



GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 5589/1
File Number: 2011/0006786-1
Duration of Permit: From 30 August 2014 to 30 August 2016

PERMIT HOLDER

City of Bunbury

LAND ON WHICH CLEARING IS TO BE DONE

Lot 507 on Deposited Plan 74949 (Davenport 6230)

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 1.43 hectares of native vegetation within the area hatched yellow on attached Plan 5589/1.

CONDITIONS

1. 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.

2. Offset Management plan

The Permit Holder must implement and adhere to the document 'Bunbury Airport Hangar Development Offset Management Plan', Revision B, dated June 2014.

3. Records to be kept

The Permit Holder must maintain a description of the *offset* activities undertaken in relation to the offset of areas pursuant to condition 2 of this permit.

4. Reporting

- (a) The Permit Holder must provide to the CEO on or before 31 December of each year, a written report:
 - (i) of records required under condition 3 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding year.
- (b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding, a written report confirming that no clearing under this permit has been carried out, must be provided to the CEO on or before 31 December of each year.
- (c) Prior to 30 May 2016, the Permit Holder must provide to the CEO a written report of records required under condition 3 of this Permit where these records have not already been provided under condition 4(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;

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;

offset/s means an offset required to be implemented under condition 2 of this Permit;

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



M Warnock
SENIOR MANAGER
CLEARING REGULATION

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

31 July 2014

Plan 5589/1



LEGEND

- Local Government Authorities
- Road Centrelines
- Cadastre
- Clearing Instruments
- Areas Approved to Clear

Bunbury 50cm Orthomosaic - Landgate 2008



Scale 1:5087
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

M. Warnock Date 31/7/14

M. Warnock
Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Government of Western Australia
Department of Environment Regulation

WA Crown Copyright 2002

* Project Data is denoted by asterisk. This data has not been quality assured. Please contact map author for details.



Clearing Permit Decision Report

Government of Western Australia
Department of Environment Regulation

1. Application details

1.1. Permit application details

Permit application No.: 5589/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: City of Bunbury

1.3. Property details

Property: LOT 507 ON PLAN 74949 (DAVENPORT 6230)
Local Government Area: City of Bunbury

1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of: |
|--------------------|-----------|--------------------|-----------------------|
| 1.43 | | Mechanical Removal | Building or Structure |

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 31 July 2014

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

| Vegetation Description | Clearing Description | Vegetation Condition | Comment |
|---|---|--|--|
| Mapped Beard Vegetation Association 1000 is described as medium forest consisting of jarrah and marri low woodland and banksias low forest with teatree (<i>Melaleuca</i> spp.) (Shepherd et al, 2001). | The clearing of 1.43 hectares of native vegetation within Lot 507 on Deposited Plan 74949, Davenport, is for the purpose of expanding airport infrastructure. | Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994) | The condition and description of the vegetation was established via a flora survey of the application area (Ekologica, 2012). The survey identified five vegetation types. |
| Mapped Heddle Vegetation Southern River Complex consists predominantly of open woodland of <i>Corymbia calophylla</i> , <i>Eucalyptus marginata</i> , and <i>Banksia</i> sp. with fringing woodland of <i>Eucalyptus rudis</i> and <i>Melaleuca raphiophylla</i> (Swamp Paperbark) along creek beds (Heddle et al, 1980). | | To Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994) | <p><i>Corymbia calophylla</i>, <i>Melaleuca preissiana</i>, and <i>Banksia attenuata</i> woodland over <i>Kunzea glabrescens</i>, <i>Acacia saligna</i>, <i>Pericalymma ellipticum</i>, <i>Dasyogon bromeliifolius</i> open heath over open herbs, sedges and grasses including <i>Lepidosperma longitudinal</i> also occur amongst invasive weed species. This community is found within the north west extent of the application area and is largely in a very good (Keighery, 1994) condition.</p> <p><i>Corymbia calophylla</i>, <i>Eucalyptus marginata</i> and <i>Melaleuca preissiana</i> open forest over open heath of <i>Dasyogon bromeliifolius</i>, <i>Opercularia hispidula</i>, <i>Macrozamia riedlei</i>, <i>Xanthorrhoea gracilis</i> and <i>X. brunonis</i> and mixed herbs, sedges, and grasses including <i>Sowerbaea laxiflora</i> and <i>Lepidosperma squamatum</i> amongst invasive weed species. This community is found within the north west portion of the application area and is largely in a very good (Keighery, 1994) condition.</p> <p>Woodland to tall woodland of <i>Eucalyptus Marginata</i>, <i>Corymbia calophylla</i> and <i>Agonis flexuosa</i> with occasional <i>Banksia attenuata</i> over <i>Dasyogon bromeliifolius</i> and <i>Xanthorrhoea gracilis</i> low open shrubland and herbs and grasses including <i>Caladenia flava</i> amongst. The groundcover is largely comprised of invasive weed species. This community is found in the north eastern portion of the application area and is largely in a completely degraded (Keighery, 1994) condition.</p> <p>Low woodland of <i>Melaleuca preissiana</i> over <i>Kunzea glabrescens</i> open scrub over <i>Adenanthos meisneri</i>, <i>Dasyogon bromeliifolius</i>, <i>Xanthorrhoea brunonis</i> open low shrubland.</p> |

This vegetation community is found in the south west portion of the application area and ranges from good to completely degraded (Keighery, 1994) condition.

Tall shrubland/open scrub of *Melaleuca preissiana*, *Kunzea micrantha*, *Acacia saligna* and *Pimelea imbricata* over open herbs, grasses and sedges including *Haemodorum spicatum*, *Patersonia occidentalis* and *Lepidosperma longitudinal*. This community is found in the south east extent of the application area and is largely in a very good (Keighery, 1994) condition.

3. Assessment of application against clearing principles

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

Comments

Proposal is at variance to this Principle

The applicant proposes to clear 1.43 hectares of native vegetation within Lot 507 on Deposited Plan 74949, Davenport, for the purpose of expanding airport infrastructure. The initial application involved the proposed clearing of 2.34 hectares, however the proponent has since excised a portion of wetland vegetation in the south west portion of the application area to reduce environmental impacts. The vegetation ranges from very good to completely degraded (Keighery, 1994) condition (Ekologica, 2012) with approximately 40 per cent of the vegetation in a very good (Keighery, 1994) condition.

A total of five vegetation communities comprising 72 flora species were identified within the application area (Ekologica, 2012). The vegetation under application can be largely separated into upland and transitional zones. The upland areas are located within the north eastern corner of the application area, and indicated by the presence of a tall *Eucalyptus marginata* and *Corymbia calophylla* woodland. This vegetation has been impacted heavily by past disturbance (DEC, 2013a). The 'transitional' vegetation is dominated by *Corymbia calophylla* with emergent *Melaleuca preissiana* and includes areas in very good (Keighery, 1994) condition (DEC, 2013a).

Several priority flora species have been recorded in the local area (10 kilometre radius). The closest of these, an aquatic perennial herb, is mapped approximately 590 metres north of the proposed clearing, and has a preference for ponds, rivers and inundated claypans (Western Australian Herbarium, 1998-). A flora survey undertaken by Ekologica in September and October 2012 did not identify any rare or priority flora species within the application area.

The upland areas of Lot 507 may be an example of Floristic Community Type (FCT) 21a, known as 'central *Banksia attenuata* - *Eucalyptus marginata* woodlands', and the 'transitional' vegetation has some similarity to FCT 21c known as low lying *Banksia attenuata* woodlands or shrublands', listed as a priority 3 ecological community (DEC, 2013a). If FCT21c is present within the application area, its extent is patchy, small and of low conservation value as it is well represented in surrounding vegetation.

The initial application area included a wetland area in the south west portion which may be an example of FCT 09 (DEC, 2013a), known as 'dense shrublands on clay flats', recognised as a threatened ecological community (TEC). The proponent has removed this wetland area from the application and it is unlikely that the proposed clearing will impact on this community.

A fauna survey identified western ringtail possums and nesting dreys within and immediately adjacent to the application area (Harewood, 2012). There are 24 large potentially hollow-bearing trees within the application area, four of which have confirmed hollows. These trees may provide nesting habitat for three species of black cockatoo (Ekologica, 2012), listed as 'rare or likely to become extinct' under the Wildlife Conservation Act 1950 (WC Act). The application area supports approximately 0.9 hectares of potential foraging habitat for black cockatoos and foraging evidence in the form of chewed marri fruits was observed on site (Harewood, 2012).

The City of Bunbury retains approximately 25 per cent of its pre-European vegetation (Government of Western Australia, 2013).

Lot 507 is located along the major East-West Maidens/Preston River ecological linkage, as mapped in the ecological linkage plan of the Environmental Protection Authority's (EPA) recommendations on the Greater Bunbury Region Scheme (EPA, 2003). These linkages are also recognised within the South West Regional Ecological Linkages technical report (Molloy et.al, 2009). Despite this, given that the application area is relatively small, has been disturbed by the surrounding airport infrastructure and is bordered by vegetation in a similar condition to the north, it is unlikely that the proposed clearing will result in significant impacts to the values of this linkage.

The flora survey (Ekologica, 2012) identified dieback and invasive weed species within the application area. The proposed clearing will increase the likelihood of weeds and dieback spreading into adjacent vegetated areas. Weed and dieback mitigation strategies will assist in minimising the introduction and spread of weeds and dieback.

The application area includes vegetation in a very good (Keighery, 1994) condition, foraging and potential nesting habitat for black cockatoos and habitat for western ringtail possums. Therefore the proposed clearing is at variance to this Principle.

To offset the residual impacts to the abovementioned species, the City of Bunbury has provided an Offset Management Plan which involves conserving in perpetuity 11.83 hectares of land adjacent to the application area. This protection is to be achieved through classifying the offset site as a 'Class A' reserve which provides the highest form of environmental protection for Crown Reserves (Opus, 2013).

Methodology

References:

- Ekologica (2012)
- Harewood (2012)
- EPA (2003)
- Molloy et al (2009)
- Western Australian Herbarium (1998 -)
- Keighery (1994)
- Government of Western Australia (2013)
- DEC (2013a)
- Opus (2013)

(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

Proposal is at variance to this Principle

Several conservation significant fauna species have been recorded within the local area (10 kilometre radius), including, *Calyptorhynchus banksii* subsp. *naso* (forest red-tailed black-cockatoo), *Calyptorhynchus baudinii* (Baudin's cockatoo), *Calyptorhynchus latirostris* (Carnaby's cockatoo) *Phascogale tapoatafa* subsp. *tapoatafa* (southern brush-tailed phascogale), *Pseudocheirus occidentalis* (western ringtail possum), *Macropus irma* (western brush wallaby), and *Isoodon obesulus* subsp. *fusciventer* (*quenda*) (DEC, 2007-).

Three of the above fauna species were identified in a survey of the application area undertaken by Harewood (2012), these being, forest red-tailed black-cockatoo, Carnaby's cockatoo and western ringtail possum (WRP).

The fauna survey (Harewood, 2012) identified a total of seven WRP's (identified over two night surveys), and eleven nesting dreys, within the application area. These species are classified as 'rare or likely to become extinct' under the Wildlife Conservation Act 1950. A further 16 individual WRP's were identified immediately adjacent to the application area. Four trees containing hollows of suitable size for WRP nesting habitat were also identified on site (Harewood, 2012). The majority of the vegetation under application has the potential to provide habitat for WRP's.

A total of 24 potentially hollow bearing trees (mainly jarrah and marri), with a diameter at breast height of greater than 500 millimetres were identified on site (Harewood, 2012). Four of these 24 trees were observed to contain hollows, with one of these large enough for use as nesting habitat for all three species of black cockatoo (Harewood, 2012). Approximately 0.9 hectares of the vegetation under application was identified as suitable foraging habitat for these species, with foraging evidence in the form of chewed marri fruits identified on site (Harewood, 2012). Black cockatoos have also been reported roosting within three kilometres of the application area (Harewood, 2012).

The proponent has committed to engaging a fauna handler to identify and relocate any WRP's and other animals found on site prior to clearing. It is advised that any animals found will be translocated to an adjacent area of suitable remnant vegetation (Opus, 2013).

A further nine conservation significant fauna species may also utilise the application area, including, great egret, cattle egret, masked owl, rainbow bee-eater, peregrine falcon, southern brush-tailed phascogale, *quenda*, western brush wallaby and western false pipistrelle (Harewood, 2012). The great egret, cattle egret and rainbow bee-eater are migratory species, and although they may temporarily utilise the application area, it is unlikely the vegetation under application provides significant habitat for these species. The application area may however provide habitat for *quenda* (given areas of dense understorey on site), southern brush-tailed phascogale (preference for dry sclerophyll forests and open woodlands with hollow-bearing trees), western false pipistrelle and western brush wallaby (preference for open forest or woodland, particularly open, seasonally wet flats with low grasses and open scrubby thickets) (DEC, 2006).

Lot 507 is located along the major East-West Maidens/Preston River ecological linkage, as mapped in the ecological linkage plan of the Environmental Protection Authority's (EPA) recommendations on the Greater Bunbury Region Scheme (EPA, 2003). These linkages are also recognised within the South West Regional Ecological Linkages technical report (Molloy et.al, 2009). Despite this, given that the application area is relatively small, has been disturbed by the surrounding airport infrastructure and is bordered by vegetation in a similar condition to the north, it is unlikely that the proposed clearing will result in significant impacts to the values of this linkage.

Given that the vegetation under application contains habitat for WRP's, foraging and potential nesting habitat for black cockatoos, and potential habitat for several other conservation significant fauna, the proposed clearing is at variance to this Principle.

To offset the residual impacts to the abovementioned species, the City of Bunbury has provided an Offset Management Plan which involves conserving in perpetuity 11.83 hectares of land adjacent to the application area. This protection is to be achieved through classifying the offset site as a 'Class A' reserve which provides the highest form of environmental protection for Crown Reserves (Opus, 2013).

Methodology References:
-Harewood (2012)
-DEC (2006)
-DEC (2007-)
-DEC (2013a)
-EPA (2003)
-Government of Western Australia (2013)
-Opus (2013)

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

Comments **Proposal is not likely to be at variance to this Principle**
The closest mapped rare flora species to the application area is an orchid, which has a preference for sandy loam and winter wet swamps, which flowers in September to October (Western Australian Herbarium, 1998-).

No species of rare flora were identified within the application area in a flora survey undertaken by Ekologica in September and October 2012.

Given the above, it is not likely that the vegetation under application includes, or is necessary for the continued existence of rare flora.

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

Methodology References:
-Western Australian Herbarium (1998-)
-Ekologica (2012)

GIS Databases:
-SAC Bio Datasest (Accessed June 2013)

(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 **Proposal is not likely to be at variance to this Principle**
The closest mapped threatened ecological community (TEC) is the 'herb rich saline shrublands in clay pans' and 'dense shrublands on clay flats' located approximately 1.6 kilometres north west and south west of the application area respectively. These TEC's are both listed as vulnerable, as endorsed by the Minister for Environment.

A site inspection of the initial area proposed for clearing revealed that the wetland area located in the south west extent may be an example of the abovementioned 'dense shrublands on clay flats' (DEC, 2013a). This community is also recognised as a federally listed TEC which is referred to as 'claypans of the Swan Coastal Plain'.

The proponent has removed this wetland area from the application and it is unlikely that the proposed clearing will impact on this potential TEC.

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

Methodology References:
-DEC (2013a)
-DEC (2013b)

GIS Databases:
-SAC Bio Datasets (Accessed June 2013)

(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 Proposal is at variance to this Principle

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

The Beard Vegetation Association and Heddle Vegetation Complex shown below retain less than the abovementioned 30 per cent pre-European vegetation extent, as does the City of Bunbury, with 27, 20 and 25 per cent pre-European vegetation remaining respectively.

The application area includes some vegetation in a very good (Keighery, 1994) condition, which provides foraging habitat and potential nesting habitat for black cockatoos, and habitat for western ringtail possums, therefore it is significant as a remnant in an area that has been extensively cleared.

The proposed clearing is at variance to this Principle.

To offset the residual impacts of the proposed clearing, the City of Bunbury has provided an Offset Management Plan which involves conserving in perpetuity 11.83 hectares of land adjacent to the application area. This protection is to be achieved through classifying the offset site as a 'Class A' reserve which provides the highest form of environmental protection for Crown Reserves (Opus, 2013).

| Pre-European | Current Extent (ha) | Remaining (ha) | Remaining (%) | Extent in DEC Managed Lands (%) |
|---|---------------------|----------------|---------------|---------------------------------|
| IBRA Bioregion* | | | | |
| Swan Coastal Plain | 1,501,209 | 587,833 | 39 | 35 |
| Shire* | | | | |
| City of Bunbury | 6,219 | 1,528 | 25 | 1 |
| Beard Vegetation Association in Bioregion* | | | | |
| 1000 | 94,175 | 25,093 | 27 | 17 |
| Heddle Vegetation** | | | | |
| Southern River Complex | 57,979 | 11,501 | 20 | 1.5 |

*Government of Western Australia (2013)

**Heddle et al (1980)

*Government of Western Australia (2013)

**Heddle et al (1980)

Methodology References:

- Commonwealth of Australia (2001)
- Government of Western Australia (2013)
- Heddle et al (1980)

(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 Proposal is at variance to this Principle

The application area is surrounded by mapped wetland areas. A conservation category palusplain wetland occurs 450 metres south of the application area, a dampland occurs 190 metres west of the application area and a multiple use wetland occurs approximately 550 metres north and 250 metres east of the application area.

A major drain runs through the south east portion of the application area, an area subject to inundation occurs approximately 80 metres west of the application area, a major perennial watercourse is mapped 850 metres west and the Preston River runs 1.1 kilometres east of the application area.

The application area includes wetland vegetation in the form of *Melaleuca preissiana* over *Kunzea glabrescens* and *Lepidosperma longitudinal*, which have been identified in the north west portion of the application area (Ekologica, 2012).

Given the above, the proposed clearing is at variance to this Principle. However, the impact upon the nearby wetlands and the major drain is not likely to be significant.

Methodology References:

- DEC (2013a)

GIS Databases:
-Hydrography, linear
-Hydrography, hierachy
-Geomorphic Wetlands, Swan Coastal plain

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

Comments Proposal is not likely to be at variance to this Principle

The soils within the application area have been mapped by Northcote et al (1960-68) as sandy dunes with intervening sandy and clayey swamp flats. Chief soils consist of leached sands, sometimes with a clay D horizon below 5 ft, on the dunes and sandy swamps.

With the possibility for sandy and clayey soils to occur on site, there is the potential for wind (on light sandy soils) and water erosion (on poorly drained clay soils) to occur post clearing. However, given the relatively small size of the application area (1.43 hectares), it is unlikely that wind or water erosion will result in appreciable land degradation.

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

Methodology References:
-Northcote et al (1960-1968)
-Keighery (1994)
-Ekologica (2012)

GIS Databases:
-Soils, Statewide

(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 Proposal is not likely to be at variance to this Principle

The closest conservation reserve to the application area is an un-named miscellaneous reserve located 1.7 kilometres north. Leschenault Peninsular Conservation Park occurs approximately 7.7 kilometres north of the application area.

Given the distance of the application area to the abovementioned reserves, it is unlikely that the proposed clearing will impact on the environmental values of any conservation areas.

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

Methodology GIS Databases:
-DEC Tenure

(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 Proposal is not likely to be at variance to this Principle

The application area is surrounded by mapped wetland areas. A conservation category palusplain wetland occurs 450 metres south of the application area, a dampland occurs 190 metres west of the application area and a multiple use wetland occurs approximately 550 metres north and 250 metres east of the application area.

A major drain runs through the south east portion of the application area, an area subject to inundation occurs approximately 80 metres west of the application area, a major perennial watercourse is mapped 850 metres west and the Preston River runs 1.1 kilometres east of the application area.

Given the distance to the closest mapped watercourses and wetlands on site and relatively small size of the application area (1.43 hectares), it is unlikely that the proposed clearing will cause deterioration in the quality of surface water.

Groundwater Salinity on site is mapped at 500 to 1000 milligrams per litre (marginal) on site. Given this low salinity level, and the small size of the application area, it is not likely the proposed clearing will lead to a perceptible rise in the watertable and subsequent increase groundwater salinity levels.

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

Methodology GIS Databases:
-Groundwater Salinity, Statewide
-Hydrography, linear

- Hydrography, hierachy
- Geomorphic Wetlands, Swan Coastal plain

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

Comments **Proposal is not likely to be at variance to this Principle**
 Given the relatively small area of proposed clearing (1.43 hectares), it is not likely that the proposed removal of the vegetation under application will cause or exacerbate the incidence or intensity of flooding.

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

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments

The applicant proposes to clear 1.43 hectares of native vegetation within Lot 507 on Deposited Plan 74949, Davenport, for the purpose of expanding airport infrastructure. The expansion will involve the construction of aeroplane hangars, roads, taxiways, storage areas, drainage basins an overflow carpark and a helicopter pad. The initial application involved the proposed clearing of 2.34 hectares, however the proponent has since removed a portion of wetland vegetation in the south west portion of the application area to reduce environmental impacts.

The proposed clearing falls within the Bunbury Groundwater Area, proclaimed under the Rights in Water and irrigation Act 1914. The Department of Water has been advised of the proposed clearing and no comment has been provided.

The application area is zoned 'rural' under the town planning scheme and Lot 507 is reserved under a Management Order for the purpose of Aerodrome.

To offset the residual impacts of the proposed clearing, the City of Bunbury has provided an Offset Management Plan which involves conserving in perpetuity 11.83 hectares of land adjacent to the application area. This protection is to be achieved through classifying the offset site as a 'Class A' reserve which provides the highest form of environmental protection for Crown Reserves (Opus, 2013).

The City of Bunbury has referred the proposal to the Department of the Environment (DotE). DotE determined that the proposed action is a controlled action, and, as such, requires assessment and a decision on approval under the Environment Protection Biodiversity Conservation Act 1999 (Opus, 2013). The proponent has submitted the abovementioned offset to DotE and is currently waiting for a determination on the offset.

An archaeological survey (Johnston, 2012) of the application area was undertaken, and no artefacts or new heritage sites were identified. The survey recommended that heritage monitoring should occur within areas of land that disturb the subsurface.

Methodology

References:

- Johnston (2012)
- Opus (2013)

GIS Databases:

- Town Planning Scheme Zones
- RIWI Groundwater Areas

4. References

DEC (2006) Fauna Habitat Notes, numerous species. Department of Environment and Conservation Western Australia.
 DEC (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed June 2013.
 DEC (2013a) Site Inspection Report for Clearing Permit Application CPS 5589/1. Site inspection undertaken 21/05/2013. Department of Environment and Conservation, Western Australia (DEC Ref A639117).
 DEC (2013b) Additional TEC information for CPS 5589/1. Species and Communities Branch. Department of Environment and Conservation, Western Australia (DEC Ref A626742).
 Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
 Ekologica (2012) Level 2 Flora and Vegetation Survey of Remnant Native Vegetation at the Bunbury Airport. Additional Information for CPS 5589/1 DEC Ref: A623252
 EPA (2003). Greater Bunbury Region Scheme. Bulletin 1108 September 2003. Environmental Protection Authority, Perth, Western Australia.
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 Harewood, G. (2012) Fauna Assessment of the Bunbury Clay Target Club. Additional Information for CPS 5589/1 DEC Ref: A623252

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