



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 6192/2
Permit Holder:	City of Gosnells
Duration of Permit:	19 September 2015 to 19 September 2025

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing is for the purpose of constructing a road.

2. Land on which clearing is to be done

Holmes Street road reserve (PIN 11871356), Huntingdale
Unnamed road reserve (PIN 12357041), Huntingdale

3. Area of Clearing

The Permit Holder must not clear more than 0.297 hectares of native vegetation within the area cross-hatched yellow on attached Plan 6192/2.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for the activities described in condition 1 of this Permit to the extent that the Permit Holder has the power to carry out works involving clearing for those activities under the *Local Government Act 1995* or any other written law.

PART II – MANAGEMENT CONDITIONS

6. Avoid, minimise and reduce the impacts and extent of clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- avoid the clearing of native vegetation;
- minimise the amount of native vegetation to be cleared; and
- reduce the impact of clearing on any environmental value.

PART III – RECORD KEEPING AND REPORTING

7. Record keeping

The Permit Holder must maintain the following records in relation to the clearing of native vegetation authorised under this Permit:

- (a) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
- (b) the date(s) that the area was cleared;
- (c) the size of the area cleared (in hectares);
- (d) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with Condition 6 of this Permit.

8. Reporting

The Permit Holder must provide the records required to be kept under condition 7 of this Permit, when requested by the *CEO*.

DEFINITIONS

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

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



Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

4 August 2020

Plan 6192/2

115°57'31.500"E

115°57'36.000"E

115°57'40.500"E

115°57'45.000"E

115°57'49.500"E

32°5'37.500"S

32°5'42.000"S

32°5'46.500"S

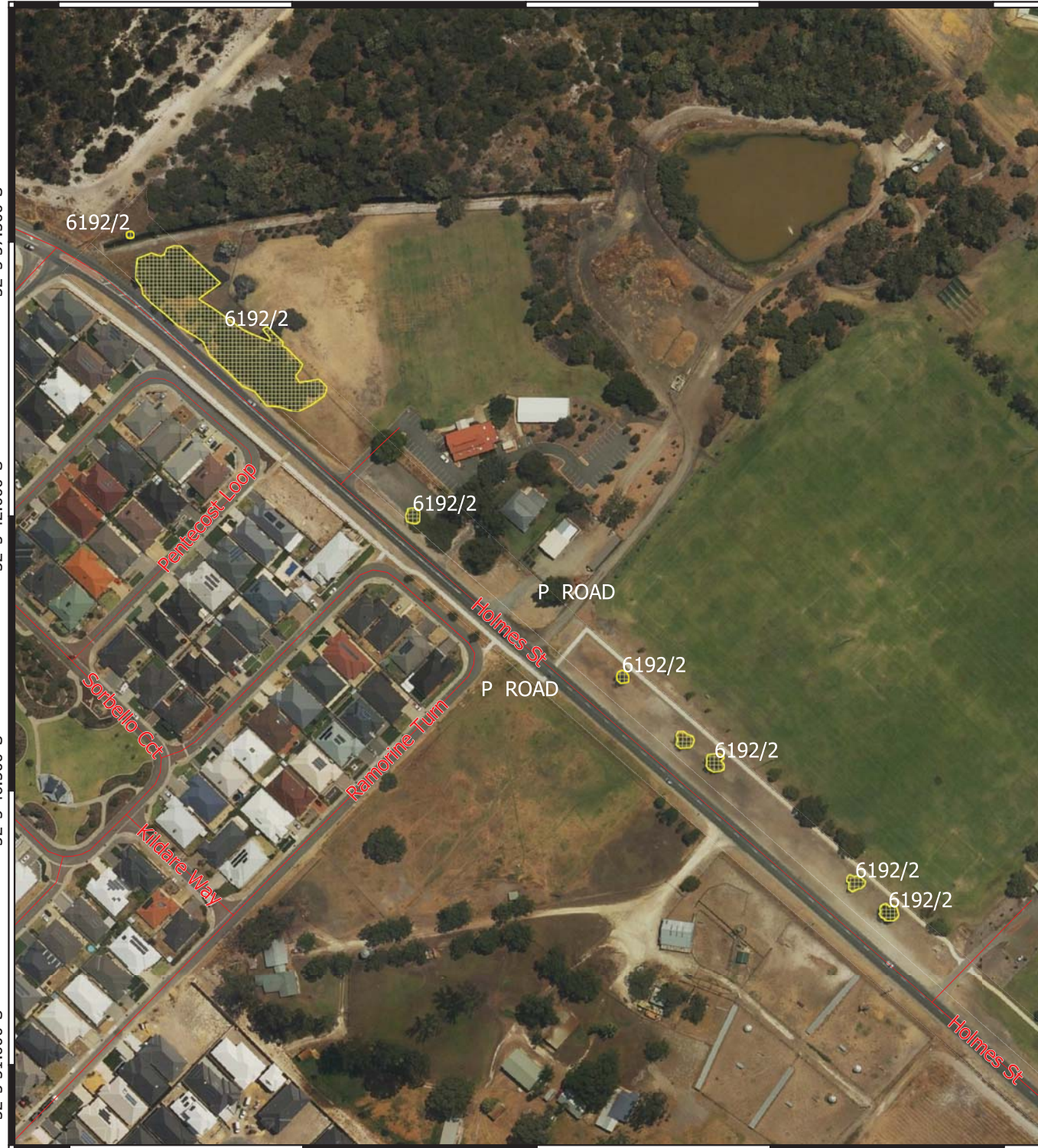
32°5'51.000"S

32°5'37.500"S

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32°5'46.500"S

32°5'51.000"S



115°57'31.500"E

115°57'36.000"E


115°57'40.500"E

115°57'45.000"E

115°57'49.500"E


Legend

CPS layers

 CPS areas approved to clear

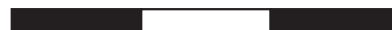
base layers

 Road Centrelines

 Cadastre - LGATE 218

Image

0 50 100 150 m



Mathew

Gannaway

2020.08.04

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Officer delegated under section 20 of the
Environmental Protection Act 1986



GOVERNMENT OF
WESTERN AUSTRALIA



Clearing Permit Decision Report

1. Application details and outcome

1.1. Permit application details

Permit number:	CPS 6192/2
Permit type:	Purpose Permit
Applicant name:	City of Gosnells
Application received:	23 June 2020
Application area:	0.297 hectares of native vegetation
Purpose of clearing:	Road construction or upgrades
Method of clearing:	Mechanical
Property:	Holmes Stree Road Reserve (PIN 11871356) and Unnamed Road Reserv (PIN 12357041)
Location (LGA area/s):	City of Gosnells
Localities (suburb/s):	Huntingdale

1.2. Description of clearing activities

CPS 6192/1 considered the widening of Holmes Street and was granted to the City of Gosnells on 20 August 2015, and expires on 19 September 2020. No clearing under CPS 6192/1 has commenced and the City of Gosnells has applied for an amendment to CPS 6192/1 (CPS 6192/2) to extend the permit duration and to amend the size of the area permitted to be cleared.

CPS 6192/1 approved the clearing of 0.275 hectares of *Melaleuca preissiana*/*Melaleuca raphiophylla* woodland in a degraded to completely degraded condition (Keighery 1994). Application amendment CPS 6192/2 includes this area, as well as an additional seven parkland cleared isolated native trees; Three *Allocasuarina fraseriana*, three *Eucalyptus tottiana*, and one *Melaleuca preissiana*. See Section 1.5, Figure 1.

1.3. Decision on application and key considerations

Decision:	Granted
Decision date:	4 August 2020
Decision area:	0.297 hectares of native vegetation including seven native trees as depicted in Section 1.5 below.

1.4. Reasons for decision

This clearing permit amendment application was made in accordance with section 51E of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Water and Environmental Regulation (DWER) on 23 June 2020. DWER advertised the application for public comment and no submissions were received.

In undertaking their assessment, and in accordance with section 51O of the EP Act, the Delegated Officer has given consideration to the Clearing Principles in Schedule 5 of the EP Act (see Appendix B), and the relevant planning instruments and any other pertinent matters they deemed relevant to the assessment (see Section 3). For the site characteristics see Appendix A, photos of the application area see Appendix D, and the relevant datasets used during the assessment see Appendix E. The Delegated Officer also took into consideration the purpose of the clearing to improve community safety by widening Holmes Street.

It has been concluded that the assessment against the clearing principles has not changed since the assessment of application CPS 6192/1 which can be found in Clearing Permit Decision Report CPS 6192/1. The Delegated Officer determined that given the small area and location of the proposed clearing, and the degraded condition of the vegetation present, the proposed clearing is not likely to lead to an unacceptable risk to the environment.

1.5. Site map

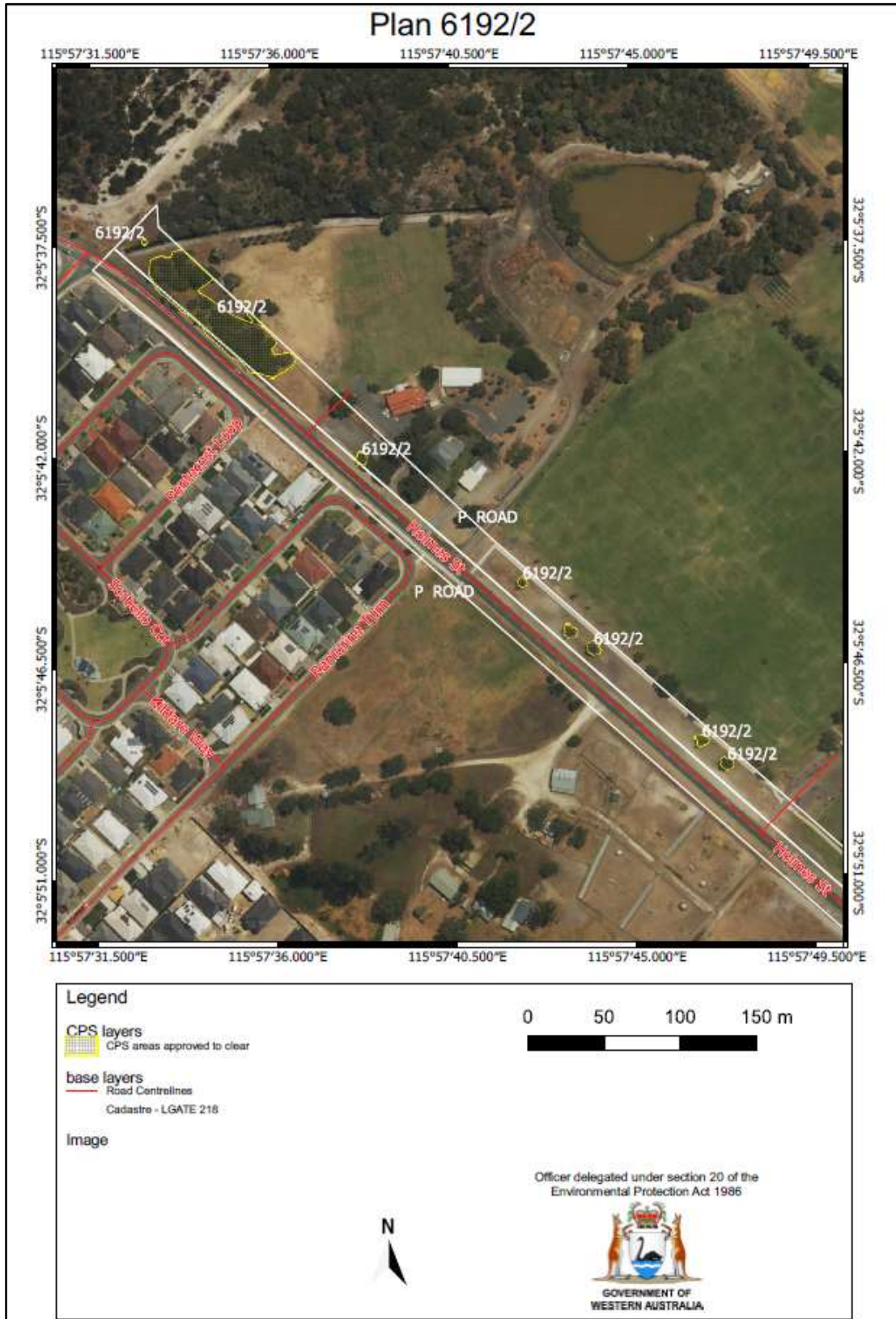


Figure 1. Map of the application area.

The area cross-hatched yellow indicates the areas authorised to be cleared under the granted clearing permit.

2. Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 3), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

1. the precautionary principle;
2. the principle of intergenerational equity; and
3. the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Soil and Land Conservation Act 1945* (WA)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (December 2013)
- *Procedure: Native vegetation clearing permits* (DWER October 2019)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

The City of Gosnells is planning an extension of Garden Street which includes the widening of Holmes Street from Balfour Street to Southern River Road, Huntingdale (City of Gosnells 2015). Several options for the overall Garden Street extension project have been considered by the City of Gosnells, including the reduction of the area required for clearing (DWER 2015). All options for the project include the widening of Holmes Street. Clearing has been limited to the minimum required for the widening of Holmes Street and the Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of environmental impacts

In assessing the application in accordance with section 51O of the EP Act, the Delegated Officer has examined the application and site characteristics (Appendix A) and considered whether the clearing poses a risk to environmental values and whether these can be managed to be environmentally acceptable. The assessment against the Clearing Principles is contained in Appendix B.

This assessment identified that the clearing may pose a risk to the environmental values of biological values, conservation areas and water resources and that these required further consideration. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Environmental value: biological values (fauna) – Clearing Principle (b)

Assessment:

Bush Forever Site 125 and the associated Conservation Category sumpland to the north of the application area provides habitat for a range of fauna and in particular those species that migrate between dryland and wetland areas. The Quenda (*Isoodon obesulus* subsp. *fusciventer*) (P4) and Rainbow Bee-eater (*Merops ornatus*) (EPBC Act migratory species) have both been recorded within the vicinity of the application area. Terrestrial Ecosystems (2014) recorded Quenda within Bush Forever Site 125. and the closest record for this species is within 175 metres of the application area. Both the Quenda and Rainbow Bee-eater are commonly found near wetland areas on the Swan Coastal Plain and particularly those wetland areas with adjacent dryland vegetation (DPAW 2014). The Quenda requires a dense understorey for cover (van Dyck and Strahan 2008). The Rainbow Bee-eater requires undulating bare sandy areas within which to construct nesting tunnels, such as sandy cliff faces or eroded riverbanks for breeding (Higgins 1999). Habitat for these two species is not present over the application area.

Both the Endangered (EN) Carnaby's Cockatoo (*Calyptorhynchus latirostris*) and the Vulnerable (VU) Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*) have been recorded in the vicinity of the application area. Terrestrial Ecosystems (2014) undertook a black cockatoo habitat assessment immediately to the north of the application area, with 2.89 hectares of high quality banksia woodland identified as foraging habitat. No banksia woodland (or individual banksias) occur over the application area, nor any trees considered roosting habitat or

breeding habitat. Three individual *Eucalyptus todtiana* trees provide a potential food resource for Carnaby's Cockatoo, and three individual *Allocasuarina fraseriana* trees provide a food resource for the Forest Red-tailed Black Cockatoo. This represents low quality foraging habitat (that is, of a few individual foraging plants) (Commonwealth of Australia 2017). In the local context large area of banksia woodland foraging habitat surrounds the application area.

The application area consists of a small area of degraded to completely degraded Melaleuca woodland and several individual trees that are parkland cleared. The application area and Bush Forever Site 125 are separated by cleared land, and the vegetation remaining along Holmes Street is fragmented, consisting predominantly of isolated native and exotic trees, and does not provide an ecological linkage. Although significant fauna species may occur in the vicinity, and particularly immediately to the north-west, the application area does not provide habitat for conservation significant species, nor does it include vegetation necessary for the maintenance of a significant habitat for fauna.

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is considered acceptable in relation to this environmental value.

Conditions: No fauna management conditions required.

3.2.2. Environmental value: biological values (flora) – Clearing Principles (a) to (d)

Assessment:

Seven threatened flora taxa and 64 priority (P) flora taxa have been recorded within a ten kilometre radius of the application area. 360 Environmental (2014) undertook a 'likelihood of assessment' of significant flora taxa occurring within a 6.8 hectare area that included the application area, as well as the intact bushland of Bush Forever Site 125 to the north of the application area. Results are included in Appendix D.

Several species of conservation significance have been recorded in the Bush Forever Site 125 within 600 metres to the north of the application area including the orchids *Caladenia huegelii* (CR), *Drakaea elastica* (CR) and *Diuris purdiei* (EN).

Priority species have also been recorded within this area including; *Jacksonia gracillima* (P3), *Styphelia filifolia* (P3), and *Stenanthemum sublineare* (P2). Additionally, *Verticordia lindleyi* subsp. *lindleyi* and *Aponogeton hexatepalus* have been recorded within one kilometre to the south of the application area.

360 Environmental (2014) determined that four threatened flora taxa and ten priority flora taxa were considered likely to occur in the 6.8 hectare area assessed. 360 Environmental (2014) undertook a targeted survey for significant flora taxa occurring within the study area that also included the application area. No threatened or priority flora were recorded within the application area. One priority species *Jacksonia gracillima* (P3) was recorded approximately 460 metres north-west of the application area.

Broadscale mapping of the Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region, listed as Priority 3 Priority Ecological Community (PEC) by the Department of Biodiversity, Conservation and Attractions and a Threatened Ecological Community (TEC) (EN) under the EPBC Act, has been mapped regionally within 50 metres of the application area. The Priority 3 PEC of low lying *Banksia attenuata* woodlands or shrublands ('floristic community type 21c') has also been described and mapped by ENV (2010) within 50 metres of the application area; corresponding to the regional mapping above. Low lying *Banksia attenuata* woodlands or shrublands forms a component of the Endangered Banksia Woodlands of the Swan Coastal Plain EPBC listed TEC. Vegetation over the application area does not include banksia species and is not representative of any TEC or PEC.

Considering the results of 360 Environmental (2014), the degraded to completely degraded condition (Keighery 1994) of the vegetation within the application area, and the small and degraded area proposed for clearing, it is unlikely that the application area would provide habitat for priority or threatened flora species, nor represent any TEC or PEC.

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is considered acceptable in relation to this environmental value.

Conditions: No flora and/or vegetation management conditions required.

3.2.3. Environmental value: significant remnant vegetation and conservation areas – Clearing Principles (e) and (h)

Assessment:

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

The application area has been mapped as the Southern River Complex (Heddle et al. 1980). complex has less than 30 per cent of its previous extent remaining; at 18.4 per cent (Government of Western Australia 2019b). However, due to the disjunct and small size of the application area, and the degraded to completely degraded condition of the vegetation, the vegetation under application is not considered representative of the mapped vegetation complex.

The Environmental Protection Authority (EPA) recognises the Perth Metropolitan Region as a constrained area, which provides for the reduction of vegetation complexes to a minimum of 10 per cent of their pre-European extent (EPA 2008). Approximately 22.7 per cent of remnant vegetation remains in the local area.

Bush Forever Site 125 (Holmes Street Bushland–Huntingdale) is located approximately 20 metres to the north of the application area and is associated with a Conservation Category Sumpland (ID 15423).

The vegetation under application is not considered a significant remnant, and the application area and Bush Forever Site 125 are separated by cleared land. Proposed clearing is not likely to impact the conservation values of Bush Forever Site 125.

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is considered acceptable in relation to this environmental value.

Conditions: No management conditions required.

3.2.4. Environmental value: land and water resources – Clearing Principle (f)

Assessment:

A large portion of the application area is mapped within a Multiple Use Category Dampland (ID 15792) and the application area includes vegetation considered riparian. Clearing is therefore at variance with Principle (f). Multiple Use Wetlands are considered wetlands with few remaining important attributes and functions (EPA 2004; EPA 2008; Water and Rivers Commission 2001). The management objective should be to take all reasonable measures to retain the wetland's hydrological function (EPA 2008), but is not incompatible with clearing. A Conservation Category Sumpland (ID 15423) is located approximately 20 metres to the north of the application area.

Riparian vegetation within the application area consists of one 0.275 hectare patch of vegetation comprising of *Melaleuca preissiana* and *Melaleuca raphiophylla* over *Pericalymma ellipticum*, *Kunzea micrantha*, *Kunzea glabrescens*, **Pennisetum clandestinum* (Kikuyu Grass), **Watsonia bulbifera*, **Conyza sp.* (Fleabane), **Eragrostis curvula* (Lovegrass) and *Gomphocarpus sp.* (Cottonbush).

Weeds dominate the understorey, and the vegetation is in a degraded to completely degraded condition (Keighery 1994) determined from information provided by the City of Gosnells (2015) and the City of Gosnells (2020).

The application will impact on riparian vegetation that is growing in, or in association with, an environment associated with a wetland. However, considering the size and degraded to completely degraded condition of the application area, the impact on environmental values is considered minor. Proposed clearing is unlikely to impact the Conservation Category Sumpland (ID 15423) located approximately 20 metres to the north, due to the separation distance and the cleared land separating the two areas.

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is considered acceptable in relation to this environmental value.

Conditions: No land or water resources, or flora/vegetation management conditions required.

3.3. Relevant planning instruments and other matters

The City of Gosnells is currently in the process of investigating options for the Garden Street extension including referral to the Environmental Protection Authority (EPA) under Part IV, section 38 of the EP Act for the northern section of the Garden Street extension (between Harpenden Street and Balfour Street, Southern River).

It is the City of Gosnells preference to clear the native vegetation along Holmes Street (under CPS 6192/1) in conjunction with the broader Garden Street extension, once the required approvals are obtained, and is therefore applying for an extension to CPS 6192/1 to accommodate this timeframe.

The City of Gosnells is the public authority that manages the application area as it is located entirely within road reserves (PINS 11871356 and 12357041).

The application area is located within the Perth Groundwater Area proclaimed under *the Rights in Water and Irrigation Act 1914* (RIWI Act). However, the application area is not located within any RIWI Act surface water areas or irrigation districts, nor any *Country Areas Water Supply Act 1947* (CAWS Act) clearing control catchments or Public Drinking Water Source Areas.

The application area is located within the boundaries of the registered Single Noongar Claim (Area 1) (WAD6006/2003), and the Whadjuk People Indigenous Land Use Agreement (WI2017/015). No Aboriginal Sites of Significance have been recorded within the application area. Registered Aboriginal Heritage Place ID 3511 (Southern River) is located approximately 650 metres to the east of the application area, and place ID 3712 is located approximately 2.1 kilometres to the west. It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

Appendix A – Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to DWER at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix B.

1. Site characteristics

Site characteristic	Details
Local context	The proposed clearing area comprises 0.297 hectares of native vegetation consisting of a patch of isolated native roadside vegetation consisting of Melaleuca woodland and seven parkland cleared individual trees on the north side of Holmes Street, Huntingdale. Spatial data indicates that the local area (ten kilometre radius of the proposed clearing area) retains approximately 22.7 per cent of the original native vegetation cover.
Vegetation description	<p>The application area has been mapped as the Southern River Complex (Hedde et al. 1980) consisting of an open woodland of <i>Corymbia calophylla</i> (Marri) - <i>Eucalyptus marginata</i> (Jarrah) - Banksia species with fringing woodland of <i>Eucalyptus rudis</i> (Flooded Gum) - <i>Melaleuca raphiophylla</i> (Swamp Paperbark) along creek beds.</p> <p>One 0.275 hectare patch of vegetation within the application area consists of <i>Melaleuca preissiana</i> and <i>Melaleuca raphiophylla</i> over <i>Pericalymma ellipticum</i>, <i>Kunzea micrantha</i>, <i>Kunzea glabrescens</i>, *<i>Pennisetum clandestinum</i> (Kikuyu Grass), *<i>Watsonia bulbifera</i>, *<i>Conyza</i> sp. (Fleabane), *<i>Eragrostis curvula</i> (Lovegrass) and <i>Gomphocarpus</i> sp. (Cottonbush) (City of Gosnells 2015).</p> <p>In addition to the above, seven isolated established trees also occur within the application area; three <i>Allocasuarina fraseriana</i>, three <i>Eucalyptus todtiana</i>, and one <i>Melaleuca preissiana</i>. Representative photographs are available in Appendix D.</p>
Vegetation condition	<ul style="list-style-type: none"> The 0.275 hectare patch of Melaleuca woodland is in a degraded to completely degraded condition (Keighery 1994) . The seven isolated trees are parkland cleared and in a completely degraded condition (Keighery 1994). <p>The condition and structure of the vegetation under application was determined from information provided by the City of Gosnells (2015; 2020).</p> <p>The full Keighery condition rating scale (Keighery 1994) is provided in Appendix C. Representative photographs are available in Appendix D.</p>
Soil description	<p>The patch of Melaleuca woodland within the application area is located within the Pinjarra System with soils mapped as (Schoknecht et al. 2004):</p> <ul style="list-style-type: none"> 213Pj_S10. SAND - as S8 B (below) as relatively thin veneer over sandy clay to clayey sand. Of eolian origin. <p>The isolated trees within the application area are located within the Bassendean System with soils mapped as:</p> <ul style="list-style-type: none"> System 212Bs_S8. SAND - very light grey at surface, yellow at depth, fine to medium-grained, sub-rounded quartz, moderately well sorted of eolian origin.

Land degradation risk	Aspect	Degradation risk			
		Pinjarra System		Bassendean System	
		Hazard Rating		Hazard Rating	
	Wind Erosion	M2	Medium	H1	High
	Waterlogging	H1	High	L2	Low
	Water Erosion	M1	Medium	L1	Low
	Salinity	M1	Medium	L1	Low
	Phosphorus export	M2	Medium	M2	Medium
	Subsurface acidification	H2	High	H2	High
	Flood Risk	M2	Medium	L1	Low
	Acid Sulphate Soils	Moderate to Low		Moderate to low	
Waterbodies	<p>The application area is located in the Bennett Brook consanguineous natural wetland suite.</p> <p>A large portion of the application area is located within a mapped Geomorphic Wetland of the Swan Coastal Plain; that is a Multiple Use Category Dampland (ID 15792).</p> <p>A Conservation Category Sumpland (ID 15423) is located approximately 20 metres to the north of the application area.</p>				
Conservation areas	<p>Bush Forever Site 125 (Holmes Street Bushland–Huntingdale) is located approximately 20 metres to the north of the application area and is associated with Conservation Category Sumpland ID 15423. The application area and Bush Forever Site 125 are separated by cleared land.</p> <p>An unnamed Nature Reserve (R 49299) vested in the Conservation Commission is located approximately 11.5 kilometres north-west of the application area.</p> <p>Jandakot Regional Park is located approximately 1.8 kilometres to the south of the application area.</p>				
Climate and landform	<p>The climate of the application area is warm and temperate. The winter months have higher rainfall than summer months with an annual rainfall of approximately 733.2 millimetres (BOM 2020).</p> <p>The application area intersects both the Pinjarra System and the Bassendean System.</p> <p>Pinjarra System: Swan Coastal Plain from Perth to Capel. Poorly drained coastal plain with variable alluvial and aeolian soils. Variable vegetation includes Jarrah, marri, wandoo, paperbark sheoaks and rudis.</p> <p>Bassendean System: Swan Coastal Plain from Busselton to Jurien. Sand dunes and sandplains with pale deep sand, semi-wet and wet soil. Banksia-paperbark woodlands and mixed heaths.</p>				

2. Flora, fauna and ecosystem analysis

With consideration for the site characteristics set out above, and relevant datasets (Appendix E), an analysis of relevant ecosystem, flora, and fauna factors are presented below.

Ecological Linkages: There are no significant mapped ecological linkages within or adjacent to the application area.

Ecological Communities:

Species / Ecological Community	Distance of closest record to application area (metres)	Suitable soil type? (flora, ecological community)	Suitable vegetation type? (flora, ecological community)
Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region. (P3, EN)	45	Yes	No
Low lying <i>Banksia attenuata</i> woodlands or shrublands ('floristic community type. 21c'). (P3, EN)	50	Yes	No

Vegetation over the application area does not contain banksia species and is not representative of the Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region, listed as Priority 3 in Western Australia, and Endangered under the EPBC Act.

Conservation significant flora recorded within 10 kilometres of the application area:

Threatened Flora summary	
Status	No. of taxa
CR	7
EN	9
VU	7
	23

Priority Flora summary	
Status	No. of taxa
P1	10
P2	8
P3	31
P4	15
	64

Several flora taxa of conservation significance have been recorded in the Holmes Street Bushland (Bush Forever Site 125) within 600 metres to the north of the application area (WAH (1998-). 360 Environmental (2014) undertook a 'likelihood of assessment' of significant flora taxa occurring within a large area of native vegetation that included the application area. Results are included in Appendix D. 360 Environmental (2014) also undertook a targeted flora survey for significant flora taxa occurring within this area that included the application area.

Taxa	~Distance of closest record to application area (metres)	Suitable soil type? (flora, ecological community)	Suitable vegetation type? (flora, ecological community)
<i>Caladenia huegelii</i> (CR)	50	Yes	No
<i>Drakaea elastica</i> (CR)	1,075	Yes	No
<i>Diuris purdiei</i> (EN)	1,325	Yes	No
<i>Jacksonia gracillima</i> (P3)	460	Yes	No
<i>Styphelia filifolia</i> (P3)	500	Yes	No
<i>Stenanthemum sublineare</i> (P2)	575	No	No
<i>Verticordia lindleyi</i> subsp. <i>Lindleyi</i> (P2)	750	Yes	No
<i>Aponogeton hexatepalus</i> (P2)	900	Yes	No

Conservation significant fauna recorded within 10 kilometres of the application area:

Threatened Fauna summary (Vertebrates)	
Status	No. of species
CR	2

Priority Fauna summary (Vertebrates)	
Status	No. of species
P1	0

EN	5
VU	5
CD	1
OS	1
IA	21
	35

P2	0
P3	4
P4	6
	10

Thirty-three birds, seven mammals and five reptiles of conservation significance have been recorded within ten kilometres of the application area.

Species	~Distance of closest record to application area (metres)	Suitable habitat features (fauna)
Quenda (<i>Isoodon obesulus subsp. Fusciventer</i>) (P4)	175	No
Rainbow Bee-eater (<i>Merops ornatus</i>) (IA)	375	No
Carnaby's Cockatoo <i>Calyptorhynchus latirostris</i>	800	No
Forest Red-tailed Black Cockatoo <i>Calyptorhynchus banksii naso</i>	255	No

3. Vegetation extent

Regional vegetation mapping

Factor	Pre-European Extent (ha)	Current Extent (ha)	% Remaining	Current Extent Protected for Conservation (ha)	% Current Extent Protected for Conservation
Swan Coastal Plain IBRA	1,501,222	579,813	38.6 %	153,955	10.3 %
Beard Vegetation Association 1001	57,410	12,661	22.1 %	1,605	2.8 %
Southern River Complex	58,781	10,832	18.4 %	692	1.2 %

Remnant vegetation within 10 kilometres of the application area

	Hectares	% remaining
Total Area (10 km radius)	31,442	
Remnant vegetation remaining	7,150	22.7 %

Appendix B – Assessment against the Clearing Principles

Assessment against the Clearing Principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> “Native vegetation should not be cleared if it comprises a high level of biodiversity.”</p> <p><u>Assessment:</u> None of the threatened and priority flora and ecological communities recorded in the local area are likely to occur within the application area. The application area does not contain significant habitat for fauna.</p>	Not likely to be at variance	Yes See Section 3.2.2
<p><u>Principle (b):</u> “Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.”</p> <p><u>Assessment:</u> Fauna species of conservation significance have been recorded in the vicinity of the application area. The application area consists of a small area of degraded to completely degraded Melaleuca woodland and several individual trees that are parkland cleared.</p> <p>Noting the shape and extent of the proposed clearing, the weed-dominated understorey, and its location in close proximity to remnant vegetation in good to excellent condition the vegetation proposed to be cleared is unlikely to comprise a significant habitat for fauna.</p>	Not likely to be at variance	Yes See Section 3.2.1
<p><u>Principle (c):</u> “Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</p> <p><u>Assessment:</u> Several threatened flora taxa occur within 600 metres to the north of the application area in the Holmes Street Bushland. Noting the type and condition of the vegetation, the application area is unlikely to be necessary for the continued existence of threatened flora.</p>	Not likely to be at variance	Yes See Section 3.2.2
<p><u>Principle (d):</u> “Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.”</p> <p><u>Assessment:</u> No Threatened Ecological Communities (TECs) endorsed by the Western Australian Minister for Environment have been mapped within 1.5 kilometres of the application area.</p> <p>Vegetation over the application area is not representative of any state listed TECs recorded within the local area.</p>	Not likely to be at variance	No
Environmental values: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> “Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</p> <p><u>Assessment:</u> Approximately 22.7 per cent of remnant vegetation remains in the local area. The vegetation in the proposed clearing areas is disjunct and degraded and not considered to be a significant remnant nor considered to be part of a significant ecological linkage in the local area.</p>	Not likely to be at variance	No
<p><u>Principle (h):</u> “Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.”</p> <p><u>Assessment:</u> Bush Forever Site 125 (Holmes Street Bushland–Huntingdale) is located approximately 20 metres to the north of the application area and is</p>	Not likely to be at variance	Yes See Section 3.2.3

Assessment against the Clearing Principles	Variance level	Is further consideration required?
<p>associated with Conservation Category Sumpland ID 15423. The application area and Bush Forever Site 125 are separated by cleared land and the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.</p>		
<p>Environmental values: land and water resources</p>		
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u> A large portion of the application area is located within a mapped multiple use wetland. The application will impact on riparian vegetation that is growing in, or in association with, an environment associated with a wetland. However, considering the size and degraded to completely degraded condition (Keighery 1994) of the application area, the impact on environmental values is minor.</p>	At variance	Yes See Section 3.2.4
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u> The mapped soils of the Pinjarra System are susceptible to water-logging, and soils in the Bassendean System are susceptible to wind erosion (DPIRD 2017). Susceptibility to acid sulphate soils is low to moderate over the application area.</p> <p>Standard and staged road construction methodologies will be implemented including strategies for drainage controls and wind and water erosion. Soils will not be excavated at depth, and any impacts to surrounding landscapes, soils, or drainage systems can also be managed through appropriate design.</p> <p>Noting the condition of the vegetation and the minor extent of proposed clearing, the proposed clearing is not likely to cause appreciable land degradation.</p>	Not likely to be at variance	No
<p><u>Principle (i):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.”</i></p> <p><u>Assessment:</u> The proposed activity will not intersect groundwater, and there are no defined drainage paths over the application area, or in the vicinity. Proposed clearing is unlikely to cause any deterioration in the quality of any surface waters or groundwater.</p>	Not likely to be at variance	No
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u> The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. The application area is outside of any recognised floodplain areas. There are no defined drainage paths over the application area or in the vicinity. Flood risk has been assessed as low in the Bassendean System and medium in the Pinjarra System.</p>	Not likely to be at variance	No

Appendix C – Vegetation condition rating scale

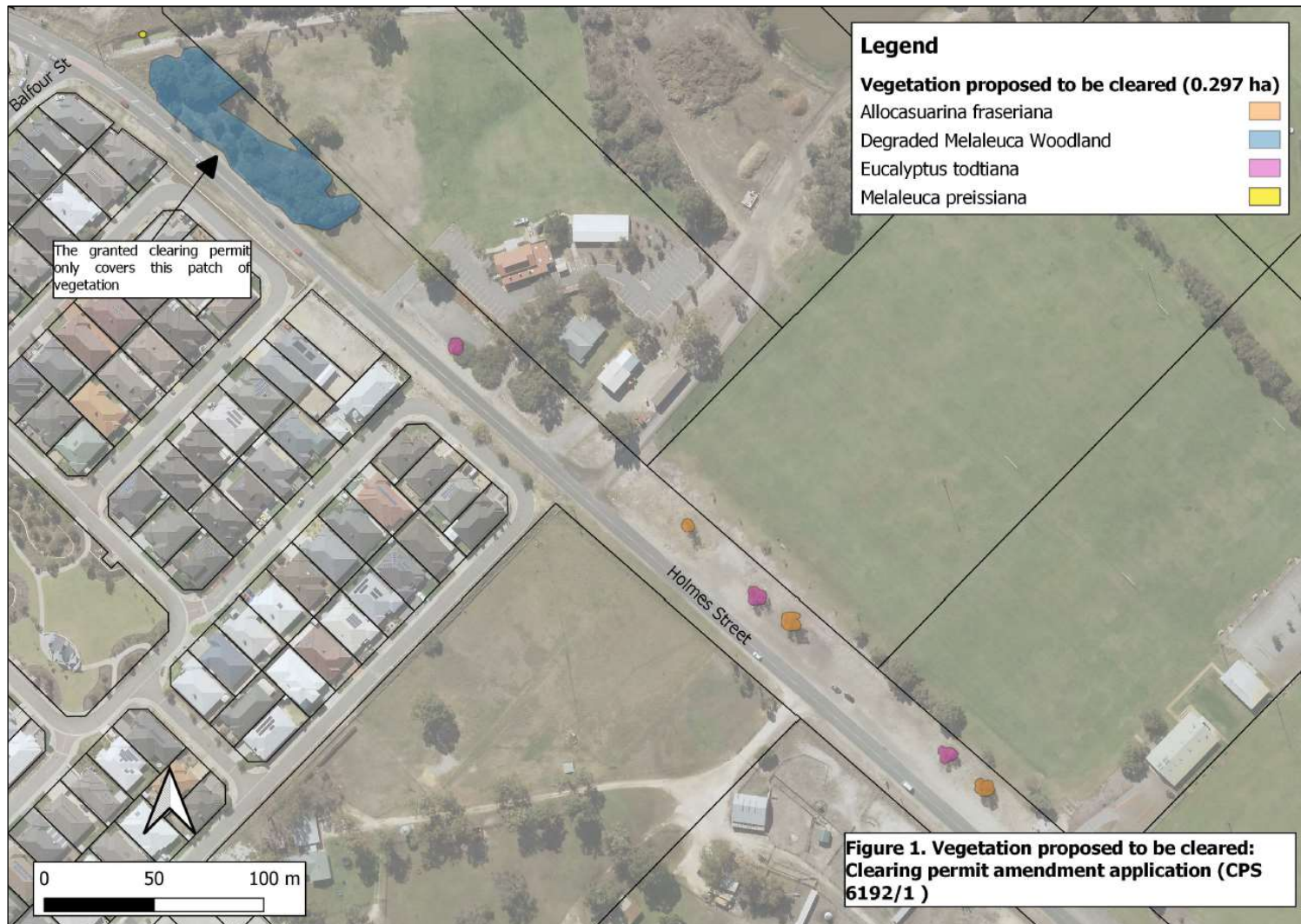
Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Measuring Vegetation Condition for the South West and Interzone Botanical Province (Keighery, 1994)

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very Good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

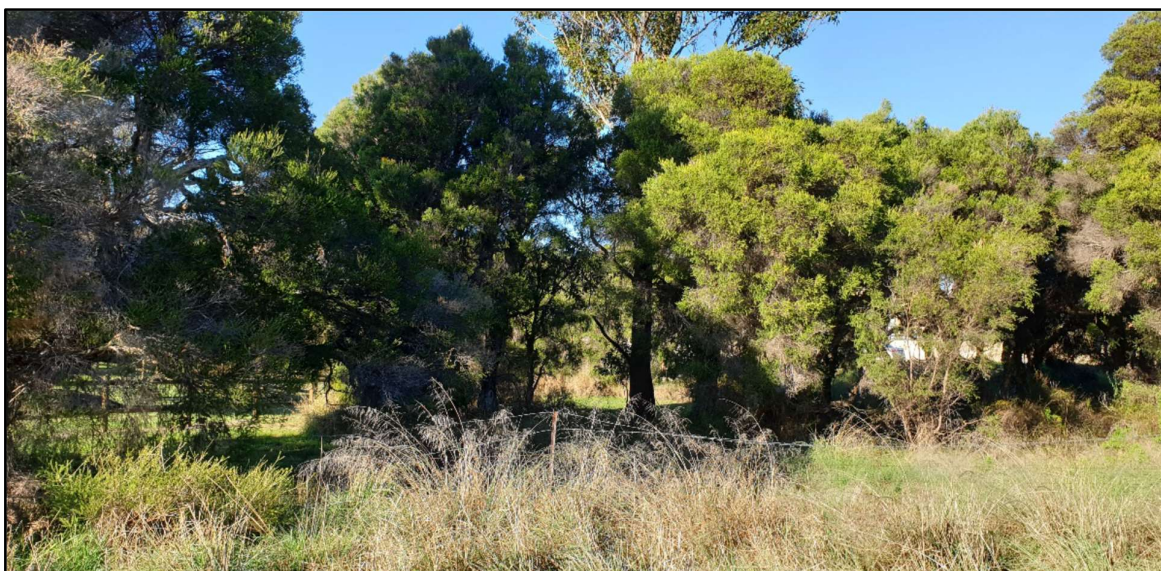
Appendix D – Biological survey information excerpts / photographs of the vegetation

1) Vegetation proposed to be cleared



2) Representative photographs

Melaleuca woodland (2 photographs)



Seven isolated trees (seven photographs)

Melaleuca preissiana along open drain adjacent to Balfour Street



Eucalyptus todtiana being taken over by *Leptospermum laevigatum** adjacent to Lot 91 Holmes Street



Allocasuarina fraseriana adjacent to Lot 92 Holmes Street



Eucalyptus tottiana adjacent to Lot 92 Holmes Street



Allocasuarina fraseriana adjacent to Lot 92 Holmes Street



Eucalyptus tottiana adjacent to Lot 93 Holmes Street



Allocasuarina fraseriana adjacent to Lot 93 Holmes Street



3) Likelihood of occurrence for conservation significant flora species (360 environmental 2014)

Table 2: Likelihood of Occurrence for Conservation Significant Species Identified During the Desktop Assessment

DRF/T = Declared Rare Flora/Threatened

P1/2/3/4 = Priority Flora

DPaW = Department of Parks and Wildlife

EPBC = Environment Protection and Biodiversity Conservation Act

CONSERVATION STATUS	SPECIES	SOURCE	HABITAT INFORMATION (WAH 2014)	SUITABLE HABITAT PRESENT	LIKELIHOOD OF OCCURRENCE IN THE PROJECT AREA
P2	<i>Acacia benthamii</i>	DPaW	Sand, Typically on limestone breakaways.	No	Unlikely
P1	<i>Acacia lasiocarpa</i> var. <i>bracteolata</i> long peduncle variant (G.J.Keighery 5026)	DPaW	Grey or black sand over clay. Swampy areas, winter wet lowlands.	Yes	Likely
P4	<i>Acacia oncinophylla</i> subsp. <i>patulifolia</i>	DPaW	Granitic soils, occasionally on laterite.	No	Unlikely
P2	<i>Andersonia</i> sp. <i>blepharifolia</i> (F. & J. Hort 1919)	DPaW	Information Unavailable	N/A	Unknown
P4	<i>Aponogeton hexatepalus</i>	DPaW	Mud, freshwater: ponds, rivers, claypans.	Yes	Possible
P3	<i>Asteridea gracilis</i>	DPaW	Sand, clay, gravelly soils.	Yes	Possible
P1	<i>Austrostipa jacobiana</i>	DPaW	Information Unavailable	N/A	Likely
DRF/T	<i>Banksia mimica</i>	EPBC, DPaW	White or grey sand over laterite, sandy loam.	No	Unlikely
P4	<i>Boronia tenuis</i>	DPaW	Laterite, stony soils, granite.	No	Unlikely
P3	<i>Byblis gigantea</i>	DPaW	Sandy-peaty swamps, seasonally wet areas.	Yes	Likely
DRF/T	<i>Caladenia huegelii</i>	EPBC, DPaW	Grey or brown sand, clay loam.	Yes	Likely
DRF/T	<i>Calytrix breviseta</i> subsp. <i>breviseta</i>	EPBC, DPaW	Sandy clay. Swampy flats.	Yes	Possible

DRF/T	<i>Conospermum undulatum</i>	EPBC, DPaW	Grey or yellow-orange clayey sand.	No	Unlikely
DRF/T	<i>Diuris purdiei</i>	EPBC, DPaW	Grey-black sand, moist. Winter-wet swamps.	Yes	Likely
DRF/T	<i>Drakaea elastica</i>	EPBC, DPaW	White or grey sand, low lying situations adjoining winter-wet swamps.	Yes	Likely
DRF/T	<i>Drakaea micrantha</i>	EPBC, DPaW	White-grey sand.	Yes	Likely
DRF/T	<i>Eleocharis keigheryi</i>	EPBC, DPaW	Clay, sandy loam. Emergent in fresh water: creeks, claypans.	Yes	Possible
P1	<i>Eremaea asterocarpa</i> subsp. <i>brachyclada</i>	DPaW	Deep grey sand.	yes	Likely
DRF/T	<i>Eremophila glabra</i> subsp. <i>chlorella</i>	EPBC, DPaW	Sandy clay. Winter-wet depressions.	Yes	Possible
P3	<i>Eryngium pinnatifidum</i> subsp. <i>palustre</i> (G.J. Keighery 13459) PN	DPaW	Information Unavailable	N/A	Unknown
P4	<i>Grevillea thelemanniana</i> subsp. <i>thelemanniana</i>	DPaW	Information Unavailable	N/A	Unknown
P3	<i>Halgania corymbosa</i>	DPaW	Gravelly soils, soils over granite.	No	Unlikely
P1	<i>Hemigenia rigida</i>	DPaW	Sandy soils, lateritic gravelly soils. Hill slopes, granite outcrops, flat, ironstone ridges.	Yes	Possible
P3	<i>Jacksonia gracillima</i>	DPaW	Information Unavailable	N/A	Found on site
P2	<i>Johnsonia pubescens</i> subsp. <i>cygnorum</i>	DPaW	Grey-white-yellow sand. Flats, seasonally-wet sites.	Yes	Likely
DRF/T	<i>Lepidosperma rostratum</i>	EPBC, DPaW	Brown. Peaty sand, clay.	No	Unlikely
P3	<i>Meeboldina decipiens</i> subsp. <i>decipiens</i>	DPaW	Sand and sandy peat. Swamps.	Yes	Likely
P4	<i>Onduffia submersa</i>	DPaW	Information unavailable	N/A	Unknown

DRF/T	<i>Conospermum undulatum</i>	EPBC, DPaW	Grey or yellow-orange clayey sand.	No	Unlikely
DRF/T	<i>Diuris purdiei</i>	EPBC, DPaW	Grey-black sand, moist. Winter-wet swamps.	Yes	Likely
DRF/T	<i>Drakaea elastica</i>	EPBC, DPaW	White or grey sand, low lying situations adjoining winter-wet swamps.	Yes	Likely
DRF/T	<i>Drakaea micrantha</i>	EPBC, DPaW	White-grey sand.	Yes	Likely
DRF/T	<i>Eleocharis keigheryi</i>	EPBC, DPaW	Clay, sandy loam. Emergent in fresh water: creeks, claypans.	Yes	Possible
P1	<i>Eremaea asterocarpa</i> subsp. <i>brachyclada</i>	DPaW	Deep grey sand.	yes	Likely
DRF/T	<i>Eremophila glabra</i> subsp. <i>chlorella</i>	EPBC, DPaW	Sandy clay. Winter-wet depressions.	Yes	Possible
P3	<i>Eryngium pinnatifidum</i> subsp. <i>palustre</i> (G.J. Keighery 13459) PN	DPaW	Information Unavailable	N/A	Unknown
P4	<i>Grevillea thelemanniana</i> subsp. <i>thelemanniana</i>	DPaW	Information Unavailable	N/A	Unknown
P3	<i>Halgania corymbosa</i>	DPaW	Gravelly soils, soils over granite.	No	Unlikely
P1	<i>Hemigenia rigida</i>	DPaW	Sandy soils, lateritic gravelly soils. Hill slopes, granite outcrops, flat, ironstone ridges.	Yes	Possible
P3	<i>Jacksonia gracillima</i>	DPaW	Information Unavailable	N/A	Found on site
P2	<i>Johnsonia pubescens</i> subsp. <i>cygnorum</i>	DPaW	Grey-white-yellow sand. Flats, seasonally-wet sites.	Yes	Likely
DRF/T	<i>Lepidosperma rostratum</i>	EPBC, DPaW	Brown. Peaty sand, clay.	No	Unlikely
P3	<i>Meeboldina decipiens</i> subsp. <i>decipiens</i>	DPaW	Sand and sandy peat. Swamps.	Yes	Likely
P4	<i>Omduffia submersa</i>	DPaW	Information unavailable	N/A	Unknown

P3	<i>Schoenus benthamii</i>	DPaW	White, grey sand, sandy clay. Winter-wet flats, swamps.	Yes	Likely
P3	<i>Schoenus capillifolius</i>	DPaW	Brown mud. Claypans.	No	Unlikely
P1	<i>Schoenus pennisetis</i>	DPaW	Grey or peaty sand, sandy clay. Swamps. winter wet depressions	Yes	Likely
P2	<i>Stenanthemum sublineare</i>	DPaW	Littered white sand. Coastal plain.	No	Unlikely
P3	<i>Tetradlea</i> sp. Granite (S. Patrick SP1224)	DPaW	Clay, moist loam, clayey sand. Granite boulders.	No	Unlikely
DRF/T	<i>Thelymitra stellata</i>	EPBC, DPaW	Sand, gravel, Lateritic loam.	No	Unlikely
P4	<i>Thysanotus glaucus</i>	DPaW	White, grey or yellow sand, sandy gravel.	Yes	Likely
P4	<i>Tripterococcus paniculatus</i>	DPaW	Grey, black or peaty sand. Winter-wet flats.	Yes	Possible
P4	<i>Verticordia lindleyi</i> subsp. <i>lindleyi</i>	DPaW	Sand, sandy clay. Winter-wet depressions.	Yes	Likely

Appendix E – References and databases

1. GIS datasets

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- IBRA Vegetation Statistics
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Regional Parks (DBCA-026)
- Soil and Landscape Mapping – Best Available

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

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