



## CLEARING PERMIT

*Granted under section 51E of the Environmental Protection Act 1986*

<b>Purpose Permit number:</b>	CPS 7617/1
<b>Permit Holder:</b>	Minister for Education
<b>Duration of Permit:</b>	19 April 2018 – 19 April 2023

### ADVICE NOTE

The funds referred to in condition 8 of this permit are intended for contributing towards the purchase of 62 hectares of native vegetation with similar environmental values containing habitat for Carnaby's cockatoo (*Calyptorhynchus latirostris*) and forest red-tailed black cockatoo (*Calyptorhynchus baudinii*) and *Banksia* Woodlands threatened ecological community within the Swan Coastal Plain Bioregion.

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 for the purpose of constructing Hammond Park high school.

**2. Land on which clearing is to be done**

Lot 1392 on Deposited Plan 408828, Hammond Park

Lot 650 on Deposited Plan 41055, Hammond Park

Lot 33 on Diagram 32142, Hammond Park

Lot 32 on Diagram 32142, Hammond Park

Lot 31 on Diagram 32142, Hammond Park

**3. Area of Clearing**

The Permit Holder must not clear more than 10.9 hectares of native vegetation within the area hatched yellow on attached Plan 7617/1.

**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**

The Permit Holder shall not clear native vegetation unless development of the site occurs within three months of the authorised clearing being undertaken.

### 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.

## 7. 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 *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.

## 8. Fauna management

- (a) Prior to undertaking any clearing of *habitat trees*, containing hollows suitable to be utilised for nesting by Carnaby's cockatoo (*Calyptorhynchus latirostris*) and forest red-tailed black cockatoo (*Calyptorhynchus banksii subsp. naso*) (black cockatoos), as identified within the Hammond Park High School Flora, Vegetation and Threatened Black-cockatoo Assessment, a *fauna specialist* shall inspect such trees for the presence of black cockatoos.
- (b) Where black cockatoos are identified under condition 8(a) of this Permit, the Permit Holder shall ensure that no clearing of, or within 10 metres of, the identified *habitat tree(s)* occurs until a *fauna specialist* has verified that the hollow/s are no longer being utilised by black cockatoos.

## 9. Monetary contributions to a fund maintained for the purpose of establishing or maintaining vegetation (offset)

Prior to undertaking any clearing authorised under this Permit and no later than 16 March 2019, the Permit Holder shall provide documentary evidence to the CEO that funding of \$310,000 has been transferred to the Department of Water and Environmental Regulation for the purpose of establishing or maintaining native vegetation.

## PART III - RECORD KEEPING AND REPORTING

### 10. Records must be kept

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

- (a) In relation to the clearing of native vegetation authorised under this Permit:
  - (i) 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;
  - (ii) the date that the area was cleared; and
  - (iii) 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 6 of the Permit.
- (c) Actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 7 of the Permit.
- (d) In relation to fauna management pursuant to condition 8 of this Permit:
  - (i) the location of each black cockatoo 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;
  - (ii) the species name of each black cockatoo identified; and
  - (iii) where black cockatoos have been identified, the date in which the black cockatoos no longer utilised the *habitat tree(s)* and the area was cleared.

### 11. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
  - (i) of records required under condition 10 of this Permit; and
  - (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding calendar year.
- (b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar, a written report confirming that no clearing under this permit has been carried out, must be provided to the CEO on or before 30 June of each year.

- (c) Prior to 19 January 2023, the Permit Holder must provide to the CEO a written report of records required under condition 10 of this Permit where these records have not already been provided under condition 11(a) of this Permit.

## DEFINITIONS

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

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

**fauna specialist:** means a person who holds a tertiary qualification specialising in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the *Wildlife Conservation Act 1950*;

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

**habitat tree(s)** means trees that have a diameter, measured at 1.5 metres from the base of the tree, of 50 centimetres or greater, that contains or has the potential to develop hollows or roosts suitable for native fauna;

**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 Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.



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Mathew Gannaway  
MANAGER  
CLEARING REGULATION

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

20 March 2018

# Plan 7617/1

115°51'0"



115°51'0"

## Legend

- Areas approved to clear
- roads\_201501131816
- Cadastre
- WANow\_Imagery

200



200 m



MGA 94  
Geocentric Datum of Australia 1994

*Matthew Gonnaway*  
Date 20/03/2018  
Officer with delegated authority under Section 20  
of the Environmental Protection Act 1986



GOVERNMENT OF  
WESTERN AUSTRALIA



# Clearing Permit Decision Report

This report has been prepared to fulfil the requirements of an accredited environmental assessment process between the Commonwealth and State governments, pursuant to a bilateral agreement established under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

This report is set out in three parts:

- Part 1: Application and site details;
- Part 2: Assessment against matters of national environmental significance (pursuant to the EPBC Act); and
- Part 3: Assessment against the clearing principles (pursuant to the *Environmental Protection Act 1986* (EP Act)). Appeal rights pursuant to section 101A of the EP Act are relevant to this section of the report.

## Part 1: Application and site details

### 1. Application details

#### 1.1. Permit application details

Permit application No.: 7617/1  
EPBC No.: 2016/7741  
Permit type: Purpose Permit

#### 1.2. Applicant details

Applicant's name: Minister for Education

#### 1.3. Property details

Property: Lot 1392 on Deposited Plan 408828, Hammond Park  
Lot 650 on Deposited Plan 41055, Hammond Park  
Lot 33 on Diagram 32142, Hammond Park  
Lot 32 on Diagram 32142, Hammond Park  
Lot 31 on Diagram 32142, Hammond Park  
Local Government Authority: Cockburn, City of  
Localities: Hammond Park

#### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
10.9		Mechanical Removal	Building or structure

#### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 20 March 2018  
Reason for Decision: The clearing permit application received on 26 May 2017 has been assessed against the clearing principles, planning instruments and other matters in accordance with section 510 of the *Environmental Protection Act 1986*. It has been concluded that the proposed clearing is at variance to clearing principles (a), (b) and (d), may be at variance to principle (g) and is not likely to be at variance to the remaining clearing principles.

Through assessment it has been determined that the application area contains 10.05 hectares of foraging habitat for black cockatoos, 24 potential black cockatoo breeding trees and 9.5 hectares of vegetation synonymous with the *Banksia* Woodlands of the Swan Coastal Plain threatened ecological community.

To mitigate the significant environment impacts identified above, and in accordance with the WA Environmental Offset Policy and Environmental Offsets Guidelines, prior to undertaking any clearing, the Permit Holder is to provide documentary evidence to the CEO that funding has been transferred to the Department to fund the purchase of 62 hectares of native vegetation on the Swan Coastal Plain.

To ensure that black cockatoos are not impacted during the clearing process a condition has been added to the permit requiring the Permit Holder to check habitat trees for the presence of black cockatoos prior to clearing and not to clear trees where black cockatoos have been identified until a fauna specialist has verified that the hollow/s are no longer being utilised by black cockatoos.

The Delegated Officer determined that the proposed clearing may increase the spread of weeds and dieback into adjacent vegetation. To minimise this impact, a condition has been placed on the permit requiring the implementation of weed and dieback management measures.

The Delegated Officer had regard to timing (1 June 2018 commencement), the progress of the land transfer and pending planning approvals in the decision to grant this clearing permit.

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

##### Vegetation Description

The application area has been mapped as Bassendean Complex – Central and South which is described as 'Vegetation ranges from woodland of *Eucalyptus marginata* (Jarrah) - *Allocasuarina fraseriana* (Sheoak) - Banksia species to low woodland of Melaleuca species, and sedgelands on the moister sites. This area includes the transition of *Eucalyptus marginata* (Jarrah) to *Eucalyptus tottiana* (Pricklybark) in the vicinity of Perth' (Hedde et al., 1980).

Two flora, fauna and vegetation assessments have been undertaken over the application area. The combined reports identified four vegetation types within the application area, being;

- Low Open Forest of *Banksia* spp. and *Allocasuarina fraseriana*;
- Low Woodland of *Banksia* spp. over Open Low Heath of *Scholtzia involucrate*;
- Low Open Woodland of *Melaleuca raphiophylla*; and
- Low Open Forest of *Eucalyptus marginata* and *Banksia* spp. (GHD, 2014 and Anders, 2016).

##### Clearing Description

The applicant proposes to clear 10.9 hectares of native vegetation within Lots 31, 32 and 33 on Diagram 32142, Lot 1392 on Deposited Plan 408828 and Lot 650 on Deposited Plan 410555, Hammond Park, for the purpose of constructing Hammond Park High School.

##### Vegetation Condition

Excellent; Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

To

Completely Degraded; No longer intact, completely/almost completely without native species (Keighery, 1994).

The majority (six hectares) of the application area is in good to very good (Keighery, 1994) condition. The best condition vegetation was found in the southern section of the application area and was rated as very good to excellent (Keighery, 1994) (Anders, 2016).

## Part 2: Assessment against matters of national environmental significance

### 3. Assessment of application against Matters of National Environmental Significance

#### Background

##### Comments

The Department of Treasury on behalf of the Department of Education is proposing to build a new secondary school and associated facilities (including; teaching and administrative buildings, school oval, essential services and infrastructure, sporting grounds and facilities, car parking, and open areas) over a 10.9 hectare site in Hammond Park, Western Australia. The application area is located approximately 26 kilometres south of Perth CBD within the City of Cockburn.

The application area is situated within a developing residential area and is bounded to the east and south by planned residential development, in the north by predominantly existing residential development and to the west by the Hammond Park Catholic Primary School. Lot 1392 is currently owned by the Department of Education while the remaining properties (Lots 31, 32, 33 and 650) are currently in private ownership, with the Department of Education having contracts of sale in place over those portions of the lots included in the proposed school site (Department of Education, 2016).

The vegetation within the application area ranges in condition from completely degraded to excellent (Keighery, 1994). A survey of the application area identified four vegetation types, which are described in Table 1.

Table 1. Vegetation types of the survey area (GHD, 2014 and Anders, 2016).

Vegetation Type Code	Vegetation Type	Vegetation Description
VT1	Low Open Forest of <i>Banksia</i> spp. and <i>Allocasuarina fraseriana</i>	Low Open Forest of <i>Banksia attenuata</i> , <i>Banksia menziesii</i> and <i>Allocasuarina fraseriana</i> over Tall Shrubland of <i>Kunzea glabrescens</i> over Shrubland of <i>Xanthorrhoea preissii</i> and <i>Eremaea pauciflora</i> var. <i>pauciflora</i> over Open Low Heath of <i>Hibbertia racemosa</i> , <i>Calytrix fraseri</i> and <i>Leucopogon polymorphus</i> over Sedgeland of <i>Lepidosperma pubisquamum</i> and <i>Schoenus curvifolius</i> over a Herbland of <i>Phlebocarya ciliata</i> , <i>Desmocladus flexuosus</i> , <i>Dasyogon bromeliifolius</i> and assorted herbs and weedy grass spp.
VT2	Low Woodland of <i>Banksia</i> spp. over Open Low Heath of <i>Scholtzia involucrata</i>	Low Woodland of <i>Banksia menziesii</i> and <i>Banksia illicifolia</i> over Tall Open Shrubland of <i>Kunzea glabrescens</i> over Open Low Heath of <i>Scholtzia involucrata</i> , <i>Conostephium pendulum</i> and <i>Calytrix fraseri</i> over Open Herbland of <i>Dasyogon bromeliifolius</i> , <i>Phlebocarya ciliata</i> and <i>Desmocladus flexuosus</i> .
VT3	Low Open Woodland of <i>Melaleuca raphiophylla</i>	Low Open Woodland of <i>Melaleuca raphiophylla</i> over Tall Open Scrub of <i>Kunzea glabrescens</i> and <i>Astartea scoparia</i> over Open Low Heath of <i>Hypocalymma angustifolium</i> over Grassland of <i>Ehrharta calycina</i> and herbaceous weed species.
VT4	Low Open Forest of <i>Eucalyptus marginata</i> and <i>Banksia</i> spp.	Low Open Forest of <i>Eucalyptus marginata</i> over Low Woodland of <i>Banksia attenuata</i> , <i>B. menziesii</i> and <i>B. illicifolia</i> over Tall Shrubland of <i>Kunzea glabrescens</i> over Mid Shrubland of <i>Stirlingia latifolia</i> and <i>Xanthorrhoea preissii</i> .

## Description of controlling provision

### Comments

On 30 September 2016, the proposal was determined to be a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for the following controlling provisions: Listed Threatened Species and Communities. The proposed action is considered likely to have a significant impact on Carnaby's cockatoo (*Calyptorhynchus latirostris*) listed as endangered under the EPBC Act, on forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*) listed as vulnerable under the EPBC Act and on the Banksia woodlands of the Swan Coastal Plain threatened ecological community (TEC) listed as endangered under the EPBC Act.

### Carnaby's cockatoo

Currently, the overall population trend for the Carnaby's cockatoo is one of decline due to the loss and fragmentation of habitat as a result of clearing of native vegetation (Saunders 1990; Johnstone and Storr 1998; Saunders and Ingram, 1998; Garnett et al. 2011). Carnaby's cockatoo is endemic to the south-west of Western Australia. Breeding takes place between late July and December and occurs mostly in the inland wheatbelt region of its distribution, in areas receiving between 300 and 750 millimetres of annual average rainfall (Saunders, 1974). During the non-breeding season (January to July) the majority of the birds move to the higher rainfall coastal regions of their range including the midwest coast, Swan Coastal Plain and south coast (Saunders, 1980, 1990; Johnstone et al. 2011). There has been an apparent expansion in the breeding range to include areas further west and south since the middle of last century with a more rapid increase into the jarrah (*Eucalyptus marginata*) and marri (*Corymbia calophylla*) forests of the south west (Johnstone and Storr 1998; Johnstone et al. 2011). This expansion in breeding range is due to threatening processes such as clearing of breeding habitat and competition for suitable breeding hollows.

The Carnaby's cockatoo was once abundant in Western Australia. Since the late 1940s, the species has suffered a 30 per cent contraction in range, a 50 per cent decline in population, and between 1968 and 1990 disappeared from more than a third of its breeding range (Saunders, 1990; Johnstone and Storr, 1998; Saunders and Ingram 1998; Garnett et al. 2011). Basic ecological theory, expert opinion and recent evidence, suggests that the remaining native and pine plantation foraging habitat on the Swan Coastal Plain is just sufficient to support the current population of Carnaby's cockatoo. Therefore, any reduction in the amount of food source will result in a reduction in the carrying capacity of the region and therefore, a decline in the population of Carnaby's cockatoo.

Carnaby's cockatoo preferred habitat is remnant native eucalypt woodlands, especially those of salmon gum (*Eucalyptus salmonophloia*) and wandoo (*Eucalyptus wandoo*), and in shrubland or kwongan heathland dominated by plants of the Proteaceae family. It also occurs in forests containing marri, jarrah, karri (*Eucalyptus diversicolor*) and tuart (*Eucalyptus gomphocephala*) (Parks and Wildlife, 2013).

Carnaby's cockatoo nests in large hollows in tall, living or dead eucalypts. It nests most commonly in smooth-barked wandoo and salmon gum, but have also been recorded breeding in red morrell (*Eucalyptus longicornis*), York gum (*Eucalyptus loxophleba*), tuart, flooded gum (*Eucalyptus rudis*), swamp yate (*Eucalyptus occidentalis*), gimlet (*Eucalyptus salubris*) and marri, and are said to nest in any species of eucalypt with a suitable hollow (Parks and Wildlife, 2013).

The Carnaby's cockatoo recovery plan (Parks and Wildlife, 2013) summarises habitat critical to the survival of Carnaby's cockatoos as:

- The eucalypt woodlands that provide nest hollows used for breeding, together with nearby vegetation that provides feeding, roosting and watering habitat that supports successful breeding;
- Woodland sites known to have supported breeding in the past and which could be used in the future, provided adequate nearby food and/or water resources are available or are re-established; and
- In the non-breeding season the vegetation that provides food resources as well as the sites for nearby watering and night roosting that enable the cockatoos to effectively utilise the available food resources.

The recovery plan also states that success in breeding is dependent on the quality and proximity of feeding habitat within 12 kilometres of nesting sites (Parks and Wildlife, 2013). Along with the trees that provide nest hollows, the protection, management and increase of this feeding habitat that supports the breeding of Carnaby's cockatoo is a critical requirement for the conservation of the species (Parks and Wildlife, 2013).

#### **Forest red-tailed black cockatoo**

The forest red-tailed black cockatoo is endemic to the south-west humid and sub-humid zones of south west Western Australia and inhabits jarrah, karri and marri forests receiving more than 600 millimetres of annual average rainfall (DEC, 2008).

The forest red-tailed black cockatoo occurs in one population of approximately 15,000 individuals and are known to nest in the large hollows of marri, jarrah and karri (Johnstone and Kirkby, 1999).

The approved conservation advice identifies the main threats to the forest red-tailed black cockatoo are illegal shooting, habitat loss through land clearing, nest hollow shortage and competition from other species (DEC, 2008).

#### **Banksia woodlands of the Swan Coastal Plain**

On 16 September 2016, the Commonwealth Department of the Environment and Energy (DotEE) listed Banksia Woodlands of the Swan Coastal Plain ecological community as endangered under the EPBC Act.

The Banksia Woodlands ecological community is restricted to areas in and immediately adjacent to the Swan Coastal Plain Interim Biogeographic Regionalisation of Australia (IBRA) bioregion, including the Dandaragan plateau. This coastal plain stretches from around Jurien Bay in the north, to Dunsborough in the south (DotEE, 2016).

This ecological community has undergone a decline of about 60 per cent in its original extent and almost all of the ecological community that remains, occurs as highly fragmented patches less than 10 hectares in size (DotEE, 2016).

The approved conservation advice states that this ecological community has a dominant *Banksia* component, which includes at least one of four key species—*Banksia attenuata* (candlestick banksia), *B. menziesii* (firewood banksia), *B. prionotes* (acorn banksia) and/or *B. ilicifolia* (holly-leaved banksia) (DotEE, 2016).

The ecological community provides habitat for many native plants and animals that rely on *Banksia* Woodlands for their homes and food. Remaining patches of the ecological community provide important wildlife corridors and refuges in a mostly fragmented landscape (DotEE, 2016).

#### **Methodology**

#### **References**

Anders (2016)  
DEC (2008)  
DEC (2009)  
DotEE (2016)  
Department of Education (2016)  
DotEE (2016)  
Garnett et al. ( 2011)  
GHD (2014)  
Hoffman and Brown (1992)  
Johnstone and Kirkby (1999)  
Johnstone and Storr (1998)  
Johnstone et al. ( 2011)  
Keighery (1994)  
Parks and Wildlife (2013)



Robinson and Coates (1995)  
Saunders (1974)  
Saunders (1980)  
Saunders (1990)  
Saunders and Ingram (1998)

## Summary of Impacts

**Comments** In 2013 GHD undertook a Level 1 flora and fauna assessment of the proposed school site. Since that time the project area footprint changed and part of the original extent was not surveyed (Anders, 2016a). To address this a subsequent flora, vegetation and black cockatoo assessment of the area not surveyed in 2013 was undertaken by Anders in March 2016.

The initial EPBC referral (including Lots 31, 32, 33 and 47), submitted in July 2016, reports that the application area contains:

- suitable breeding habitat for black cockatoos, including 24 potential breeding trees of suitable diameter at breast height (DBH). Of the 24 potential breeding trees identified, seven contained hollows of a suitable size for cockatoo occupancy. Potential breeding habitat was identified within the Banksia woodland habitat which is within proximity of the known breeding range of the Carnaby's cockatoo; and
- approximately 9.5 hectares of suitable foraging habitat for black cockatoos.

In August 2016 WSP/Parsons Brinckerhoff, on behalf of the applicant requested a variation to the referral to include Lot 1392. Lot 1392 is 0.8 hectares and contains areas of clearing associated with residences, sheds, soil extraction and dumping. Accordingly, DotEE has advised that Lot 1392 comprises 0.25 hectares of 'completely degraded' vegetation that does not provide habitat for black cockatoos (DotEE, 2017). Therefore the application area contains 10.05 hectares of foraging habitat for black cockatoos.

Both the GHD and Anders reports were undertaken prior to the listing of the Banksia woodlands of the Swan Coastal Plain being listed as a TEC in September 2016. Therefore the EPBC referral did not recognise the loss of this TEC as a significant residual impact. Through the referral process DotEE determined that the application area contains 9.5 hectares of the Banksia woodlands of the Swan Coastal Plain TEC.

After avoidance, minimisation and mitigation, it is considered that the proposed clearing will result in the following significant residual impacts:

- 10.05 hectares of foraging habitat for black cockatoos;
- 24 potential breeding trees identified, seven contained hollows of a suitable size for cockatoo occupancy; and
- 9.5 hectares of the Banksia woodlands of the Swan Coastal Plain TEC.

**Methodology** References:  
Anders (2016a)  
DotEE (2017)  
WSP/Parsons Brinckerhoff (2016)

## Public consultation

**Comments** The application was advertised online on 20 June 2017 for a 21 day submission period. A publication summary was advertised in *The West Australian* on Monday 26 June 2017.

Two public submissions were received during the 21 day submission period.

The first submission noted that the flora report did not identify the TEC. It further advised that this TEC should not be cleared and if any of it was to be cleared it should be offset at a 10:1 ratio. This submission provided two alternate locations for the school which would not require any clearing (Submission 1, 2017).

The second submission noted that the proposed clearing was environmentally unacceptable and that the impacts could not be offset. It was also noted that the application area contains; foraging and breeding habitat for black cockatoos, a TEC, vegetation types that are under represented and linkages for fauna. This submission provided an opinion on what the variance to the 10 clearing principles should be (Submission 2, 2017).

In a letter dated 17 July 2017 these submissions were forwarded to the applicant requesting a response within 30 days. A detailed 15 page response was provided by the applicant addressing the concerns raised in the two submissions. This response can be viewed online at [ftp.dec.wa.gov.au/Permit/](http://ftp.dec.wa.gov.au/Permit/) under 7617.

## Avoidance, mitigation and offset

The following avoidance and mitigation measures were provided to DotEE in the EPBC referral.

### Planning (pre-construction phase) measures

- The site contains constraints which have influenced the layout of the master plan. All vehicular access to the school site and the required on-site parking bays is restricted to the southern and western boundaries.
- The development of the school site and its ongoing maintenance forms part of the Public-Private – Partnership between the State of Western Australia and a private consortia (EduWest). The Master Plan is an integral part of this contract and identifies the areas of the site to be developed.
- An offset proposal for the site has been prepared to further mitigate any residual impact on the black cockatoo species.
- The Department of Treasury has been liaising with the (former) Department of Parks and Wildlife with regard to the availability of suitable measures to offset the impact of this proposal. Further liaison with the Department of Biodiversity, Conservation and Attractions is scheduled.

### Construction phase measures

- Prior to commencement of any onsite activity, an Environmental Management Plan (EMP) would be prepared that captures all mitigation and avoidance measures which will be applicable to construction activities. Such an EMP will address all avoidance measures that were confirmed during the design process, as well as mitigation measures that are to be implemented during construction.
- Induct all staff and construction contractors working in the referral area regarding potential black cockatoo constraints and the required actions regarding these values.
- The breeding season for the black cockatoo is July to December. As far as practical, clearing and disturbance of the areas of black cockatoo habitat will be timed to avoid the breeding season.
- All trees with potential breeding hollows will be checked prior to removal.
- Nest relocation will be undertaken in consultation with the (former) Department of Parks and Wildlife, if nests are found to be present.
- Implement pest animal, weed and fire management practices.
- Landscaped areas are to consist of shade tree structures and garden beds that include a mix of foraging habitat species e.g. *Eucalyptus* and *Banksia*.

### Operation phase measures

- Implement pest animal, weed and fire management practices.
- Other environmental measures as outlined under local planning approval conditions.

In addition to the above avoidance and mitigation measures, information has been provided to outline why the high school is the size it is and why it is to be located at this site. WSP on behalf of the applicant has advised that the Hammond Park School was identified as a school site through the strategic and local planning process undertaken by the City of Cockburn and the Western Australian Planning Commission. These processes designated land for the school site and the surrounding residential land uses (WSP, 2017). The high school has been designed on the basis of the Department of Education Design Brief for High Schools which necessitates the school and ancillary facilities occupy a site of approximately 10 hectares. The size of the school cannot be reduced as it would compromise the feasibility of the school at this location (WSP, 2017).

The applicant has not provided additional information on whether potential engineering or design controls could be implemented to avoid the clearance of suitable nesting hollows.

## Offset

Anders Environmental Consulting (Anders), on behalf of the applicant has prepared a draft offset proposal for this project. The draft offset proposal lists the residual impacts of the proposed clearing as being the loss of 9.5 hectares of foraging habitat for black cockatoos and 24 potential breeding trees (Anders, 2016b). It is advised that these residual impacts represent a significant localised impact on the protected matter, including:

- Reducing the amount of viable feeding area;
- Increasing the distance between foraging and breeding areas; and
- A reduction of hollows in the local area leading to a reduction in the availability of future breeding habitat and lack of breeding resources.

(Anders, 2016b)

The draft offset proposal notes that an offset for this project will need to contain 32 hectares of foraging habitat and 30 potential breeding trees (Anders, 2016b). These figures were obtained through the use of the Commonwealth Offsets Assessment Guide.

The proposed offset will consist of land acquisition and the Department of Treasury has been in contact with the former Department of Parks and Wildlife in regards to locating a suitable site.

In assessing whether the proposed offset is adequately proportionate to the significance of the habitat values for Carnaby's cockatoo being impacted, the Department of Water and Environmental Regulation (DWER) undertook a calculation using the Commonwealth Offsets Assessment Guide. The calculation indicated that 62 hectares (containing at least 24 potential breeding trees) is required to counterbalance the loss of 10.05 hectares of black cockatoo habitat and *Banksia* woodland TEC.

Given the above, the acquisition of 62 hectares into conservation estate is considered adequate to counterbalance the significant residual impacts to black cockatoo habitat and the Banksia woodland TEC consistent with the *Environment Protection and Biodiversity Conservation Act 1999* Environmental Offsets Policy October 2012 and *WA Environmental Offsets Policy September 2011*.

In a letter of 16 January 2018, the Department of Education confirmed its intention to provide the required offset.

### **Other relevant considerations**

The following information was provided by the applicant in an email dated 7 September 2017 (Department of Finance, 2017).

#### **Economic and Social Matters**

##### **Capital investment and ongoing value;**

The Hammond Park High School is being delivered as a Public-Private-Partnership between the Government of Western Australia and the Eduwest consortium. The capital cost of the construction of the Hammond Park High School and associated infrastructure (e.g. power and water etc.) is \$70 million. The ongoing maintenance of the school by the Eduwest consortium for a period of 27 years is estimated at \$43 million.

The ongoing value of the school is in the education of 1500-2000 students from the local community. In addition, specific school facilities such as the auditorium will be available for community use.

##### **Basis for an estimation of cost and /or benefits;**

To inform the State Government's preparation of the Request for Proposal to develop the eight school sites, a Capital Cost Plan was prepared by a registered Quantity Surveyor. This Cost Plan calculated the estimated construction cost, with the Eduwest consortia confirming this estimate with their bid price which included \$70 million for the construction of the school.

The future capacity of the Hammond Park High School has been determined through the demographic projections and enrolment projections undertaken by the Department of Education, as identified in the Strategic Asset Plan 2012-2022.

##### **Potential employment opportunities**

Potential employment opportunities are expected to be generated at each phase of the project and the Hammond Park High School is to be developed in two stages over a period of three years:

Stage 1 - 18 months

Stage 2 - 12 months

During this construction phase, it is anticipated that employment will account for approximately 30,000 man-hours per month. Approximately 200 education and support staff will be employed full-time and part-time.

##### **Details on any public and stakeholder consultation activities, including the outcomes.**

The Hammond Park High School is located in a greenfield site in the developing suburb of Hammond Park. As part of the strategic planning for this area a District Structure Plan was prepared as well as five individual local structure plans for each lot within the school site. These plans clearly identified the proposed school site and have all been subject to public advertising by the City of Cockburn and referral to the relevant statutory authorities. Although specific submissions lodged with the City of Cockburn are not made known to Strategic Project, it needs to be assumed that any submissions received were considered by the City of Cockburn and the Western Australian Planning Commission in their deliberations and ultimate approval of the District Structure Plan and the five Local Structure Plans.

Strategic Projects is constructing most of the roads and services around the school and has been liaising with adjacent landowners to coordinate the design and construction of this infrastructure. In addition, liaison has occurred with the City of Cockburn, the Western Australian Planning Commission and surrounding landowners, including, the adjacent Catholic School.

As the Hammond Park High School is to be constructed in a greenfield site in an area where subdivision is yet to proceed or is in its early stages, there are few residential neighbours in the vicinity of the school site so there has been limited opportunity for the Department of Education to engage with residents. The land developers in the area are aware of the future school site and have been promoting this in their sales efforts.

##### **Applicant's Environmental History**

The Department of Education has previously been granted 17 clearing permits. No instances of non-compliance with permit conditions have been noted.

#### 4. Assessment of application against clearing principles

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

###### Comments

###### Proposed clearing is at variance to this Principle

On 11 October 2013 GHD undertook a Level 1 flora and vegetation assessment over the majority of the application area (excluding the south western corner, western boundary and an entry road to the site from Barfield Road). In March 2016 the areas not covered by the GHD report were surveyed by Anders Environmental Consulting (Anders).

A total of 139 species were recorded during the 2013 and 2016 surveys. This was represented by 38 families and 95 genera. The most dominant families were Fabaceae (19 taxa), Myrtaceae (13 taxa), Poaceae (12 taxa) and Proteaceae (11 taxa) (Anders, 2016a).

Seven priority flora and five rare flora species have been recorded within the local area (10 kilometre radius). Neither of the abovementioned flora surveys identified rare or priority flora species within the application area. Although the 2013 survey was undertaken at the most appropriate time of year (Spring) transect data was not provided with the report and therefore the presence of two rare flora species (*Caladenia huegelii* and *Drakaea micrantha*) could not be ruled out. At the request of DWER the applicant commissioned GHD to undertake a targeted flora search for *Caladenia huegelii* and *Drakaea micrantha*. The targeted survey was undertaken over three days in October and did not find either of these rare flora species (GHD, 2017).

Five priority ecological communities (PEC) have been recorded within the local area. It is likely that Vegetation Types VT1 (Low Open Forest of *Banksia* spp. and *Allocasuarina fraseriana*) and VT2 (Low Woodland of *Banksia* spp. over Open Low Heath of *Scholtzia involucrate*) represent the PEC, *Banksia* dominated woodlands of the Swan Coastal Plain (Anders, 2016a).

On 16 September 2016, the Commonwealth DotEE listed *Banksia* Woodlands of the Swan Coastal Plain ecological community as endangered under the EPBC Act. The mapping of this TEC includes the application area. The application area contains three of the four key diagnostic species of this community (*Banksia attenuata*, *B. menziesii* and *B. ilicifolia*) and given its size and condition it is representative of this community.

Five terrestrial fauna species listed as specially protected under the *Wildlife Conservation Act 1950* (WC Act) have been recorded within the local area, being; Carnaby's cockatoo (*Calyptorhynchus latirostris*), forest red-tailed black cockatoo (*Calyptorhynchus baudinii*), chuditch (*Dasyurus geoffroyi*), numbat (*Myrmecobius fasciatus*) and southern brush-tailed phascogale (*Phascogale tapoatafa* subsp. *tapoatafa*) (Parks and Wildlife, 2007-). As discussed under principle (b) the application area contains 10.05 hectares of suitable foraging habitat for black cockatoos and 24 potential breeding trees. Therefore, the application area contains significant habitat for black cockatoos.

The application area contains vegetation in excellent (Keighery, 1994) condition, a PEC, a TEC and significant habitat for black cockatoos. Therefore the application area contains a high level of biodiversity and is at variance to this Principle.

Taking into account the applicant's avoidance and minimisation measures (outlined in Part 2 of this assessment), it is considered that a suitable offset will counterbalance impacts to biodiversity. The applicant has advised that the proposed offset will consist of land acquisition.

###### Methodology

###### References:

Anders (2016a)  
GHD (2014)  
GHD (2017)  
Keighery (1994)  
Parks and Wildlife (2007- )

###### GIS Datasets:

Sac Bio Datasets – accessed July 2017

##### (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.

###### Comments

###### Proposed clearing is at variance to this Principle

As discussed in Principle (a) five terrestrial fauna species listed as specially protected under the WC Act have been recorded within the local area, being; Carnaby's cockatoo, forest red-tailed black cockatoo, chuditch, numbat (*Myrmecobius fasciatus*) and southern brush-tailed phascogale (*Phascogale tapoatafa* subsp. *tapoatafa*) (Parks and Wildlife, 2007-).

Two broad fauna habitat types were identified within the application area based on the predominant landforms, soil and vegetation structure (GHD, 2014), being:

1. *Banksia* woodland
2. *Melaleuca* dampland

Carnaby's cockatoo is listed as endangered and forest red-tailed cockatoo is listed as vulnerable under the EPBC Act. 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).

Twenty four potential breeding trees were identified within the application area, seven of which contained hollows of a size suitable for use by black cockatoos (GHD, 2014).

Black cockatoos have a preference for foraging habitat that includes jarrah and marri woodlands and forest heathland and woodland dominated by proteaceous plant species such as *Banksia* sp., *Hakea* sp. and *Grevillea* sp. (Commonwealth of Australia, 2012).

Given the presence of Jarrah, *Banksia* sp. as well as other proteaceous species the application area contains 10.05 hectares of suitable foraging habitat for black cockatoos. During a site inspection conducted on 21 July 2017, DWER officers identified a large amount of foraging evidence, in the form of chewed *Banksia menziesii* cones (DWER, 2017).

Carnaby's cockatoo usually forage within six kilometres of a roost site (Commonwealth of Australia, 2012). Seven confirmed Carnaby's cockatoo roost sites have been recorded within the local area, four of which are within six kilometres of the application area. Given the above the application area contains significant habitat for black cockatoos.

The chuditch is listed as vulnerable under the EPBC Act. Chuditch are now only present in approximately five per cent of their pre-European range. Most chuditch are now found in varying densities throughout the jarrah forest and south coast of Western Australia. Chuditch use a range of habitats including forest, mallee shrublands, woodland and desert. The densest populations have been found in riparian jarrah forest (DEC, 2012a). Given the present range of this species it is unlikely to be present within the application area.

The numbat is also listed as vulnerable under the EPBC Act. Numbats build nests in hollow logs or trees, or dig burrows. Only two isolated populations of this species remains at Dryandra and Perup in the southwest of Western Australia, approximately 160 kilometres apart (DotE, 2014). Given the distance to the two known remaining populations the proposed clearing is not likely to impact them.

The southern brush-tailed phascogale is a small arboreal dasyurid. In south west Western Australia they have been observed in dry sclerophyll forests and open woodlands that contain hollow bearing trees. Habitat clearing, fragmentation, and alteration by logging and mining are the greatest threats to this species (DEC, 2012b). On the Swan Coastal Plain, populations are centred on wetlands (DotEE, 2017b). Given the presence of wetland vegetation (*Melaleuca dampland*) within the application area, the application area may contain suitable habitat for this species.

In addition to the fauna species discussed above, the areas of *Melaleuca dampland* may provide refuge for ground dwelling mammals such as quenda (*Isodon obesulus fusciventer*) (listed as Priority 4 by the Department of Biodiversity, Conservation and Attractions) as a fauna survey of an adjacent property in 2011 identified quenda diggings (Terrestrial Ecosystems, 2011).

The application area holds some value as an ecological linkage, especially for avian fauna, however the proposed clearing is not likely to impede the movement of fauna between areas of remnant vegetation due to its location in an already highly fragmented landscape. Within the local area Bush Forever sites form ecological linkages across the landscape, especially in a north-south direction.

Given the above and noting that the application area provides significant habitat for black cockatoos, the proposed clearing is at variance to this Principle.

Taking into account the applicant's avoidance and minimisation measures (outlined in Part 2 of this assessment), it is considered that a suitable offset will counterbalance impacts to black cockatoos. The applicant has advised that the proposed offset will consist of land acquisition.

#### Methodology

##### References:

Commonwealth of Australia (2012)  
DEC (2012a)  
DEC (2012b)  
DotE (2014)  
DotEE (2017)  
DWER (2017)  
Parks and Wildlife (2007- )  
Terrestrial Ecosystems (2011)

##### GIS Datasets:

Sac Bio Datasets – accessed July 2017

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

**Comments**

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

Five rare flora species have been recorded within the local area, being; *Caladenia huegelii*, *Diuris micrantha*, *Diuris purdiei*, *Drakaea elastic* and *Drakaea micrantha*.

*Caladenia huegelii* occurs in areas of mixed woodland of jarrah (*Eucalyptus marginata*), candlestick banksia (*Banksia attenuata*), holly banksia (*B. ilicifolia*) and firewood banksia (*B. menziesii*) with scattered sheoak (*Allocasuarina fraseriana*) and marri (*Corymbia calophylla*) over dense shrubs of blueboy (*Stirlingia latifolia*), swan river myrtle (*Hypocalymma robustum*), yellow buttercups (*Hibbertia hypericoides*), buttercups (*H. subvaginata*), balga (*Xanthorrhoea preissii*), coastal jugflower (*Adenanthos cuneatus*) and *Conostylis* species (DEC, 2009). Throughout its range the species tends to favour areas of dense undergrowth. Soil is usually deep grey-white sand usually associated with the Bassendean sand-dune system (DEC, 2009). The Level 1 Flora and Vegetation Assessment of the application area notes that "the survey timing was considered optimal to record *Caladenia huegelii* and the Study area was well traversed to determine the presence of this species" (GHD, 2014). GHD established five quadrats in the three vegetation types identified and their locations were provided on mapping, however transect data has not been provided. In the absence of transect data an informed decision could not be made as to whether the Level 1 survey was adequate to determine the presence of *Caladenia huegelii*.

*Drakaea micrantha* is usually found in cleared fire breaks or open sandy patches that have been disturbed, and where competition from other plants has been removed (Brown et al., 1998; Hearn et al., 2006). The Dwarf Hammer-orchid occurs in infertile grey sands, in Banksia, jarrah (*Eucalyptus marginata*) and common sheoak (*Allocasuarina fraseriana*) woodland or forest (TSSC, 2008). The application area contains suitable habitat for this species, however it is noted that the GHD report did not recognise this species in its likelihood of occurrence assessment. GHD's survey was conducted in mid-October which is the most appropriate time to survey for this species, however as noted above transect data has not been provided to demonstrate that the site was adequately searched.

In the absence of transect data the applicant was requested to undertake further survey work to target the abovementioned rare flora species. In response to this request GHD were commissioned to undertake a targeted survey. The survey was undertaken over a three day period in October 2017. The survey area was traversed by foot north to south and then again east to west, with the objective of keeping the width of the transects between five and ten metres apart (GHD, 2017). The targeted survey did not find any evidence of *Caladenia huegelii* or *Drakaea micrantha*.

*Drakaea elastic* grows in deep sandy soil in banksia woodland, in low-lying areas alongside winter-wet swamps (Brown et al., 1998). No winter-wet swamps have been mapped within the application area, however the application area does contain vegetation associated with damp conditions including *Melaleuca raphiophylla*, *Kunzea glabrescens* and *Hypocalymma angustifolium* (GHD, 2014). Given the absence of defined wetlands, the application area is not likely to support this species.

The application area is not within the known distribution range of *Diuris micrantha* and *Diuris purdiei*.

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

**Methodology**

**References:**

Brown et al. (1998)  
DEC (2009)  
GHD (2014)  
GHD (2017)  
Hearn (2006)  
TSSC (2008)

**GIS Datasets:**

Sac Bio Datasets – accessed July 2017

**(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.**

**Comments**

**Proposed clearing is at variance to this Principle**

As discussed in Principle (a), the *Banksia* Woodlands of the Swan Coastal Plain TEC is listed as endangered under the EPBC Act.

The *Banksia* Woodlands ecological community is restricted to areas in and immediately adjacent to the Swan Coastal Plain IBRA bioregion, including the Dandaragan plateau. This coastal plain stretches from around Jurien Bay in the north, to Dunsborough in the south (DotEE, 2016).

This ecological community has undergone a decline of about 60 per cent in its original extent and almost all of the ecological community that remains, occurs as highly fragmented patches less than 10 hectares in size (DotEE, 2016).

This ecological community has a dominant *Banksia* component, which includes at least one of four key species—*Banksia attenuata* (candlestick banksia), *B. menziesii* (firewood banksia), *B. prionotes* (acorn banksia) and/or *B. ilicifolia* (holly-leaved banksia) (DotEE, 2016).

The ecological community provides habitat for many native plants and animals that rely on *Banksia* Woodlands for their homes and food. Remaining patches of the ecological community provide important wildlife corridors and refuges in a mostly fragmented landscape (DotEE, 2016).

The DotEE mapping of this ecological community includes the application area.

Four vegetation types were recorded within the application area. Two of the vegetation types identified by GHD (2014) show strong similarities to floristic community type SCP23a and the fourth vegetation type identified by Anders (2016) shows similarities to floristic community type SCP21a. The approved conservation advice for the *Banksia* Woodlands of the Swan Coastal Plain TEC lists community types SCP23a and SCP21a as having relationships to this TEC.

Given the above the proposed clearing is at variance to this Principle.

Taking into account the applicant's avoidance and minimisation measures (outlined in Part 2 of this assessment), it is considered that a suitable offset will counterbalance impacts to the *Banksia* Woodlands of the Swan Coastal Plain TEC. The applicant has advised that the proposed offset will consist of land acquisition.

**Methodology**   References:  
DotEE (2016)

GIS Datasets:  
Sac Bio Datasets – accessed July 2017

**(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.**

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

The application area is located within the Swan Coastal Plain IBRA bioregion. This bioregion has approximately 38.5 per cent of its pre-European vegetation extent remaining (Government of Western Australia, 2017).

The application area is also mapped as Hedde Bassendean Central and South complex which retains approximately 26 per cent pre-European extent (Parks and Wildlife, 2015a).

The area under application is located within the City of Cockburn, within which there is approximately 29 per cent pre-European extent remaining (Government of Western Australia, 2017).

The local area retains approximately 35 per cent native vegetation (approximately 8,000 hectares).

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.

The application area contains vegetation in excellent (Keighery, 1994) condition, a PEC, a TEC and significant habitat for black cockatoos. Therefore the application area is a significant remnant, however as the application is located within a constrained area it is not considered to be a significant remnant in an area that has been extensively cleared.

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

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DBCA lands (%)
<b>IBRA Bioregion</b>				
Swan Coastal Plain	1,501,222	578,432	38.5	37.8
<b>Shire</b>				
City of Cockburn	17,088	4,882	29	19
<b>Heddlle Vegetation Complex</b>				
Bassendean complex – Central and South	87,353	22,461	26	5

**Methodology** References:  
Commonwealth of Australia (2001)  
EPA (2003)  
EPA (2015)  
Government of Western Australia (2000)  
Government of Western Australia (2017)  
Keighery (1994)  
Parks and Wildlife (2015)

GIS Databases  
Pre-European vegetation  
NLWRA, Current Extent of Native Vegetation

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

**Comments** **Proposed clearing is not likely to be at variance to this Principle**  
No watercourses or wetlands have been mapped within the application area. The closest mapped wetland is a conservation category dampland which is located approximately 500 metres north west of the application area.

The flora, fauna and vegetation assessment conducted by GHD noted that 'no wetlands, lakes or drainage channels were recorded within the Study Area during the field survey. However the Study Area contained vegetation associated with damp conditions including *Melaleuca raphiophylla*, *Kunzea glabrescens* and *Hypocalymma angustifolium*' (GHD, 2014).

While vegetation associated with damplands was observed within the application area, as no permanent wetlands or watercourses have been mapped within the application area, the proposed clearing will not significantly impact on an environment associated with a watercourse or wetland. Given the above, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** References:  
GHD (2014)

GIS Databases  
Hydrography, linear  
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain

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

**Comments** **Proposed clearing may be at variance to this Principle**  
The soils within the application area have been mapped as:  
Bassendean B1 Phase (approximately 80% of application area) - Extremely low to very low relief dunes, undulating sandplain and discrete sand rises with deep bleached grey sands sometimes with a pale yellow B horizon or a weak iron-organic hardpan at depths generally greater than two metres; Banksia dominant.

Bassendean B2 Phase (approximately 20% of application area) - Flat to very gently undulating sandplains with well to moderately well drained deep bleached grey sands with a pale yellow B horizon or a weak iron-organic hardpan 1.2 metres.



Land Deg Risk Category	Bassendean B1 Phase	Bassendean B2 Phase
Water Erosion	3-10% of map unit has a high to extreme water erosion risk	<3% of map unit has a high to extreme water erosion risk
Wind Erosion	>70% of the map unit has a high to extreme wind erosion risk	>70% of the map unit has a high to extreme wind erosion risk
Waterlogging	3-10% of map unit has a moderate to very high waterlogging risk	3-10% of map unit has a moderate to very high waterlogging risk
Flooding	<3% of the map unit has a moderate to high flood risk	<3% of the map unit has a moderate to high flood risk
Salinity Risk	30-50% of map unit has a moderate to high salinity risk or is presently saline	30-50% of map unit has a moderate to high salinity risk or is presently saline

Based on the mapped land degradation risk outlined above, the application area has a relatively low likelihood of water erosion, waterlogging and flooding (Schoknecht et al., 2004).

Wind erosion is mapped at 70 per cent of the map unit having a high to extreme risk of wind erosion (Schoknecht et al., 2004).

Given the sandy nature of the soils and mapped land degradation risk, the proposed clearing may lead to appreciable land degradation through wind erosion.

The proposed clearing may be at variance to this Principle. The requirement to commence development within three months of clearing will assist in ensuring that appreciable land degradation in the form of wind erosion does not occur.

**Methodology** References:  
Schoknecht et al. (2004)

GIS Databases  
Flood Risk  
Salinity Risk  
Soils – Sub-systems  
Water Erosion  
Waterlogging  
Wind Erosion

**(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.**

**Comments** **Proposed clearing is not likely to be at variance to this Principle**  
The closest mapped conservation area is Harry Waring Marsupial Reserve which is located approximately 800 metres west of the application area. This area is also mapped as Bush Forever Sites 391 and 392.

Jandakot Regional Park (Bush Forever Site 492) is located approximately 1.5 kilometres north west and Bush Forever Site 263 is mapped approximately 3.5 kilometres north west of the application area.

Further to the conservation areas listed above, an additional five Bush Forever Sites are located within five kilometres of the application area.

Given the distance to the nearest conservation reserve the proposed clearing is unlikely to impact on the conservation values of these reserves through the spread of weeds or dieback.

Bush Forever sites within the local area form ecological linkages across the landscape. Harry Waring Marsupial Reserve and adjacent Bush Forever sites constitute the most significant north south linkage. The application area holds some value as an east west linkage, especially for avian fauna, however Kwinana Freeway provides a physical barrier for terrestrial fauna. Small pockets of native vegetation exist within close proximity to the application area and therefore the proposed clearing will not impede the movement of fauna between conservation reserves.

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

**Methodology** GIS Databases  
DBCA Estate

**(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.**

**Comments**      **Proposed clearing is not likely to be at variance to this Principle**  
No watercourses or wetlands have been mapped within the application area. Vegetation associated with a dampland, including *Melaleuca raphiophylla*, *Kunzea glabrescens* and *Hypocalymma angustifolium*, has been recorded within the application area, however no surface water was observed.

Groundwater salinity within the application area is mapped at less than 500 total dissolved solids, milligrams per litre. This level of groundwater salinity is classified as 'fresh'. Given this level, the proposed clearing is not likely to increase groundwater salinity.

Given the absence of defined watercourses and wetlands and the low level of mapped groundwater salinity the proposed clearing is not likely to cause deterioration in the quality of surface or underground water. Therefore the proposed clearing is not likely to be at variance to this Principle.

**Methodology**    GIS Databases  
Hydrography, linear  
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain  
Groundwater Salinity

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

**Comments**      **Proposed clearing is not likely to be at variance to this Principle**  
Given the porous nature of the mapped soils and the low mapped (less than three per cent) flood risk (Schoknecht et al., 2004), the proposed clearing is not likely to increase the incidence or intensity of flooding.

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

**Methodology**    References:  
Schoknecht et al. (2004)

GIS Databases  
Flood Risk  
Soils – Sub-systems

## Planning instruments and other relevant matters.

**Comments** The applicant has advised that this project is necessary due to recent residential growth and development and the necessity for the state government to provide appropriate education and community services for the increasing regional population (Department of Education, 2016).

The Strategic Asset Plan 2012-2022 prepared by the Department of Education identified a shortfall in the availability of school accommodation within the Perth and Peel regions and the requirement for the construction of several new schools. The State Government has entered into a Public-Private-Partnership with a private consortia to build eight new schools to satisfy the projected demand, with the Hammond Park Secondary School included in this contract (Department of Education, 2016).

The Department of Education has contracts of sale in place over Lots 31, 32 and 33 for those portions of the Lots included in the proposed school site. The transfer of ownership to the Department of Education has been finalised for Lots 650 and 1392. The Western Australian Planning Commission has granted all necessary subdivision approvals for Lots 31, 32 and 33 to create the necessary lots for the high schools (Department of Finance, 2018). The Deposited Plans for Lots 31 and 32 have been prepared and lodged with Landgate and the certificate of title for Lot 33 was issued in December 2017, with the high school site created as Lot 647 (Department of Finance, 2018).

The development application for the Hammond Park High School was lodged with the City of Cockburn on 20 December 2017 (Department of Finance, 2018). The development application is to be determined by the Development Assessment Panel (DAP). The DAP has previously approved development application for five of the eight schools included in the Schools Public-Private-Partnership contract (Department of Finance, 2018). The Hammond Park High School site has been endorsed by both the City of Cockburn and the Western Australian Planning Commission as a high school site at both the strategic and local planning levels (Department of Finance, 2018). A decision on the development application is expected to be determined on 22 February 2018.

The Hammond Park High School is to be constructed under a Public-Private-Partnership contract between the State and the Eduwest private consortium. The contract requires that the State must make a high school site available to Eduwest on 1 June 2018 to allow for the commencement of construction.

The application area falls within the *Jandakot Groundwater Area (Success subarea)* as proclaimed under the *Rights in Water and Irrigation Act 1914*. The former Department of Water (DoW) advised that any abstraction in this proclaimed area for the purposes other than domestic and/or stock water is subject to licensing (DoW, 2017). The proponent has applied for a licence under Section 26D (construct a well) and Section 5C (groundwater abstraction) of the *Rights in Water and Irrigation Act 1914*. Both applications are pending. The applicant has been advised that the water allocation has been set aside for the Hammond Park High School, however a licence is anticipated to be issued closer to the time when the water is required (Department of Finance, 2018).

On 19 June 2017, a direct interest letter was sent to the City of Cockburn. In an email of 1 August 2017 the City of Cockburn advised that if a clearing permit is granted they would like the following conditions to be added to the permit:

- Mature trees greater than 500 millimetres DBH are retained where possible within the development footprint for habitat purposes;
- Native seed collection occurs prior to clearing- this seed can be passed to the City for use in revegetation projects; and
- Fauna Management Plan is developed and implemented prior to clearing.

The City of Cockburn also noted that there are two environmental conditions pursuant to the subdivision approval as listed below:

12. Prior to the commencement of subdivision works a fauna relocation management plan is to be prepared and approved to ensure the protection and management of the sites environmental assets with satisfactory arrangements being made for the implementation of the approved plan. (Local Government)

13. Measures being taken to ensure the identification and protection of any vegetation on the site worthy of retention that is not impacted by subdivisional works, prior to commencement of subdivisional works. (Local Government).

(City of Cockburn, 2017)

The draft Perth and Peel Green Growth Plan for 3.5 million (Green Growth Plan) has identified the application area as falling within an 'Urban Class of Action'. The Green Growth Plan is in draft and therefore has no statutory basis at this time and therefore was not a consideration in this application.

The application area is zoned "Urban" under the Metropolitan Region Scheme, "Development" under the City of Cockburn Town Planning Scheme No 3 (Development Area No 10) and designated as "High School" in the Southern Suburbs District Structure Plan – Stage 3, Hammond Park / Wattleup (SSDSP3). Local Structure Plans approved for each of the lots included in the application area identify the referral area as "High School" (Department of Education, 2016).

**Methodology** References:  
City of Cockburn  
Department of Education (2016)

## 5. References

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