Reserves 27185 & 17394, Mount Barker

Revegetation Plan for CPS 9349-1

Bio Diverse Solutions

Final V 2.0

13/01/2023

DOCUMENT CONTROL

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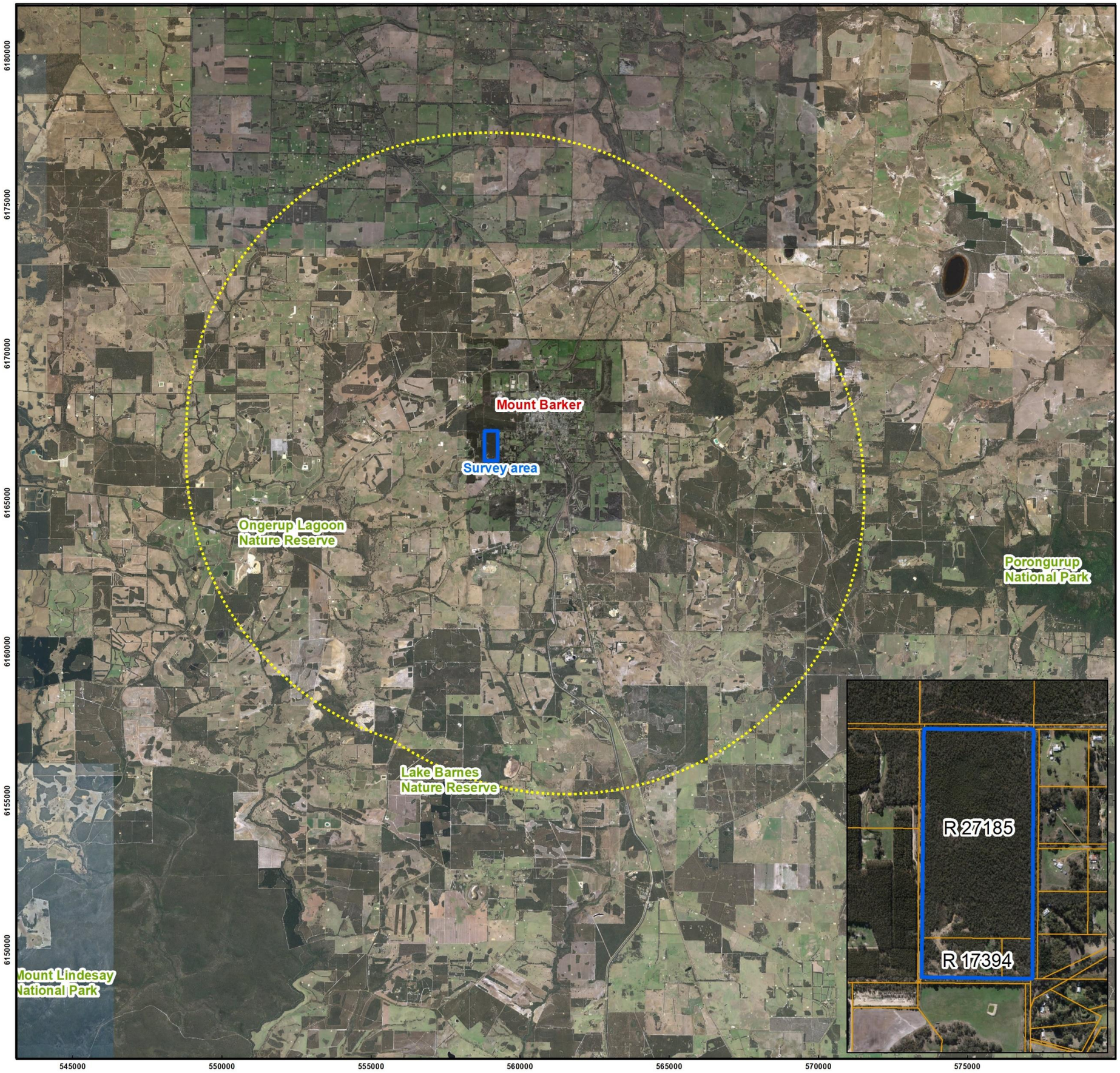
1. Introduction

Bio Diverse Solutions (Environmental Consultants) was commissioned by the Shire of Plantagenet ("the client") as environmental consultants to prepare a Revegetation Plan to offset the clearing of 1.34 ha of native vegetation at Lot 6923 Tower Road, Mount Barker on Deposited Plan 218597 (Reserve 15162). The clearing, scheduled under the clearing permit CPS 9349/1, is intended to be undertaken by the Shire of Plantagenet to facilitate the construction of a recreational bike trail and carpark area on behalf of the Great Southern Centre for Outdoor Recreation Excellence (GSCORE). The Department of Water and Environmental Regulation (DWER) requires a Revegetation Plan to be developed for the approval of CPS 9349/1, where DWER regulations require 4.57 ha of revegetation at a Crown Reserve to adequately offset the clearing undertaken at Reserve 15162. The revegetation has been earmarked to take place on two Crown Reserves situated close to the township of Mount Barker; Reserve 27185 and Reserve 17394 (herein referred to as "the subject site"). This Revegetation Plan has been developed in line with DWER's *Guide to Preparing Revegetation Plans for Clearing Permits* (DWER, 2018a) (Appendix D).

1.1. Site Details

The original revegetation area was defined by Department of Water and Environmental Regulation (DWER) as the 37-ha southern block of Reserve 27185, an A-Class Reserve managed by the Shire of Plantagenet. Upon site investigation it was determined the need to extend the revegetation area to include the 7-ha block immediately south of R 27185, being R 17394, a C Class Reserve vested in the Department of Planning, Lands and Heritage (DPLH) and previously utilised for gravel extraction. This reserve is required to provide additional revegetation areas to contribute towards meeting the 4.57 ha revegetation target (see Figure 1). The resulting subject site is approximately 44 ha, within which the southern most portion contains unvegetated ground suitable for offset revegetation (4.65 ha in total revegetation). Refer to Figure 1 and maps in Appendix A.

The subject site (4.65ha revegetation site) has been previously used for gravel extraction and subject to illegal rubbish dumping. Areas proposed for revegetation include areas considered bare / devoid of vegetation, or weed infested on the site.



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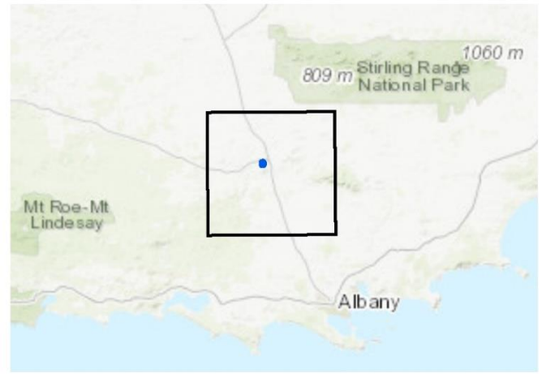

Overview Map Scale 1:500,000

Legend

Survey Area

10 km Survey Area

Scale
1:125,000@ A3
GDA MGA 94 Zone 50

Data Sources
Aerial Imagery: WA Now, Landgate Subscription Imagery
Cadastre, Relief Contours and Roads: Landgate 2017
IRIS Road Network: Main Roads Western Australia 2017
Overview Map: World Topographic map service, ESRI 2012

CLIENT
Shire of Plantagenet
R 27185 & R 17394
Mount Barker, WA 6324

Figure 1: Subject site location

	QA Check	*Drawn by*
	MLH	**KMG**
STATUS **FINAL**	*FILE* **MB008-003**	*DATE* **04/11/2022**

1.2. Aims of this Plan

The aim of this plan is to:

- Re-establish a functional landscape, representing pre-clearing / disturbance vegetation types through structure and composition;
- Reinstatement of the biodiversity of the area with local, endemic species;
- Maintain the high condition value of the area, with revegetated area returned to a minimum of very good condition, with limited presence of non-native species and need for future weed management; and
- Minimise the environmental impact of extractive activities by return of the ecosystem.

The subject site is proposed to be revegetated through stabilisation of the site by returning native plants to the area and re-establishing a functional landscape representing the pre-clearing vegetation types through structure and composition. This will be achieved through the utilisation of broad revegetation principles and methods. Micro habitats for fauna will also need to be reintroduced in revegetation areas. The use of large logs (trees removed during the clearing process) and large rocks that aren't crushed during extraction activities should be placed in revegetation areas to provide micro habitats for fauna. This will encourage ground-based fauna (e.g., lizards, snakes etc.) to return to the area as the vegetation becomes more established. The success of the revegetation will be monitored, and a contingency plan is proposed to be enacted if a functional and sustainable landscape fails to establish. Failure is deemed as the revegetation outcomes not meeting the completion criteria specified in Section 6 of this report.

The topsoil is known to be a source of viable seed, from the natural soil seed bank developed over numerous years within the subject site. Similarly, seed is known to be stored on some species in the brushing vegetative material following clearing, and therefore also acts as a source of viable seed. However, seed viability decreases incrementally the longer it sits in stockpiling, therefore it is imperative that seed be returned to the revegetation areas as soon as feasible. Given the availability of seed supplies already at the site, no supplementary tube stock plantings or direct seeding is currently proposed. If it is deemed through the monitoring program (Section 6) that the revegetation is not providing a functional level of plant coverage and species diversity a contingency plan in accordance with Section 6.1 will be implemented.

2. Background Information

2.1. Existing Land Use and Adjacent Tenure

The subject site is comprised of two Crown reserves within the Local Government Area of Plantagenet – Reserve 27185 and Reserve 17394. The subject site is approximately 44 ha in size and is accessible via Omrah Road. Reserve 27185 is vested within the Shire of Plantagenet, "Public Open Space" within the A Class Mondurup Bushland Reserve, under Local Planning Scheme No. 5. Reserve 17394 is vested within the Department of Planning, Land and Heritage (DPLH) under the Land Act (Type 2) and is zoned as 'Rural' under the Local Planning Scheme No. 5. This reserve was previously utilised as a gravel quarry, however since operations have ceased weeds have smothered the cleared areas, and it has become a hotspot for illegal dumping activity. The Reserve 17394 is proposed to be rezoned to 'Public Open Space' and would be effectively included in the Mondurup Bushland Reserve. The resulting subject site (revegetation site) is approximately 4.65 ha in size across both reserves (R27185 and R17394) and is accessible from the south via Omrah Road.

The subject site is in the Great Southern region within a landscape that has been largely cleared for agriculture, with rural and broadacre grazing and cereal cropping properties stretching in all directions from the subject site. The vast majority of these properties are used for broad acre cropping, forestry or for grazing purposes. The townsite of Mount Barker is situated approximately 2 km east of the subject site. Several large Nature Reserves and National Parks are situated to the south, east and north-east, such as Mount Lindesay National Park, Porongurup National Park, Stirling Ranges National Park, and Lake Barnes Nature Reserve (refer to Figure 1). The subject site has been previously used for gravel extraction and subject to illegal dumping. Areas proposed for revegetation are aimed at the bare / devoid of vegetation on the site and weed infested areas. Refer to Photographs 1-4 showing the site conditions in the proposed revegetation areas.

Photograph 1: View of proposed revegetation area in the north of Reserve 27185.

Photograph 2: View of proposed revegetation area in the north of Reserve 27185.

Photograph 3: View of proposed revegetation area in the north of Reserve 27185.

Photograph 4: View of proposed revegetation area in the east of Reserve 17394.

2.2. Geology and Soils

Database searches shows the property lies within the Porongurup Range System (242Pr) within the Albany Sandplain Zone. The Porongurup Range System is described as "*Granitic hills and fringing siltstone slopes, in the Albany Sandplain Zone. Sandy gravel, loamy gravel, loamy duplex and stony soil. Jarrah-marri-karri forest, jarrah woodland and shrublands.*" (DPIRD, 2018a). The Albany Sandplain Zone is described as having "*Gently undulating plain dissected by a number of short rivers flowing south. Eocene marine sediments overlying Proterozoic granitic and metamorphic rocks. Soils are sandy duplex soils, often alkaline and sodic, with some sands and gravels."* (DPIRD, 2017a).

2.3. Climate

The nearest Bureau of Meteorology (BoM) operational station is Mount Barker (Station No. 009581), which was used for climate data regarding temperature. However due to lack of confirmed rainfall data for 2021-2022 at Station No. 009581, the Pardelup station (Station No. 009591) was utilised for rainfall data. The average maximum temperature is 26.3°C, whilst the average minimum temperature is 6.1°C. The average annual rainfall for the station is 757.8 mm, with the majority of rainfall occurring between June and October (BoM, 2021).

2.4. Surface Water Hydrology

The property lies within the Denmark Coast Catchment area within the Albany Sandplain Hydrological Zone (HZ20_AS), which is described as "*Gently undulating plain dissected by a number of short rivers flowing south. Eocene marine sediments overlying Proterozoic granitic and metamorphic rocks. Soils are sandy duplex soils, often alkaline and sodic, with some sands*

and gravels" (DPIRD, 2018b). The Subject Site discharges towards the Hay River, which lies approximately 5 km to the south-west of the property and meanders further south before discharge into the Wilson Inlet (DPIRD, 2018b).

The property is not located within a Public Drinking Water Source Area (DWER, 2018b). There are no significant wetlands in the area (DWER, 2017c).

2.5. Remnant Vegetation

Mondurup Reserve is anticipated to become part of the proposed 'Lindesay Link Corridor' that will conjoin Porongurup National Park with Mount Lindesay National Park (WICC, 2012). It contains Jarrah Forest, Jarrah-Marri Forest, and Banksia Woodland as known existing vegetation communities (WICC, 2012).

The subject site lies along the southern boundary of the Jarrah Forest Bioregion and Southern Jarrah Forest (JF2) subregion, which has experienced the highest level of clearing in the bioregion (WICC, 2012). Comer et al (2001) describes the Southern Jarrah Forest subregion as "*Duricrusted plateau of Yilgarn Craton characterised by Jarrah-Marri Forest on laterite gravels and, in the eastern part, by Wandoo - Marri woodlands on clayey soils. Eluvial and alluvial deposits support Agonis shrublands. In areas of Mesozoic sediments, Jarrah forests occur in a mosaic with a variety of species-rich shrublands.*"

The vegetation has been mapped on a broad scale by J.S. Beard (Shepherd et al. 2002) in the 1970's, where a system was devised for state-wide mapping and vegetation classification based on geographic, geological, soil, climate structure, life form and vegetation characteristics (Sandiford and Barrett, 2010). Vegetation units were regarded as associations and grouped into Vegetation Systems representing a particular pattern of association distribution within a given area. A GIS search of J.S. Beard's (Beard et al. 2013) vegetation classification places the Subject site within one System and Vegetation Association (DPIRD, 2017b):

- **System Association Name:** Narrikup.
- **Vegetation Association Number:** 3.
- **Structure Description:** Forest.
- **Floristic Description:** Mainly jarrah and marri (*Eucalyptus marginata* and *Corymbia calophylla*).
- **Remnant Vegetation by Beard Association Rarity in LGA**: 36.37% remaining (GoWA, 2019).
- **Remnant Vegetation by Beard Association Rarity in IBRA Region:** 67.10% remaining (GoWA, 2019).

The reference sites are generally Jarrah and Marri Forest, refer to Photographs 5-7 and section 3 for more detail on the reference sites and vegetation types.

Photograph 5: Reference vegetation at Quadrat 1 within Reserve 27185.

Photograph 6: Reference vegetation at Quadrat 2 within Reserve 27185.

Photograph 7: Reference vegetation at Quadrat 3 within Reserve 27185.

2.6. Heritage

The site is located within the Menang Nyungar nation, and whilst there are no Registered Aboriginal Heritage Sites on the property, there are several within close proximity (DPLH, 2022). Artefacts have been uncovered at sites 4607 (Spring Hill), 10587 (Mt. Barker 01), 28190 (Hay River Terrace Site) and 15093 (Mt. Barker 07), all of which are within 9 km of the revegetation site. It is recognised that there has been a large scale of loss of cultural knowledge and information, and the subject site may contain additional heritage values that are not recognised through DPLH. Historically, Nyungar people utilised the reserve for traditional activities, such as camping (WICC, 2012).

2.7. Dieback

The water-borne protozoan, *Phytophthora cinnamomi*, is known to cause the destructive plant disease, 'Dieback', that results in the death of susceptible species constituting 40% of the Western Australian flora. Phytophthora dieback is known to occur within the subject site and has been documented to have already impacted the heath and presence of species within the Myrtaceae and Proteaceae families; the most notable impact has been the death of mature Jarrah (*Eucalyptus marginata*) trees that form significant habitat values for fauna and are an important structural component within the ecosystem. The last known dieback assessment for Mondurup Reserve was conducted in 2012 by Jeremy Spencer of Great Southern Bio Logic; the extent map is depicted in Figure 5, Appendix A. Approximately 20 ha of the reserve is classified as 'Uninfested' (Figure 6, Appendix A) and protectable via signage, access restriction, and adherence to appropriate hygiene protocols if entry is unavoidable. However, given the water-borne nature of the disease and the high-rainfall zoning of the reserve, it is highly likely that in the decade since the assessment, the disease has spread further into the previously uninfested areas.

Aerial canker disease, causing necrosis in the upper limbs of plants, such as Marri (*Corymbia calophylla)* and *Banksia formosa*, is known to be well-established within the western flank of Mondurup Reserve (WICC, 2012). Although typically this disease causes partial death of infected plants, in recent years the disease has appeared to increase in virulence and may have increased impact in the future.

3. Reference Site: Survey of area to be revegetated

3.1. Vegetation Units

One vegetation unit was identified during the survey and is described in the following section based on compilation of data derived from three quadrat assessments of reference habitat (refer to Appendix B). Vegetation Type A acts as the reference site for this revegetation plan, including baseline data such as species diversity, species composition, functional traits of fauna usage, vegetation condition and vegetation communities present. Refer to Figure 1 for photographs of the vegetation unit across the whole subject site (reference sites).

Vegetation Type A: Marri-Jarrah Forest on hillslope

Vegetation Description (Muirs): *Eucalyptus marginata* and *Corymbia calophylla* Open Forest, over *Agonis theiformis, Acacia triptycha, Conospermum conifera, and Hakea florida* Shrubland, over *Leucopogon obovatus.* subsp. *revolutus, Opercularia hispidula* and *Xanthosia rotundafolia* Heathland, over *Johnsonia lupulina, Anarthria prolifera, Conostylis setigera, Desmocladus fasciculatus and Lepidosperma squamatum* Sedges, over *Drosera* sp. 1 & 2 Herbs.

Area: 39.5 ha (approximately) within reserve 27185 and Reserve 17934.

Site description: Moderate slope on granitic hill, with well-draining light to dark grey sandy/ sandy loam soil and underlying lateritic/granitic geology.

Condition: Completely Degraded – Excellent.

Figure 1: Vegetation Type A, Marri-Jarrah Forest on hillslope.

3.2. Vegetation Condition

Vegetation condition was assessed at the site during the survey on the 23rd of August 2022. The vegetation condition for the Vegetation Type A has been mapped using the condition rating scale (adapted from Keighery 1994) outlined in EPA *Flora and Vegetation Survey Guidelines* (2016) and is displayed below in Table 1. The degradation within the Good-Completely Degraded areas can be attributed to a combination of weed invasion due to garden waste dumping, edge effects from surrounding agricultural land, illegal vehicle activity for firewood collection, clearing, and fire. Some alterations of understorey species composition are evident of a historical Phytophthora dieback infestation, and potential seedling regeneration may be experiencing suppression due to overgrazing by feral and overabundant native herbivores (i.e., rabbits and kangaroos). The largest proportion of Vegetation Type A exists as 'Excellent' condition; these areas were not assessed to be eligible as a revegetation area. Refer to Figure 3 – Vegetation condition, Appendix A.

There is a total of approximately 4.65 ha available for revegetation at the site, provided by improving the condition ratings of the areas classified as Very Good – Completely Degraded through actions detailed in this Revegetation Plan. Therefore, the offset revegetation target of 4.57 ha has been 100% met at the site.

Insert comment on how veg condition informs reveg plan, ie. Stem density for plantings (refer to map in appendix), where retention of native veg is worth it and where to bulldoze for reveg.

Table 1: Vegetation condition rating.

Vegetation type	Condition rating	Area (ha)
Veg Unit A	Completely Degraded	0.9
	Degraded	2.48
	Good	1.08
	Very Good	0.19
	Excellent	39.35
Total		**44.00**

3.1. Fauna Considerations

Habitat values for numerous Threatened and Priority Fauna were noted by Senior Zoologist Dr Karlene Bain was assessed at the site during the survey on the 23rd of August 2022. This included foraging habitat for the Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*, VU) and Baudin's Black Cockatoo (*Calyptorhynchus baudinii*, EN), and den habitat for Chuditch (*Dasyurus geoffroi*, VU). Numerous non-threatened / priority native species were observed to inhabit the vegetation on the site, including Red-capped parrots, Western whistlers, and kangaroos. Considerations of the presence of fauna and their habitat preferences may become relevant with consideration to mitigating grazing of establishing revegetation, and prioritisation of species selected from the recommended list for planting (refer to Table 8).

3.2. Weeds and Disturbance

The data for the reference vegetation unit was collected in areas classified as being in Excellent condition. However, the southern area of the subject site showed varying degrees of ecological degradation attributed to weeds and other evident disturbances, with some areas eligible for classification as Completely Degraded (Figure 3, Appendix A). Of the 63 species identified within the survey areas, 16 were invasive / weed species. Two invasive species, *Asparagus asparagoides* (bridal creeper) and *Rubus ulmifolius* (blackberry) were classified as 'Declared Pests' under s22(2) of the *Biosecurity and Agricultural Management Act 2007*.

Weeds are a serious and pertinent challenge to the successful revegetation of the site. Whilst there were several exotic species sparsely dispersed throughout the surveyed southern portion of the site, the most severe infestation occurs within clearings within the southern and eastern portion of Reserve 17394, where weeds such as *Watsonia* sp. and kikuyu grass are highly established (refer to Figure 3, Appendix A). The weeds originated from a range of sources, including moderate edge effects from surrounding agricultural properties, illegal dumping of garden waste within the reserves, and contaminated vehicles and personnel entering the site (Kevin Collins, pers. comms, Aug 2022). Several pine trees were felled within the last decade, evident by the remaining woody debris. Areas of mounded soil and debris in the weed-infested south-eastern corner were evident of previous earthworks. The semi-established revegetated strip running along the western side of the site showed signs of compaction and topsoil erosion, likely a result of wind and water run-off on the bare soil.

4. Revegetation Methodology

The following section outlines the detailed steps for successful revegetation of the offset site. Table 2 outlines a schedule for actions and management of the Revegetation Plan that will be carried out across a 5-year revegetation timeframe. A two-stage revegetation process is recommended for this offset revegetation project due to uncertainty over approval for the DPLH Reserve 17394 to be utilised for revegetation:

Stage 1 – Reserve 27185.

Stage 2 – Reserve 17394 (pending approval of transfer of management to Shire of Plantagenet).

The followring procedures will be implemented for both Stage 1 and Stage 2 of the revegetation plan:

4.1. Site Preparation

Investment in a substantial range of site preparation processes is crucial for optimal revegetation outcomes at this site. Both broad-range and targeted weed management techniques will be required to manage the severe weed infestation in the south-eastern pocket of the site, with earthworks recommended to recreate more natural slope contours and reduce weed seed contamination in the soil seed bank.

Refer to Section 5.2 in this report for details on weed management.

1. Intensive and extensive weed control;
2. Earthworks to reshape soil mounds to natural contours and reduce weed species present in soil seed bank;
3. Shallow ripping in clay soil areas across slope; and
4. Spreading of topsoil and/or mulch across bare areas and shallow soils.

4.2. Revegetation Activities

Revegetation activities can be split into two groups: natural regeneration enhancement and active revegetation. Enhancement of natural regeneration will be undertaken through:

1. Redistribution of native seed-bearing topsoil from mounded stockpiles to bare areas; and
2. Laying of seed-bearing branches across woody debris piles.

Active revegetation will be undertaken across the revegetation areas through:

3. Manual planting of selected native species tube stock to an appropriate density ranging from 200 to 1500 stems/ha according to required improvements in existing vegetation condition to achieve a ‘Good’ condition; and
4. Broadcast seed dispersal.

Designations of planting density of tube stock across the revegetation areas is illustrated in Figure 3, Appendix A.

4.3. Reduce Site Disturbances

Following the completion of revegetation activities, degradation-inflicting disturbances such as illegal garden waste dumping of garden waste and contaminated vehicle traffic, will be managed through the introduction of several access restriction measures:

1. Fencing around the revegetation sites; and
2. Installation of access restriction points.

These access restriction measures intend to reduce the accessibility of the reserve to people using vehicles intending to dump rubbish, weed-bearing garden material, or collect firewood. The Mondurup Reserve Draft Management Plan (WICC, 2012) has mapped suitable locations for the installation of lockable gates to restrict access and increase efficiency of management. Mesh fencing may also reduce grazing by overabundant native herbivores such as kangaroos. Regular fence checking may be required if high kangaroo activity is detected, and the fencing poses a risk to animal welfare (regarding entanglements) or property damage.

5. Schedule and Budget

The schedule for the revegetation project has been derived from the revegetation methodology described in Section 4 and is depicted as a guide in Table 2. In September 2022, the Shire of Plantagenet passed a motion to apply for the transfer of the management of R 17394 from DPLH to the Shire of Plantagenet. If approved, the Shire will need to determine the budget allocations it will invest in the Revegetation Plan across the five years of its operation. The document regarding the request for the change of management of R 17394 is included in Appendix C.

Table 2: Schedule and Budget for Revegetation Plan (combined Stages 1 & 2)

Stage	Action	Responsibility	Timing	Year 1	Year 2	Year 3	Year 4	Year 5	Inventory and Cost Estimates
Site Preparation	Removal of rubbish and vegetative debris.	Project Manager	Prior to weed control	X	X				Bobcat positrack $110 per hr +GST.
	Treatment of invasive and exotic species within the revegetation zones of the revegetation site.	Project Manager	Optimal time for most species is in September; refer to Generalised Weed Management Program (Table 3).		X	X	X	X	Pest/Weed Control @ $100 per hr per staff. Recommended 2-3 staff . Recommended 2-3 days annually = approximately $6,750 per year. Treatment options for weed species in Table 3.
	Removal of top 10cm of soil in severe *Watsonia* infestations and remove bulbs.	Project Manager	Prior to vegetation establishment and during weed control.		X				Bobcat positrack $110 per hr +GST.
	Shallow ripping through designated revegetation areas to reduce compaction.	Project Manager	After weed control.		X	X			Single tine ripper hire Bobcat positrack $110 per hr +GST.
Access restriction	Erection of mesh fencing around perimeter of reserve to discourage trespassers and potential large herbivores.	Shire of Plantagenet	Prior to vegetation establishment.			X	X		Mesh fencing wire @ $200-$300 per metre.
	Installation of lockable concrete/steel barricades to access roads to reserve.	Shire of Plantagenet	Prior to vegetation establishment.			X			Concrete barricade or rock pitching. Ringlock gate $500.00.
Vegetation Establishment and Active Revegetation	Spread stored topsoil over the revegetation area, particularly compacted clay-rich areas, and laying of seed-bearing branches of targeted revegetation species.	Project Manager	At beginning of any stages of revegetation, recommended from April to June.		X	X			Bobcat positrack $110 per hr +GST.
	Dieback-free mulch spread across revegetation areas.	Project Manager / Environmental Consultant if required	At beginning of any stages of revegetation – Recommended from April to June			X	X		Bobcat positrack $110 per hr +GST.
	Active revegetation – planting of target native species.	Project Manager	Early stages of revegetation, recommended in winter months from May to July.		X	X	X		Seedlings @ $2-3.00 each, for approximately 5000 seedlings = $9, 140 - $13, 710 for 4.57 ha. Direct seeding to be confirmed after first year of revegetation; pending seed collection.
	Planting Crew.	Project Manager	Early stages of revegetation, recommended in winter months from June to August.		X	X			Example tree planting crew: Badgebup Aboriginal Corporation Rangers. Approximately $1500 per day for 3 Rangers. Estimate 2-3 days planting.
Dieback management plan	Implement Dieback Management Plan, as outlined in Section 4.6.	Project Manager	Ongoing	X	X	X	X	X	NA
	Visual inspection of all items involved in extraction and revegetation with the capacity for transferring infected soil material into the site.	Project Manager	Ongoing	X	X	X	X	X	Environmental Consultant @ $150 per hr + GST+ travel time.
	All items involved in extraction and revegetation are required to be 'cleaned' prior to entering site.	Project Manager	Ongoing	X	X	X	X	X	In contract specification.
	Control of site during excavation to prevent machinery with unknown 'clean' status to enter.	Project Manager	Ongoing	X	X	X	X	X	In contract specification.
	All vehicles and traffic to use defined road reserves and formalised accessed routes within the private property.	Project Manager	Ongoing	X	X	X	X	X	In contract specification.
	Reshaping of overburden to meet natural contours and prevent wet or waterlogged soils.	Project Manager	During Revegetation activities	X	X	X	X	X	Completed in site preparation stage.
	Material used during revegetation only from the on-site stockpiled material and not external sites unless deemed “dieback-free”.	Project Manager	During Revegetation activities	X	X	X	X	X	To be determined from material source contractor.

Table 2 continued.

Stage	Action	Responsibility	Timing	Year 1	Year 2	Year 3	Year 4	Year 5	Inventory and Cost Estimates
Weed control Plan	Implement Weed Management Plan, as outlined in Section 4.5.	Project Manager	Ongoing	X	X	X	X	X	Refer to spraying and earthmoving costings in site preparation inventory.
	Weed control, as required upon detection of weed species.	Project Manager	Ongoing	X	X	X	X	X	As required at same rate.
Contingency measures	Undertake contingency measures, where triggered as outlined in Section 5.	Project Manager / Environmental Consultant if required	If required following revegetation completion				X	X	As required; Environmental Consultant @ $150 per hr + GST.
Monitoring: Completion Criteria and Targets	Implement monitoring program, as outlined in Section 6. Formal monitoring to meet completion criteria and targets.	Project Manager/ Environmental Consultant if required.	At commencement of revegetation strategies. Annual following revegetation completion			X	X	X	$2,500 + GST annually.
	Incidental records of photos, notes etc.	Project Manager	Ongoing	X	X	X	X	X	Records to be kept.
	Engage Friends of Mondurup Reserve volunteers and other stakeholders with monitoring activities and surveillance for weeds, feral animals, and illegal activities.	Project Manager	Ongoing	X	X	X	X	X	To be negotiated with FoMR and other engaged stakeholders where appropriate.
Record keeping	Dates of revegetation activities.	Project Manager	Ongoing	X	X	X	X	X	Environmental Consultant @ $150 per hr + GST or Shire staff.
	Location of revegetation activities (including an ESRI shapefile).	Project Manager	Ongoing	X	X	X	X	X	Environmental Consultant @ $150 per hr + GST or Shire staff.
	Description of revegetation activities undertaken.	Project Manager	Ongoing	X	X	X	X	X	Environmental Consultant @ $150 per hr + GST or Shire staff.

5.1. Consideration of Threatened & Priority Flora within Revegetation Plan

No Priority species were detected within the subject site during the basic flora survey. However, the Reconnaissance Flora and Vegetation Survey Report (BDS, 2022) identified the presence of three Priority flora taxa within Reserve 15162, the site intended undergo clearing under CPS 9439/1: *Banksia sphaerocarpa* var. *latifolia* (P2), *Synaphea preissii* (P3), and *Verticordia endlicheriana* var. *angustifolia* (P3). Revegetation activities detailed in this document aim to restore and enhance a vegetation community that is of habitat value for all three Priority species. It is recommended that a licenced seed collector for Priority and Threatened flora be engaged to source seed from known local populations of the three detected Priority Flora species to utilise for seed broadcasting or seedling propagation within the offset revegetation site. In the case of intending to employ an unlicenced seed collector with intention of attaining one, consideration must be given to the time required for licences to be processed in time for the successive flowering season. Refer to Table 8 in Appendix B for inclusion of Threatened and Priority Flora within the revegetation species lists.

5.2. Weed Control

Weed management is to be used in conjunction with Dieback hygiene management to address the biosecurity considerations of the project (See Section 4.7). The following Weed Management Plan is to apply to all aspects of site operations. All operations shall conform to this Weed Management Plan, and monitoring to occur post construction for any infestations. Weed management will primarily be undertaken through the management and extent reduction of existing weed infestations within the site, as well as the avoidance of introducing new weeds. A full species list of the weeds detected on the reserve, and their status under the BAM Act 2007 and Environmental Weed Strategy WA is presented in Table 9, Appendix B.

Aims of Weed Management Plan

The aims of the weed management program will be:

- Significantly reduce extent of current weed invasions within areas intended for revegetation;
- Increase available area suitable for revegetation activities;
- Attempt to eradicate smaller infestations or small populations;
- Maintain weed-free status of areas determined to be of Very Good to Excellent condition;
- Ensure all vehicles are clean on entry prior to any soil or vegetation movement;
- All weeds on site or colonisers removed promptly on discovery;
- Do not use weed affected soils for rehabilitation (the only soil to be used during rehabilitation is the weed free topsoil); and
- Regularly monitor the site for invasive species.

If weeds are discovered on site, they will be treated using the following methodology:

- Large woody weeds will be burned, poisoned or removed from site and disposed to approved green waste;
- Small weeds will be sprayed by a licensed contractor or landholder; and
- Initial follow up spraying will be undertaken at 6 months and 18 months and repeated as necessary.

Program for Weed Control

The following program for weed management will be implemented prior to commencement of revegetation activities. Table 3 is a guide for managing weed species (adapted from Department of Agriculture and Food and Department of Biodiversity Conservation and Attractions (Moore & Wheeler, 2008; FloraBase; WAH, 1998 -) recommended technique) and should be used as a guide to treat relevant species within the proposal area. Further information for any species and recommended treatment not listed in Table 3 should be gained from the Department of Primary Industry and Regional Development (DPIRD).

Table 3: Generalised Weed Management Program for Detected Weed Species.

Species	Recommended Treatment
Grasses	
*Kikuyu *Cenchrus clandestinus*	Control with herbicides whilst growing.
African Love Grass *Eragrostis curvula*	Removal of small plants/infestations. Annual Spray during winter, small infestations all year round as required.
Perennial Grasses *Phalaris sp.*	Selective control can be achieved with 800mL/ha Verdict®520 plus 1% spray oil. Or, use 10mL Verdict®520 plus 100mL of spray oil per 10L water for hand sprays.
Woody Weeds	
Sydney Golden wattle *Acacia longifolia*	Hand pull seedlings. Fell mature plants, apply herbicides and diesel to trunk, or cut and paste or inject with Glyphosate.
Golden Wattle *Acacia pycnantha*	Hand pull seedlings. Fell mature plants. Follow up work removing germinating seedlings will be required for at least 5 years.
Butterfly bush *Buddleja* spp.	Fell single tree, inject stump with Glyphosate to kill all rhizomes. Hand-pull any seedlings.
Tree lucerne, Tagasaste *Chamaecytisus palmens*	Hand-pull any seedlings.
Dolichos pea *Dipogon lignosus*	Small infestations can be dug out. All the rhizomes must be removed and destroyed off-site, as any remaining rhizomes will regrow even if turned upside down. Moderately resistant to herbicides, surfactants may help improve penetration into the waxy-coated leaves. Remove and burn or deep bury flower heads to stop spread of seed. Spray with 1% Grazon® just prior to flowering. Read the manufacturers' labels and material safety data sheets before using herbicides. For further information consult the Australian Pesticides and Veterinary Medicines Authority to determine the status of permits for your situation or state.
Victorian Tea Tree *Leptospermum laevigatum*	Hand pull seedlings. Fell mature plants. Cut and paint, or drill and fill with 50% glyphosate. Older plants can be ringbarked. Monitor site for recruitment from seedbank. Read the manufacturers' labels and material safety data sheets before using herbicides.
Myrtle leaf Milkwort *Polygala x dalmiasiana (P. myrtifolia x fruticosa)*	Hand pull seedlings where possible. For mature plants apply 250 ml Access® in 15 L of diesel to basal 50 cm of trunk (basal bark). Foliar spray with 0.5 g/10 L metsulfuron methyl + Pulse®. Read the manufacturers' labels and material safety data sheets before using herbicides.
## Blackberry *Rubus ulmifolius*	Mechanical control difficult. Annual summer applications of Grazon, 3 applications required, use Glyphosate in sensitive areas (i.e., creek lines). Uproot heavy infestations and cut remaining plants 5cm below ground. Spraying is effective.
Herbs	
Agapanthus / Blue Lily *Agapanthus praecox*	Removal of plant with bulb in small infestations. Wipe individual leaves with glyphosate 10% or spray dense infestations 2,2-DPA 10 g/L + Pulse®. Apply just as flower spikes emerge at corm exhaustion. 2,2-DPA at 5 g/L+ Pulse® is also quite effective and is appropriate to use when particularly concerned about off-target damage, for example following fire when growing among germinating native seedlings and resprouting native shrubs.
## Bridal creeper *Asparagus asparagoides*	Spray 0.2 g Metsulfuron methyl + Pulse® in 15 L water (or 2.5 - 5g /ha + Pulse®). Best results achieved when flowering. Biocontrol methods include a leafhopper, a rust fungus, and a leaf beetle.

Table 3 continued.

Species	Recommended Treatment
Pink Gladiolus *Gladiolus caryophyllaceous*	Wipe individual leaves with Glyphosate 10%. Spray dense infestations in degraded areas with 1% Glyphosate just on flowering at corm exhaustion. Read the manufacturers' labels and material safety data sheets before using herbicides.
Wild Gladiolus *Gladiolus undulatus*	Physical removal can result in spread of cormels. Once the parent corm is killed cormels in the soil tend to lose dormancy and germinate. Spot spray Metsulfuron methyl 0.2 g/15 L + Pulse® or 2.5-5 g/ha + Pulse®. Herbicide application should be just on corm exhaustion.
Sorrel *Oxalis spp.*	Generalised herbicide spraying.
Bugle Lily *Watsonia spp.*	Removal of plant with bulb in small infestations. Wipe individual leaves with glyphosate 10% or spray dense infestations 2,2-DPA 10 g/L + Pulse®. Apply just as flower spikes emerge at corm exhaustion. 2,2-DPA at 5 g/L+ Pulse® is also quite effective and is appropriate to use when particularly concerned about off-target damage, for example following fire when Watsonia is growing among germinating native seedlings and resprouting native shrubs.

Note: ## indicates weeds which are a 'Declared Pests' under s22(2) of the Biosecurity and Agricultural Management Act 2007.

Species marked with * are listed under the Environmental Weed Strategy WA.

5.3. Dieback Management

Over 40% of native flora species are susceptible to *Phytophthora cinnamomi,* with infection causing rapid and mass plant deaths. It also affects many agricultural crops (such as avocados and citrus) and garden plants (such as roses), representing a significant biosecurity threat for the horticultural, agricultural and conservation industry. Often the presence of *P. cinnamomi* is cryptic and difficult to ascertain. It is primarily spread through the movement of infected soil and mud, through vehicles / machinery and footwear, and naturally through free water and root-to-root plant contact. There are numerous other native plant pathogens or fungi active in Western Australia, and more broadly Australia, representing a biosecurity concern, and basic hygiene management principles should be applied in general regardless of the site.

There is a known historical infestation of Phytophthora dieback within areas of the site; the extent of which was most recently mapped in the *Mondurup Reserve Draft Management Plan* (WICC, 2012). Whilst dieback sampling was beyond the scope of the contextual survey, a visual assessment of potential spread indicated that there was an absence of dieback-sensitive species in several areas of the reserve, potentially indicative of an old infestation, and a presence of sensitive indicator species in other, likely dieback-free zones. Multiple species – including the keystone canopy species, *Eucalyptus marginata* – identified in the reference sites are susceptible to *P. cinnamomi*. The focus of the Dieback Hygiene Management Plan should be on minimising the spread of *P. cinnamomi* from infested to dieback-free areas within the reserves and preventing the introduction of the pathogen to the reserve from outside areas.

The aims of the dieback and hygiene management are to:

- To avoid the spread of Phytophthora and other plant pathogens/diseases within the site;
- To ensure there is zero spread of *Phytophthora* and other plant pathogens or diseases into and out of the site; and
- Implement measures for successful completion of the project in terms of education to personnel, decontaminating equipment, and defining access measures.

The following will apply to all aspects of operations and will form part of the hygiene management briefing to all site workers:

- Visual inspections on vehicles, plant, equipment and footwear are clean (free of any clods or patches of dirt or mud across the entire site,) when entering the site;
- Earth moving vehicles and equipment are to be cleaned prior to entering site with attention to:
    - Tyres: tread, trim, hub, wheel arches wheels;
    - Body: external areas, crevices, chassis, bumpers, side steps etc; and
    - Internal: footwells of vehicles, engine bay, grill, radiator etc.
- Access to the site during preparation and revegetation works will be controlled (fenced and gated and locked when unattended);
- Completed areas will be rehabilitated as soon as practicable;
- The rehabilitated surface will be free draining and not contain wet or waterlogged soils;
- Materials used in rehabilitation will be from on-site stockpiled material as much as practicable, and from dieback-free resources if out-sourced; and
- Road and transport vehicles are to be restricted to defined road reserve and access tracks, loading and turn around areas.

Clean Down Specification:

A visual inspection is necessary of in-coming and out-going vehicles to determine whether vehicles, machinery or equipment is free of a build-up of:

- Clods of soil and plant material and / or slurry consisting of a mixture of soil, plant and water;
- Dust and grime adhering to the sides of vehicles need not be removed before entering the site; and
- Records of inspections and clean downs are to be maintained.

6. Completion Criteria and Targets

Completion targets and criteria for consideration of successful revegetation of the area are displayed in Table 4, as guided by DWER (2018a) *A Guide to Preparing Revegetation Plans for Clearing Permits*. These completion criteria are relevant for both Stage 1 and Stage 2 of the revegetation plan. Revegetation is an emerging science, and there is large amounts of research and debate on what consists of a 'self-sustaining' ecological state following restoration. For example, if a disturbance such as fire were to occur, the revegetated area would be considered self-sustaining if able to regenerate and return as an ever-present community. Generally, for this to occur, disturbances should be limited until the soil seed bank and seed stored in the vegetative material (e.g., serotinous material) is sufficient to naturally regenerate. Disturbance should be protected for a 10–20-year period to allow for a self-sufficient ecosystem to develop in the revegetated area. Measurables address return of functional traits of ecological community as a proxy indicative of having capacity to become a self-sustaining ecosystem.

Revegetation measurables generally focus on floristic composition and structure, with limited knowledge present on return of use by fauna. It is presumed that the return of vegetation community, a relative level of floristic diversity along with micro habitats (rocks, logs etc.) will in the long-term result in return of fauna to the area. The timeframe of rehabilitation of cleared areas regarding fauna component is significantly longer.

Table 4: Completion targets and criteria for the subject site.

Criterion	Baseline Floristic data	Completion targets	Completion criteria
A (i)	Species richness of 47 native species recorded across the entire area.	Minimum of 60% of floristic diversity returned, based on pre-clearing survey as reference site.	The revegetation site contains a minimum of 14 species across Vegetation Unit A.
A (ii)	NVIS Level 5 Descriptions, including dominance of species, for Vegetation A of pre-clearing composition are outlined in Section 3.1.	Return of dominant species per stratum (upper, middle and ground storey).	A minimum of a single species from across the upper stratum and four species per middle and ground storeys, as identified in Vegetation Unit A.
B (i)	NVIS Level 5 Descriptions and quadrat data collected at Vegetation A indicate that maximum cover (indicative of density) for a strata layer was 30-70% across three strata independently.	Cover (as indicative of density of stems) returns to pre-clearing extent, as reference site.	Revegetation site will return to cover levels of 30-70% cover for three strata (understorey, midstorey and canopy) independently in the long-term.
D (i)	Reference vegetation community condition was 'Very Good'-'Excellent'.	Vegetation condition is maintained at lowest condition threshold of reference site.	Revegetation area as a whole is considered to be in 'Very Good' condition, at minimum.
D (ii)	Severe weed infestations recorded in clearings and vegetation of the southern part of the site and along periphery.	Significant reduction in weed invasion extent and severity. Minimum weed infestation occurs.	Maintenance of weed cover <5% within revegetation area.
D (iii)	Presence of two Declared Pest weed species: *Rubus ulmifolius* (Blackberry) and *Asparagus asparagoides* (Bridal Creeper).	Managed as required by the *Biosecurity and Agriculture Management Regulations 2013.*	Eradication of Declared Pest species within revegetation areas. Significant extent reduction (>85%) in surrounding buffer vegetation (10m).

Table 4 cont.

Criterion	Baseline Floristic data	Completion targets	Completion criteria
F (i)	Reference vegetation type (A, Section 3.1) were identified within the site prior to clearing.	Return of ecological community to the revegetation site.	Areas representing a similar composition and structure of Vegetation Unit A is identified in the revegetated area at a minimum area of 3.65 ha. This is 80% of the 4.57 ha of required revegetated area, accounting for a permissible 20% failure rate in plantings. Whilst this does not aim for 100% success rate in return of ecological community representing Vegetation A, it is thought that if 80% is achieved over time, a natural progression of recruitment will result in 100% of the area meeting the criteria long-term.

7. Monitoring

Completed sections of revegetation are to be incrementally monitored, recorded and assessed as per Table 5. Following the approval of CPS 9349-1, an Annual Environmental Report (AER) will possibly be required to formally monitor the progression of the rehabilitation, over the life of the Clearing Permit. Data for monitoring is to be collected at quadrats and across the revegetation site to measure completion criteria and targets, allowing for weed cover estimates, floristic diversity, return of priority species from clearing site (*Banksia sphaerocarpa* var. *latifolia, P2; Synaphea preissii,* P3; *Verticordia endlicheriana* var. *angustifolia, P3*), presence of different vegetation types and cover to be monitored. This is displayed in Table 5. Additionally, fixed photo-point monitoring should be used to provide a visual comparison of vegetation change over time.

It is expected that a minimum of 3-5 years will be required to meet completion criteria and targets. Due to ecological processes and maturation of vegetation, the 30-70% cover target for the three strata levels, independently, may require up to 30 years to achieve. However, determination of the area to be 'on track' (as determined by an appropriately experienced botanist or environmental scientist) to meet measurables can be recorded as indicative of success in future years. If the subject site revegetated is considered to not be 'on track' to meet measurables of success within 12 months of planting or within 15 months of seeding , the contingency plan (Section 7.1) will be enacted. As the planting will predominately occur in Year 2 of the plan, the contingency plan will be triggered in Year 3, if required. If after 24 months of enacting the contingency plan if revegetation is considered to not be 'on track' to meet measurables of success, this revegetation plan is required to be reviewed, including a detailed consideration of applying other revegetation and/or weed management techniques, such as establishing weed suppression matting. Expert opinion may also be sought from agencies such as the WA Botanical Gardens and Parks Authority and other revegetation specialists.

Three monitoring sites will be established at the subject site to assess the condition of the revegetation. A single point will be used for photo monitoring and to mark the south-western corner of a 10 x 10m quadrat (Figure 4, Appendix A).

Table 5: Monitoring requirements and environmental data to be collected to measure success, through completion criteria and targets.

Data collection type	Aim of monitoring	Output	Frequency	Duration
Site-level	A(i) Species richness across entire revegetation site.	Floristic survey data, incidental species list.	Annual	For the lifetime of clearing permit CPS 9349/1 or until the revegetation is considered successful and met all completion target and criteria.
	A (iii) Presence of priority species.	Presence/absence data of priority species, analysis, discussion.		
	D (i) Vegetation condition.	Data and map.		
	D (iii) Declared weed presence.	Data and map.		
	F (i) Vegetation Type A.	Data, analysis and discussion.		
Quadrat-level	A (ii) Dominant species per strata.	Floristic survey data, analysis and discussions.	Annual	For the lifetime of clearing permit CPS 9349/1 or until the revegetation is considered successful and met all completion target and criteria.
	B (i) Cover levels.	Floristic survey data, analysis and discussions.		
	D (ii) Weed infestation cover.	Floristic survey data, analysis and discussions.		
	F (i) Vegetation Type A present.	Floristic survey data, analysis and discussions.		

7.1. Contingency Plan: Direct Seeding and Tube stock Planting

The contingency plan will only be enacted if key measurables listed in Section 5 were considered to not be 'on track' to meet measurables of success within 12 months of planting or within 15 months of seeding. If after 24 months of enacting the contingency plan revegetation of the area is considered to not be 'on track' to meet measurables of success, this revegetation plan is required to be reviewed, with a more detailed analysis of other revegetation mechanisms.

Suitable species to be considered for either direct seeding or tube stock planting are displayed in Table 8, Appendix B. Three revegetation species groups were composed based on three sets of criteria; the first group was dominant species identified in the reference vegetation (Table 7, Appendix B) on the revegetation site; the second is habitat species from the Naturemap search; and the third is the three Priority species identified to be present at the clearing site. Recommendations are made on determining whether species should be returned using seed or tube stock seedlings based off availability, cost and technical expertise. Seed to be used in direct seeding may be collected from the surrounding remnant vegetation, by an experienced and licenced seed collector or purchased from a seed supplier. Where possible, local provenance collection of seed is preferred. Nurseries specialising in large scale growing programs and native species are recommended for the purchasing of tube stock seedlings.

Following DWER's *A Guide to Preparing Revegetation Plans for Clearing Permits* (2018a) optimal time for direct or broadcast seeding in the South West region is April to June and optimal time for undertaking tube stock planting is May to June.

Collected and / or purchased seeds will require some pre-treatment prior to broad cast seeding. Generally, a smoke treatment will be required to increase germination rates of the *Banksia* sp., *Calothamnus* sp., *Conostylis* sp., and *Melaleuca* species (Ralph, 2003). Some species require scarification (nicking the seed coat), and or heat treatment (placing seed in hot water) to increase the germination, such as *Acacia* sp., *Jacksonia* sp., and *Templetonia* species (Ralph, 2003). It is likely the process of excavation of the vegetation will abrade and scarify some of the seed and therefore act as a treatment (allow water to imbibe the seed coat). The Western Australian, Botanic Gardens and Parks Authority (https://www.bgpa.wa.gov.au/) provides additional information of seed treatment, or alternatively ask the supplier. Direct seeding can be implemented in numerous manners, through seeders specifically tailored for native seeds and contracted through Native Ecologist Agronomists or hand casting implemented by specialists, with a variety of additives or fillers to ensure even and random mix of species.

It is recommended if tube stock planting occurs that additives of Australian native fertiliser tablets and / or tree guards for protection from grazing (such as rabbits or kangaroos) are incorporated into the planting program. Additionally, plantings should be random, without distinct patterns in species composition (e.g., lines or clumps of a single species) to mimic the natural variety within natural ecological communities. Tube stock planting should aim for a stem / $1m^2$.

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9. Appendices

Appendix A: Maps

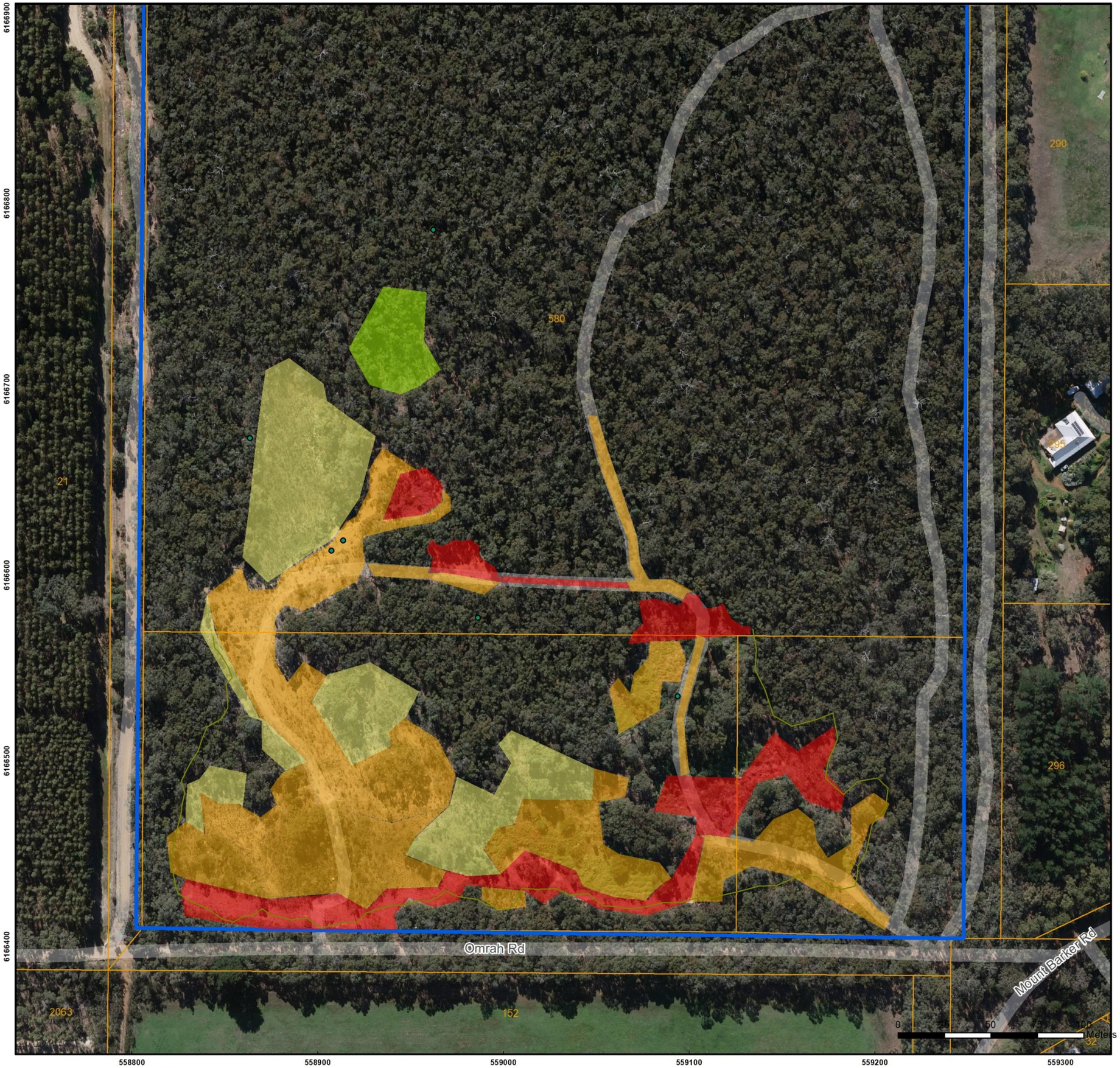
Appendix B: Species List

Appendix C: Amendment to Agree to Reserve (ATR)

Appendix D: Checklist on Recommended Content for a Revegetation Plan

Appendix A

Maps



Albany Office:
29 Hercules Crescent
Albany, WA 6330
(08) 9842 1575

Denmark Office:
7/40 South Coast Highway
Denmark, WA 6333
(08) 9848 1309

Esperance Office:
2A/113 Dempster Street
Esperance, WA 6450
(08) 9072 1382

BIO DIVERSE SOLUTIONS

Overview Map Scale 1:1,200,000

Legend

- Survey Area
- Cadastre

Vegetation Condition

- Completely Degraded
- Degraded
- Good
- Very Good

Scale
1:2,000 @ A3
GDA MGA 94 Zone 50

Data Sources
Aerial Imagery: WA Now, Landgate Subscription Imagery
Cadastre, Relief Contours and Roads: Landgate 2017
IRIS Road Network: Main Roads Western Australia 2017
Overview Map: World Topographic map service, ESRI 2012

CLIENT
Shire of Plantagenet
R 27185 & R 17394
Mount Barker, WA 6324

Figure 3: Vegetation Condition

	QA Check	*Drawn by*
	MLH	**KMG**
STATUS **FINAL**	*FILE* **MB008-003**	*DATE* **15/11/2022**

Albany Office:
29 Hercules Crescent
Albany, WA 6330
(08) 9842 1575

Denmark Office:
7/40 South Coast Highway
Denmark, WA 6333
(08) 9848 1309

Esperance Office:
2A/113 Dempster Street
Esperance, WA 6450
(08) 9072 1382

BIO DIVERSE SOLUTIONS

Overview Map Scale 1:1,000,000

Legend

- Survey Area
- Cadastre

Revegetation Areas

Planting Rate

- 1500 stems/ ha
- 1000 stems/ha
- 500 stems/ha
- 200 stems/ha

Scale
1:1,600 @ A3
GDA MGA 94 Zone 50

Data Sources
Aerial Imagery: WA Now, Landgate Subscription Imagery
Cadastre, Relief Contours and Roads: Landgate 2017
IRIS Road Network: Main Roads Western Australia 2017
Overview Map: World Topographic map service, ESRI 2012

CLIENT
Shire of Plantagenet
R 27185 & R 17394
Mount Barker, WA 6324

Figure 4: Revegetation Staging

	QA Check	*Drawn by*
	MLH	**KMG**
STATUS **FINAL**	*FILE* **MB008-003**	*DATE* **15/11/2022**

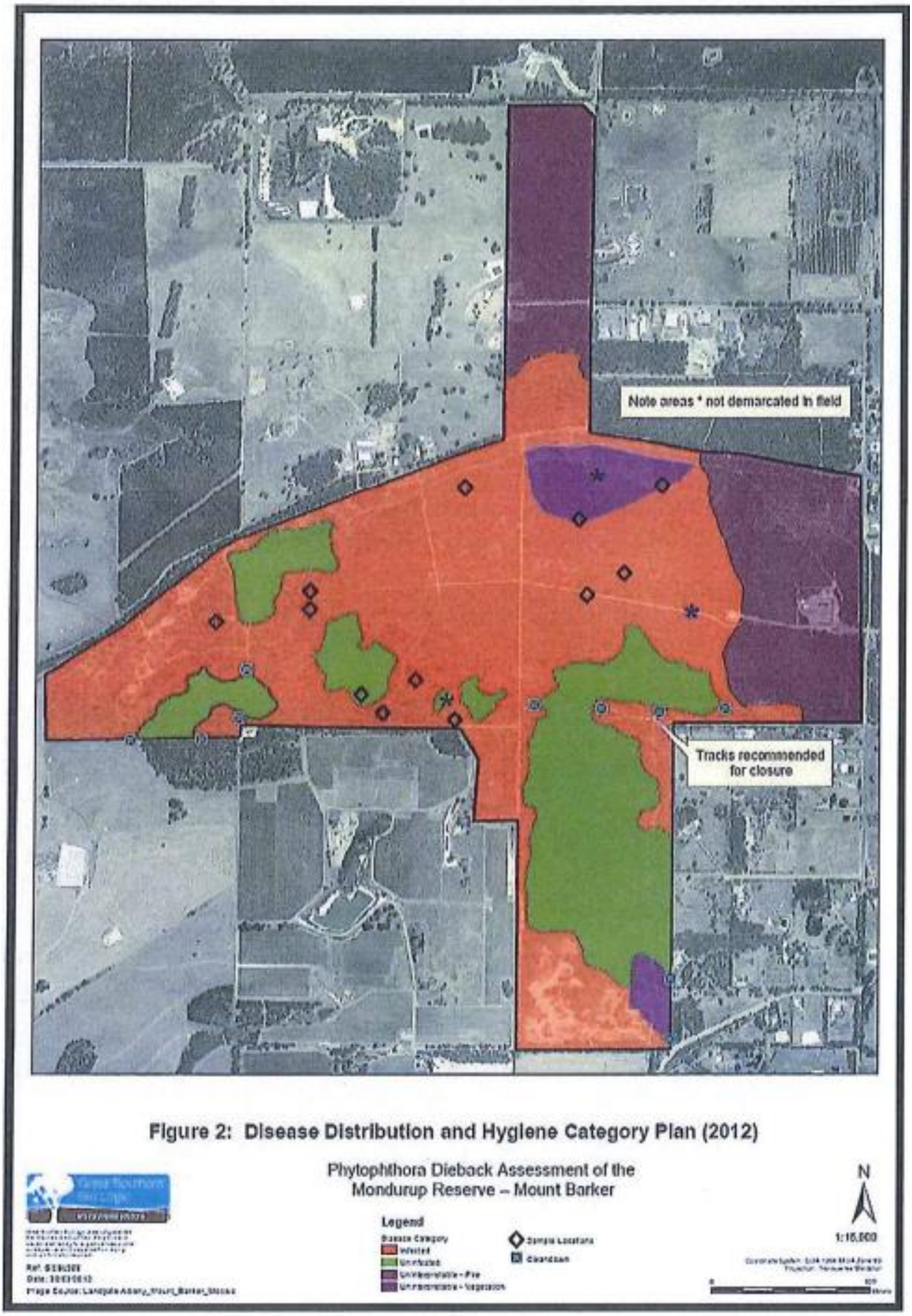


Figure 5: Disease Distribution and Hygiene Category Plan (2012). Sourced from WICC (2012).

Note that the image resolution in the original report precludes the reader from interpreting the legend. The red areas are 'Infested', green areas are 'Uninfested', dark purple areas are 'Uninterpretable – fire' and the lighter purple areas are 'Uninterpretable – vegetation'.

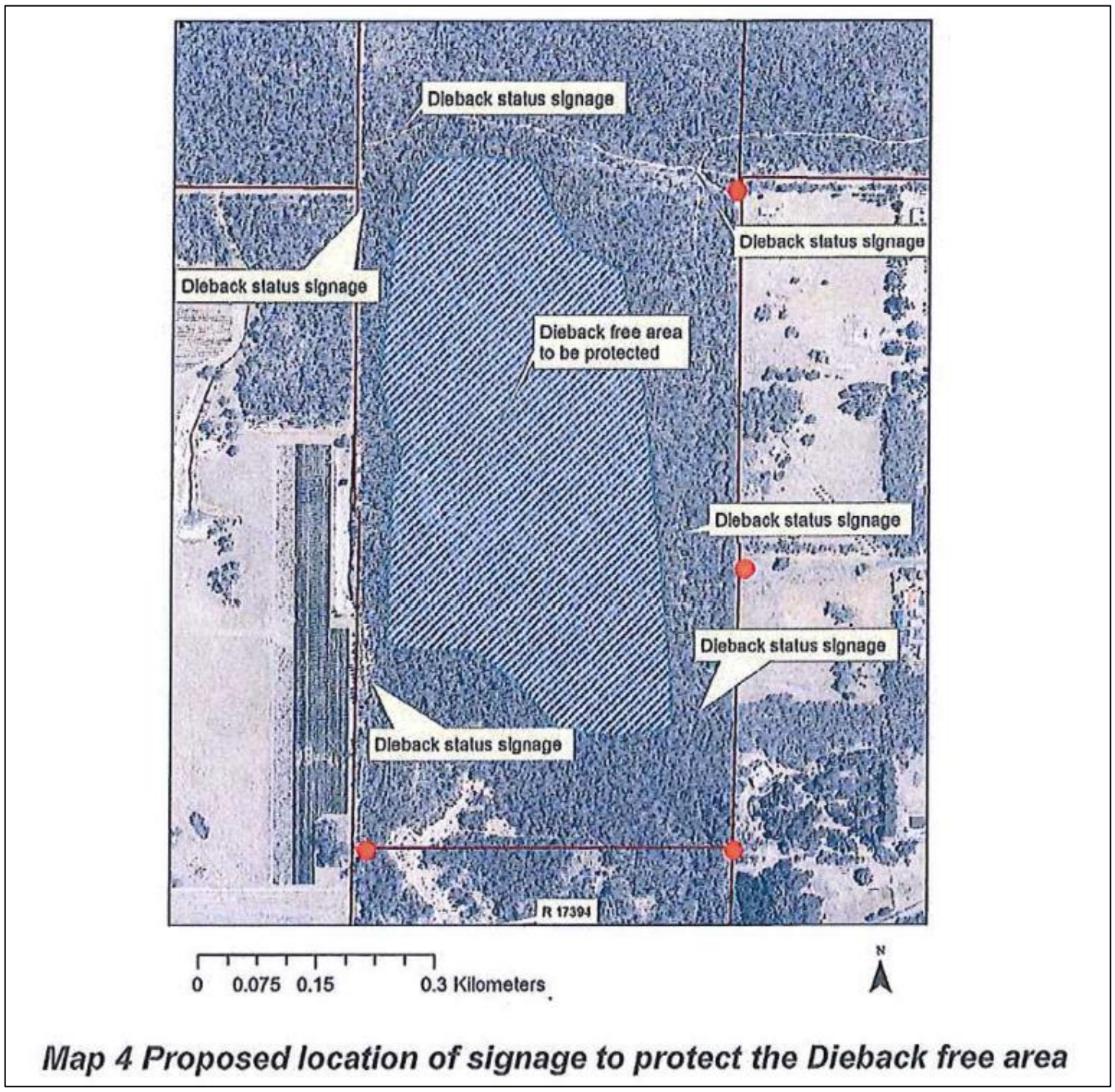


Figure 6: Dieback-free area within Reserve 21785, as determined in WICC (2012).

Appendix B

Species Lists

Table 7: Flora species identified within reference vegetation within survey area.

Family	Species	Common Name	Invasive	Cons Code	Quadrat 1	Quadrat 2	Quadrat 3
Agapanthaceae	*Agapanthus praecox*	Agapanthus, Blue Lily	X				
Anarthriaceae	*Anarthria prolifera*				X		
Apiacea	*Xanthosia rotundifolia*	Southern Cross			X	X	
Asparagaceae	*Asparagus asparagoides*	Bridal creeper	X				
Asteraceae	*sp.*						
Cyperaceae	*Lepidosperma squamatum*				X		
Cyperaceae	*Lepidosperma pubisquameum*					X	
Dillenaceae	*Hibbertia cunninghamii*	Mr Cunningham's candollea				X	
Droseraceae	*Drosera eurythrogyne*				X		X
Droseraceae	*Drosera sp. 2*				X	X	
Droseraceae	*Drosera sp. 3*				X		
Ericaceae	*Andersonia caerulea*	Foxtails			X		X
Ericaceae	*Leucopogon obovatus subsp. revolutus*				X	X	X
Ericaceae	*Leucopogon unilateralis*	Beard heath			X	X	X
Ericaceae	*Leucopogon verticillatus*	Tasselflower				X	
Ericaceae	*Leucopogon glabellus ?*	Beard heath				X	
Ericaceae	*Leucopogon capitellatus*						X
Fabaceae	*Acacia triptycha*				X		
Fabaceae	*Acacia browniana subsp. Intermedia*	Brown's Wattle				X	X
Fabaceae	*Bossiaea ornata*	Broad-leaved brown pea				X	
Fabaceae	*Gastrolobium latifolium*				X		
Fabaceae	*Acacia leioderma*						
Fabaceae	*Hovea chorizemifolia*	Holly-leaved Hovea				X	
Fabaceae	*Acacia longifolia*	Sydney Golden Wattle	X				
Fabaceae	*Acacia pycnantha*	Golden Wattle	X				
Haemodoraceae	*Conostylis setigera*	Bristly Cottonhead			X	X	
Hemerocallidaceae	*Johnsonia lupulina*	Hooded Lily			X		

Table 7 continued

Family	Species	Common Name	Invasive	Cons Code	Quadrat 1	Quadrat 2	Quadrat 3
Iridaceae	*Patersonia occidentalis*	Purple Flag			X		
Iridaceae	*Gladiolus undulatus*	Wild Gladiolus	X				
Iridaceae	*Gladiolus caryophyllaceous*	Pink Gladiolus	X				
Iridaceae	*Watsonia spp.*	Bugle Lily	X				
Lindsaeaceae	*Lindsaea linearis*	Screw fern					
Loganiaceae	*Buddleja spp.*	Butterflybush	X				
Myrtaceae	*Eucalyptus marginata*	Jarrah			X	X	X
Myrtaceae	*Corymbia calophylla*	Marri			X	X	
Myrtaceae	*Calothamnus schaueri*						X
Myrtaceae	*Agonis theiformis*	Summer Snowflakes			X	X	X
Myrtaceae	*Leptospermum laevigatum*	Victorian Tea Tree	X				
Orchidaceae	*Caladenia sp. 1*				X		
Orchidaceae	*Caladenia sp. 2*						X
Oxalidaceae	*Oxalis spp.*	Sorrel	X				
Papilionaceae	*Hardenbergia comptoniana*	Native Wisteria					
Papilionaceae	*Dipogon lignosus*	Dolichos Pea	X				
Papilionaceae	*Chamaecytisus palmens*	Tree lucerne, tagasaste	X				
Pittosporaceae	*Billardiera fusciformis*	Australian Bluebell					
Poaceae	*Cenchrus clandestinus*	Kikuyu grass	X				
Poaceae	*Eragrostis curvula*	African lovegrass	X				
Polygalaceae	*Polygala x dalmiasiana (P. myrtifolia x fruticosa)*	Myrtleleaf Milkwort	X				
Proteaceae	*Grevillea depauperata*	Beautiful Grevillea				X	
Proteaceae	*Grevillea pulchella subsp. pulchella*					X	
Proteaceae	*Hakea florida*				X	X	X
Proteaceae	*Conospermum conifera*	Smokebush			X	X	
Proteaceae	*Banksia formosa*	Golden Dryandra					

Table 7 continued

Family	Species	Common Name	Invasive	Cons Code	Quadrat 1	Quadrat 2	Quadrat 3
Proteaceae	*Banksia grandis*	Bull Banksia					X
Proteaceae	*Sp.*					X	
Proteaceae	*Isopogon formosus subsp. Formosus*	Rose Coneflower				X	
Proteaceae	*Isopogon attenuatus*	Coneflower/Pineapple bush				X	X
Proteaceae	*Conospermum sp.*						
Proteaceae	*Persoonia longifolia*	Snottygobble				X	
Restionaceae	*Desmocladus fasciculatus*				X		
Rosaceae	*Rubus anglocandicans*	Blackberry, bramble	X				
Rubiaceae	*Opercularia hispidula*	Hispid Stinkweed			X		
Xanthorrhoeaceae	*Xanthorrhoea gracilis*	Graceful Grasstree					X

Table 8: Recommended Revegetation Species List

List Group	Strata Layer	Species	Conservation Code
1	Canopy	*Corymbia calophylla*	
		Eucalyptus marginata	
	Midstorey	*Acacia browniana subsp. intermedia*	
		Acacia leioderma	
		Agonis theiformis	
		Banksia formosa	
		Banksia grandis	
		Bossiaea ornata	
		Calothamnus schaueri	
		Conospermum conifera	
		Grevillea depauperata	
		Grevillea pulchella subsp. pulchella	
		Hakea florida	
		Hakea varia	
		Hibbertia cunninghamii	
		Isopogon attenuatus	
		Isopogon formosus	
		Leucopogon obovatus subsp. revolutus	
		Leucopogon unilateralis	
		Persoonia longifolia	
		Xanthorrhoea gracilis	
	Understorey/Ground	*Conostylis setigera*	
		Desmocladus fasciculatus	
		Gastrolobium latifolium	
		Johnsonia lupulina	
		Lepidosperma pubisquameum	
		Lepidosperma squamatum	
		Patersonia occidentalis	
		Xanthosia rotundifolia	
2	Midstorey	*Banksia ilicifolia*	
		Banksia verticillata	
		Boronia crenulata	
		Boronia heterophylla	
		Boronia nematophylla	
		Boronia spathulata	
		Boronia subsessilis	
		Calothamnus quadrifidus subsp. quadrifidus	
		Calytrix asperula	
		Calytrix flavescens	
		Calytrix hirta	
		Calytrix leschenaultii	
		Chorizema aciculare	
		Chorizema aciculare subsp. aciculare	
		Chorizema cytisoides	
		Chorizema glycinifolium	
		Chorizema nanum	
		Chorizema spathulatum	
		Commersonia parviflora	
		Dampiera alata	
		Dampiera linearis	
		Dampiera pedunculata	
		Darwinia citriodora	

Table 8 continued

List Group	Strata Layer	Species	Conservation Code
2	Midstorey	*Darwinia leiostyla*	
		Darwinia oederoides	
		Darwinia vestita	
		Hakea corymbosa	
		Hakea linearis	
		Hakea trifurcata	
		Hakea undulata	
		Hibbertia gracilipes	
		Hibbertia hypericoides	
		Hibbertia lineata	
		Hibbertia stellaris	
		Leucopogon pendulus	
		Lobelia anceps	
		Lobelia rhombifolia	
		Melaleuca pauciflora	
		Petrophile diversifolia	
		Anigozanthos gabrielae	
		Anigozanthos preissii	
		Austrostipa trichophylla	
		Bossiaea lalagoides	P2
		Dianella revoluta	
		Patersonia umbrosa	
		Persoonia striata	
		Pimelea rosea	
3	Midstorey	*Banksia sphaerocarpa var. latifolia*	P2
		Verticordia endlicheriana var. angustifolia	P3
	Understorey/Ground	*Synaphea preissii*	P3

Table 9: Listing Status of Observed Weed Species

Family	Species	WA Weed Strategy rating (CALM 1999)	BAM Act (2007)
Asparagaceae	Bridal Creeper *Asparagus asparagoides*	High	Declared Pest – s22 (2)
Agapanthaceae	Agapanthus praecox	Low	Permitted – s11
Iridaceae	Wild Gladiolus *Gladiolus undulatus*	Moderate	Permitted - s11
	Pink Gladiolus *Gladiolus caryophyllaceous*	Moderate	Permitted – s11
	Bugle Lily *Watsonia* spp.	High-Moderate	Permitted – s11
Fabaceae	Sydney Golden Wattle *Acacia longifolia*	Not listed	Permitted - s11
	Golden Wattle *Acacia pycnantha*	Low	Permitted – s11
Loganiaceae	Butterflybush *Buddleja* spp.	Low	Permitted – s11
Myrtaceae	Victoria Tea Tree *Leptospermum laevigatum*	High	Permitted – s11
Oxalidaceae	*Oxalis* spp.	Mild	Permitted – s11
Papilionaceae	Dolichos Pea *Dipogon lignosus*	Low	Permitted – s11
	Tree lucerne, tagasaste *Chamaecytisus palmens*	Moderate	Permitted – s11
Poaceae	Kikuyu *Cenchrus clandestinus*	Moderate	Permitted – s11
	African Lovegrass *Eragrostis curvula*	High	Permitted – s11
Polygalaceae	Myrtleleaf Milkwort *Polygala x dalmiasiana (P. myrtifolia x fruticose)*	Not listed	Permitted – s11
Rosaceae	Blackberry *Rubus anglocandicans*	High	Declared Pest

Appendix C

Agreement to Vary Reserve

9.1.2 RESERVE 17394 - TRANSFER OF CROWN LAND

File Ref:	**N59001**
Responsible Officer:	**Delma Baesjou** **Executive Manager Development Services**
Authors:	**Laura Adams** **Economic Development and Projects Officer**
Proposed Meeting Date:	**27 September 2022**

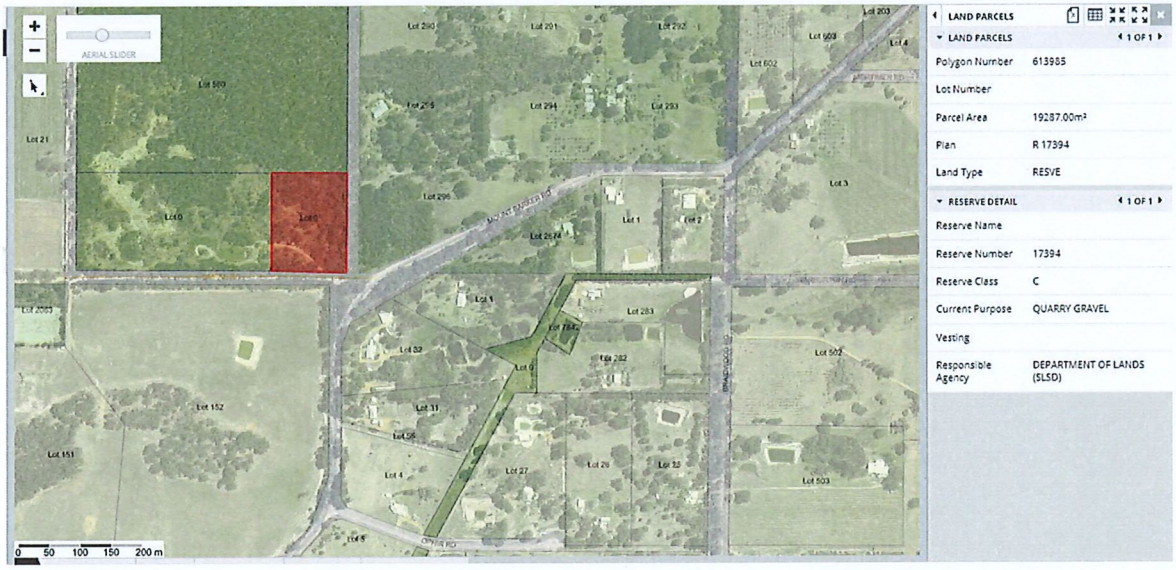
PURPOSE

The purpose of this report is to seek the Council's consent to apply for a change of purpose and management responsibility for Reserve 17394, being Crown land at the southern end of Mondurup Bushland Reserve.

The rationale for the Shire of Plantagenet seeking the Management Order of this reserve for the purposes of conservation and passive recreation is to carry out a weed-clearing and bush rehabilitation project. The revegetation is required to meet the conditions of a clearing permit for works associated with the DBCA funded Mountain Bike Trails within Reserve 15162, Mount Barker Hill.

BACKGROUND

Reserve 17394, as shown on the above aerial and overleaf, is located at the southern end of Mondurup Bushland Reserve running alongside Omrah Road. It is adjacent to and congruent with Reserve 27185, vested in the Shire of Plantagenet for conservation.



The current purpose of Reserve 17394 is a gravel quarry. The 7.4462ha C class reserve was established in 1920 and comprises Lots 201 and 573. There is no associated Management Order/vesting. The former gravel pit is now exhausted, and the site is no longer utilised. Weeds, including Watsonia and invasive wattles, have colonised the previously cleared areas of the site. It has also become an unfortunate hot-spot for illegal dumping.

A clearing permit application for Reserve 15162, Mount Barker Hill is currently with the Department of Water and Environmental Regulation (DWER) to clear native bush for the construction of recreational trails. The necessary conditions to this permit have been negotiated with DWER. A key aspect of these conditions is the provision of a clearing offset – an equivalent vegetation type of degraded native bush that will be rehabilitated within a radius of the bush to be cleared. DWER will require a multiple of around 4.5x to be rehabilitated in proportion to the 1ha to be cleared. Mondurup Reserve has been identified as the most appropriate place within the required radius to revegetate.

The protection of Mondurup Reserve through retention of remnant vegetation and encouraging revegetation is consistent with the Shire of Plantagenet Local Planning Strategy; within Appendix, Part 2.7 includes the following objectives:

- To protect significant landscape features such as Mount Barker Hill and Mount Barrow, retain remnant vegetation and encourage revegetation where appropriate; and
- Encourage the revegetation of creek lines and explore opportunities to extend green corridors into and around the townsite.

The Reserve is not identified as suitable for any future townsite growth. The community and conservation benefits of this revegetation project have also been evaluated; this assessment further supports the selection of this area within Mondurup Reserve.

The bulk of the priority areas to rehabilitate are in Reserve 17394 section of the bushland. Additionally, weed eradication efforts in the Mondurup reserve alone would be undermined by the presence of significant infestations in this adjacent reserve, which would re-colonise the cleared areas.

STATUTORY ENVIRONMENT

Land Administration Act 1997

Planning and Development Act 2005

Planning and Development (Local Planning Schemes) Regulations 2015

Shire of Plantagenet Local Planning Scheme No. 5 - Reserve 17394 zoned Rural under LPS5. Reserve 27185 is Public Open Space.

EXTERNAL CONSULTATION

This revegetation project is strongly supported by the Friends of Mondurup Reserve, who are currently informing the botanist's plans for Reserves 17394 and 27185.

FINANCIAL IMPLICATIONS

There are no immediate financial implications for this report.

BUDGET IMPLICATIONS

Once the revegetation plan has been finalised, budget allocations will need to be made over the next five years to deliver the activities.

Discussions are underway with the Bushfire Risk Mitigation Coordinator to access existing funding for weed management projects to subsidise the first stages of the rehabilitation project. There is also considerable potential to partner with local landcare groups across the whole project.

POLICY IMPLICATIONS

Policy implications do not apply for this report and it is the opinion of the author that policy development is not required.

LEGAL IMPLICATIONS

Correspondence was received on 31 August 2022 from the Department of Planning Lands and Heritage (DPLH) seeking comment on the possible transfer of Reserve 17394 into the Noongar Land Estate (NLE) under the South West Native Title Settlement. Transfer of Reserve 17394 through to the NLE is subject to consultation and approvals with stakeholders.

Given the pending revegetation project and the importance of ongoing weed management and fire mitigation, it is considered appropriate for the Shire to oppose/not support transfer of Reserve 17394 to the NLE and to proceed with the request for a change of purpose and management responsibility of the former gravel quarry.

If however this is denied, officers still consider it is appropriate and responsible to undertake the weed management and revegetation of the former gravel pits within the unmanaged Reserve.

A draft response to the nine (9) issues identified by DPLH is provided below:

South West Native Title Settlement - Land Base Consultation		
Subject Land	Lots 201 and 573 Reserve 17394, Omrah Rd, Mount Barker	
SoP Ref/File	R17394 (Lot 201) and A136549 (Lot 573)	
DPLH Ref/Parcel ID:	Land List 121 – 613985 & 613982	
Issue		Comment/Response
1	Is the Shire of Plantagenet supportive of the transfer of this land to the Noongar People under the Settlement?	Transfer to NLE is not supported given the pending revegetation project and the importance of ongoing weed management and fire mitigation.
2	Does the Shire have any interest in the land?	The Shire proposes to undertake weed management and revegetation of the former gravel quarry and will continue with fire mitigation activities.
3	Does the Shire have existing or planned infrastructure within the land parcel that requires protection? If yes, provide details and advise if access to this infrastructure will need to be maintained	N/A
4	Is the land parcel subject to any mandatory connection to services?	Development would require upgraded road access and installation of a constructed crossover to LG specifications, at proponent's cost. Refer to the Water Corporation for capacity, availability and connection requirements for mains water and reticulated sewer.
5	Are any future proposals for the land identified?	The subject land is within the 'Mondurup Bushland Reserve' as identified in the Shire of

	Provide detail ..... In what timeframe?	Plantagenet Local Planning Strategy; within Appendix 1, Part 2.7 includes the following objectives: • To protect significant landscape features such as Mount Barker Hill and Mount Barrow, retain remnant vegetation and encourage revegetation where appropriate; and • Encourage the revegetation of creeklines and explore opportunities to extend green corridors into and around the townsite. The protection of Mondurup Reserve through retention of remnant vegetation and encouraging revegetation is consistent with community expectations. The land is zoned Rural under Local Planning Scheme No. 5. This is inconsistent with the overarching planning strategy and current community expectations. Land clearing for use and development for rural purposes is unlikely to be supported. Accordingly, rezoning from Rural to Public Open Space local reserve is proposed through the upcoming Omnibus Amendment to address the anomaly.
6	Future proposals for adjoining land? If so, in what timeframe?	The adjacent Reserve 27185 is designated as Public Open Space under the Local Planning Scheme. It is within the 'Mondurup Bushland Reserve'. It serves as a significant bushland, conservation and landscape feature. The Shire of Plantagenet will be undertaking an extensive program of weed management and revegetation. The revegetation efforts in Reserve 27185 will be compromised if corresponding works are not carried in the former gravel quarry.
7	Proposed planning scheme amendments that may affect zoning the change proposed, and when will it come into effect?	In light of the quality of the remnant vegetation and strategic importance of the bushland on Reserve 17394, the Shire of Plantagenet is seeking to rezone the subject land from Rural to Public Open Space local reserve as a component of the Omnibus Amendment to Local Planning Scheme No. 5.
8	Land management issues such as site contamination, hazards, debris or rubbish dumping, unauthorised land	The former gravel quarry contains considerable weed infestation.

	use and environmental considerations (such as inundation or similar site constraints)	The property has been used for illegal dumping, potential including asbestos-containing materials. The subject land is designated as Bush Fire Prone Area (BFPA) as identified by the Fire and Emergency Services Commissioner. Additional planning and building requirements will apply to future development. The site contains significant remnant vegetation.
9	Additional comments on the proposed transfer of this land as part of the Settlement.	Rates may be levied by the Local Government. The requirements and obligations set out in the Shire of Plantagenet Annual Bush Fire Mitigation Notice pursuant to Section 33 of the Bush Fires Act 1954 will apply.

ASSET MANAGEMENT IMPLICATIONS

Reserve 17394 fire mitigation works are already undertaken by the Shire of Plantagenet, and in this regard, accepting management responsibility will not incur any additional responsibilities. Existing fire management breaks and tracks will lend themselves to 'mosaic' fire management, thereby assisting in protecting the recently revegetated sections of the reserve whilst reducing the fuel load of the reserve overall.

STRATEGIC IMPLICATIONS

The Shire of Plantagenet Corporate Business Plan 2022/23 – 2025/36 provides at Strategy 2.3.1 (Protection of natural environment) the following Actions:

Action 2.3.1.1:

'Engagement with and support DBCA, NRMs, catchment and Friends of Reserve groups.'

Action 2.3.1.2:

'Advocate for and support weed management and dieback management facilities.'

Action 2.3.1.3:

'Pursue revegetation of degenerated areas.'

Action 2.3.1.3:

'Consider future funding of proactive environmental and sustainability initiatives.'

Accordingly, the recommended outcome for this report aligns with the Corporate Business Plan.

RISK MITIGATION IMPLICATIONS

Risk	Likelihood	Consequence	Risk Analysis	Mitigation
Financial / Reputational Expending funds and resources on land for which the Shire does not have management responsibility	*Possible*	*Minor*	*Low Moderate*	*Support Officer Recommendation*
Project (time and cost) and Reputational	*Likely*	*Moderate / Major*	*High*	*Seek change of purpose and management order for reserve 17394 and undertake revegetation*
Opportunity: Improving environmental values of a degraded reserve				

STRATEGIC RISK IMPLICATIONS

The key strategic risk of not proceeding with the revegetation plan is inability to fulfil the criteria for the Pwakkenbak clearing permit within the required timeframe, potentially jeopardising the MTB Trails project.

REGIONAL IMPLICATIONS

The development of recreational trails at Reserve 15162 is a project of regional significance, with State government project partners funding the trails construction.

OFFICER COMMENT

Undertaking this weed management and revegetation project within Reserves 17394 and 27185 will facilitate the granting of a clearing permit for Reserve 15162 and enable immediate commencement of construction of the Mountain Bike Trails.

The change in purpose of Reserve 17394 from quarry to conservation and passive recreation better reflects the conservation values and intended land use. It will also assist in achieving the strategic and community objectives for the Mondurup Bushland Reserves.

The land is zoned Rural under Local Planning Scheme No. 5. This is inconsistent with the overarching planning strategy and current community expectations. Land clearing for use and development for rural purposes is unlikely to be supported. Accordingly, rezoning from Rural to Public Open Space local reserve is proposed through the upcoming Omnibus Amendment to address the anomaly.

While it is considered preferable for the Shire of Plantagenet to have management responsibility for Reserve 17394, regardless of whether the subject land is transferred into the Noongar Land Estate under the South West Native Title Settlement, remediation and revegetation is warranted.

VOTING REQUIREMENTS

Simple Majority

OFFICER RECOMMENDATION/COUNCIL DECISION

Moved Cr K Clements, seconded Cr M O'Dea:

That:

1. **The Chief Executive Officer be authorised to seek a change in the purpose of Reserve 17394 from quarry gravel to conservation and passive recreation and the Shire of Plantagenet be listed and the responsible agency on the Management Order.**
2. **Reserve 17394 be rezoned from Rural to Public Open Space local reserve as a component of the Omnibus Amendment to Local Planning Scheme No. 5.**
3. **The Department of Planning Lands and Heritage be advised the Transfer of Reserve 17394 to Noongar Land Estate under the South West Native Title Settlement is not supported given the pending revegetation project and the importance of ongoing weed management and fire mitigation.**

CARRIED (8/0)

NO. 154/22

Appendix D

Checklist on Recommended Content for Revegetation Plan

Appendix B: Recommended Content for Monitoring

PERMIT HOLDER MUST COMPLETE THIS CHECKLIST AND SUBMIT TO DEPARTMENT OF WATER AND ENVIRONMENTAL REGULATION (DWER TOGETHER WITH THE MONITORING REPORT.

Relevant boxes should be ticked to demonstrate that the information has been provided within the submitted revegetation annual report.

- ☐ Title which clearly outlines the name of the revegetation project and its location
- ☐ Table of contents. Suggested headings include:
  - Introduction
  - Summary of revegetation site:
    - background of revegetation site;
    - current disturbances and threats;
    - site preparation; and
    - initial vegetation establishment.
  - Monitoring outcomes
  - Progress against completion criteria:
    - data analysis;
    - results; and
    - discussion.
  - Maintenance and contingency measures
  - Updated schedule and budget
  - References and appendices

Introduction

The following should be included, but not limited to:

- ☐ Purpose of the report.
- ☐ Section explaining how the proposed revegetation addresses the impacts of the clearing.
- ☐ Clearing permit number (CPS xxx/x) that the revegetation plan relates to.
- ☐ Key contacts and details of person who wrote the report.
- ☐ Level of qualification and experience of person who wrote the report.
- ☐ Location of clearing, property details, clearing size and purpose.
- ☐ Location of revegetation site, property details and size of revegetation site.
- ☐ Map outlining the boundary of the clearing area, the revegetation site, aerial photography, cadastral boundaries, roads and other relevant factors (include areas in hectares).
- ☐ Associated spatial data for the clearing area is provided in GIS format (for example shapefile).

Summary of revegetation site

This section should include the components below which are from the original revegetation plan:

- ☐ The background of the revegetation site.
- ☐ Current disturbances and threats.
- ☐ Summary of initial site preparation.
- ☐ Summary of initial vegetation establishment.
- ☐ Revegetation sites and/or activities that have occurred should be illustrated on a detailed site plan and provided in GIS format (for example shapefile).

Monitoring outcomes

This section should state the monitoring outcomes and include:

- ☐ A description of monitoring methods to be used (particularly if changed from what was suggested in the revegetation plan).
- ☐ A description of the monitoring frequency and timing (month/year).
- ☐ The monitoring data sets (electronically), monitoring summaries, analysis and interpretation of findings for data outlined in table below.
- ☐ Records of the weed density or cover. Provide weed map in report and GIS format (for example shapefile).
- ☐ A vegetation condition map in the report and in GIS format (for example shapefile).
- ☐ Disease mapping (if relevant) in the report and in GIS format (for example shapefile).
- ☐ The success of additional actions, for example weed control, fencing and rabbit control.

Progress against completion criteria

This section should comprise data analysis, results and discussion on changes in the revegetation over time. This includes:

- ☐ Who completed the analysis?
- ☐ The data analysis methods used and justification for their use.
- ☐ Why/why not data pretreatment was/was not undertaken.
- ☐ The type of pretreatment used.
- ☐ Results and discussion.

Maintenance and contingency measures

This section should outline the maintenance and contingency measures that are required based on monitoring results and progress against completion criteria, including:

Maintenance measures

- ☐ A list of the maintenance measures.
- ☐ The trigger for maintenance measures.
- ☐ Timing.
- ☐ How often these measures will be undertaken.

Contingency measures

- ☐ A list of the contingency measures
- ☐ The trigger for contingency measures.
- ☐ Timing.
- ☐ How often these measures will be undertaken.

Updated schedule and budget

This section should include any modifications to the original detailed work plan.

- ☐ Schedule of actions (timeline) in table format (see Table 4) showing actions to be undertaken per month/season and per year of the project. Highlight any changes from the original revegetation management plan and provide explanation.
- ☐ The entity or person responsible to implement each action outlined in the schedule of actions.
- ☐ Budget and costing of actions (see examples in Appendix E).
- ☐ Source of funding.

References and appendices

This section should include references used to create the plan and any appendices.

- ☐ References used to create the revegetation plan.
- ☐ Aerial photographs.
- ☐ Onsite photographs (photopoints).
- ☐ Required monitoring datasets in entirety.
- ☐ Maps of fence boundary, dieback mapping, vegetation condition mapping, photopoint locations and monitoring quadrat locations.
- ☐ Associated spatial data of the revegetation site features is provided in GIS format (for example shapefile). Shapefiles are to be clearly named to reflect content.
- ☐ Copy of written agreement with landowner (if not the owner of the revegetation site).