



Butler North District Open Space Native Vegetation Clearing Permit Application (Bilateral assessment)

Prepared for
City of Wanneroo

21 December 2017



DOCUMENT TRACKING

Item	Detail
Project Name	Butler North Secondary School Native Clearing Permit Application
Project Number	17PER-5856
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Status	DRAFT
Version Number	V1
Last saved on	21 December 2017
Cover photo	<i>Banksia</i> woodland – photo by Joel Collins, © Eco Logical Australia 2016.

This report should be cited as ‘Eco Logical Australia 2017. *Butler North District Open Space Native Clearing Permit Application*. Prepared for City of Wanneroo.’

ACKNOWLEDGEMENTS

This document has been prepared by Eco Logical Australia Pty Ltd with support from the City of Wanneroo.

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Template 29/9/2015

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Abbreviations

Abbreviation	Description
BAM Act	<i>Biosecurity and Agriculture Management Act 2007</i>
CBD	Central Business District
DBCA	Department of Biodiversity, Conservation and Attractions
DEC	Department of Environment and Conservation
DotEE	Department of the Environment and Energy
DWER	Department of Water and Environmental Regulation
ELA	Eco Logical Australia
EP Act	<i>Environmental Protection Act 1986</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
ha	Hectare/s
km	Kilometre
NVCP	Native Vegetation Clearing Permit
SEWPaC	Department of Sustainability, Environment, Water, Population and Communities
TEC	Threatened Ecological Community
WA	Western Australia
WAPC	Western Australian Planning Commission
WC Act	<i>Wildlife Conservation Act 1950 (WA)</i>
WoNS	Weed of National Significance

1 Introduction

1.1 Purpose of document

This document has been prepared to support a Native Vegetation Clearing Permit (NVCP) application and has been prepared for assessment and approval under Part V Division 2 of the Western Australian (WA) *Environmental Protection Act 1986* (EP Act).

The proposed clearing is also likely to impact on Matters of National Environmental Significance listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and was been deemed a Controlled Action by the Department of the Environment and Energy (DotEE) on 6 December 2017 (EPBC 2017/8053, *Butler North District Open Space playing fields development, Wanneroo, WA*). Consequently, it is proposed that this application is assessed under the *Bilateral agreement made under section 45 of the Environment Protection and Biodiversity Conservation Act 1999 (Cth) relating to environmental assessment*.

1.2 Development overview

The City of Wanneroo is proposing to develop playing fields and associated infrastructure (e.g. carparks, club room etc.) within the Butler North District Open Space (the Development), which spans two sites:

- 1K Darbyshire Parade, Alkimos; and
- 24 Halesworth Parade, Butler.

The Development Area encompasses 10.26 ha and is located within the City of Wanneroo, which is approximately 38 km northwest of the Perth CBD and 16.5 km northwest of the Wanneroo City Centre. The Development Area is bound by Halesworth Parade to the south, Santorini Promenade to the north, the Butler train line and Chardbury Dr to the east and the John Butler Primary College to the west (**Figure 1**).

The proposed Development will result in the clearing of 7.98 ha of native vegetation that resembles the Threatened Ecological Community (TEC) *Banksia Woodlands of the Swan Coastal Plain* (Banksia Woodlands TEC) and contains habitat for Carnaby's Black-Cockatoo.

Conservation areas have been incorporated into the Development Area to protect areas of Banksia Woodlands TEC and Carnaby's Black-Cockatoo habitat.

1.3 Project approvals history

The Development Area is zoned 'Urban' under the Metropolitan Region Scheme and 'Urban Development' under the City of Wanneroo District Planning Scheme No.2.

The Development Area encompasses two Lots, and consequently spans two Approved Structure Plans (ASP 27 for 24 Halesworth Parade, and ASP 60 for 1K Derbyshire Parade). The Butler-Ridgewood Agreed Structure Plan (ASP 27) was endorsed by the Western Australian Planning Commission (WAPC) and the City of Wanneroo on 4 June 2002. This ASP 27 plan (updated 12 October 2015) zones 24 Halesworth Parade (i.e. the southern portion of the Development Area) as "Public Use".

The Lots 1001 & 1002 Marmion Avenue, Alkimos Agreed Structure Plan (ASP 60) was originally adopted by resolution of WAPC on 13 November 2009 and by resolution of the Council of the City of Wanneroo on 27 January 2010. This ASP 60 plan (updated October 2015) zones 1K Derbyshire

Parade (i.e. the northern portion of the Development Area) as “Public Use”, specified as “High School/Primary School and District Open Space”.

The proposed Development will be undertaken in accordance with the Lot 3 Romeo Road, Alkimos Local Structure Plan and Lot 9049 Marmion Avenue, Butler Structure Plan. These Structure Plans have both been approved as Controlled Actions under the EPBC Act (EPBC 2008/4601 and EPBC 2009/5155 respectively) however, this Development is being assessed as a separate Controlled action due to differences in proponent (i.e. the City of Wanneroo) and scope.

The Development is also associated with a proposal for the development of Butler North Secondary School and a portion of the proposed playing fields on adjoining land to the west of the Development Area (Lot 2018 on Deposited Plan 410670 [Lot 2018]), owned by the Department of Education (**Figure 2**). The Department of Education has separately applied for an NVCP for the proposed development located within Lot 2018.

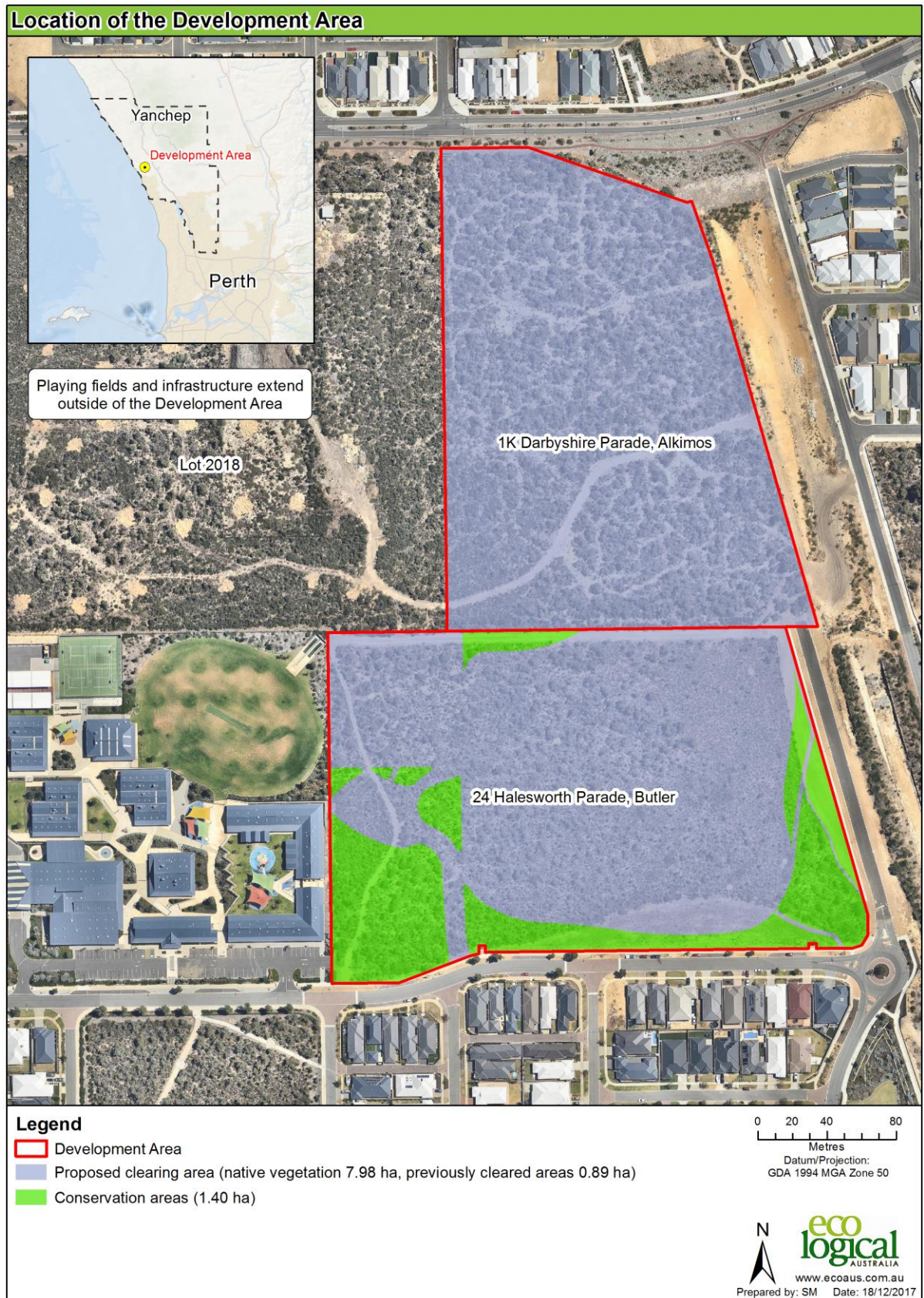


Figure 1: Location of the Development Area

2 Description of the Development

2.1 Development overview

The Development involves clearing of 7.98 ha of native vegetation within a 10.26 ha Development Area for the development of playing fields and sporting facilities at the Butler North District Open Space (**Figure 1**; **Figure 2**).

A network of conservation areas (totalling 1.40 ha) will also be established within the Development Area (**Figure 1**) which complies with the Vegetation Management Plan approved under EPBC 2009/5155. The conservation areas will comprise remnant vegetation and historically cleared areas which will be revegetated.

2.2 Schedule

Initial vegetation clearing works are proposed to commence in January 2019. The practical completion of the Development is expected by July 2020.

2.3 Proposed works

Clearing of the Development Area is to be undertaken for the construction of playing fields and sports facilities considered necessary to support the surrounding community. Environmental values, including the retention of specific vegetation complexes and key fauna habitat, have been considered at each of the stages of development, including the Approved Structure Plans, ASP 27 for 24 Halesworth Parade, and ASP 60 for 1K Derbyshire Parade.

The impact of clearing and earthworks required for the Development will be minimised by undertaking standard avoidance and mitigation measures applicable to construction activities. These measures include:

- Fencing of conservation areas prior to clearing commencing;
- Clearly delineating clearing boundaries;
- Suspending clearing if Carnaby's Black-Cockatoos are sighted within the Development Area and not recommencing until the birds have left the area; and
- Undertaking management works in conservation areas to address indirect impacts of weed invasion.



Figure 2: Indicative site design for the Development Area and surrounds

3 Assessment against the Ten Clearing Principles

An assessment of the proposed vegetation clearing against the ten native vegetation Clearing Principles contained in Schedule 5 of the EP Act is provided in Sections 3.1 to 3.10. **Table 1** contains a summary of the assessment.

The proposed development has the potential to be at variance with one of the Principles.

Table 1: Summary of assessment against the ten clearing principles

Clearing Principle	Is not at variance	May be at variance
a) Native vegetation should not be cleared if it comprises a high level of biological diversity	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Native vegetation should not be cleared if it comprises the whole, or part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of Rare flora	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Native vegetation should not be cleared if it comprises the whole, or part of, or is necessary for the maintenance of a threatened ecological community (TEC)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Native vegetation should not be cleared if it is significant as remnant vegetation in an area that has been extensively cleared	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Native vegetation should not be cleared if the clearing of vegetation is likely to cause appreciable land degradation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Native vegetation should not be cleared if the clearing of vegetation is likely to cause, or exacerbate, the incidence of flooding	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.1 Comprises high level of biological diversity

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

The Development Area does not contain an unusually high level of biological diversity or significant species for this region and the proposed clearing is not considered to be at variance with this Principle.

Eco Logical Australia (ELA) undertook a Level 2 flora and vegetation survey and Level 1 fauna survey within the Development Area in November 2016 (ELA 2017; **Figure 3**). This survey identified two Vegetation Communities within the Development Area as described in **Table 2** and depicted in **Figure 3**. **Table 2** also provides a breakdown of the total clearing of each Vegetation Community proposed as part of the Development.

Table 2: Vegetation communities in the Development Area

Code	Description	Area to be cleared (ha)	Area to be retained/ revegetated (ha)
BaBmLW	<p><i>Banksia attenuata</i> and <i>Banksia menziesii</i> low woodland over <i>Xanthorrhoea preissii</i>, <i>Hibbertia hypericoides</i> subsp. <i>hypericoides</i> and <i>Leucopogon polymorphus</i> open low heath over <i>Mesomelaena pseudostygia</i> very open sedgeland and *<i>Briza maxima</i> and *<i>Ehrharta calycina</i> very open grassland over <i>Burchardia congesta</i>, <i>Waitzia suaveolens</i> var. <i>suaveolens</i> and <i>Podotheca gnaphalioides</i> very open herbland.</p> <p>This Vegetation Community resembles Floristic Community Type (FCT) 28 – ‘Spearwood <i>Banksia attenuata</i> or <i>Banksia attenuata</i> - Eucalyptus woodlands’ as mapped by Gibson et al. (1994) (ELA 2017).</p>	7.83	0.98
BsXpHtTOS	<p><i>Banksia sessilis</i> var. <i>cygnorum</i>, <i>Xanthorrhoea preissii</i> and <i>Hakea trifurcata</i> tall open scrub over <i>Acacia pulchella</i> var. <i>glaberrima</i>, <i>Calothamnus quadrifidus</i>, <i>Acacia pulchella</i> var. <i>glaberrima</i> and <i>Hibbertia hypericoides</i> open low heath <i>Mesomelaena pseudostygia</i> and <i>Desmocladius fasciculatus</i> very open sedgeland and *<i>Briza maxima</i> and <i>Microlaena stipoides</i> very open grassland over <i>Podotheca chrysanthia</i>, <i>Acanthocarpus preissii</i> and <i>Waitzia suaveolens</i> var. <i>suaveolens</i> very open herbland.</p> <p>This Vegetation Community resembles FCT 24 – ‘Northern Spearwood shrublands and woodlands’ as mapped by Gibson et al. (1994) (ELA 2017).</p>	0.15	0
Previously cleared areas		N/A	0.42
Total		7.98	1.40

A total of 98 flora taxa (73 native and 25 introduced) were identified within the Development Area (ELA 2017). No listed Threatened (Declared Rare Flora), Priority or other flora species of conservation significance were recorded or considered likely to occur.

Vegetation condition within the Development Area ranges from Excellent to Completely Degraded as described in **Table 3**.

Table 3: Vegetation condition within the Development Area

Vegetation condition	Total area (ha)	Portion of Development Area
Excellent	5.03	49.03%
Very Good	3.10	30.21%
Good	0.63	6.14%
Degraded	0.19	1.85%
Completely Degraded	0.60	5.85%
Tracks, infrastructure etc.	0.71	6.92%
TOTAL	10.26	100%

None of the 25 introduced flora species recorded in the Development Area is classified as a Declared Pest under s22(2) of the *Biosecurity and Agriculture Management Act 2007* (BAM Act) or a Weed of National Significance.

The fauna habitat that occurs within the Development Area ('Mixed woodlands' habitat type) is common on the Swan Coastal Plain, and is well represented outside the Development Area in the locality (ELA 2016, 2017). The Level 1 fauna survey conducted by ELA (2017) recorded 17 vertebrate fauna species within the Development Area, comprising one reptile, 13 birds and three mammals (including two introduced species). No Threatened fauna were directly observed during the survey; however, two conservation significant species are considered highly likely to occur:

- Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) - foraging evidence recorded within the Development Area; and
- Rainbow Bee-eater (*Merops ornatus*) – observed nesting adjacent to the Development Area.

A further six conservation listed species are also considered to potentially occur within the Development Area (refer to Section 3.2).

The number of flora and fauna species recorded in the Development Area are comparable to a similar scale survey (7 ha) conducted nearby, 1.5 km to the north east at Romeo Rd (ELA 2016). A comparison of the results of the two surveys is provided in **Table 4**. Flora species diversity within the Development Area was significantly higher than the Romeo Rd site, however the Romeo Road site was a linear area and subject to greater threats and edge effects, resulting in generally lower quality vegetation.

Table 4: Comparison of flora and fauna species between the Development Area and Romeo Rd site

Factor	Assessment Area (ELA 2017)	Romeo Rd site (ELA 2016)
Number of flora species recorded (native and introduced taxa)	98	91
Flora species diversity (native and introduced taxa)	40.2	22.3
Number of fauna species recorded	17	14

The Development Area does not contain an unusually high level of biological diversity or significant species for this region and the proposed clearing is not considered to be at variance with this Principle.

3.2 Potential impact to any significant habitat for fauna indigenous to Western Australia

Principle (b): Native vegetation should not be cleared if it comprises the whole, or part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

A total of 17 native vertebrate fauna species have been recorded within the Assessment Area, including one reptile, 13 birds and three mammals (ELA 2017). No Threatened fauna were directly observed during the survey; however, two conservation significant species are considered highly likely to occur:

- Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) (Threatened – Endangered under the WC Act and EPBC Act) - foraging evidence recorded within the Development Area; and
- Rainbow Bee-eater (*Merops ornatus*) (listed Migratory under the WC Act and Marine under the EPBC Act)– observed nesting adjacent to the Development Area.

A further six conservation listed species are considered to have the potential to occur:

- Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksii naso*) (Threatened - Vulnerable under the WC Act and EPBC Act);
- Fork-tailed Swift (*Apus pacificus*) (Migratory under the WC Act and EPBC Act);
- Grey Wagtail (*Motacilla cinerea*) (Migratory under the WC Act and EPBC Act);
- Carpet Python (*Morelia spilota*) (listed as Other Specially Protected fauna by DBCA);
- Black-striped Snake (*Neelaps calonotus*) (listed as Priority 3 by DBCA) and
- Graceful Sun-moth (*Synemon gratiosa*) (listed as Priority 4 by DBCA).

The aerial nature and large home range of Forest Red-tailed Black Cockatoo, Fork-tailed Swift and Grey Wagtail means the Development Area would only be used on an occasional basis by these species, if at all. The Rainbow Bee-eater occurs in a wide range of habitats, and is likely to find alternative foraging and breeding sites nearby. The habitat present is not considered significant in a local or regional context for the Rainbow Bee-eater, Black-striped Snake, Carpet Python and Graceful Sun-moth, and similar habitat is present within adjacent bushland areas.

No breeding habitat for Carnaby's Black Cockatoo was recorded in the Development Area, however, approximately 7.98 ha (77.78%) of the Development Area represents suitable foraging habitat for the species, which comprises the full extent of both mapped Vegetation Communities (**Figure 3**). Both Vegetation Communities contained high densities of suitable foraging species and evidence of foraging by Carnaby's Black-Cockatoos. Consequently, the quality of Carnaby's Black-Cockatoo foraging habitat is considered to be 'high'.

Whilst there is no breeding or roosting habitat for Carnaby's Black-Cockatoos within the Development Area, breeding is known to occur approximately 10 km to the north within Yanchep National Park (Department of Planning 2011). While breeding, Carnaby's Cockatoo will generally forage up to 12 km away from their nesting site (SEWPaC 2012); however, given the relatively small size of the Development Area, and large amounts of high quality foraging habitat located closer to the known breeding site; it is unlikely that the Development Area would constitute an important food source for a breeding population. Additionally, the presence of numerous known roosting sites surrounding the breeding location (Department of Planning 2011) suggests that the local population of Carnaby's Black-Cockatoos would utilise foraging habitat within Yanchep National Park on a regular basis.

The EPBC Act referral for the proposed Development contains a full assessment of impacts to Carnaby's Black-Cockatoos within the Development Area.

Based on the assessment above, vegetation within the Development Area is not considered to contain significant habitat for any fauna species and the proposed clearing is not anticipated to be at variance to this Principle.

3.3 Potential impact to any rare flora

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

No Rare flora species have been recorded in the Development Area (ELA 2017); therefore, the proposed Development is not considered to be at variance with this Principle.

3.4 Potential of any threatened ecological communities

Principle (d): Native vegetation should not be cleared if it comprises the whole, or part of, or is necessary for the maintenance of a threatened ecological community (TEC).

The 'Banksia Woodlands of the Swan Coastal Plain' (Banksia Woodlands TEC) is listed as Threatened-Endangered under the EPBC Act and was recorded in the Development Area by ELA (2017).

The direct impact to the Banksia Woodlands TEC is the loss of approximately 7.82 ha of the TEC due to clearing associated with the Development. Indirect impacts include increased weed invasion to retained areas of bushland and potential unauthorised public access/littering in conservation areas.

The EPBC Act referral for the proposed development contains a full assessment of impacts to the TEC within the Development Area.

The proposed clearing may be at variance to this Principle.

3.5 Significance as a remnant of native vegetation in the area that has been extensively cleared

Principle (e): Native vegetation should not be cleared if it is significant as remnant vegetation in an area that has been extensively cleared.

The Development Area occurs within one vegetation association defined by Shepherd et al. (2002), Guilderton 949 (bLi) – Low Woodland *Banksia*. A total of 1,109.63 ha (33.02%) of Guilderton vegetation association 949 remains on the Swan Coastal Plain (Government of Western Australia 2016).

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation (Commonwealth of Australia 2001) that includes a target of avoiding additional clearance of ecological communities with an extent below 30% of that present prior to European settlement. The proposed Development will reduce the extent of this vegetation association by 0.72% (i.e. 7.98 ha), which will not take the total extent remaining below 30% of its pre-European extent.

Therefore, the vegetation to be cleared is not considered significant as remnant vegetation in an area that has been extensively cleared.

Based on the above, the proposed clearing is not considered to be at variance to this Principle.

3.6 Impact on any watercourses and/or wetlands

Principle (f): Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

There are no watercourses or wetlands located within the Development Area. The closest wetland is Carabooda Lake, approximately 2.3 km to the east. Given the separation distance of the Development Area to the nearest watercourse/wetland, and the nature of the Development, the Development is not anticipated to have an impact to any watercourses or wetlands and consequently, the proposed clearing is not considered to be at variance to this Principle.

3.7 Potential to cause appreciable land degradation

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

The Development Area will be cleared for construction of playing fields and associated infrastructure. The potential impacts of clearing and construction, such as land degradation from erosion and sedimentation, will be managed by undertaking the standard avoidance and mitigation measures applicable to construction activities, such as the installation of wind fencing around the perimeter of the site to minimise impacts on adjacent vegetation. Given the timeframe between vegetation clearance and development on the site is relatively short, it is unlikely the proposed clearing will result in significant wind erosion.

The Development is not anticipated to cause appreciable land degradation and consequently, the proposed clearing is not considered to be at variance to this Principle.

3.8 Potential to impact on the environmental values of adjacent or nearby conservation areas

Principle (h): Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

There are no Bush Forever Sites or conservation areas within or adjacent to the Development Area. The closest Bush Forever Sites are Site 383 (Neerabup National Park), 1.2 km to the east and Site 397 (Coastal Strip from Wilbinga to Mindarie), 1.8 km to the west of the Development Area. Given the separation distance, the Development is not anticipated to impact any environmental values of conservation areas and consequently, the proposed clearing is not considered to be at variance to this Principle.

3.9 Potential deterioration in the quality of surface or underground water

Principle (i): Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

There are no watercourses or wetlands located within the Development Area. The closest water features are Carbooda Lake (Resource Enhancement Category Wetland) and Nowergup Lake (Conservation Category Wetland), located 2.3 km to the north-east and 3.1 km to the east respectively. Given the distance to the closest surface water body, the Development is not considered likely to cause deterioration to the quality of the surface water.

The Perth Groundwater Atlas shows groundwater at between 48 and 50 m depth within the Development Area (Department of Water 2017). The soils of the Development Area are porous and are Karrakatta Sands, hence it is likely that the surface water rapidly infiltrates the soil, though large rainfall events are likely to result in surface run off. Appropriate chemical and hydrocarbon storage and handling will ensure protection of groundwater and surface water quality during the vegetation clearing and construction.

The proposed clearing is not considered to be at variance to this Principle.

3.10 Potential of clearing to cause, or exacerbate, the incidence of flooding

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

The Development is considered unlikely to cause or exacerbate the incidence of flooding. The Development Area is flat, reducing the chance of water pooling. There are no watercourses or wetlands located within the Development Area. The soils of the Development Area are porous Karrakatta Sands; hence it is likely that the surface water would rapidly infiltrate the soil rather than form sheet flow (with the exception of large rainfall events, which are likely to result in some surface run off). The Development does not include hard surfaces and is unlikely to significantly alter drainage flows or overland sheet flow.

The proposed clearing is not considered to be at variance to this Principle.

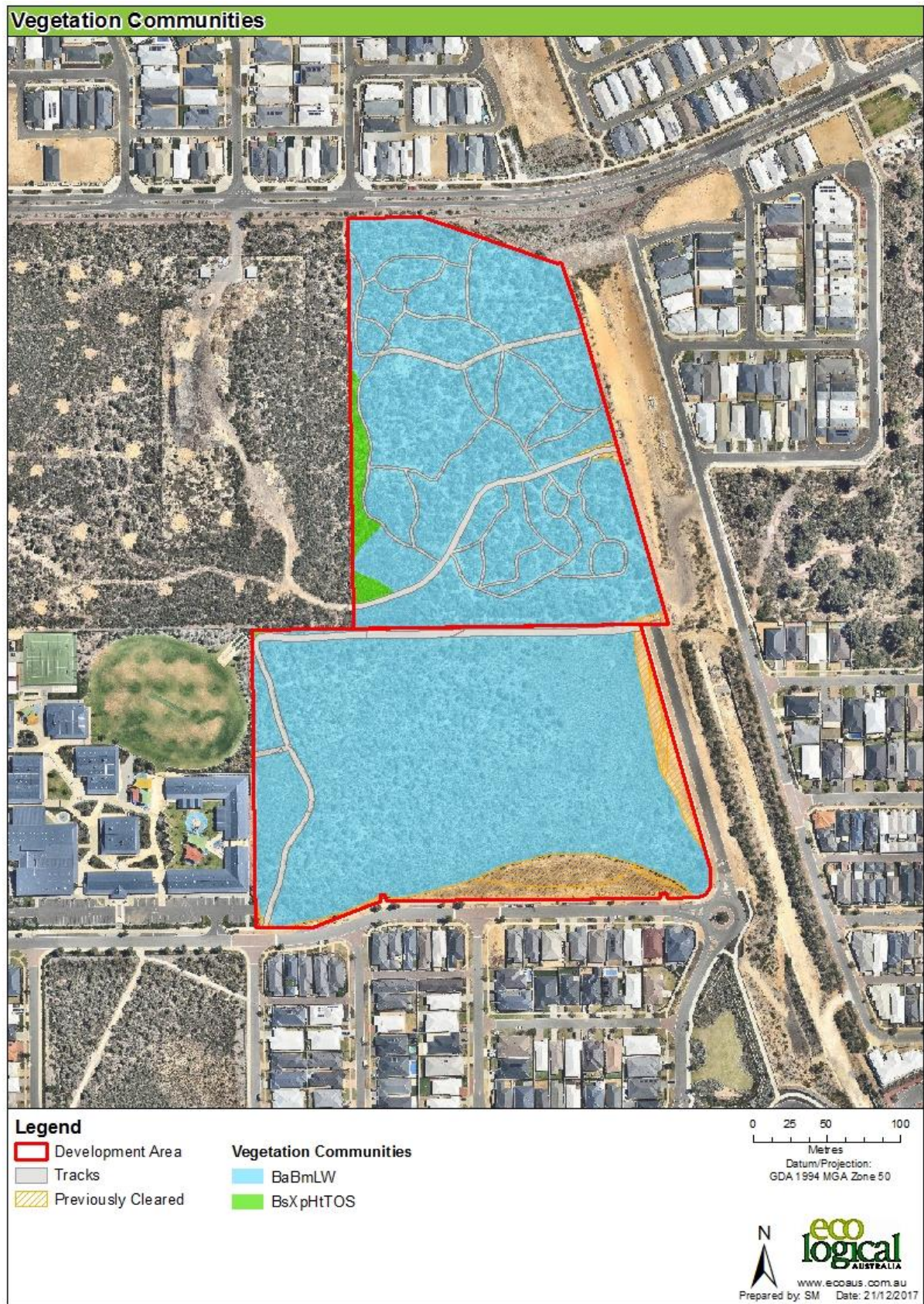


Figure 3: Vegetation Communities, tracks, infrastructure and previously cleared areas in the Development Area.

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