



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 7521/1
File Number: 2012/000671-1
Duration of Permit: From 26 July 2018 to 26 July 2023

PERMIT HOLDER

Carey Baptist College Inc

LAND ON WHICH CLEARING IS TO BE DONE

Lot 9005 on Deposited Plan 57667, Harrisdale

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 0.312 hectares of native vegetation within the area cross hatched yellow on attached Plan 7521/1.

CONDITIONS

1. 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:

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

2. Direction of clearing

The Permit Holder shall conduct clearing in a slow, progressive manner from west to east to allow fauna to move into adjacent native vegetation ahead of the clearing activity.

3. Dieback and weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

4. Vegetation management

- (a) Prior to the commencement of clearing, the Permit Holder shall construct a fence enclosing the area cross hatched red on attached Plan 7521/1 to prevent uncontrolled access.
- (b) The fence is required to be maintained for the life of the Permit.
- (c) Within one month of installing the fence, the Permit Holder shall notify the CEO in writing that the fence has been constructed.

PART III - RECORD KEEPING AND REPORTING

5. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

- (a) In relation to the clearing of native vegetation authorised under this Permit:
 - (i) the species composition, structure and density of the cleared area;
 - (ii) 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;
 - (iii) the date that the area was cleared;
 - (iv) the size of the area cleared (in hectares);
- (b) Actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 1 of the Permit;
- (c) The direction of clearing in accordance with condition 2 of the Permit;
- (d) Actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 3 of the Permit; and
- (e) In relation to the vegetation management required under condition 4 of this Permit:
 - (i) the date the fence was constructed.

6. Reporting

The Permit Holder must provide to the *CEO* the records required under condition 10 of this Permit, when requested by the *CEO*.

DEFINITIONS

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

dieback means the effect of *Phytophthora* species on native vegetation;

fill means material used to increase the ground level, or fill a hollow;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or
- (c) not indigenous to the area concerned.

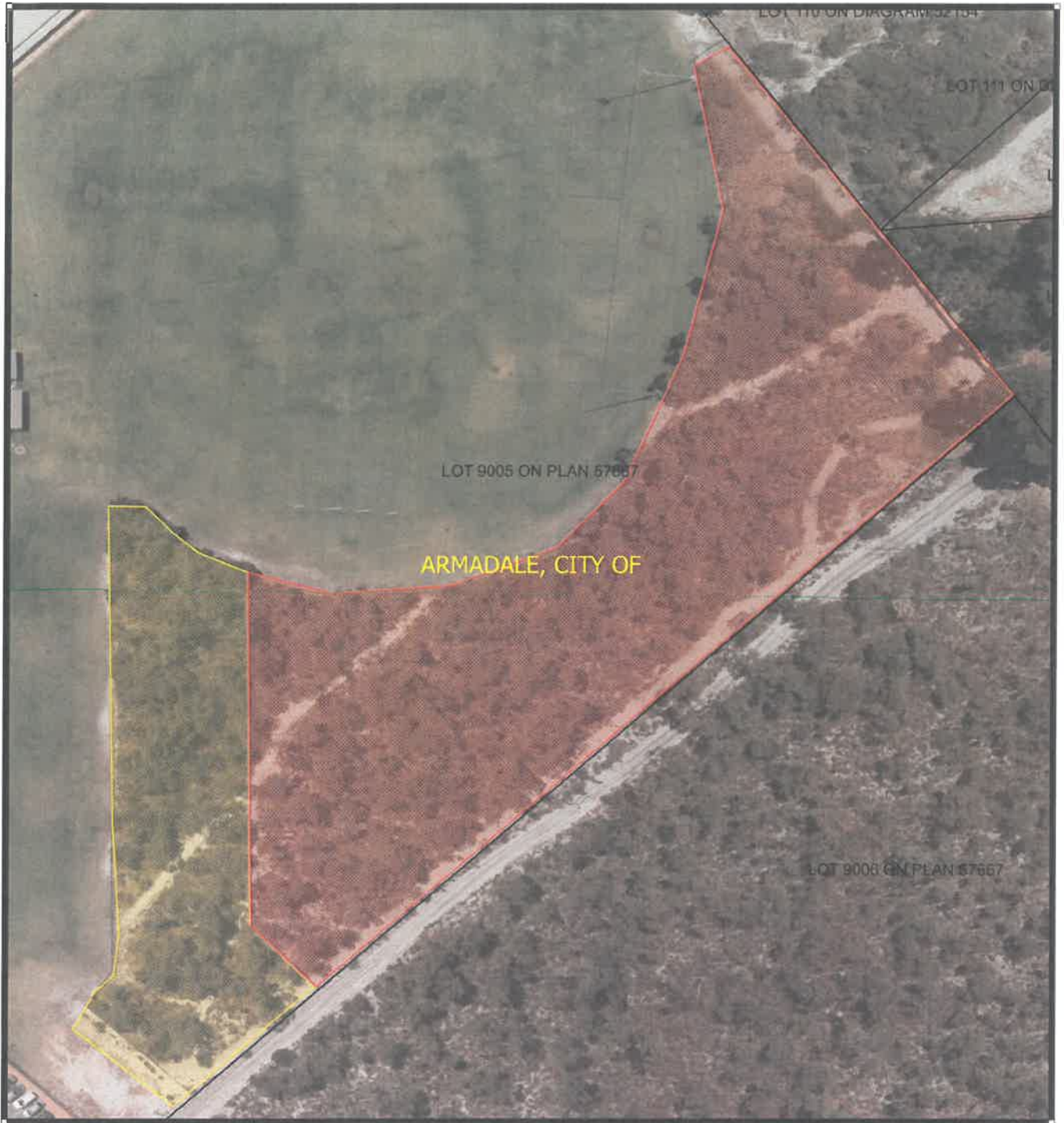


Mathew Gannaway
MANAGER
CLEARING REGULATION





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

26 June 2018

Plan 7521/1



Legend

-  Subject to conditions
-  Areas approved to clear
-  LGA
cadastre
-  Cadastre
WANow_Imagery

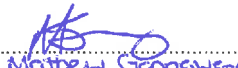
60



60 m



MGA 94
Geocentric Datum of Australia 1994

 Date: 23/05/2018
Matthew Gannaway
Officer with delegated authority under Section 20
of the Environmental Protection Act 1986



GOVERNMENT OF
WESTERN AUSTRALIA



1. Application details

1.1. Permit application details

Permit application No.: 7521/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Carey Baptist College Inc
Application received date: 15 March 2017

1.3. Property details

Property: Lot 9005 on Deposited Plan 57667
Local Government Authority: City of Armadale
Localities: Harrisdale

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
0.312		Mechanical Removal	Recreation

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 26 June 2018

Reasons for Decision: The clearing permit application has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986* (EP Act). It has been concluded that the proposed clearing may be at variance to principles (a), (b) and (d), and is not likely to be at variance to the remaining clearing principles.

The Delegated Officer determined that:

- The application area comprises suitable foraging habitat for Carnaby's cockatoo (*Calyptorhynchus latirostris*);
- The application area may be an occurrence of a State listed priority ecological community, known as 'Banksia Dominated Woodlands of the Swan Coastal Plain Interim Biogeographic Regionalisation for Australia (IBRA) Region' (Banksia Woodlands PEC) and a Commonwealth listed threatened ecological community known as 'Banksia Woodlands of the Swan Coastal Plain ecological community' (Banksia Woodland TEC);
- The proposed clearing may result in incidental fauna deaths to conservation significant ground dwelling indigenous fauna; and
- The proposed clearing may result in the spread of weeds and dieback and lead to uncontrolled access into an adjacent area of remnant vegetation, which may be representative of the abovementioned TEC and PEC.

The Delegated Officer noted the relatively small size of the application area, presence of extensive nearby vegetated areas, the majority of which are within Bush Forever sites, are mapped as the Banksia Woodlands PEC, and likely to be representative of the Banksia Woodland TEC, to conclude that the proposed clearing is unlikely to significantly impact on the local extent of the the Banksia Woodland TEC or PEC or on foraging habitat for Carnaby's cockatoo.

To minimise impacts to conservation significant ground dwelling indigenous fauna, the clearing permit contains a condition requiring:

- Slow, progeressive one directional clearing from west to east to allow fauna to move into adjacent habitat ahead of the clearing.

To minimise potential impacts to adjacent native vegetation within Lot 9005 On Deposited Plan 57667, mapped as the Banksia Woodland TEC and PEC, the clearing permit contains a condition requiring:

- The movement of machinery to be restricted to the limits of the application area,
- That no dieback or weed affected soil, mulch, fill or other material is brought into the area to be cleared;
- Earth moving machinery to be cleaned of soil and vegetation prior to entering and leaving the application area; and
- The fencing of adjacent remnant vegetation within Lot 9005 On Deposited Plan 57667, to prevent the degradation of this area associated with uncontrolled access and edge effects of the proposed school development.

In determining to grant a clearing permit subject to conditions, the Delegated Officer found that the proposed clearing is unlikely to lead to an unacceptable risk to the environment.

2. Site Information

Clearing Description

The applicant proposes to clear up to 0.321 hectares of native vegetation within Lot 9005 on Deposited Plan 57667, Harrisdale, for the purpose of expanding school facilities, including the construction of a tennis court and additional car park facilities.

Vegetation Description

A survey of the application area conducted by Strategen on 7 September 2016 described the vegetation within the application area as *Banksia attenuata* and *Banksia menziesii* open low forest over *Adenanthos cygnorum* and *Melaleuca thymoides* open shrubland over closed understory of mixed low shrubs and herbs (Strategen, 2017a).

The application area is mapped as Heddle vegetation complex Southern River, which is described as open woodland of *Corymbia calophylla* (marri), *Eucalyptus marginata* (jarrah) and *Banksia* species with fringing woodland of *Eucalyptus rudis* (flooded gum) and *Melaleuca raphiophylla* (swamp paperbark) along creek beds (Heddle et al., 1980).

Vegetation Condition

The majority of the application area ranges between the following vegetation conditions (Department of Environment Regulation (DER), 2017; Strategen, 2017a):

- Good; Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it (Keighery, 1994); and
- Excellent; Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

The application area also contains tracks and a firebreak, with these areas considered to be in a degraded (structure severely disturbed; regeneration to good condition requires intensive management) (Keighery, 1994) condition (DER, 2017; Strategen, 2017a).

Soil type

A site inspection of the application area undertaken by officers of the former DER identified that the soils within the application comprise of grey sands (DER, 2017).



Fig 1: Application Area

3. Minimisation and mitigation measures

On 11 September 2017, DWER wrote to the applicant to advise that an additional flora survey was required, noting that the timing of the initial survey was not adequate to detect the presence of several species of conservation significant flora. Subsequently, the applicant commissioned a targeted flora survey which was undertaken on 12 October 2017, to determine impacts to conservation significant flora. The targeted flora survey did not identify the presence of any conservation significant flora species within the application area.

4. Assessment of application against clearing principles

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

Proposed clearing may be at variance to this Principle

A flora survey of a larger area (0.6 hectares) encompassing the application area was undertaken in September 2017, whereby three quadrats were sampled within the survey area to compile a flora species list (Strategen, 2017a). Additionally, traverses through the survey area were undertaken to search for additional species outside of the quadrats and any rare or priority flora species. The survey identified a total of 41 native flora species from 20 plant families (Strategen, 2017a). No rare or priority flora species were recorded during this survey (Strategen, 2017a).

One vegetation type was mapped within the application area, which is described as *Banksia attenuata* and *Banksia menziesii* open low forest over *Adenanthos cygnorum* and *Melaleuca thymoides* open shrubland over closed understorey of mixed low shrubs and herbs (Strategen, 2017a).

The vegetation under application largely ranges from good to excellent (Keighery, 1994) condition (Strategen, 2017a; DER, 2017). The majority of the application area was in a very good to excellent (Keighery, 1994) condition (approximately 0.2 hectares) (Strategen, 2017a). The southern portion of the application area has been subject to minor disturbances (rubbish dumping, removal of vegetation, clearing for informal tracks and school activities) and was in a good (Keighery, 1994) condition. There are several informal tracks that run through the centre and southern portion of the application area, with these areas in a degraded (Keighery, 1994) condition (Strategen, 2017a).

The application area contains a number of dead and dying *Banksia* sp. (DER, 2017). The cause of these deaths is unknown, however may be dieback related.

The local area considered in the assessment of this application is defined as a 10 kilometre radius surrounding the application area. The local area retains approximately 17 per cent native vegetation cover (5527 hectares). The proposed clearing of 0.321 hectares represents 0.006 per cent of the native vegetation within the local area.

Fifty six priority flora species have been recorded within the local area and the application area is considered to contain suitable habitat for three of these species, which include:

- *Jacksonia gracillima* (priority 3);
- *Jacksonia sericea* (priority 4); and
- *Styphelia filifolia* (priority 3)

Sixteen rare flora species have been recorded within the local area, and it is considered that the application area provides suitable habitat for two rare flora species, which include;

- *Caladenia huegelii* (classified as 'flora that are considered likely to become extinct or rare, as critically endangered flora' under the *Wildlife Conservation (Rare Flora) Notice 2017 (WC Flora Notice)*); and
- *Drakaea micrantha* (classified as 'flora that are considered likely to become extinct or rare, as endangered flora' under the *WC Flora Notice*).

As previously mentioned, the applicant initially commissioned a flora survey of the application area, which was undertaken on 7 September 2016. While no rare or priority flora species were recorded during the initial flora survey (Strategen, 2017a) the former Department of Parks and Wildlife (Parks and Wildlife) (now the Department of Biodiversity, Conservation and Attractions [DBCA]) advised that the flora survey was not sufficient to identify the abovementioned conservation significant flora species, as it occurred outside of their peak flowering period (Parks and Wildlife, 2017).

As a result of the former Parks and Wildlife's comments and DWER's subsequent request, the applicant commissioned an additional targeted flora survey of the application area which was undertaken on 12 October 2017. The survey involved two botanists walking transects of the application area spaced at 10 metres apart. The survey was undertaken in accordance with the Environmental Protection Authority (2016) *Technical Guidance: Flora and Vegetation Surveys for Environmental Impact Assessment*. The survey did not identify any conservation significant flora species (Strategen 2017b).

As discussed under Principle (b), the application area provides suitable foraging habitat for Carnaby's cockatoo (*Calyptorhynchus latirostris*) and habitat for a number of conservation significant ground dwelling indigenous fauna. Noting the extent of surrounding areas of remnant vegetation, much of which occurs within Bush Forever Sites, the relatively small application area is unlikely to provide significant habitat for conservation significant fauna species.

As discussed under Principle (d), the application area is within an area defined as 'likely to occur' for the Commonwealth *Banksia* Woodlands TEC, and is also mapped as the *Banksia* Woodlands PEC (Priority 3). The main feature of both communities is the dominance of *Banksia attenuata* and/or *B. menziesii* woodland, which commonly co-occur, over a suite of native understorey species. Noting the vegetation identified within the application area, shares characteristics with those described for the abovementioned PEC and TEC, it may be an occurrence of these communities.

While the application area is mapped as the Banksia Woodlands PEC and is potentially representative of the *Banksia* Woodlands TEC, noting the extent of surrounding vegetation, including that within Bush Forever sites (1455.5 hectares of native vegetation remaining within a five kilometre radius, the majority of which is mapped as the Banksia Woodlands PEC), the proposed clearing of 0.312 hectares is not likely to significantly impact on the local extents of these communities.

Given that the application area contains suitable habitat for conservation significant fauna, and that the vegetation within the application area is mapped as a PEC and may be an occurrence of a TEC, the proposed clearing may be at variance to this Principle.

Noting that there are larger areas of nearby (including adjacent areas) remnant vegetation mapped as the abovementioned PEC, potentially representative of the abovementioned TEC, and considered to contain suitable foraging habitat for Carnaby's cockatoo (much of which occurs in Bush Forever sites), the proposed clearing is not likely to significantly impact on the biological diversity of the local area.

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

Proposed clearing may be at variance to this Principle

There are 27 conservation significant fauna species known to occur within the local area (Parks and Wildlife, 2007-). Noting the available habitat within the application area, seven conservation significant species have the potential to utilise the application area, these being, forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*), Baudin's cockatoo (*Calyptorhynchus baudinii*), Carnaby's cockatoo, southern death adder (*Acanthopis antarcticus*), Perth slider (*Lerista lineata*), dell's ctenotus (*Ctenotus delli*) and the southern brown bandicoot (*Isodon obesulus*).

Carnaby's cockatoo is listed as endangered and Baudin's cockatoo and forest red-tailed cockatoo are listed as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (collectively known as black cockatoos). Black cockatoos breed in large hollow-bearing trees, generally within woodlands or forests or in isolated trees (Commonwealth of Australia, 2012). These species nest in hollows in live or dead trees of karri, marri, wandoo, tuart, salmon gum, jarrah, flooded gum, York gum, powder bark, bullich and blackbutt (Commonwealth of Australia, 2012). The vegetation within the application area does not contain any large mature hollow bearing trees that fit the criteria for black cockatoo breeding habitat, having a diameter at breast height of more than 50 centimetres. Therefore, the vegetation within the application area is not considered suitable breeding habitat for the black cockatoo species.

The native feeding records on the Swan Coastal Plain reveal that *Banksia* species account for nearly 50 per cent of Carnaby's cockatoo diet, with the majority of records from *Banksia attenuata* (Shah 2006). This species and the co-dominant *Banksia menziesii* are considered essential native food sources for Carnaby's cockatoo (Shah 2006). *Banksia* woodland is also utilised for foraging by forest red-tailed black-cockatoo and Baudin's cockatoo, although other flora species are generally utilised in favour of *Banksia* sp., for these species if available (Commonwealth of Australia, 2012), and the application area is unlikely to provide significant foraging habitat for these species. Noting that the application area predominantly consists of *Banksia* woodland (Strategen, 2017a), it is considered to provide potentially significant foraging habitat for Carnaby's cockatoo (DER, 2017).

There are 14 Bush Forever sites (342, 413, 253, 125, 465, 464, 255, 262, 390, 389, 472, 467, 340 and 388) within a five kilometre radius of the application area, comprising a total area of approximately 1455.5 hectares. The majority of the remnant vegetation within these Bush Forever sites (approximately 80 percent) is mapped as the Banksia Woodlands PEC and as 'likely to occur' for the Banksia Woodlands TEC. It is considered that these areas are highly likely to provide suitable foraging habitat for Carnaby's cockatoo. The application area (0.312 hectares), comprises approximately 0.021 per cent of the total vegetation within the abovementioned remnants, and thus of potentially suitable Carnaby's cockatoo foraging habitat within a five kilometre radius. Therefore, the application area is unlikely to comprise of significant foraging habitat for Carnaby's cockatoo.

The dense native understory vegetation within the application area is likely to provide suitable habitat for a number of ground dwelling fauna species, including the aforementioned southern death adder, Perth slider, dell's ctenotus and southern brown bandicoot. However, given the relatively small size of the application area, and its location adjacent to areas of similar habitat much of which is maintained within Bush Forever sites, the application area is unlikely to provide significant habitat for these species. However, it is noted that terrestrial fauna deaths may occur as a result of clearing. Additionally the proposed clearing will not fragment any areas of fauna habitat and or ecological linkages.

Given the above, the proposed clearing may be at variance to this principle.

To minimise direct impacts to ground dwelling indigenous fauna, the applicant will be required to undertake slow progressive directional clearing to allow these species to move into adjacent habitat ahead of clearing.

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

Proposed clearing is not likely to be at variance to this Principle

Sixteen rare flora species have been recorded within the local area and based on the vegetation and soils type recorded within the application area (see Site Information under Section 2) it may provide suitable habitat for two of these, being *Caladenia huegelii* and *Drakaea micrantha*.

Caladenia huegelii is generally found in deep grey sandy soils in *Banksia* and *Eucalyptus* woodlands, favouring areas of lush undergrowth (Brown et al., 1998). Parks and Wildlife advised that 'at the time of the survey the flowers would have only just begun to emerge and it is suggested that another targeted survey for this species is undertaken during a more appropriate time when the species is confirmed as flowering at other regional locations' (Parks and Wildlife, 2017).

Drakaea micrantha inhabits infertile white-grey sands in common sheoak and jarrah woodland or forest (Brown et al., 1998). Parks and Wildlife advised that the recommended survey period for this species is late September to early October, and that the survey was undertaken too early in its flowering period (Parks and Wildlife, 2017).

The applicant initially commissioned a flora survey of the application area, which was undertaken on 7 September 2016. While no rare or priority flora species were recorded during the initial flora survey (Strategen, 2017a), the former Parks and Wildlife advised that the flora survey was not sufficient to identify the abovementioned rare flora species, as the survey occurred outside of their peak flowering period (Parks and Wildlife, 2017).

As a result of the former Parks and Wildlife's comments and DWER's subsequent request, the applicant commissioned an additional targeted flora survey of the application area which was undertaken on 12 October 2017. The survey involved two botanists walking transects of the application area spaced at 10 metres apart. The survey was undertaken in accordance with the Environmental Protection Authority (2016) *Technical Guidance: Flora and Vegetation Surveys for Environmental Impact Assessment*. The survey did not identify any rare flora species (Strategen, 2017b).

As the follow up targeted flora survey did not identify any rare flora, the application area is unlikely to include, or be necessary for the continued existence of rare flora.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

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

Proposed clearing may be at variance to this Principle

On 16 September 2016, the Commonwealth Department of the Environment and Energy (DotEE) listed the *Banksia* Woodlands TEC as endangered under the EPBC Act (Threatened Species Scientific Committee, 2016). The *Banksia* Woodlands TEC is most commonly dominated or co-dominated by *Banksia attenuata* and/or *Banksia menziesii*. Other *Banksia* species that may dominate include *Banksia prionotes* or *Banksia ilicifolia* (Threatened Species Scientific Committee, 2016). The understorey of the community typically contains a high to very high diversity of shrub and herb species that often vary from patch to patch (Threatened Species Scientific Committee, 2016).

The application area is mapped by DotEE as a 'likely to occur' area for the *Banksia* Woodlands TEC. DotEE's mapping provides an indicative distribution of the ecological community, defining areas mapped as 'likely to occur' and 'may occur'. The approved conservation advice for this community states that "Ground-truthing (e.g. an on-ground survey) is required to verify if a particular site meets the required key diagnostic characteristics and minimum condition thresholds to be the described ecological community" (Threatened Species Scientific Committee, 2016).

The initial flora survey determined that the vegetation within the application area is consistent with the characteristics of the TEC (Strategen, 2017a). Although the proposed clearing of 0.3 hectares of the *Banksia* Woodlands TEC in good to excellent (Keighery, 1994) condition does not meet the minimum patch size threshold for consideration as the TEC (Threatened Species Scientific Committee, 2016), the application area is within an approximately nine hectare patch of *Banksia* Woodlands TEC that meets the threshold for consideration as the TEC.

Given the above, the proposed clearing may be at variance to this Principle.

While the application area is potentially representative of the *Banksia* Woodlands TEC, DBCA provided comment on the proposed impacts to this TEC and advised that "the area proposed for clearing is considered unlikely to result in significant impacts to the *Banksia* Woodland TEC at a regional scale due to limited total impact area" (DBCA, 2017).

There are 14 Bush Forever sites (342, 413, 253, 125, 465, 464, 255, 262, 390, 389, 472, 467, 340 and 388) within a five kilometre radius of the application area, comprising a total area of approximately 1455.5 hectares. The majority of the remnant vegetation within these Bush Forever sites (approximately 80 percent) is mapped as 'likely to occur' for the *Banksia* Woodlands TEC. Two of these Bush Forever sites mapped as 'likely to occur' areas are within 500 metres of the application area and comprise approximately 225.8 hectares. The application area (0.312 hectares), comprises approximately 0.021 per cent of the total vegetation remaining within the abovementioned remnants.

Noting the above, and the advice from DBCA, the proposed clearing is not likely to significantly impact on the local extent of the ecological community.

Weed and dieback management practices will assist in mitigating potential impacts to the occurrence of this TEC.

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

Proposed clearing is not likely to be at variance to this Principle

The National Objectives and Targets for Biodiversity Conservation 2001-2005 include a target to have clearing controls in place that prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750 (Commonwealth of Australia, 2001). In the Perth Metropolitan and Bunbury regions, the Environmental Protection Authority (EPA) has a modified objective to retain at least 10 per cent of the pre-clearing extent of vegetation complexes for defined constrained areas (intensely developed) (EPA, 2015; EPA 2003; Government of Western Australia, 2000). The application area is located within a constrained area given that it occurs within the Bush Forever Study Area Boundary (Government of Western Australia, 2000).

The application area is located within the Swan Coastal Plain IBRA bioregion which retains approximately 38.57 per cent of its pre-European vegetation extent (Government of Western Australia, 2018). The vegetation within the application area is mapped as Heddle vegetation complex Southern River (Hedde et al., 1980), which retains approximately 18 per cent of its pre-European vegetation extent (Government of Western Australia, 2018).

The local area retains approximately 17 per cent native vegetation cover (5,527 hectares) and the proposed clearing of 0.321 hectares represents 0.006 per cent of the remnant native vegetation within the local area.

Noting that the application area is within a constrained area, and that the abovementioned remnant vegetation extents are all above the 10 per cent threshold for constrained areas, the application area is not considered to be within an extensively cleared landscape.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Current Extent in all DBCA Managed Lands (%)
IBRA bioregion*				
Swan Coastal Plain	1,501,221.93	578,997.37	38.57	38.47
Hedde Vegetation Complex**				
Southern River	58,781.48	10,828.04	18.42	1.59

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

Proposed clearing is not likely to be at variance to this Principle

There are no wetlands or watercourses mapped within the application area, however there are number of wetlands located within the local area. The closest mapped wetland or watercourse is a multiple use wetland, located approximately 230 metres from the application area. No vegetation associated with watercourses or wetlands was observed within the application area (DER, 2017; Strategen, 2017a).

Noting the distance to the nearest wetland and watercourse, the vegetation within the application area is not considered to be growing in, or in association with, an environment associated with a watercourse or wetland. Therefore the proposed clearing is not likely to be at variance to this Principle.

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

Proposed clearing is not likely to be at variance to this Principle

The landform system of the application area has been mapped as Bassendean B2 Phase, which comprises flat to very gently undulating sandplain with well to moderately well drained deep bleached grey sands with a pale yellow B horizon or a weak iron-organic hardpan at one to two metres. The soils within the application area were identified as grey sandy soils (DER, 2017).

Generally, sandy soils have a high risk of wind erosion and a low risk of water erosion due to the high infiltration rates associated with sands. Although the sandy soils in the application area are susceptible to wind erosion, given the small narrow area of clearing, presence of adjacent native vegetation, and that the proposal is for a carpark and tennis court, it is not likely that the proposed clearing will result in wind erosion causing appreciable land degradation.

Noting that the mapped groundwater salinity levels within the application area are less than 500 milligrams per litre (fresh), the proposed clearing is unlikely to result in appreciable land degradation via salinity.

Given the above, the proposed clearing is not likely to be at variance to this 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.

Proposed clearing is not likely to be at variance to this Principle

The application area is not located within or adjacent to any conservation areas, however there are numerous areas reserved for conservation purposes within the local area, the closest being Bush Forever site 253 (Harrisdale Swamp and Adjacent Bushland) which is located approximately 290 metres from the application area.

Given the distance to the nearest conservation area and that the application area does not form part of a corridor linkage to the conservation areas, the proposed clearing is not likely to have an impact on the environmental values of any nearby conservation areas.

Given the above, the proposed clearing is not likely to be at variance to this 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.

Proposed clearing is not likely to be at variance to this Principle

As discussed under Principle (f), no wetlands or watercourses are mapped within the application area. Given the distance to the closest watercourse or wetland, the proposed clearing is unlikely to cause deterioration in the quality of surface water.

Groundwater salinity mapped within the application area is less than 500 milligrams per litre (fresh). Given the low salinity levels within the application area, and the relatively small size of the application area, the proposed clearing is not likely to cause deterioration in the quality of groundwater.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

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

Proposed clearing is not likely to be at variance to this Principle

As discussed under Principle (f), no wetlands or watercourses are mapped within the application area. Given the distance to the closest watercourse or wetland and the high infiltration rate of the sandy soils within the application area, it is unlikely that the proposed clearing of 0.312 hectares will cause, or exacerbate, the incidence or intensity of flooding.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Planning instruments and other relevant matters.

The application is for the clearing of 0.321 hectares of native vegetation within Lot 9005 on Deposited Plan 57667, Harrisdale, for the purpose of expanding school facilities, including the construction of a tennis court and additional car park facilities. This application was received on 15 March 2017.

The application was advertised on DER's website on 12 April 2017 for a 21 day submission period. No public submissions have been received in relation to this application.

No Aboriginal sites of significance are mapped within the application area.

The application area is zoned urban under the Metropolitan Regional Scheme.

The City of Armadale has issued the applicant with development approval for the proposed school facilities, subject to a clearing permit being issued (City of Armadale, 2017a).

With respect to the proposed impacts of clearing, the City of Armadale has indicated that "although the proponent has stated that the size of the development (0.3 hectares) is too small to warrant a referral under the EPBC Act, the entire *Banksia* woodlands remnant vegetation, on the school grounds, is about 1.2 hectares in size. The City would prefer the 1.2 hectare parcel was assessed, which would include this small portion, as a whole and referred under the EPBC Act, rather than a number of future clearing permit applications for small areas to avoid a referral" (City of Armadale, 2017b).

Should any further applications for the remaining area of remnant vegetation within Lot 9005 on Deposited Plan 57667 be received from the applicant, cumulative impacts of clearing will be a valid consideration in determining the extent of impacts to Banksia Woodland TEC occurrences and conservation significant fauna species.

Carey Baptist College was granted clearing permit CPS 3806/1 for 0.835 hectares of clearing within Lot 9005 on Deposited Plan 57667, Harrisdale, for the purpose of developing a sports oval on the 10 February 2011. For clearing permit CPS 3806/1, the applicant was advised that the application area contains significant foraging habitat for the Carnaby's cockatoo. In response, the applicant advised that the remaining native vegetation on this Lot would be retained. A condition was included on clearing permit CPS 3806/1 requiring that within 3 months of the commencement of clearing, the permit holder shall construct a fence enclosing the area outlined in red on Plan 3806/1 to prevent uncontrolled access. The applicant wrote to the former DER on 20 February 2012, advising that the area had been fenced.

The application area for CPS 7521/1 falls within the area outlined in red on Plan 3806/1. Prior to any clearing, the applicant will be required to maintain a fence around the adjacent remnant vegetation within Lot 9005, to prevent uncontrolled access and degradation of this area.

5. Applicant's Submissions

On 11 September 2017, DWER wrote to the applicant to advise that the initial survey undertaken was not adequate to determine the presence of several rare and priority flora species. The applicant was also notified that a decision on the application would likely be put on hold until such time that development approval had been obtained from the City of Armadale.

The applicant provided an additional targeted flora survey to DWER on 12 October 2017. The survey did not identify any rare or priority flora species. The applicant provided a copy of the development approval from the City of Armadale on 14 May 2018.

6. References

- Brown A., Thomson-Dans C. and Marchant N. (1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.
- City of Armadale (2017a) Notice of Determination for Application of Development Approval. City of Armadale. Western Australia (DER ref. A1673317)
- City of Armadale (2017b) Advice received regarding Clearing Permit Application CPS 7521/1. City of Armadale. Western Australia (DER ref. A1413860)
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Commonwealth of Australia (2012) EPBC Act referral guidelines for three threatened black cockatoo species. Department of Sustainability, Environment, Water, Populations and Communities, Canberra.
- Department of Biodiversity, Conservation and Attractions (DBCA) (2017) Further advice received regarding Clearing Permit Application CPS 7521/1. Department of Biodiversity, Conservation and Attractions. Western Australia. (DWER ref. A1500403).
- Department of Environment Regulation (DER) (2017) Site Inspection Report for Clearing Permit Application CPS 7521/1. Site inspection undertaken 4 May 2017. Department of Environment Regulation, Western Australia (DER ref. A1430187).
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- EPA (2003) Bulletin 1108 – Greater Bunbury Region Scheme, Report and recommendations of the Environmental Protection Authority, Environmental Protection Authority, Perth.
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- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc.). Nedlands, Western Australia.
- Shah, B. (2006) Conservation of Carnaby's Black-Cockatoo on the Swan Coastal Plain, Western Australia. December 2006. Carnaby's Black-Cockatoo Recovery Project. Birds Australia, Western Australia.
- Strategen (2017a) Native Vegetation Clearing Permit (Area Permit) Supporting Documentation. Carey Baptist College, 51 Wright Road, Harrisdale, Draft, January 2017. DWER ref. A1394057.
- Strategen (2017b) Targeted Flora Survey Findings. Additional information for Clearing Permit Application CPS 7521/1. DWER ref. A1579969.
- Threatened Species Scientific Committee (2016). Approved Conservation Advice (incorporating listing advice) for the Banksia Woodlands of the Swan Coastal Plain Ecological Community. Canberra: Department of the Environment and Energy. Available from: <http://www.environment.gov.au/biodiversity/threatened/communities/pubs/131-conservation-advice.pdf>. In effect under the EPBC Act from 16-Sep-2016.

GIS Databases:

- Aboriginal Sites of Significance
- Department of Biodiversity, Conservation and Attractions, Tenure
- Hydrography, COG Hydro
- Hydrography, General Hydro
- Hydrography, SLIP Hydro
- Hydrography, Swan Drainage Lines
- Hydrography, Swan Waterbodies
- Hydrography, Wetlands
- SAC bio datasets
- TPFL Data May 2017
- Vegetation Complexes – South West Forests
- WAHerb Data May 2017
- WA TEC PEC Boundaries