2.1 Climate

The Dunsborough region experiences a Mediterranean climate with warm, dry summers and mild, wet winters. High-pressure cells dominate climatic patterns during summer and the passage of cold fronts and associated low-pressure cells dominate during winter.

Data included in **Tables 2 and 3**, and shown pictorially on **Charts 1 and 2** have been obtained from the Bureau of Meteorology's (BOM) Busselton Aero Weather Station (Site No. 009603) located at the Busselton Airport, the closest weather station to the offset site (Bureau of Meteorology, 2017).

2.1.1 Rainfall

The long-term (1997-2016) mean annual rainfall is 657.5 mm, with the lowest monthly total of 4.4 mm recorded in February and the highest (133.8 mm) recorded in July. During 2016, the total rainfall recorded was 781.4 mm which is considerably above the long-term mean annual rainfall. The lowest monthly rainfall for 2016 was 4.8 mm (November) and the highest monthly total was 181.0 mm (July) (refer to **Table 2 and Chart 1**). Rainfall events, particularly in terms of intensity, are irregular and characterised by a winter maximum which results from rain-bearing low pressure cells crossing the south-west coastal area.

STATISTIC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean Rainfall (mm) for years 1997-2016	12.9	4.4	19.2	34.0	99.8	127.9	133.8	105.7	77.8	30.2	23.6	9.1	657.5
Rainfall (mm) 2016	64.4	5.0	44.0	41.2	90.2	112.2	181.0	133.0	58.4	37.4	4.8	9.8	781.4

TABLE 2RAINFALL DATA RECORDED AT BUSSELTON AERO WEATHER STATION

Source: Bureau of Meteorology (2017)

REHABILITATION OFFSET MANAGEMENT PLAN (EPBC 2006/2834) PORTION LOTS 217 - 219 BUSSELTON BYPASS, VASSE (BROADWATER NATURE RESERVE)

Mean rainfall (mm) 009603 Highest rainfall (mm) 250 200 150 100 50 Ø Feb Jan Mar Арг Hay Jun Jul Aug Sep Oct Nov Dec Month 🗖 009603 Mean rainfall (mm) 009603 Highest rainfall (mm) Australian Government Bureau of Meteorology

Location: 009603 BUSSELTON AERO

CHART 1: Monthly mean rainfall (mm) recorded at the Busselton Aero Weather Station (long-term and 2016).

2.1.2 Temperature

The long-term data (1997-2016) for mean daily temperature shows a mean maximum temperature of 30.2° C in January/February and a mean minimum temperature of 7.2° C in July (refer to **Table 3 and Chart 2**). During 2016, a mean maximum temperature of 14.6° C was recorded in February with the mean minimum temperature of 7.2° C recorded in July.

TABLE 3 TEMPERATURE DATA RECORDED AT BUSSELTON AERO WEATHER STATION

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
im 30.2	30.2	27.9	24.0	20.5	17.8	16.8	17.3	18.3	21.3	25.0	27.9
ars											
im 14.3	14.6	13.3	11.0	9.1	7.6	7.2	7.7	8.6	10.7	12.3	10.3
ars											
	Jan 30.2 ars 14.3 ars	Jan Feb um 30.2 30.2 ars	Jan Feb Mar um 30.2 30.2 27.9 ars 14.3 14.6 13.3 ars 14.3 14.6 13.3	Jan Feb Mar Apr um 30.2 30.2 27.9 24.0 ars 14.3 14.6 13.3 11.0	Jan Feb Mar Apr May um 30.2 30.2 27.9 24.0 20.5 ars 14.3 14.6 13.3 11.0 9.1	Jan Feb Mar Apr May Jun um 30.2 30.2 27.9 24.0 20.5 17.8 ars 14.3 14.6 13.3 11.0 9.1 7.6	Jan Feb Mar Apr May Jun Jul um 30.2 30.2 27.9 24.0 20.5 17.8 16.8 ars 14.3 14.6 13.3 11.0 9.1 7.6 7.2	Jan Feb Mar Apr May Jun Jul Aug um 30.2 30.2 27.9 24.0 20.5 17.8 16.8 17.3 ars 14.3 14.6 13.3 11.0 9.1 7.6 7.2 7.7	Jan Feb Mar Apr May Jun Jul Aug Sep um 30.2 30.2 27.9 24.0 20.5 17.8 16.8 17.3 18.3 ars 14.3 14.6 13.3 11.0 9.1 7.6 7.2 7.7 8.6	Jan Feb Mar Apr May Jun Jul Aug Sep Oct um 30.2 30.2 27.9 24.0 20.5 17.8 16.8 17.3 18.3 21.3 ars 14.3 14.6 13.3 11.0 9.1 7.6 7.2 7.7 8.6 10.7	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov um 30.2 30.2 27.9 24.0 20.5 17.8 16.8 17.3 18.3 21.3 25.0 ars 14.3 14.6 13.3 11.0 9.1 7.6 7.2 7.7 8.6 10.7 12.3

Source: Bureau of Meteorology (2017)



Location: 009603 BUSSELTON AERO

CHART 2: Mean Maximum and Minimum Temperatures (°C) Recorded at the Busselton Aero Weather Station (2016).

2.2 Geology and Soils

The offset site is located at the southern extremity of the Swan Coastal Plain which is bounded by the Whicher Scarp to the south and Geographe Bay to the north. This area is thought to have originally comprised relatively low sand drifts that have been flattened as a result of long-term pastoral use (Tille and Lantzke, 1990).

The regional geology of the Busselton-Capel area is dominated by a Cretaceous sedimentary sequence that was deposited within a major graben structure in the southern Perth Basin. The stratigraphy underlying the offset site comprises the Leederville Formation unconformably overlying Permian deposits and comprises a sequence of onshore fluviatile (river) and paludal (wetland) deposits (sediments) that are essentially flat-lying with a gentle slope to the north and have a thick weathering profile, up to about 25 m thick (Department of Water, 2008).

The soils-landscaping mapping for the general area (Department of Agriculture and Food WA, 2008) identifies the area of the offset site as belonging to the Spearwood Dunes System characterised by low relief dunes generally <10 m in elevation. The offset site forms part of the Vasse Wonnerup Subsystem and is comprised of three distinct sub-units:

- **211VaWOwy** located in the northern half described as Vasse Wonnerup very wet saline flats; Phase Wet and Semi-wet soils and Saline wet soils;
- **211SpLD1** located in the southern half described as Ludlow flats Phase Yellow and Brown DotEp sands; and
- **211VaWOw** located in the north-western portion described as Vasse Wonnerup wet flats Phase Semi-wet and Wet soils with some Saline 48274827wet soils and Pale DotEp sands.

Figure 5 identifies the location of each of the soil-landscape units.

2.3 Wetlands

The *Geomorphic Wetlands Swan Coastal Plain* dataset displays the location, boundary, geomorphic classification (wetland type) and management category of wetlands on the Swan Coastal Plain (Department of Environment and Conservation, 2012) viewable online using the Government of Western Australia's WA Atlas (2017).

A conservation wetland (UFI 13156), part of the Broadwater wetland system is located to the north of the offset site and a multiple use wetland (UFI 13195) is located across the northern half of the offset site (refer to **Figure 6**).

2.4 Vegetation

2.4.1 Biogeographic Region

The site is located within the Swan Coastal Plain (SWA) Region under the Interim Biogeographic Regionalisation of Australia (IBRA7) codes and in the Swan Coastal Plain 02 (SWA02) subregion that is characterised by a low-lying coastal plain, mainly covered by woodlands (Government of Australia, 2012).

2.4.2 Vegetation Complex

The offset site is located within the Karrakatta Complex - Central and South (Heddle *et al.,* 1980) and the Ludlow Units (LW) and (L) (Mattiske and Havell, 1998).

2.4.3 Vegetation Type and Condition

The dominant plant community in the adjacent reserve comprises a Low Forest dominated by *Eucalyptus rudis* subsp. *rudis* and *Melaleuca rhaphiophylla* with scattered *Agonis flexuosa* over a degraded understorey comprising a dense cover (>70%) of *Zantedeschia aethiopica* (Arum Lily).

On-site, the vegetation comprises one mature *Agonis flexuosa* tree, one mature *Eucalyptus rudis* tree, and scattered *Melaleuca rhaphiophylla* trees, while the native understorey strata have been totally removed as a result of historical grazing and replaced by a dense cover (>70%) of annual pasture grasses and weeds (refer to **Section 2.5**).

The condition of remnant vegetation across the site was assessed using the condition rating scale of Keighery published in *Bush Forever* (Government of WA, 2000) that ranges from Pristine (which means

that the vegetation exhibits no visible signs of disturbance) to Completely Degraded (where the vegetation structure is no longer intact and without native plant species). While vegetation fringing the northern boundary of the offset site (within the multiple use wetland) is in a Good to Degraded condition, the entire offset site has been cleared for annual pasture and the vegetation condition is rated as Completely Degraded³.

Due to the degree of clearing undertaken within the offset site to provide annual pasture for cattle grazing, the vegetation was unmappable for *Phytophthora* dieback.

2.5 Weeds

Environmental weeds include those listed as Declared Plants under the Government of Western Australia's *Agriculture and Related Resources Protection Act 1976*. Declared Plants require a varying degree of control, depending upon their rating in the district in which they are encountered (Government of Western Australia, 2009; Department of Agriculture and Food Western Australia, 2017a and 2017b).

The following 41 introduced species were observed during a late September 2017 site visit:

- Amaranthus albus (Tumbleweed)
- Avena barbata (Bearded Oat)
- Arctotheca calendula (Cape Weed)
- Briza minima (Shivery Grass)
- Bromus diandrus (Great Brome)
- Carduus tenuiflorus (Slender Thistle)
- Cenchrus clandestinus (Kikuyu Grass)
- Conyza bonariensis (Flaxleaf Fleabane)
- Cynodon dactylon (Couch Grass)
- Disa bracteata (African Orchid)
- Dittrichia graveolens (Stinkwort)
- Ehrharta longiflora (Annual Veldt Grass)
- Euphorbia peplus (Petty Spurge)
- Geranium molle (Doves foot Geranium)
- Holcus lanatus (Yorkshire Fog)
- Hypochaeris glabra (Flatweed)
- Lolium rigidum (Wimmera Ryegrass)
- Lotus angustissimus (Narrowleaf Trefoil)
- Lupinus cosentinii (Western Australian Blue Lupin)
- Lythrum hyssopifolia (Lesser Loosestrife)
- Malva parviflora (Marshmallow)
- *Medicago polymorpha* (Burr Medic)
- Melilotus indicus (King Island Melilot)
- Mentha pulegium (Pennyroyal)
- Oxalis pes-caprae (Soursob)
- Romulea rosea (Guildford Grass)
- Rumex acetosella (Sorrel)

³ The structure of the vegetation is no longer intact and the area is completely or almost completely without native species.

- Rumex crispus (Curled Dock)
- Rumex hypogaeus (Doublegee)
- Solanum nigrum (Deadly Nightshade)
- Sonchus asper (Rough Sowthistle)
- Sonchus oleraceus (Common Sowthistle)
- Sparaxis bulbifera (Sparaxis)
- Spergularia rubra (Sand Spurry)
- Stellaria media (Common Chickweed)
- Stenotaphrum secundatum (Buffalo Grass)
- Symphyotrichum squamatum (Bushy Starwort)
- Trifolium fragiferum (Strawberry Clover)
- Trifolium lappaceum (Burr Clover)
- Vulpia myuros (Rat's Tail Fescue)
- Zantedeschia aethiopica (Arum Lily)

Zantedeschia aethiopica (Arum Lily) is a listed as a Declared Pest in Western Australia. It occurs as scattered plants within the offset site; these plants can be easily removed prior to commencing rehabilitation. However, the larger risk is posed from the adjacent Broadwater Nature Reserve where there has been no management of Arum Lily for an extended period, and the Declared Pest now provides a seasonal cover of 95 percent. This loading significantly increases the risk of spread into the neighbouring offset site and threatens the sustainability of the native revegetation cover in the event that it continues to be unmanaged.

2.6 Fauna

2.6.1 Fauna Habitats

The adjacent Broadwater Nature Reserve supports a Low Forest dominated by *Eucalyptus rudis* subsp. *rudis* and *Melaleuca rhaphiophylla* with scattered *Agonis flexuosa* over a degraded understorey comprising a dense cover (>70%) of *Zantedeschia aethiopica* (Arum Lily). There is evidence of crown decline within the dominant canopy species, *Eucalyptus rudis* subsp. *rudis* (Flooded Gum). The offset site comprises annual pasture which currently provides limited value in terms of fauna habitat, other than for kangaroo grazing.

2.6.2 Conservation Significant Fauna

Habitat parameters affecting the distribution of the Western Ringtail Possum (*Pseudocheirus occidentalis*) are well known with the population on the Swan Coastal Plain predominantly located in the coastal strip between Bunbury and Albany (extending inland in riparian habitat between the Collie and Blackwood Rivers), and in the Upper Warren region. Habitat is associated with stands of myrtaceous trees (usually Peppermint Tree [*Agonis flexuosa*]) growing near the coast, swamps, watercourses or floodplains, and at topographic low points which provide cooler, often more fertile conditions (Department of the Environment, 2015c).

The area lies within the known distribution of the Ringtail Possum (*Pseudocheirus occidentalis*) in the Dunsborough to Bunbury Zone, and habitat within the Broadwater Nature Reserve is mapped as high quality for the species. Lots 217 – 219 provide a small and discrete area suitable to meeting the offset conditions required by Capecare, and would further enhance a previous Western Ringtail Possum

habitat creation offset implemented by Main Roads Department along the Busselton Bypass Road (Kim Williams, Parks and Wildlife Service, DBCA, pers. comm. 31 October 2017).

2.7 Pests

2.7.1 Introduced

The following introduced pest species are likely to inhabit or range through the offset site: *Vulpes vulpes* (European red fox), *Oryctolagus cuniculus* (feral European rabbit), and *Felis catus* (feral or semi-domestic cat).

The European red fox is an opportunistic predator and scavenger and has been recognised as a serious threat to Australian native fauna. Fox population densities may range from 0.2 to 12 adults per km² with fox groups having well defined home ranges with stable borders; the size of the home range averaging approximately 30 ha in urban areas (Animal Pest Management Services, 2017).

Feral rabbits are nocturnal grazers preferring green grass and herbs thereby preventing regeneration by eating seeds and seedlings and contributing to the decline in numbers of many native plants and animals (Department of Sustainability, Environment, Water, Population and Communities, 2011).

Feral cats range in size from 3.5- 6.5 kg, are nocturnal hunters capable of killing prey up to their own body size and are thought to have contributed to the extinction of a number of small to medium sized ground-dwelling mammals and ground-nesting birds in Australia. Home ranges of 1-10 km may be extended during times of food shortage (Animal Pest Management Services, 2017).

The *Threat Abatement Plan for Predation by Feral Cats* (Commonwealth of Australia, 2015) states that:

The responsibility for managing domestic cats ultimately rests with their owners. State, territory and local governments are supporting initiatives aimed at encouraging responsible pet ownership, including developing appropriate legislation, education and awareness programs, and management plans to address local problems with domestic and stray cats.

In Western Australia, the *Cat Act 2011* requires the identification, registration and sterilisation of domestic cats, and gives local government authorities the power to administer and enforce the legislation (Department of Local Government, 2013). From the 1 November 2013, the full *Cat Act 2011* required that all cats that have reached six months of age be microchipped, sterilised and registered with the relevant local government authority.

While responsible cat management includes keeping a cat confined to its property, especially at night (Department of Local Government, 2013), this is particularly difficult for authorities to enforce.

Feral predators such as foxes and cats (both feral and domestic) have the potential to be concentrated in remnant bushland areas such as in or near to the offset site and have an adverse impact on the Western Ringtail Possum through predation, while the introduced pest the European rabbit can have an adverse impact on revegetation measures through herbivoring. Management actions to reduce the impact of introduced pests on Western Ringtail Possum are identified in **Section 4.7.1**.

2.7.2 Native

A large population of native Western Grey Kangaroos (*Macropus fuliginosus*) are known to inhabit the Broadwater Nature Reserve including the offset site moving freely throughout the Reserve. This species can have an adverse impact on the revegetation process due to their foraging activity and preference for young green growth of saplings and grasses (introduced and native).

The Western Grey Kangaroo is protected under the Western Australian *Wildlife Conservation Act 1950* and is also a declared pest of agriculture under the provisions of the *Agriculture and Related Resources Protection Act 1976*. This declaration allows for the approval and implementation of a Western Grey Kangaroo management plan and management strategies in various areas of the state.

Management actions to reduce the impact of the kangaroo on revegetation are identified in **Section 4.7.2**.

3. REHABILITATION STRATEGY

The rehabilitation process must acknowledge that native vegetation at the offset site has been permanently altered, but seeks to return a native plant community that has elements that are compatible with original and adjacent vegetation complexes. Capecare will be responsible for managing the revegetation for a period of five years during the early establishment phase.

3.1 Rehabilitation Objectives

The principal objectives of the ROMP as they apply to the offset site are to:

- 1. Undertake native rehabilitation across a minimum 1 hectare area of annual pasture within the offset site that has previously been cleared of native vegetation and subjected to prolonged grazing by dairy cattle;
- 2. Revegetate using a minimum number of nine plant taxa including three each of overstorey, midstorey and understorey species, matched to the landform, i.e. upland and wetland, and ensuring a minimum number of 2,500 Peppermint seedlings are included in the overstorey mix; and
- 3. Maintain revegetation at the offset site for a period of five years following planting to ensure the survival of at least 80 percent of the Peppermint seedlings and that no patch greater than 100 m² has mid-storey and upper storey native species absent.

3.2 Targets and Indicators

Targets and indicators have been established for each of the principal objectives of the ROMP to ensure that the rehabilitation performance is measurable as identified in **Table 4**.

3.3 Completion Criteria

The completion criteria as prescribed by EPBC Condition 5(c) requires there to be a survival rate of 80 percent (equivalent to 2,000 Peppermints per hectare) for the offset site five years after planting. For the non-Peppermint mixed species survival rate five years after planting, no patch greater than 100 m² will have mid-storey and upper storey native species absent and patches of 400 m² will contain at least two different under/mid-storey species and a minimum under/mid-storey cover of approximately 30 percent.

At the end of the initial planting, a spreadsheet will be provided to the DotEE and the DBCA detailing the final species type and number of tubestock planted. This information will be used as baseline data for comparison in future monitoring assessments and to determine the survival rate (or otherwise) of revegetation, whether completion criteria have been met and whether additional plantings are required.

Five years following planting, the management responsibility for the site will devolve to the DBCA.

REHABILITATION OFFSET MANAGEMENT PLAN (EPBC 2006/2834) PORTION LOTS 217 - 219 BUSSELTON BYPASS, VASSE (BROADWATER NATURE RESERVE)

TABLE 4 TARGETS AND INDICATORS FOR REHABILITATION OBJECTIVES

CRITERION / OBJECTIVE	MECHANISM	TARGET	INDICATOR(S)	MEASUREMENT TOOL
Undertake native rehabilitation across a minimum 1 ha area of annual pasture that has previously been cleared of native vegetation and subjected to prolonged grazing by dairy cattle.	Implement the approved ROMP.	Rehabilitate no less than 1 ha of land within the designated offset site.	The annual monitoring confirms that all required components of the ROMP have been appropriately implemented.	Quarterlysiteinspectionsofrevegetationdevelopmenttobecompleted by an appropriately qualifiedbotanist.Annualrevegetationmonitoringandreportingtobecompletedbyappropriately qualifiedbotanist.
Revegetate using a minimum number of nine plant taxa including 3 each of upper storey, mid-storey and understorey species, matched to the landform, i.e. upland and wetland, and ensuring a minimum number of 2,500 Peppermint seedlings are included in the upper storey mix per hectare.	Implement rehabilitation methodologies listed in Section 4 of the ROMP.	2,500 peppermint seedlings planted per hectare within the designated offset site.	Revegetation monitoring confirms that at least 2,500 Peppermint seedlings per hectare were planted. Review of plant orders and invoices confirms total number of tubestock.	Quarterly site inspections of revegetation development to be completed by an appropriately qualified botanist. Annual revegetation monitoring and reporting to be completed by an appropriately qualified botanist.
Maintain revegetation at the offset site for a period of five years following planting to ensure the survival of at least 80% of the Peppermint seedlings, and for the non- Peppermint mixed species survival rate five years after planting, no patch greater than 100 m ² will have mid-storey and upper storey native species absent and patches of $400m^2$ will contain at least 2 different under/mid-storey species and a minimum under/mid-storey cover of approximately 30%. Five years following planting, the management responsibility for the site will devolve to the DBCA.	Implement rehabilitation methodologies listed in Section 4 of the ROMP.	Ongoing management measures to ensure a survival rate of 80% of the 2,500 Peppermint seedlings is maintained per hectare five years after planting. Ongoing management measures to ensure that no patch greater than 100 m ² will have mid- and upper storey native species absent and patches of 400 m ² will contain at least 2 different under/mid-storey species and a minimum under/mid-storey cover of approximately 30%.	Revegetationmonitoring confirms that at least 2,000Peppermint seedlings per hectare occur within the designated offset site after five years, representing an 80% survival rate.Revegetationmonitoring confirms that patches greater than 100 m² have mid-storey and upper storey native species present and patches of 400 m² will contain at least 2 different under/mid-storey species with a minimum under/mid-storey cover of approximately 30%.	Quarterly site inspections of revegetation development to be completed by an appropriately qualified botanist. Annual revegetation monitoring and reporting to be completed by an appropriately qualified botanist.

4. METHODOLOGY AND MANAGEMENT ACTIONS

Parts of the Broadwater Nature Reserve and its associated landforms have been successfully rehabilitated to develop into Western Ringtail Possum habitat whilst other areas, particularly the wetland, have proven difficult to successfully rehabilitate. The use of site-specific appropriate site preparation, weed control and planting methodologies will form the basis of ensuring the objectives identified in **Table 4** can be achieved over Capecare's five-year management period. The use of specialist subcontractors to implement the methodologies and assess the outcomes throughout the management period will also be critical to rehabilitation success at the offset site.

4.1 Site Preparation

There are three landforms represented within the offset site:

- 1. An elevated sandy ridge comprising deep grey sandy soil and supporting one large isolated tree of *Agonis flexuosa* (Peppermint) over cleared annual pasture grasses and weeds;
- 2. A seasonally wet floodplain (dark clayey sand) fringing the Broadwater wetland and supporting one large isolated tree of *Eucalyptus rudis* (Flooded Gum) and scattered trees of *Melaleuca rhaphiophylla* (Swamp Paperbark) over cleared annual pasture grasses and weeds; and
- 3. An un-incised ephemeral drainage line with seasonal pools during winter months.

As shown in **Appendix 5**, approximately 0.5 hectares of the offset site supports the elevated sandy ridge with deep grey non-wetting sands. This landform will be ideal for establishment of Peppermint woodland that will develop into Western Ringtail Possum habitat. Deep ripping on the contour by a D9 dozer with modified 'winged' tyne at less than 1 metre intervals and to a minimum depth of 500 mm will be the site preparation technique. This method directs water following rainfall into the base of riplines where seedlings will be establishing, increasing plant available water in the otherwise non-wetting soils. The riplines also provide protection to developing seedlings from prevailing winds.

The seasonally wet floodplains occur over approximately 0.70 hectares situated lower in the landscape, fringing the Broadwater wetland. These areas were holding surficial standing water during site visits conducted in late August and late September 2017. Prolonged waterlogging is potentially a major issue for developing seedlings. Rip mounding is an appropriate site preparation technique in soils that are subject to waterlogging as it allows plant roots to develop along the tops of mounds above the level of seasonal inundation, which promotes faster early plant growth and increased survival rates.

An unincised drainage line supporting seasonal pooling of surface water occurs over approximately 0.60 hectares of the offsite site. Due to the increased rate of flow along this drainage line, site preparation is not recommended owing to the potential for scouring. Any revegetation will occur directly into the existing profile using plant species that are adapted to being seasonally inundated. Revegetation of this landform will occur late in year during periods when surface water is receding.

4.2 Fencing

The southern boundary of the offset site is currently fenced with 1.8 m high chain mesh. The other three perimeters are currently fenced with ringlock or single strand fencing to 1.2 m height. In order to manage kangaroo herbivoring, the offset site will be fenced with a 1.5m netting fence with 1.8m

posts (thereby providing potential to add a further 300 mm netting at a later stage if needed) and the installation of one way "roo gates" to enable animals to escape the fenced area will be required. Additional rabbit-proof meshing for the base will be 500 mm high attached as an apron at the base, extending a minimum of 400 mm height above ground level and dug in 100 mm (refer also to **Section 4.7**).

4.3 Weed Control

The offset site has been actively managed as annual pasture and grazed by cattle for an extended period, resulting in the site being dominated by a mixture of introduced annual and perennial grasses in combination with other common pasture weeds including Cape Weed and Guildford Grass. Timely treatment of weeds within the rehabilitation area will therefore be critical to revegetation success. Knockdown herbicide treatments will be implemented prior to revegetation using glyphosate (Roundup), with broadscale use of a grass selective herbicide (e.g. Fusilade or Verdict) following revegetation, in combination with targeted spot-spraying of woody weeds. It will be important not to use any residual herbicides which prevent native seed germination.

Following planting, quarterly qualitative assessment of weeds at the offset site will be conducted by a qualified botanist (January, April, July and October), with weed infested areas mapped and corresponding control treatments to be conducted annotated.

Weed control will be ongoing throughout Capecare's five-year management period.

4.4 Soil Amelioration

Soil testing will be undertaken to confirm soil acidity, level of organic carbon, cation exchange capacity, and nutritional status of *in situ* soil. Given that the site supports low quality annual pasture, it is likely that soil amelioration will be required prior to revegetation. Depending on soil test results, there may be a requirement to increase soil organic carbon by spreading compost at 4 m³ per hectare (farm spreader), followed by a spray application of soil microbial inoculant through boomless spray nozzle (100 litres per hectare), prior to planting seedlings and direct sowing native seed.

4.5 Planting Seedlings and Direct Sowing

Revegetation will consist of a number of steps, including:

- Species selection and plant allocation;
- Sourcing plant material;
- Direct seeding;
- Planting seedlings;
- Plant establishment; and
- Documentation.

4.5.1 Species Selection and Plant Allocation

As identified in **Table 5**, a recommended list of plant species for revegetation of upland, wetland and interface zones within the offset site was provided by the DBCA (refer to **Appendix 3**). Unfortunately not all of the recommended plant species are readily available from local nurseries, and hence, additional species have been added to the original list.

4.5.2 Sourcing Plant Material

Where practicable, plant species used in revegetation works will be of local provenance. However, in acknowledging that sourcing sufficient plant stock of local provenance can be difficult, tubestock from species that are found in the Dunsborough region may be sourced from nurseries that are NIASA accredited which will guarantee the quality of the plant material, including *Phytophthora* dieback free status.

4.5.3 Direct Seeding

Direct seeding will be undertaken using local provenance seed where practical and available, with the seed mix based on the species listed in **Table 5**. Direct sowing is an effective method of providing rapid native cover and reducing potential issues with introduced species by increasing competition during the early establishment phase.

Seed broadcast rates will be determined by annual seed availability for individual species. All seeds will be mixed with a suitable bulking and spreading agent (preferably vermiculite), and manually spread ensuring even coverage over the whole area. Sowing of the upland seed mix (elevated sandy ridges) will occur in early winter, following the required soil preparation and subsequent weed treatment. For wetland areas, direct sowing will be delayed until at least late August when flood waters are receding.

4.5.4 Seedling Planting

Plant stock (tubestock) used should be suitably mature (9-12 months) and appear to be thriving in order to enable optimal establishment and growth.

Initial planting of seedlings within upland areas (elevated sandy ridges) will commence after the season's first major rains, and following required treatment of subsequent weed germination (typically post-June). All seedlings will be planted into the base of riplines at even spacings (planting density to be confirmed following ripping).

For wetland areas, planting of seedlings will be delayed until at least late-August when flood waters typically begin receding. The later planting reduces the potential for seedlings to suffer from prolonged waterlogging. All seedlings will be planted into the top of mounds at even spacings (planting density to be confirmed following mounding).

Infill/supplementary planting of tubestock will be undertaken in the second year following planting if determined to be required during the annual monitoring program completed by an appropriately qualified botanist. Supplementary planting in Year 3 will be informed by the outcomes of Year 2 (2019) planting, with annual review ensuring that the survival rate is met at the corresponding month in 2023.

PLANTING	OVERSTO	OREY ^a	MIDS	TOREY ^b	UNDERST	OREY ^c
ZONE	SPECIES NAME	COMMON NAME	SPECIES NAME	COMMON NAME	SPECIES NAME	COMMON NAME
Upland Zone	Agonis flexuosa Banksia grandis Banksia attenuata Corymbia calophylla	Coastal Peppermint Bull Banksia Candle Banksia Marri	Acacia saligna ⁴ Jacksonia furcellata Kunzea glabrescens Melaleuca systena Melaleuca thymoides Spyridium globulosum	Coojong Grey stinkwood Spearwood Coastal Honeymyrtle Sand Myrtle Basket Bush	Adenanthos meisneri ⁴ Gastrolobium praemorsum ⁵ Hardenbergia comptoniana ⁶ Hibbertia cuneiformis Hypocalymma angustifolium Kennedia prostrata Lepidosperma gladiatum Rhagodia baccata Stirlingia latifolia ⁴	Prostrate Woollybush Bronze Butterfly Native wisteria Cutleaf Hibbertia White Myrtle Scarlet Runner Coast Sword-sedge Berry Saltbush Blueboy
Wetland Zone	Agonis flexuosa Eucalyptus rudis Melaleuca rhaphiophylla Melaleuca preissiana	Coastal Peppermint Flooded gum Swamp Paperbark Moonah	Acacia saligna ³ Astartea scoparia Banksia littoralis Callistachys lanceolata Hakea prostrata Hakea varia Kunzea recurva Melaleuca viminea Melaleuca incana Pericalymma ellipticum Taxandria linearifolia Taxandria parviceps	Coojong Common Astartea Swamp Banksia Wonnich Harsh Hakea Variable-leaved Hakea Pink Pompoms Mohan Grey Honeymyrtle Swamp Teatree Swamp Peppermint Winter White Tea Tree	Baumea juncea Ficinia nodosa Gahnia trifida ⁵ Juncus krausii Juncus pallidus Lepidosperma longitudinale Patersonia occidentalis	Bare twig rush Knotted Club Rush Coast Saw-sedge Shore rush Pale rush Pithy Sword-sedge Purple Flag
Interface Zonei					Adriana quadripartita	Bitter Bush

TABLE 5 SPECIES LIST FOR REVEGETATION AREA

Notes: ^a 50% comprised of the following species in each zone ^b 25% comprised of at least 3 of the following species in each zone ^c 25% comprised of at least 3 of the following species in each zone

⁴ Potential to become weedy and reduce species richness

⁵ Infrequently available from nurseries in high plant numbers

⁶ Climber (non-structural component of revegetation)

4.6 Plant Disease

4.6.1 *Phytophthora* dieback

Human activity can cause the most significant, rapid and widespread distribution of both of these pathogens, and bush restoration projects can also inadvertently spread the pathogen through the inadvertent use of infected plant stock and importation of infested soil. Introducing soil or plant stock into the offset site can potentially introduce *Phytophthora* dieback and inadvertently spread the disease.

Phytophthora dieback management within the revegetation area will include, but not be limited to, the following management actions:

- Scheduling activities that involve soil disturbance during low rainfall months (November to April) when the soil is dry;
- Vehicles, tools, equipment, machinery and footwear used should be free of all mud, soil and vegetative material prior to entering the offset site; and
- Soil or plant stock used for revegetation should only be obtained from a soil/plant stock supplier accredited with Nursery Industry Accreditation Scheme of Australia (NIASA) accreditation.

4.6.2 Redlegged earth mite

The Redlegged earth mite (*Halotydeus destructor*) is a major pest of pastures, crops and vegetables in regions of Australia with cool wet winters and hot dry summers such as the offset site. Earth mites are active in the cool, wet part of the year (April to November) with over-summering eggs hatching in autumn following exposure to cooler temperatures and adequate rainfall. During this time, two to three generations may hatch, releasing swarms of mites which attack crop seedlings and emerging pasture plants (Department of Primary Industries and Regional Development, 2017).

Given the weather conditions experienced at the offset site, its historical use for cattle grazing and the annual pasture species that dominate the site, there may be a requirement to undertake Redlegged earth mite control. Typical control utilises systemic insecticides that are applied following the commencement of autumn rainfall, with possible retreatment required in spring. Further treatments will only be implemented should quarterly site inspections indicate that the Redlegged earth mite is present.

4.7 Pest Control

4.7.1 Introduced Pests

A fence will be constructed around the perimeter of the offset site to provide for long-term protection of revegetation from herbivorous pest species and to protect the Western Ringtail Possum population from predators (refer to **Section 4.2** for details).

Monitoring for signs of herbivorous and predatory pest species (e.g. scats, diggings) within and adjacent to the offset site will be undertaken during quarterly site inspections and annual revegetation

monitoring. Should signs of feral pests be observed during site inspections, a qualified pest control subcontractor will be employed to eradicate the pest(s).

Eradication of foxes, cats and rabbits will be undertaken on an 'as needs' basis in order to protect the plantings and seedlings.

Fox eradication will utilise either baiting, trapping or shooting using qualified and experienced subcontractors.

The preferred method for rabbit eradication is through deploying a strain of rabbit haemorrhagic disease virus (RHDV; also known as rabbit calicivirus disease or viral haemorrhagic disease virus). Eradication via this method will be carried out under conditions set down in a specific permit issued by the Australian Pesticides and Veterinary Medicines Authority (APVMA) under Commonwealth legislation (*Agricultural and Veterinary Chemicals Code Act 1994*) and will be used in accordance with all relevant State and Commonwealth legislation. Should the need arise, and following consultation with local DBCA staff, additional rabbit control using approved baiting techniques (ie: 1080 Oats) will be implemented.

4.7.2 Native Pests

Managing kangaroo numbers will be required to control the total grazing pressure on the offset site.

As previously discussed in **Section 4.2**, the perimeter of the offset site will be fenced to provide for long-term protection from pest species including kangaroos.

The Western Grey Kangaroo Management Plan for Western Australia includes the legalities of destroying kangaroos on non-private land, such as the offset site, when the population is found to contain excessive numbers. In light of this, culling (shooting) may be required as a short-term control measure but will need to be authorised by the DBCA prior to implementation (Department of Environment and Conservation). The implementation of a 'cull' will only be undertaken following consultation with officers from the Parks and Wildlife Services and will conducted by a licenced professional shooter.

4.8 Fire Management

The Southwest of Western Australia generally experiences a cool to mild growing season (August-November) followed by four months of summer drought conditions during which the potential for bush fire to occur is at its peak. The worst fire weather conditions occur during this summer drought when a low pressure trough forms off the west coast creating mid-level disturbances and bringing unstable atmospheric conditions from the north or north-west that result in thunderstorms and the potential for lightning strike as a fire ignition source.

The *Map of Bush Fire Prone Areas* (Department of Fire and Emergency Services, 2017) identifies land falling within, or partially within, a bush fire prone area as designated by the Fire and Emergency Services Commissioner.

Plate 1 (over the page) shows the bush fire prone areas (highlighted in pink) both within and surrounding the offset site. The amount and type of vegetation to the north and south of the offset

site has the capacity to directly contribute to the risks associated with bush fire, its spread into or out of these areas, as environmental conditions allow and impacts on the environment and therefore the revegetation of the offset site.

Vegetation located to the north and south of the offset site needs to be considered due to the potential for fire to spread into or out of these areas. The result of fire spreading into the offset site could potentially result in excessively high mortality rates of juvenile plantings.



PLATE 1: Map of Bush Fire Prone Areas in and around Offset Site (Source: Department of Fire and Emergency Services, 2017)

To prevent potential bush fire impacts on the offset site, and in keeping with the *Bush Fires Act 1954*, a 3m wide mineral earth firebreak will be cleared and maintained around the external perimeter of the offset site fenceline. Consultation and approval from local DBCA staff will be sought prior to pruning any overhanging trees and other vegetation impinging upon the firebreak. The firebreak will be installed prior to planting commencing and maintenance will be conducted prior to 15 December annually (refer to **Appendix 6**).

4.9 Rehabilitation Chronology

The chronology for proposed stages involved with rehabilitation implementation, rehabilitation management monitoring and reporting are summarised in **Table 6** (over the page).

REHABILITATION OFFSET MANAGEMENT PLAN (EPBC 2006/2834) PORTION LOTS 217 - 219 BUSSELTON BYPASS, VASSE (BROADWATER NATURE RESERVE)

		201	.8			201	9		2	2020			2	021			20)22			20	23			202	4	
	Autumn	Winter	Spring	Summer	Autumn	Winter	Spring																				
Rehabilitation Implementation:	_																										
Installation of fence and firebreak																											
Pre-planting weed control																											
Site preparation (deep ripping, mounding)																											
Redlegged earth mite control																											
Apply microbial inoculation																											
Planting seedlings / direct sowing native seed																											
Rehabilitation Management:																											
Weed control (as directed by quarterly inspections)																					_			_			
Infill planting (if required)																											
Fence inspection and maintenance																											
Fox control (if required)																											
Rabbit control (if required)																											
Kangaroo control (if required)																											
Firebreak maintenance			_												_				_								
Rehabilitation Monitoring and Reporting:																											
Quarterly site inspections and reporting																											
Annual rehabilitation monitoring and reporting						_																					

TABLE 6	
SCHEDULE FOR WEED CONTROL, REVEGETATIO	N, MONITORING AND REPORTING

5. MONITORING AND CORRECTIVE MEASURES

5.1 Quarterly Site Inspections

Quarterly site inspections will be completed by an appropriately qualified rehabilitation professional (preferably a botanist) during the first week of January, April, July and October throughout Capecare's five year management period following rehabilitation commencing.

5.2 Revegetation and Weed Control

Monitoring will be completed annually during late September and continue throughout Capecare's five year management period. The monitoring procedure will involve two methods; belt transects for an overall vegetation assessment, and plots for assessment of tree density and tree health.

Annual monitoring events will conducted in Year 4 to calculate the survival rate of the Peppermint trees and non-Peppermint species, and additional infill planting and weed control conducted on an 'as needs' basis in Years 4 and 5.

5.2.1 Belt transects

Permanent belt transects of 20 contiguous one metre square quadrats will be established throughout the rehabilitated offset area (refer to **Chart 3** over the page). A GPS location of the start point and the orientation of each belt transect will be recorded and a photo monitoring point will be established. The 20 x $1m^2$ quadrats along each transect line will be assessed individually. For each species within a quadrat, the number present, percentage ground cover, and maximum plant height will be recorded. Summarised data will provide mean density values (no. plants/m⁻²), mean percentage ground cover, and mean maximum plant height for each belt transect. The number of transects established will be determined by a species accumulation curve.

Data will be collated for each landform within the offset area (i.e. upland, wetland) with data for native plant taxa summarised separately to introduced plant taxa.

5.2.2 Tree plots

Permanent 20 m by 20 m plots will be established to monitor density, health and height of tree species within the rehabilitation (refer to **Chart 3** over the page). The western boundary of each plot will be aligned with the 20 m by 1 m belt transect described in **Section 5.2.1** above. Within each plot the species name, height and condition (0 dead, 5 full healthy crown) of each tree present will be recorded and later summarised to provide average data for each tree species.

The survival rate of Peppermints and non-Peppermints will be determined by individual counting and recording the location of plants (dead, alive, absent).



CHART 3: Layout of Permanent Belt Transect (20, 1m by 1m quadrats) and Tree Plots (20m by 20m), to be Established as part of the Monitoring Program

5.3 Corrective Actions

In the event that quarterly monitoring/site inspections or annual monitoring indicates rehabilitation is not developing in line with expected trends for the plant biodiversity parameters being monitored, the corrective actions identified in **Table 7** (over the page) will be implemented.

TABLE 7 TRIGGERS AND CORRECTIVE ACTIONS FOR REHABILITATION

ITEM	TRIGGER	CORRECTIVE ACTION
1.	Revegetation completion criteria for Peppermints and non-Peppermint species are not met at Years 2 or 3	 Identify the cause/survival rate. Implement one or more corrective actions, such as: Undertaking additional infill planting; Implementing supplementary watering, fertilising, wetting agents if required; Monitor the success of the corrective action.
1.	Revegetation completion criteria for Peppermints and non-Peppermint species are not met at Years 4 or 5	 Undertaking additional infill planting; Monitor the success of the corrective action.
2.	Weed coverage is impacting on development of the native species cover	 Identify the cause/weed species. Implement one or more corrective actions, such as: Using a different chemical for eradicating the species identified; Utilising hand weeding/digging; Conducting additional weed controls. Monitor the success of the corrective action.
3.	Insect attack is reducing plant productivity within the native revegetation cover	 Identify the insect/s. Implement one or more corrective actions, such as: Apply an appropriate insecticide aimed at eradicating the species identified; Increasing nutritional status of soil to improve plant health and increase plant resistance. Monitor the success of the corrective action.
4.	The revegetation area appears to be suffering dieback/revegetation is not thriving as expected.	 Identify the cause, including whether dieback is caused by <i>Phytophthora</i>. Engage a <i>Phytophthora</i> dieback consultant to confirm the presence of the disease. Implement management measures prescribed by the dieback consultant. Monitor the success of the corrective action.
5.	Unauthorised access (humans, feral or pest species) into revegetation area.	 Identify the nature and extent of pest/unauthorised human access. Undertake fence maintenance. Implement eradication of feral species (baiting, trapping, shooting) on an 'as-needs-basis' in consultation with the DBCA.

6. RESPONSIBILITIES, RECORD-KEEPING, AUDITING AND REPORTING

6.1 **Proponent Responsibilities**

Capecare is the proponent for the proposed development of an aged care facility to be constructed on Lot 600 Naturaliste Terrace, Dunsborough and will be responsible for the preparation and implementation of this ROMP within the designated offset site identified in **Appendix 5**.

Capecare will be responsible for engaging appropriately qualified and experienced subcontractors and consultants to undertake the rehabilitation activities and for ensuring that the rehabilitation activities are implemented in accordance with the approved ROMP.

Capecare will engage an experienced, and preferably locally based, rehabilitation professional to oversee the implementation of the approved ROMP, undertake quarterly site inspections, and undertake annual rehabilitation monitoring and advise Capecare on appropriate subcontractors capable of undertaking specific tasks required to implement the ROMP. It is recommended that specialist contractors are sourced to undertake site preparation and weed control; these items will be critical to rehabilitation success at the offset site.

6.2 Record-keeping, Auditing and Reporting

Capecare will maintain accurate records of all rehabilitation activities undertaken within the offset site for the duration of the rehabilitation program. These records will be made available to the DotEE and the DBCA upon request.

Following quarterly site inspections and the annual spring monitoring assessment, a letter report will be provided to Capecare and the DBCA within one week of each quarterly site inspection being conducted. The report will identify any triggers that will require corrective actions identified in **Table 7** to be implemented in a timely and effective manner.

An annual audit of the implementation of management measures within the offset site will be undertaken by the proponent's environmental consultant to ensure compliance with the approved ROMP. The information gathered will form the basis of an annual compliance report that will include: all management actions taken, the outcomes of the quarterly site inspections and annual monitoring program, any corrective measures implemented during that calendar year, and performance of the revegetation process against the completion criteria identified in **Section 3.3** and **Table 4**.

The annual compliance report will be submitted to the DotEE and DBCA for the duration of Capecare's five-year management period.

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FIGURES

REHABILITATION OFFSET MANAGEMENT PLAN (EPBC 2006/2834) PORTION LOTS 217 - 219 BUSSELTON BYPASS, VASSE (BROADWATER NATURE RESERVE)



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APPENDICES

REHABILITATION OFFSET MANAGEMENT PLAN (EPBC 2006/2834) PORTION LOTS 217 - 219 BUSSELTON BYPASS, VASSE (BROADWATER NATURE RESERVE)

APPENDIX 1

CITY OF BUSSELTON LOCAL PLANNING STRATEGY NO. 21 – ARMSTRONG RESERVE CADASTRE (2017)

CITY OF BUSSELTON INTRAMAP PRINT SCREENS (Downloaded: 31 August 2017)



RESERVE 40445 (LOT 258) DRAINAGE RESERVE

RESERVE 25229 (LOTS 3000 AND 601) LANDSCAPE PROTECTION



APPENDIX 2

EPBC 2006/2834 VARIATION TO CONDITIONS ATTACHED TO APPROVAL (18 OCTOBER 2017)



Australian Government

Department of the Environment and Energy

Mr Dominic Trombetta General Manager Operations Capecare 20 Ray Avenue BUSSELTON WA 6280

EPBC 2006/2834 CAPECARE, URBAN AND COMMERCIAL DEVELOPMENT, AGED CARE – NATURALISTE TERRACE, DUNSBOROUGH, WA

Dear Mr Trombetta

I refer to a series of emails from EndPlan Environmental, on behalf of Capecare, regarding the variation of conditions of approval for EPBC 2006/2834.

I understand the Department has worked closely with EndPlan Environmental to resolve matters regarding the status of Armstrong Reserve and to identify an offset for the EPBC Act listed Western Ringtail Possum.

As a delegate of the Minister for the Environment and Energy, I have varied the conditions of approval to update certain administrative conditions, to reflect the tenure of Armstrong Reserve and to provide a suitable alternative to the environmental offset envisaged in the 2013 project approval. I have made this decision in accordance with section 143(1)(c) of the Act. The approved action must now be undertaken in accordance with the attached variation notice.

Condition 9 allows you, under certain circumstances, to implement a revised approved Rehabilitation Offset Management Plan without seeking the Minister's approval. A fact sheet has been attached to provide guidance on 'new or increased impacts' and changes to approved management plans under EPBC Act environmental approvals.

As you are aware, the Department has an active monitoring program which includes monitoring inspections, desk top document reviews and audits. Please ensure that you maintain accurate records of all activities associated with, or relevant to, the conditions of approval so that they can be made available to the Department on request.

Should you require any further information please contact Vaughn Cox on 02 6274 2005 or by email: <u>post.approvals@environment.gov.au</u>.

Yours sincerely

James Barker Assistant Secretary Assessments and Governance Branch Environment Standards Division

18 October 2017

Attachments: EPBC 2006/2834 Variation to conditions attached to approval October 2017. Guidance on 'new or increased impact'.

GPO Box 787 Canberra ACT 2601 • Telephone 02 6274 1111 • Facsimile 02 6274 1666 • www.environment.gov.au



VARIATION TO CONDITIONS ATTACHED TO APPROVAL

Capecare, urban and commercial new development, Aged Care – Naturaliste Terrace, Dunsborough, WA (EPBC 2006/2834)

This decision to vary a condition of approval is made under section 143 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Approved action			
Person to whom the approval is granted	Ray Village Aged Services Inc. (Trading as Capecare)		
	ABN: 77 630 179 279		
Approved action	To develop aged care facilities on Naturaliste Terrace, Dunsborough, WA [See EPBC Act referral 2006/2834]		
Variation			
Variation of conditions of approval	The variation is:		
	Delete conditions 4, 5, 6, 7, 8 and 9 attached to the approval and substitute with the conditions specified below.		
	Add new conditions 9A and 9B to the approval, as specified below.		
	Revoke definitions of Offset site(s) and WA DEC attached to the approval.		
	Add new definition of New or increased impact and WA DBCA to the approval, as specified below.		
	Add new Attachment B to the approval, as specified below.		
Date of effect	This variation has effect on the date the instrument is signed		
Person authorised to mak	ce decision		
Name and position	James Barker Assistant Secretary Assessment and Governance Branch		
Signature			
Date of decision	ate of decision /8 October 2017		

Conditions attached to the approval

Original conditions	Varied conditions
4. The person taking the action must not commence construction until written evidence is provided to the Department that the remaining 2.83 ha of Armstrong Reserve, outside of the proposed development footprint (as shown at <u>Attachment A</u>), is designated a reserve for the purpose of 'Landscape Protection' under the WA Land Administration Act 1997.	4. The person taking the action must not commence construction until written evidence is provided to the Department that the remaining 2.83 ha of Armstrong Reserve , outside of the proposed development footprint (as shown at <u>Attachment A</u>), is designated a reserve for the purpose of 'Landscape Protection' or 'Reserve for Drainage' under the WA Land Administration Act 1997.
 5. To offset the residual impacts of the action on the Western Ringtail Possum, the person taking the action must prepare and submit a Rehabilitation Offset Management Plan (ROMP). The ROMP must be prepared in consultation with the City of Busselton and WA DEC and must include, though not be limited to the following: a) the identification (including a map) of an offset site(s) at least 1.8 ha in size, containing Western Ringtail Possum habitat, that is within the Dunsborough region of Western Australia and is able to support the planting of at least 700 Peppermint (<i>Agonis flexuosa</i>) trees. The offset site(s) must be accompanied with the Offset attributes; b) the planting of at least 700 Peppermint trees within the offset site(s); c) methodology for rehabilitation works and ongoing management measures to ensure a survival rate of 80% of the 700 Peppermint trees is maintained 5 years after planting; d) details of the transfer of responsibility for the offset site(s) to the City of Busselton, which must occur within 3 years following the commencement of rehabilitation works, and the management measures that will occur after this transition; e) measures to ensure the long term protection of the offset site(s); f) measures to manage the impacts of feral animals, people, weeds and Dieback (<i>Phytopthora cinnamomi</i>); g) details of monitoring, reporting and contingency measures if performance indicators are not met; h) timeframes for the implementation and completion of the above measures/programs/reporting; and, i) roles and responsibilities of personnel associated with the implementation of the above measures/programs/reporting; 	 5. To offset the impacts of the action on the Western Ringtail Possum, the person taking the action must prepare and submit a Rehabilitation Offset Management Plan (ROMP). The ROMP must be prepared in consultation with the WA DBCA and must: a) specify an offset site of at least 1 ha in size within the area shown at <u>Attachment B</u>; b) provide for the planting of at least 2,500 Peppermint trees (<i>Agonis flexuosa</i>) per hectare within the offset site; c) include a methodology for ensuring a survival rate of 80% of the 2,500 Peppermint trees is maintained per hectare 5 years after planting; d) describe monitoring and contingency measures if the survival rate (item c) is not met; and e) contain measures to minimise human access, and the Impacts of herbivores, unplanned fire, weeds and Dieback (<i>Phytophthora cinnamomi</i>) within 3 years following commencement of rehabilitation works. The ROMP must be submitted to the Department for approval by the Minister. Construction must not commence until the ROMP is approved by the Minister approves the ROMP, the approved ROMP must be implemented.

The ROMP must be submitted to the Department prior to the commencement of construction . If the Minister approves the ROMP, the approved ROMP must be implemented. Construction must not commence until the ROMP is approved by the Minister .	
6. Within 30 days after the commencement of the action, the person taking the action must advise the Department in writing of the actual date of commencement.	6. Within 10 business days after commencement of the action, the person taking the action must advise the Department in writing of the actual date of commencement.
7. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the ROMP required by this approval, and make them available upon request to the Department . Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	7. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement plans and strategies required by this approval, and make them available upon request to the Department . Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act. The results of audits may also be publicised through the general media.
8. Within three months of every 12 month anniversary of the commencement of the action, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of the ROMP as specified in the conditions. Each report must stay on the proponent's website for at least 3 years. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the Department at the same time as the compliance report is published.	8. Within three (3) months of every twelve (12) month anniversary of the commencement of the action, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of the ROMP as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be reported to the Department at the same time as the compliance report is published. Compliance reports must remain published, or until written approval by the Minister for removal of the report.
9. If the person taking the action wishes to carry out any activity otherwise than in accordance with the ROMP as specified in the conditions, the person taking the action must submit to the Department for the Minister's written approval a revised version of that ROMP. The varied activity shall not commence until the Minister has approved the varied ROMP in writing. The Minister will not approve a varied ROMP unless the revised ROMP would result in an equivalent or improved environmental outcome over time. If the Minister approves the revised ROMP must be implemented in place of the ROMP originally approved.	 9. The person taking the action may choose to revise the ROMP approved by the Minister under condition 5 without submitting it for approval under section 143A of the EPBC Act, if the taking of the action in accordance with the revised plan would not be likely to have a new or increased impact. If the person taking the action makes this choice they must notify the Department in writing that the approved plan has been revised and provide the Department, at least four weeks before implementing the revised plan, with: i. with an electronic copy of the revised plan; ii. an explanation of the differences between the revised plan and the approved plan; and iii. the reasons the person taking the action considers that the taking of the action in accordance with the revised plan would not be likely to have a new or increased impact.

9A. The person taking the action may revoke its choice under condition 9 at any time by giving written notice to the Department . If the person taking the action revokes the choice to implement the revised plan, without approval under section 143A of the EPBC Act, the plan approved by the Minister must be implemented.
 9B. If the Minister gives a notice to the person taking the action that the Minister is satisfied that the taking of the action in accordance with the revised plan would be likely to have a new or increased impact, then: i. condition 9 does not apply, or ceases to apply, in relation to the revised plan; and ii. the person taking the action must implement the plan approved by the Minister.
To avoid any doubt, this condition does not affect any operation of conditions 9 and 9A in the period before the day the notice is given.
At the time of giving the notice, the Minister may also notify that for a specified period of time condition 9 does not apply for the plan required under the approval.
Conditions 9, 9A and 9B are not intended to limit the operation of section 143A of the EPBC Act which allows the person taking the action to submit a revised plan to the Minister for approval.

Definitions

New or increased impact is a new or increased environmental impact or risk relating to any matter protected by the controlling provisions for the action, when compared to the impact or risk arising from implementing the plan that has been approved by the **Minister**.

WA DBCA is the Western Australian Department of Biodiversity, Conservation and Attractions (or equivalent agency).

Attachment B: Portion of the Broadwater Nature Reserve, Dunsborough (as delineated by green line), within which the offset site must be located (Condition 5).



APPENDIX 3

DEPARTMENT OF BIODIVERSITY, CONSERVATION AND ATTRACTIONS CORRESPONDENCE

Hello Bernadette,

We have a proposal from DPaW to revegetate a portion of the Broadwater NR.

Please see attached map and planting zones for three vegetation (wetland, interface and upland) categories. **I am not proposing the whole area be planted** – only an as yet undetermined portion, extending from the western (RHS) boundary.

Please also see below a table listing Overstorey, Midstorey and Understorey species and composition of each strata.

May I suggest you request a quote from your landscape/rehab contractor to:

- a) propose a mix of species to meet the criteria in the following table. I would expect you to select the most cost effective mix of overstorey, 3 midstorey and 3 understorey species;
- b) plant 0.1 hectare of each zone (upland, wetland, interface), for the proposed mix of species, at a rate of 10,000 plants per hectare. For example 0.1ha would be comprised of 1,000 plants total comprised of 500 overstorey (at least 40 Agonis the current rate), 250 midstorey and 250 understorey plants; and
- c) plant 0.5 hectare as per above, there may be economies of scale, and whether there is gradation out from the wetland (eg close to wetland melaleuca, with Agonis at the outer limits of waterlogging).

We are not concerned at survival rates – this is set and forget.

I am open to an area between 0.9 and 1.8ha, given the intensive nature of the habitat rehabilitation proposed.

Given the above, and your knowledge of the budget limits, feel free to come forward with a proposal from your consultant rehab team.

I am yet to learn of fencing etc requirements.

Best call me today if need be.

Cheers

Vaughn Cox 02 6274 2005

Planting Zone	Overstorey 50% comprised of the following species in each zone	Midstorey 25% comprised of at least 3 of the following species in each zone	Understorey 25% comprised of at least 3 of the following species in each zone
Upland	Corymbia calophylla	Kunzea glabrescens	Gastrolobium praemorsum
Zone	Agonis flexuosa	Jacksonia furcellata Banksia grandis Banksia attenuata Acacia saligna	Adenanthos meisneri Stirlingia latifolia Hardenbergia comptoniana
Wetland Zone	Eucalyptus rudis Melaleuca rhaphiophylla Agonis flexuosa	Melaleuca viminea Hakea varia Acacia saligna Banksia littoralis	Baumea juncea Lepididosperma longitudinale Gahnia trifida Juncus krausii Juncus pallidus Ficinia nodosa (*) Rhagodia baccata
Interface Zone			Lepidosperma gladiatum (*) Hibbertia cuneiformis Adriana quadripartita Melaleuca incana Spyridium globulosum (*)



Hello Bernadette,

Thanks for providing the opportunity to comment early in the development of the document.

I suggest the following additions;

1) Section 4 Rehab Approach,

- add a section 4.6 and address feral animal control and grazing pressures arising from both native and introduced herbivores (primarily roos and rabbits). Identify actions that will be used to reduce impacts from these pressures and what trigger points/threshholds will be used to initiate onground action.

- will 4.3.2 Reveg Methodology address use of supplementary fertilizers, soil amelioration using products such as bacterial additives and watering requirements over the 1st summer establishment period. NB: All of these actions need to be considered to maximise establishment and survival and achieve completion criteria. If these will not be part of 4.3.2 consider addressing them in a new section 4.7, include trigger points for initiating action.

2) Section 5 Monitoring and Contingency Measures;

This section should contain a monitoring timetable and a timetable for reporting the monitoring results.

Thanks

Kim **Kim Williams** Regional Leader Nature Conservation Dept Parks and Wildlife. South West Region, Bunbury WA <u>kim.williams@dpaw.wa.gov.au</u>



From: Bernadette Van der Wiele <bernadette@endplanenvironmental.com.au>
Sent: Tuesday, 6 June 2017 4:18:10 PM
To: Williams, Kim
Cc: Hanly, Peter; Cox, Vaughn; 'Dominic Trombetta'; Krystal Laurentsch
Subject: EPBC 2006/2834 Armstrong Reserve, Dunsborough

Following on from DPaW's discussions with Mr Vaughn Cox Dept of the Environment and Energy) regarding Capecare utilising 1 ha of the Broadwater Nature Reserve as a rehabilitation offset site, I have attached a draft Table of Contents for the Rehabilitation Offset Management Plan that is required to be prepared prior to construction commencing at Armstrong Reserve.

Can you please review the attached and advise whether it covers all of the issues that DPaW would expect to be covered in this type of management plan? Should any issues be missing would you please advise accordingly?

Many thanks Kind regards Bernadette van der Wiele Director EndPlan Environmental PO Box 138 NORTH FREMANTLE WA 6159 M: 0447 366 460 UDIA WA Environmental Excellence Award Winner 2014 UDIA National Environmental Excellence Award Winner 2015

Wiske Pty Ltd as Trustee for Esk Family Trust trading as "EndPlan Environmental" ABN: 23 684 573 524

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From:	Kim Williams
То:	Bernadette Van der Wiele
Cc:	Cox, Vaughn (Vaughn.Cox@environment.gov.au); Tracy Teede
Subject:	RE: Rehabilitation Mgt Plan - Portion Lots 217-219 Busselton Bypass, Vasse Armstrong Reserve Offset
Date:	Tuesday, 31 October 2017 11:35:29 AM
Attachments:	image003.png

Hello Bernadette,

I refer to the Rehabilitation Offset Management Plan (ROMP) ver 4 for Lots 217-219 sent as per below and provide the following comments from the South West Regional Office of the Parks and Wildlife Service, Department of Biodiversity, Conservation and Attractions.

Background:

Parks and Wildlife offered the newly acquired conservation Lots 217-219 as a potential offset site on the basis that;

- The area lies within the known distribution of Western Ringtail Possum in the Dunsborough to Bunbury Zone, and habitat within the Broadwater Nature Reserve is mapped as high quality for the species.
- Lots 217 219 provided a small and discrete area suitable to meet the offset conditions required by CapeCare, and would further enhance a previous WRP habitat creation offset implemented by MRD along the Busselton Bypass Road.
- Lots 217-219 were and are regarded by the department as strategically located with potential to make a significant contribution to the long term conservation values of the nature reserve and contribute to regional wetland and WRP conservation. These attributes justified purchasing the land.
- The land is vested with the Conservation and Parks Commission and all management actions such as revegetation works must be consistent with Commission and Department policies and guidelines. Inherent is a requirement that any actions undertaken should not further degrade the values of the site or leave an ongoing management burden upon the Commission or Department.
- Revegetation actions should aspire to reconstruct/restore the composition, structure and functionality of conservation reserve habitats and ecosystems in a manner that is effective and can be measured and reported.

Overall Comments:

While the general content of the document is consistent with what the department requires in a ROMP it is deficient in two key areas which will need to be addressed to be compliant with the expectations/management requirements of the Conservation and Parks Commission and Department;

1) There are no documented targets or indicators for the non-Peppermint components of the revegetation in each of the identified landforms ie" Upland and Wetland Zones.

2) There are no strategies or triggers and contingency actions documented with regard to mitigating grazing impacts resulting from native herbivores (kangaroos).

Comments on specific sections;

1) **Section 2.7.2** correctly identifies the large population of Western Grey Kangaroos that frequent the Broadwater area and the potential adverse grazing impacts they can have on revegetation works, however the document has not identified any strategies to prevent these impacts prior to plant establishment or identified what contingency actions will be implemented should quarterly

monitoring detect a significant impact on plant survival. These omissions need to be addressed.

We note **Section 4.2** makes reference to consolidating the existing 1.2m perimeter fencing for rabbit exclusion on three sides of the rehab area, but no reference to excluding kangaroos. It is the department's experience in undertaking similar revegetation works elsewhere around the Busselton Wetlands System that a 1.2m fence will be ineffective at preventing kangaroos accessing the planting area and that a minimum 1.5m netting fence with 1.8m posts (thereby providing potential to add a further 300mm netting at a later stage if needed) and the installation of one way "roo gates" to enable animals to escape the fenced area will be required. The department strongly recommends that strategies for effective kangaroo management at the site are incorporated into the ROMP.

2) **Section 3.3 Table 4**, Targets and Indicators for the non-Peppermint components of the revegetation are required to be developed and included in Table 4. The department recognises there are a number of measures that could be used to address this omission such as Species % Survival or Plant Density per square metre with some measures being more suitable for direct seeding areas and others applicable in seedling areas. The outcomes of these measures are required to be reported quarterly consistent with the nominated reporting schedule for other components.

3) Triggers and Contingency Actions are required for these non-Peppermint components are to be added to **Table 7**. The department expects suggested contingency actions would include infill planting in patches of or greater than 100m² where mid and upper storey species are absent.

4) **Section 4.5.3 Table 5**, Species List for Revegetation Area: The department notes that additional species have been added to the suggested planting zone lists on the basis that some of the departments preferred species can be difficult to source from commercial suppliers. With the exception of two species these changes are acceptable to the department. Please remove Conostylis candicans and Trachymene coerulea from the upland understorey list.

5) **Section 4.8 Table 6,** Rehabilitation Schedule: Pre and Post site preparation weed control. . It is the department's experience in undertaking similar revegetation works elsewhere around the Busselton Wetlands System particularly in cleared ex-paddock farmlands, that weed control can be a significant challenge requiring multiple control sessions over a number of seasons to reduce the residual weed load prior to planting/seeding and be supplemented with at least one rotary hoeing session to break up the compacted and fibrous root mat surface soil . The current schedule (Table 6) suggests only one pre-site preparation and one post-site preparation weed control session will be undertaken prior to planting, the department is of the opinion this will be insufficient to maximise seedling and direct sowing success. It is recommended that planting / direct sowing be scheduled for winter year 2 and for year 1 to focus on preparing the site. A pre-planting weed control session should be scheduled in late autumn / early winter year 2 prior to planting.

It is highly desirable that density of weeds and weed species composition and abundance be significantly reduced over the period of the ROMP to ensure the viability and longevity of the revegetation works and functionality of the reserve. Where environmental offset works are undertaken on departmental lands, it is important and expected outcomes will result in a nett benefit without substantial on going management obligations. Ie: the Conservation and Parks Commission will be reluctant to accept an ongoing burden of managing a "scattered trees over grass" patch if the revegetation works fail.

Parks and Wildlife look forward to receiving an updated ROMP addressing the these issues for final comment.

Regards

Kim

Kim Williams Regional Leader Nature Conservation Parks and Wildlife Service Department of Biodiversity, Conservation and Attractions SW Region, Bunbury, WA *Ph: 97254300* <u>kim.williams@dbca.wa.gov.au</u>



From: Bernadette Van der Wiele [mailto:bernadette@endplanenvironmental.com.au]
Sent: Friday, 20 October 2017 7:33 AM
To: Kim Williams; Kim Williams
Cc: 'Dominic Trombetta'; Nadine Carter; Stuart Sibbald; 'John Reid'; Darren Brearley; Cox, Vaughn
Subject: Rehabilitation Mgt Plan - Portion Lots 217-219 Busselton Bypass, Vasse
Importance: High

Good morning Kim

On behalf of our client Ray Village Aged Services (Inc) t/a Capecare, please find attached a pdf of the Rehabilitation Management Plan prepared for portion of Lots 217-219 Busselton Bypass, Vasse.

As required by Condition 5 of EPBC2006/2834 (see attached pdf), the document is provided to the Department of Biodiversity Conservation and Attractions for their review and comment.

To assist you, I have also attached the RMP in word format for comments/track changes should there be any.

Can you please advise when you will be able to provide the Department's comments to me? Kind regards and many thanks

Bernadette van der Wiele Director EndPlan Environmental PO Box 138 NORTH FREMANTLE WA 6159 M: 0447 366 460 UDIA 2014 WA and 2015 National Environmental Excellence Award Winner

Wiske Pty Ltd as Trustee for Esk Family Trust trading as "EndPlan Environmental" ABN: 23 684 573 524

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From:	Kim Williams
То:	Bernadette Van der Wiele; Andrew Webb
Cc:	<u>Tracy Teede; Stuart Sibbald; "John Reid"; Nadine Carter; "Dominic Trombetta";</u> Stephen.Carmody@capecare.com.au
Subject:	Re: Capecare offset site ROMP query
Date:	Wednesday, 29 November 2017 2:40:22 PM
Attachments:	EPBC 2006-3017 ROMP KW 24112017.docx

Hello Bernadette,

In response to your question below, yes version 5 of the ROMP has incorporated the intent of the advice and comments previously provided by the department.

I have identified three further amendments / clarifications detailed below, which the department seeks to have incorporated into the document.

section 4.1

Query the reference to Vasse Estuary, in this context should say Broadwater wetland ? *ie: 2.A seasonally wet floodplain (dark clayey sand) fringing the Broadwater wetland and supporting one large isolated tree of Eucalyptus rudis (Flooded Gum) and scattered trees of Melaleuca rhaphiophylla (Swamp Paperbark) over cleared annual pasture grasses and weeds;* and

section 4.7.1

Insert statement: "Should the need arise and following consultation with local DBCA staff, additional rabbit control using approved baiting techniques (ie: 1080 Oats) will be implemented."

section 4.8

Insert statement "Consultation and approval from local DBCA staff will be sought prior to pruning any overhanging trees and other vegetation impinging upon the firebreak." *The firebreak will be installed prior to planting commencing and annual maintenance will be conducted prior to the 15th December (refer to Appendix 5)*

Bernadette - the melaleuca canopies on the North side of the offset area have been identified as high quality WRP habitat, the potential impacts of any pruning esp to 5m height will need to be assessed on site with local departmental staff prior to undertaking this action.

Thankyou

Kim

Kim Williams

Regional Leader Nature Conservation South West Region, Bunbury. WA. Parks and Wildlife Service Dept of Biodiversity, Conservation and Attractions kim.williams@dbca.wa.gov.au



From: Bernadette Van der Wiele <bernadette@endplanenvironmental.com.au>
Sent: Monday, 27 November 2017 2:59:28 PM
To: Kim Williams
Cc: Tracy Teede; Stuart Sibbald; 'John Reid'; Nadine Carter; 'Dominic Trombetta'; Stephen.Carmody@capecare.com.au
Subject: Capecare offset site ROMP query

Hello Kim

Further to my email of the 17 November, can you please advise whether the changes made to version 5 of the ROMP are to the satisfaction of the Department?

Kind regards Bernadette van der Wiele Director EndPlan Environmental PO Box 138 NORTH FREMANTLE WA 6159 M: 0447 366 460 UDIA 2014 WA and 2015 National Environmental Excellence Award Winner

Wiske Pty Ltd as Trustee for Esk Family Trust trading as "EndPlan Environmental" ABN: 23 684 573 524 Disclaimer: The contents of this email message are confidential and intended for the named recipient only. If you are not the intended recipient of this email, you are hereby notified that any use, reproduction, disclosure or distribution of the information contained within is prohibited. If you have received this email in error, please notify the sender. Hi Bernadette, Yes I think the document is now ready

Thanks

From: Bernadette Van der Wiele [mailto:bernadette@endplanenvironmental.com.au]
Sent: Saturday, 2 December 2017 1:11 PM
To: Andrew Webb
Cc: Kim Williams
Subject: RE: EPBC 2006/2834 ROMP Version 6

Hello Andrew

Thank you for your comments and in particular with respect to fire management.

I have amended the text in section 3.3 and Table 4 as requested. Can you please advise whether the document is now ready to be released as a final version?

Kind regards Bernadette van der Wiele Director EndPlan Environmental PO Box 138 NORTH FREMANTLE WA 6159 M: 0447 366 460 UDIA 2014 WA and 2015 National Environmental Excellence Award Winner

Wiske Pty Ltd as Trustee for Esk Family Trust trading as "EndPlan Environmental" ABN: 23 684 573 524 Disclaimer: The contents of this email message are confidential and intended for the named recipient only. If you are not the intended recipient of this email, you are hereby notified that any use, reproduction, disclosure or distribution of the information contained within is prohibited. If you have received this email in error, please notify the sender.

From: Andrew Webb [mailto:andrew.webb@dbca.wa.gov.au]
Sent: Friday, 1 December 2017 2:13 PM
To: Bernadette Van der Wiele
Cc: Kim Williams
Subject: RE: EPBC 2006/2834 ROMP Version 6

Hi Bernadette,

It is complicated but I don't think that change has quite captured what I was intending (I wasn't specifically intending for the criteria I suggested to be applied over the whole rehab area, I realise now that it could be interpreted that way) .. perhaps a better way to put this criteria would be a combination of both what Kim had and I am suggesting, something like,

• The completion criteria as prescribed by EPBC Condition 5(c) requires there to be a survival rate of 80 percent (equivalent to 2,000 Peppermints per hectare) for the

offset site five years after planting. For the non-Peppermint mixed species survival rate five years after planting, no patch greater than 100 m² will have mid-storey and upper storey native species absent and patches of 400m2 will contain at least 2 different under/mid-storey species and a minimum under/mid-storey cover of approximately 30%

And by using 400m2 (20x20m) these criteria can be measured by recording under/mid story species in the proposed 20x20m quadrats (so possibly a slight tweak to that monitoring technique section may be required).... Perhaps this would negate the need for belt-transects

Also I don't think you need to pers.comms us unless you really want, if you want to, I am not a Dr

With the firebreak from what I understand Parks and Wildlife owns the land this rehab is proposed on (well its Cons Commision freehold) and the land to the north is also vested with us, so as such we would view this as the one reserve and firebreak requirements if the shire was to make an issue of it would only need to be around the perimeter of this larger reserve, as such we shouldn't need one in that area you are concerned with. Either way if an issue was to arise we would definitely intercede if needed

Thanks

From: Bernadette Van der Wiele [mailto:bernadette@endplanenvironmental.com.au]
Sent: Friday, 1 December 2017 1:08 PM
To: Andrew Webb
Cc: Kim Williams
Subject: RE: EPBC 2006/2834 ROMP Version 6

Hello Andrew

I have revised Section 3.3 and Table 4 to include your requested amendment regarding 30% cover and also Table 5 *Gahnia trifida* to be footnote 5. For ease of reference, all changes are highlighted in blue.

Can you please advise that you are satisfied with the changes?

Also, Kim made a note at the bottom of his last email to me regarding the WRP habitat values of *Melaleuca* woodland to the north of the site. Kim, I am very aware of this and this is what we are hoping to connect into through this revegetation process. However, in the event that City of Busselton's snr fire officer is not happy with the firebreak, will the Department intercede on Capecare's behalf please? I have had situations with some LGA's where revegetation has taken place across old firebreaks in order to provide connectivity only to have the LGA fire officers request that the firebreak be reinstalled!!

Kind regards

Bernadette van der Wiele Director EndPlan Environmental PO Box 138 NORTH FREMANTLE WA 6159 M: 0447 366 460

UDIA 2014 WA and 2015 National Environmental Excellence Award Winner

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From: Andrew Webb [mailto:andrew.webb@dbca.wa.gov.au]
Sent: Friday, 1 December 2017 11:23 AM
To: Bernadette Van der Wiele
Cc: Kim Williams
Subject: RE: EPBC 2006/2834 ROMP Version 6

Hi Bernadette,

I think Kim has gone now so I will reply to this, given I am totally new to this document and previous discussions hopefully I am not complicating things with these comments.

I agree with Darren that determining 80% with direct seedling is tricky, so in regards to what you propose for understory and mid-story is an acceptable criteria, although that criteria as currently proposed could technically mean that the presence of just one under/mid-story plant or the presence of the same species will result in the completion criteria being met. Having a rehab with only one under/mid-story plant every 100m2 is not ideal, nor is it ideal if the under/mid-story species is all the one species.

I accept that the rehabilitation site may be difficult and the resulting under/mid-story may be dominated by 1-2species, but we would definitely want more than 1 scattered plant meeting the criteria. In order to avoid this I would propose that Table 4 target is adjusted to read as below

Ongoing management measures to ensure no area greater than 100 m² does not contain mid- and upper storey native species five years after planting. 100m2 areas should contain at least 2 different under/mid-story species and a minimum under/mid-story cover of approximately 30% .

In regards to measuring this, I note that monitoring is to involve belt-transects and 20x20m tree quadrats, the above suggestion I have added would be best measured by 10x10m quadrats, but there is no reason why the under/mid-story diversity and density measure proposed above couldn't be applied to 20x20m quadrats or somehow captured in the belt-transects in green I'm tempted to ask why use the belt transects couldn't all the reveg layers criteria be measured by the 20x20 quadrats..., either way if belt-transect are to be used for understory hopefully the criteria I have proposed above can be worked into that way of measuring.

I have also noted a possible error in your report, in Table 5 the foot-note numbers may be wrong .. the reason I ask is that *Gahnia trifida* is allocated a footnote of 4, this species definitely will not become weedy and if it did that would be ideal (I suspect this species is ment to be allocated a footnote of 5).

If you have any questions please ask

Thanks Andrew Webb From: Bernadette Van der Wiele [mailto:bernadette@endplanenvironmental.com.au]
Sent: Thursday, 30 November 2017 12:40 PM
To: Kim Williams; Andrew Webb
Cc: Williams, Justin; Darren Brearley; Stuart Sibbald; Nadine Carter;
Stephen.Carmody@capecare.com.au; 'John Reid'; 'Dominic Trombetta'; Cox, Vaughn
Subject: EPBC 2006/2834 ROMP Version 6

Hello Kim and Andrew

Further to your request for some additional changes to be made to version 5, I have created version 6 (attached) wherein the requested changes have been highlighted in yellow.

With respect to your earlier advice for meaningful completion criteria for the mixed species plantings (see attached advice), on the advice of Dr Darren Brearley (Onshore Environmental) who has noted that the use of both tubestock and native seed in the revegetation area will mean that using a set figure for determining a survival rate (eg 80%) will be difficult to verify. In order to resolve both of these issues, I have amended version 6 to show that infill planting will be undertaken in patches greater than 100m2 where mid-storey and upper storey native species are absent. These changes (highlighted in green) are included in sections 3.1, 3.2 and Table 4. Kind regards

Bernadette van der Wiele Director

EndPlan Environmental PO Box 138 NORTH FREMANTLE WA 6159 M: 0447 366 460 UDIA 2014 WA and 2015 National Environmental Excellence Award Winner

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APPENDIX 4

EPBC 2006/2834 APPROVAL (25 FEBRUARY 2013)



Australian Government

Department of Sustainability, Environment, Water, Population and Communities

EPBC Ref: 2006/2834

Mr Greg Holland Chief Executive Officer Capecare 20 Ray Ave BUSSELTON WA 6280

Dear Mr Holland

Decision on approval Capecare, Aged Care Village, Dunsborough, WA (EPBC 2006/2834)

I am writing to you in relation to your proposal to develop aged care facilities on Naturaliste Terrace, Dunsborough, WA.

I have considered the proposal in accordance with Part 9 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and have decided to grant an approval to Capecare. The details of my decision are attached. The proposal must be undertaken in accordance with the conditions specified in the approval.

I would appreciate your assistance by informing me when you start the action, when you intend to provide the Rehabilitation Offset Management Plan and who will be the contact person responsible for the administration of the approval decision.

Please note, any plans required as conditions of approval will be regarded as public documents unless you provide sufficient justification to warrant commercial-in-confidence status.

You should also note that this EPBC Act approval does not affect obligations to comply with any other laws of the Commonwealth, state or territory that are applicable to the action. Neither does this approval confer any right, title or interest that may be required to access land or waters to take the action.

The department has an active audit program for proposals that have been referred or approved under the EPBC Act. The audit program aims to ensure that proposals are implemented as planned and that there is a high degree of compliance with any associated conditions. Please note that your project may be selected for audit by the department at any time and all related records and documents may be subject to scrutiny. Information about the department's compliance monitoring and auditing program is enclosed.

I have also written to Mr Kim Taylor of the WA Office of the Environmental Protection Authority, and Mr Keiran McNamara of the WA Department of Environment and Conservation, informing them of this decision. If you have any questions about this decision, please contact the project manager, Mitchell Bouma, by email to mitchell.bouma@environment.gov.au, or telephone (02) 6274 2020 and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely

oll

Michael Ward Acting Assistant Secretary North, West and Offshore Assessment Branch 75 February 2013


Australian Government

Department of Sustainability, Environment, Water, Population and Communities

Approval

Capecare, urban and commercial new development, Aged Care – Naturaliste Terrace, Dunsborough, WA (EPBC 2006/2834)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act* 1999.

Proposed action

person to whom the Ray Village Aged Services Inc. (Trading as Capecare) approval is granted

proponent's ACN (if ABN: 77 630 179 279 applicable)

proposed action To develop aged care facilities on Naturaliste Terrace, Dunsborough, WA [See EPBC Act referral 2006/2834].

Approval decision

Controlling Provision	Decision	
Listed threatened species and communities (sections 18 & 18A)	Approved	

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 31 December 2021.

Decision-maker

name and position

Michael Ward Acting Assistant Secretary North, West and Offshore Assessment Branch

signature

Mulall

- 1. The person taking the action must not **clear** more than 0.9020 ha of habitat for the vulnerable Western Ringtail Possum (*Psuedocheirus occidentalis*) within the **proposed development footprint** (as shown at <u>Attachment A</u>).
- 2. Clearing must not occur outside of the proposed development footprint (as shown at <u>Attachment A</u>).
- 3. To mitigate potential impacts to the Western Ringtail Possum, the person taking the action must have an experienced zoologist with an approved Regulation 15 WA DEC fauna relocation licence on site, to spot for, handle and relocate Western Ringtail Possums from the proposed development footprint to undisturbed vegetation within Armstrong Reserve, during clearance of vegetation.
- 4. The person taking the action must not commence construction until written evidence is provided to the Department that the remaining 2.83 ha of Armstrong Reserve, outside of the proposed development footprint (as shown at <u>Attachment A</u>), is designated a reserve for the purpose of 'Landscape Protection' under the WA Land Administration Act 1997.
- 5. To offset the residual impacts of the action on the Western Ringtail Possum, the person taking the action must prepare and submit a Rehabilitation Offset Management Plan (ROMP). The ROMP must be prepared in consultation with the City of Busselton and WA DEC and must include, though not be limited to the following:
 - a. the identification (including a map) of an offset site(s) at least 1.8 ha in size, containing Western Ringtail Possum habitat, that is within the Dunsborough region of Western Australia and is able to support the planting of at least 700 Peppermint (*Agonis flexuosa*) trees. The offset site(s) must be accompanied with the Offset attributes;
 - b. the planting of at least 700 Peppermint trees within the offset site(s);
 - **c.** methodology for rehabilitation works and ongoing management measures to ensure a survival rate of 80% of the 700 Peppermint trees is maintained 5 years after planting;
 - **d.** details of the transfer of responsibility for the **offset site(s)** to the City of Busselton, which must occur within 3 years following the commencement of rehabilitation works, and the management measures that will occur after this transition;
 - e. measures to ensure the long term protection of the offset site(s);
 - f. measures to manage the impacts of feral animals, people, weeds and Dieback (*Phytopthora cinnamomi*);
 - **g.** details of monitoring, reporting and contingency measures if performance indicators are not met;
 - **h.** timeframes for the implementation and completion of the above measures/programs/reporting; and,

i. roles and responsibilities of personnel associated with the implementation of the above measures/programs/reporting.

The ROMP must be submitted to the **Department** prior to the commencement of **construction**. If the **Minister** approves the ROMP, the approved ROMP must be implemented. **Construction** must not commence until the ROMP is approved by the **Minister**.

- **6.** Within 30 days after the commencement of the action, the person taking the action must advise the **Department** in writing of the actual date of commencement.
- 7. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the ROMP required by this approval, and make them available upon request to the **Department**. Such records may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the **Department's** website. The results of audits may also be publicised through the general media.
- 8. Within three months of every 12 month anniversary of the commencement of the action, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of the ROMP as specified in the conditions. Each report must stay on the proponent's website for at least 3 years. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the **Department** at the same time as the compliance report is published.
- 9. If the person taking the action wishes to carry out any activity otherwise than in accordance with the ROMP as specified in the conditions, the person taking the action must submit to the **Department** for the **Minister's** written approval a revised version of that ROMP. The varied activity shall not commence until the **Minister** has approved the varied ROMP in writing. The **Minister** will not approve a varied ROMP unless the revised ROMP would result in an equivalent or improved environmental outcome over time. If the **Minister** approves the revised ROMP, that ROMP must be implemented in place of the ROMP originally approved.
- 10. If the Minister believes that it is necessary or convenient for the better protection of listed threatened species to do so, the Minister may request that the person taking the action make specified revisions to the ROMP specified in the conditions and submit the revised ROMP for the Minister's written approval. The person taking the action must comply with any such request. The revised approved ROMP must be implemented. Unless the Minister has approved the revised ROMP, then the person taking the action must continue to implement the ROMP originally approved, as specified in the conditions.
- **11.** If, at any time after 5 years from the date of this approval, the person taking the action has not commenced **construction** the action, then the person taking the action must not substantially commence the action without the written agreement of the **Minister**.
- **12.** Unless otherwise agreed to in writing by the **Minister**, the person taking the action must publish the ROMP referred to in these conditions of approval on their website. The ROMP must be published on the website within 1 month of being approved.

13. Upon the direction of the **Minister**, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the **Minister**. The independent auditor must be approved by the **Minister** prior to the commencement of the audit. Audit criteria must be agreed to by the **Minister** and the audit report must address the criteria to the satisfaction of the **Minister**.

Definitions

Armstrong Reserve is the area contained within the 'Site Boundary' at <u>Attachment A</u>, which is comprised of Lots 117, 116, 118, 257 and 258, Naturaliste Terrace, Dunsborough, Western Australia.

Clear/clearing is the cutting down, felling, thinning, logging, removing, killing, destroying, poisoning, ringbarking, uprooting or burning of native vegetation.

Construction includes any preparatory works required to be undertaken including clearing vegetation, the erection of any fences, signage or on-site temporary structures and the use of construction or excavation equipment on site for the purpose of breaking the ground for buildings or infrastructure.

The **Department** is the Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*.

Minister is the Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the **Minister**.

Offset attributes means an excel file ('.xls') capturing relevant attributes of the Offset Area, including the EPBC reference ID number, the physical address of the offset site, coordinates of the boundary points in decimal degrees, the EPBC protected matters that the offset compensates for, any additional EPBC protected matters that are benefiting from the offset, and the size of the offset in hectares.

Offset site(s) is the area, or areas, to be identified by the proponent to be used for their proposed rehabilitation offset that must be a total of at least 1.8 ha in size and support the planting of at least 700 Peppermint trees. The proponent will specify the location of the **offset sites(s)** within the ROMP.

Proposed development footprint is the area identified as '*Proposed Development Footprint*' at <u>Attachment A</u>.

WA DEC is the Western Australian Department of Environment and Conservation, (or equivalent agency).

Attachment A



APPENDIX 5

OFFSET SITE - REHABILITATION AREA (ONSHORE ENVIRONMENTAL, 2017)



APPENDIX 6

FIREBREAK AND FUEL HAZARD REDUCTION NOTICE (CITY OF BUSSELTON, 2017)

BUSH FIRES ACT 1954

PROPERTY COMPLIANCE REQUIREMENTS

Compliance inspections of land will be carried out from 16 November 2017, to assess landowner(s) or occupier(s) of land compliance with the City of Busselton Firebreak and Fuel Hazard Reduction Notice.

Rural Residential, Urban and Industrial Land requirements must be compliant by <u>16 November 2017</u>

Rural Land requirements must be compliant by <u>15 December 2017</u>

Local Government may serve a notice pursuant to Section 33 of the Bush Fire Act 1954, requiring the property owner to undertake any extra work to reduce the impact of a fire

Rural Residential, Urban and Rural Land requirements <u>must</u> <u>be maintained</u> in accordance with the table overleaf until 12 May 2018 or a later date if the compliance period is extended, in which case a notice will be placed in the local newspaper

FIRE PERMITS

- Permits to burn are required for the whole of the restricted periods and can only be obtained from the Fire Control Officer for your area
- Permits are to be obtained before burning commences (the permit holder must be in possession of the permit during the burn)

FIRE PERMIT APPLICATION

Before you call a Fire Control Officer ensure you have the following information $% \label{eq:control}%$

- Who will be the three able bodied persons in attendance at all times whilst the fire is alight including contact phone number?
- What is the address of the property for which the permit applies?
- What fire fighting equipment and resources will you have at the fire front and is it in good working order?
- What is the size of burn to take place?
- Are there firebreaks installed and can a fire unit get access to the area?
- What material are you burning? Is it dry? Are there any plastics, tyres, treated posts or woods in the piles or area to be burnt? If so, remove them to a safe place.
- Ensure you give 72 hours notice to the Fire Control Officer first; and
- Ensure you notify neighbours 72 hours prior to commencing your burn

For further advice, contact your local Fire Control Officer, as advertised in the City of Busselton's Community Directory or on the City of Busselton website <u>www.busselton.wa.gov.au</u>

GENERAL REQUIREMENTS

Garden Refuse Urban Areas (Town sites): No garden refuse is permitted to be burnt on the ground, in the open air or in an outdoor incinerator within the urban areas of Busselton and Dunsborough town sites at any time of the year

- Garden Refuse Rural Residential Areas (non-Town sites): The burning of garden refuse is prohibited from 14 December to 28 February. During the restricted burning period, 2 November to 14 December and 1 March to 12 May each year, permits are required to be obtained from the Fire Control Officer in your area for the burning of any garden refuse
- **Burning of toxic materials** and **rubbish** is prohibited at all times
- **Camp fires** are prohibited within the City during the restricted and prohibited burning period
- **Wood** and **coal fuelled barbecues**, including wood fired pizza ovens and chimineas are banned during a total fire ban or in any period when the fire danger forecast is 'Very High' or above
- Wood fired pizza ovens must have a spark arrestor fitted
- Warning: The use of electric fences during periods of 'Very High' or above may cause fire
- **Owners of tractors** with down swept exhaust systems are encouraged to have an approved spark arrestor fitted as provided in the Bush Fires Act 1954 Regulations
- Welding, Cutting and Grinding Equipment: A person shall not operate this equipment during the restricted/prohibited burning times on land which is under crop, pasture, stubble and bush unless one working fire extinguisher is provided, work area is clear of flammable materials and there is compliance with any other controls required by a Fire Control Officer.
- Welding, cutting and grinding equipment is not permitted to be used anywhere within the City of Busselton when the fire index is 'extreme' or above

FIRE DANGER RATING

For the current fire danger rating visit Department of Fire & Emergency Services (DFES) website <u>www.dfes.wa.gov.au</u> or Bureau of Meteorology (BOM) website <u>www.bom.gov.au</u>

CONTRACTORS

Please be advised, if you engage a contractor to gain compliance with this notice it is the property owner, <u>not the contractor</u>, who is responsible for the standard and quality of the fire prevention work undertaken and required to be compliant by 16 November (or 15 December if Rural Land) each year and maintained as per this notice throughout whole the fire season.

CONTACT US

For further fire safety information visit the City of Busselton website <u>www.busselton.wa.gov.au</u> or Department of Fire & Emergency Services (DFES) website <u>www.dfes.wa.gov.au</u>

IMPORTANT DATES

The below dates may change due to seasonal fire conditions in which case details will be published in the local newspaper.

RESTRICTED

BURNING PERMITS ARE REQUIRED FROM

2 November 2017 to 14 December 2017 inclusive and 1 March 2018 to 12 May 2018 inclusive

BURNING PROHIBITED

15 December 2017 to 28 February 2018 inclusive (ALL FIRES PROHIBITED)

COMPLIANCE DATE

- Completion of firebreaks/fuel hazard reduction on all rural residential, urban and industrial land is required to be completed by 16 November 2017 and must be maintained until 12 May 2018
- Completion of firebreaks/fuel hazard reduction on all rural land is required to be completed by 15 December 2017 and must be maintained until 12 May 2018
- **1** Burning on Sundays and public holidays during the restricted fire season is prohibited

Applications for a variation of this the Firebreak and Fuel Hazard Reduction Notice, where ground considerations or environmental concerns prevent compliance with the requirements of this Notice, must be lodged in writing together with a Firebreak and Fuel Hazard Reduction Notice Variation form, prior to **31 October 2017.**

The hardest aspect of fire prevention is explaining to your family why you didn't undertake any!



Actions speak louder than words and actions save lives

Should you require further clarification of the information contained in this notice please do not hesitate to contact the City's Ranger and Emergency Services Department on (08) 9781 0444.



FIREBREAK AND FUEL HAZARD REDUCTION NOTICE



2017/2018 BUSH FIRE SEASON FIRST AND FINAL NOTICE

Bush Fires Act 1954

Take notice that pursuant to Part 3 Division 6 Section 33 of the Bush Fires Act 1954, landowner(s) or occupier(s) of land shall construct firebreaks and carry out fire prevention work in accordance with the City of Busselton Firebreak and Fuel Hazard Reduction Notice.

Failure to comply with this notice may result in a

\$5,000 FINE

Fire Prevention Starts with You!



RING 000 FOR ALL FIRES

CATEGORY It is the land owner's responsibility to identify the category that relates to their property and to ensure the necessary fire prevention works are completed on time. Please contact the City if you are unsure of your category.	A	в	с	D	FIREBREAK CATEGOORY CODE AND SUMMARY OF REQUIREM Image: Complex state of the state
CATEGORY 1 RURAL Except plantations and vineyards (for tourist chalets, refer to Estate Fire Management Plan or Individual Fire Management Plan) Sections A, C and D apply to this category.	~		~	~	A - Firebreak – The term firebreak includes a mineral earth firebreak. A mineral earth firebreak means a 3 metre wide area of the owner(s)/occupiers(s) land, cleared and maintain there is only mineral earth left. Any overhanging trees and other vegetation must be pruned to a height of 5 metres above the ground level of a mineral earth firebreak. Category 1 – Rural: A mineral earth FIREBREAK shall be constructed 3 metres wide, except in pasture or crop areas where a FIREBREAK shall be 2 metres wide. FIREBREAKS shall be located area exceeds 120 hectares, an additional FIREBREAK must divide the land into areas of not more than 120 hectares with each part completely surrounded by a FIREBREAK. Category 2 - Urban Residential and Industrial-Commercial: Where the area of land exceeds 2024m ² (½ acre) a mineral earth FIREBREAK shall be constructed and maintained at least 3 boundaries of the land. Where the area of land is 2024m ² (½ acre) or less, hazardous material must be removed in accordance with section B - Fuel Reduction (refer to B1). Category 5 - Protea Plantations/Vineyards: A mineral earth FIREBREAK shall be 3 metres wide. A low fuel area is to be maintained in accordance with section B - Fuel Reduction (refer to B2).
CATEGORY 2 URBAN RESIDENTIAL & INDUSTRIAL - COMMERCIAL Sections A, B, D and E1 Trees, apply to this category. Refer to section E - Interpretation and Additional Requirements (E1 Trees).	~	~		~	 Category 6 and 7 - Rural Residential: A mineral earth FIREBREAK shall be constructed 3 metres wide. On Category 6 Rural Residential land with pasture or crop, a FIREBREAK the land. For Category 7 Rural Residential land, free access along a Strategic FIREBREAK is to be maintained at all times and including across the boundary of a lot, by means on B - Fuel Reduction 1) Category 2 - Urban Residential and Industrial-Commercial: Where the area of land is 2024m² (½ acre) or less, ALL HAZARDOUS MATERIAL must be removed from the maintained to a height of no greater than 10 centimetres; this includes piles of timber, branches and other vegetation. Trees shall be pruned in accordance with section E - 2) Category 5 - Protea Plantations/Vineyards: A 5 metre low fuel area is to be maintained between the 3 metre FIREBREAK and the plantation/vineyard area. In this area, v includes piles of timber, branches and other vegetation.
CATEGORY 3 & 4 PLANTATIONS Fire Management Plan applies	N/A	N/A	N/A	N/A	 3) Category 6, 7 and 8 - Rural Residential: Parkland clearing must be carried out in all open paddocks and along the boundary of the property. Clearing means that all dead vegetation and trees/shrubs) including piles of timber and disused materials must be maintained to a height of no greater than 10 centimetres. C - Building Protection Zones (BPZ) - This is a modified area of reduced fuel immediately surrounding a building BPZ's starve the fire by reducing the fuel levels around your house. These requirements are designed to reduce the fire's intensity and minimise the likelihood of flame contact with built threaten suddenly and they cannot leave. It also provides extra protection for fire fighters and property owners who may decide to stay with their property. A BPZ shall be provided for buildings in bush fire prone areas. The surroundings of buildings must comply with the following requirements:
CATEGORY 5 PROTEA PLANTATIONS / VINEYARDS (For tourist chalets, refer to Estate Fire Management Plan or Individual Fire Management Plan) Sections A, B, C and D apply to this category.	~	~	~	~	 The BPZ for existing buildings must be at least 20 metres from any external wall of the building unless varied under an approved Fire Management Plan (FMP) in accordance with section The minimum BPZ for buildings constructed after 1 November 2011, in all cases shall be 25 metres. The BPZ must be located within the boundary of the lot that the building is situated on. Hazardous/flammable materials must not exceed the maximum fuel load specified in Point 5 below with grass areas not exceeding a height greater than 10 cm. Fuel loads must be reduced and maintained at 2 tonne per hectare. Isolated trees and shrubs may be retained, however, the first 5 metres around all buildings is to be clear of all hazardous/flammable materials. Reticulated gardens in the BPZ shall be maintained to a height of no greater than 500 millimetres. Wood piles must be at least 10 metres away from habitable dwellings.
CATEGORY 6 RURAL RESIDENTIAL - LOTS WITH INDIVIDUAL (MINERAL EARTH) BOUNDARY BREAKS Sections A, B, C and D apply to this category unless the property is subject to Estate Fire Management Plan or Individual Fire Management Plan	~	~	~	~	 9) Trees in the BPZ must comply with section E - Interpretation and Additional Requirements (refer to E1). 10) Where the land has an approved FMP, compliance must be achieved in accordance with the FMP. The FMP may vary the above BPZ requirements. 11) A Hazard Separation Zone (HSZ) is also recommended in the absence of a Fire Management Plan. Section E - Interpretation and Additional Requirements (refer to E3). D – Fuel Storage & Haystack Protection Zones A 3 metre mineral earth FIREBREAK shall be located within 6 metres of fuel storage tanks, sheds, gas cylinders and haystacks. The mineral earth firebreak shall be maintained so that it is total
CATEGORY 7 RURAL RESIDENTIAL - LOTS WITH A STRATEGIC FIREBREAK ON ONE OR MORE BOUNDARIES Sections A, B, C and D apply to this category unless the property is subject to Estate Fire Management Plan or Individual Fire Management Plan	~	~	~	~	 <u>E – Interpretation and Additional Requirements</u> <u>Trees</u> On Urban, Industrial, Rural, and Rural Residential land, all tree branches must be removed or pruned to ensure a clear separation of at least 3 metres back from the eaves of all may fall on the house must also be removed. In the BPZ the following is 'recommended'; the spacing of individual or groups of trees should be 15 metres apart to provide for a 5 metres 2.5 metres between trees and power lines so they do not come into contact and start a fire or bring down a power line. <u>Hazardous and Flammable Materials</u> means the accumulation of fuel (living or dead) such as leaf litter, twigs, trash, bush, dead trees and scrub capable of carrying a running fire, but NOTE: All remaining vegetation, piles of timber, branches and other living vegetation must be maintained to a height of no greater than 10 centimetres. To measure and http://www.dfes.wa.gov.au/safetyinformation/fire/bushfire/pages/publications.aspx#5 and select <i>Visual Fuel Load Guide Swan Coastal (Part 1 & 2)</i>. Surface bush fire fuels should be kept
CATEGORY 8 RURAL RESIDENTIAL - LOTS WITHIN A STRATEGIC FIREBREAK AREA WITH NO STRATEGIC FIREBREAKS ON THE LOT BOUNDARIES Sections B, C and D apply to this category unless the property is subject to Estate Fire Management Plan or Individual Fire Management Plan		~	~	~	 <u>nazaru separation zones</u> (<u>nsc</u>) A hsz is a modified area or reduced rule load outside of the BP2 and is recommended to assist in reducing the fires intensity when flames are approach for the protection of buildings. A HSZ covers the area 75 metres outside the BP2. The HSZ should be modified to have a maximum fuel load of 6-8 tonne per hectare. This can be implemented by fuel reduction methods such as burning, mowing and slashing to remove a shrubs. REMEMBER: reduce the fuel level of the fire to lower the intensity of the blaze. Further information on fuel loading can be found in the <i>Visual Fuel Load Guide</i> available by calling D Fire Management Plan (FMP) A FMP is a comprehensive plan for the prevention and control of bushfires which may apply to individual land holdings. A notification, pursuant to the Certificate(s) of Title of the land for medium to long term fire management to reduce the occurrence and minimise the impact of uncontrolled bush fires, thereby reducing the threat to li with the FMP. Building in bush fire prone areas, new dwellings and other forms of accommodation, as well as additions to existing buildings are to be constructed in accordance with i areas, the minimum BPZ in all cases shall be 25 metres. Further information on this and other information relating to fire safety issues can be found on the City's website <u>www.busselton.w</u>

