



## CLEARING PERMIT

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

<b>Purpose permit number:</b>	CPS 1974/3
<b>Permit holder:</b>	City of Wanneroo
<b>Duration of permit:</b>	22 June 2008 – 22 June 2013

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 construction of a pedestrian pathway and boardwalk.

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

Lot 12835 on Plan 21310 (House No. 46 Foreshore Yanchep 6035);  
Lot 612 on Plan 10292 (Lot No. 612 Hornpipe Yanchep 6035); and  
Compass Circle road reserve.

**3. Area of Clearing**

Clearing of up to 0.095 ha of native vegetation within the areas shaded yellow on attached Plan 1974/3.

**4. Application**

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

**5. Type of Clearing Authorised**

This Permit authorises the permit holder to clear native vegetation for activities to the extent that the permit holder has the power to clear native vegetation for those activities under the *Local Government Act 1995* or any other written law.

**6. Compliance with Assessment Sequence and Management Procedures**

Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

## PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

### 7. Avoid, minimise etc clearing

In determining the amount of native vegetation to be cleared for the purpose of the pedestrian pathway and boardwalk, the Permit Holder must have regard to the following principles, set out in order of preference:

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

### 8. Weed Management

(a) When undertaking any clearing, or other activity pursuant to this Permit the Permit Holder must take the following steps to minimise the risk of introduction and spread of *weeds*:

- (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (ii) ensure that no *weed*-affected *mulch*, *fill* or other material are brought into an area to be cleared; and
- (iii) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

(b) At least once in each 12 month period for the *term* of this Permit, the Permit Holder must remove or kill any *weeds* growing within area cross-hatched red on attached Plan 1974/3.

### 9. Offsets

(a) Determination of offsets

- (i) As part or all of the clearing to be done is or may be at variance with one or more of the clearing principles, then the permit holder must implement an *offset* in accordance with Conditions 9(a) and 9(b) of this Permit with respect to that native vegetation.
- (ii) The permit holder shall implement the *offset* proposal approved by the CEO pursuant to clearing permit CPS1974/2 on 18 December 2008.

(b) Offset principles

For the purpose of this Part, the offset principles are as follows:

- (i) *direct offsets* should directly counterbalance the loss of the native vegetation;
- (ii) *contributing offsets* should complement and enhance the *direct offset*;
- (iii) *offsets* are implemented only once all avenues to avoid, minimise, rectify or reduce environmental impacts have been exhausted;
- (iv) the environmental values, habitat, species, ecological community, physical area, ecosystem, landscape, and hydrology of the *offset* should be the same as, or better than, that of the area of native vegetation being *offset*;
- (v) a ratio greater than 2:1 should be applied to the size of the area of native vegetation that is *offset* to compensate for the risk that the *offset* may fail;
- (vi) *offsets* must entail a robust and consistent assessment process;
- (vii) in determining an appropriate *offset*, consideration should be given to ecosystem function, rarity and type of *ecological community*, vegetation *condition*, habitat quality and area of native vegetation cleared;
- (viii) the *offset* should either result in no net loss of native vegetation, or lead to a net gain in native vegetation and improve the condition of the natural environment;
- (ix) *offsets* must satisfy all statutory requirements;
- (x) *offsets* must be clearly defined, documented and audited;
- (xi) *offsets* must ensure a long-term (10-30 year) benefit; and
- (xii) an *environmental specialist* must be involved in the design, assessment and monitoring of *offsets*.

## PART III – RECORD KEEPING AND REPORTING

### **10. Records must be kept**

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

- (a) In relation to the clearing of native vegetation undertaken pursuant to this clearing permit:
  - (i) the species composition, structure and density of the cleared area;
  - (ii) the location where the clearing occurred, recorded using Geocentric Datum Australia 1994;
  - (iii) the date that the area was cleared; and
  - (iv) the size of the area cleared (in hectares).

### **11. Reporting**

- (a) The Permit Holder must provide to the CEO, on or before 30 June of each year, a written report of records required under condition 10 and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 22 March 2013, the Permit Holder must provide to the CEO a written report of records required under condition 10 where these records have not already been provided under condition 11(a).

### **Definitions**

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

*condition* means the rating given to native vegetation using the *Keighery scale* and refers to the degree of change in the structure, density and species present in the particular vegetation in comparison to undisturbed vegetation of the same type;

*contributing offsets* has the same meaning as is given to that term in the Environmental Protection Authority's *Position Statement No.9 Environmental Offsets*, January 2006;

*direct offsets* has the same meaning as is given to that term in the Environmental Protection Authority's *Position Statement No.9 Environmental Offsets*, January 2006;

*environmental specialist* means a person who is engaged by the permit holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

*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* means an offset required to be implemented under Condition 9 of this Permit;

*term* means the duration of this Permit, including as amended or renewed; and

*weed* means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.



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Kelly Faulkner  
MANAGER  
NATIVE VEGETATION CONSERVATION BRANCH

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

30 December 2009

# Plan 1974/3



<b>LEGEND</b> Clearing Instruments ■ Areas Approved to Clear — Road Centrelines □ Cadastre Local Government Authorities		Cadastre for labelling Bunbury 50cm Orthomosaic - Landgate 2006 Clearing Instruments_1 ■ Areas Subject to Conditions		Swan Coastal Plain North 20cm Orthomosaic - Landgate 2006	
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Scale 1:1806  
(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.*

*K Faulkner* Date 30/12/09  
 K Faulkner  
 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.

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



## 1. Application details

### 1.1. Permit application details

Permit application No.: 1974/3  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: City of Wanneroo

### 1.3. Property details

Property: LOT 612 ON PLAN 10292 (House No. 87 BRAZIER YANCHEP 6035)  
LOT 12835 ON PLAN 21310 (House No. 46 FORESHORE YANCHEP 6035)

Local Government Area:

Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.095		Mechanical Removal	Recreation

## 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
Beard Vegetation Association: No vegetation association mapped (Shepherd et al. 2007).	CPS1974/2 has been amended to modify the boardwalk location; the amendment does not lead to an increase in clearing area, just a change in the clearing boundary.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	Description and condition of the vegetation under application was determined from the Site Inspection (2007). Vegetation ranges in condition from 'completely degraded' to 'very good' with an average condition rating of 'degraded' (Keighery, 1994).
Hedde Vegetation Complex: Quindalup Complex - Coastal dune complex consisting mainly of two alliances: the strand and fore-dune alliance and the mobile and stable dune alliance. Local variations include the low closed forest of <i>M. lanceolata</i> - <i>Callitris preissii</i> and the closed scrub of <i>Acacia</i> <i>rostellifera</i> (Hedde et al. 1980)	The proposed clearing consists of 0.095 hectares of native vegetation, divided between Portions A and B, to be cleared for the construction of a coastal pathway on primary dune swales.  Portion B under application to the south is located within Bush Forever site 397. Vegetation in this area has a condition rating of 'very good' (Keighery, 1994).  Vegetation present in portion B includes <i>Acacia cochlearis</i> , <i>Acanthocarpus preissii</i> , <i>Conostylis</i> <i>candicans</i> , <i>Hardenbergia</i> <i>comptoniana</i> , <i>Scaevola crassifolia</i> , <i>Tetragonia decumbens</i> , <i>Olearia</i> <i>axillaris</i> , <i>Acacia littorea</i> , <i>Myoporum</i> <i>insulare</i> and <i>Santalum acuminatum</i> . A major infestation of the weed species <i>Pelargonium capitatum</i> occurs at the southern extremity of portion B. The only other weed recorded within portion B is scattered <i>Trachyandra divaricata</i> .  Portion A under application runs along the road reserve of Compass Circle, vegetation in this area ranges in condition from 'completely degraded' (Keighery, 1994) in the northern half to 'good' (Keighery, 1994) in the southern half. The		

northern half of Portion A is approximately 0.058 ha and heavily weed infested and the majority of its length has been mowed and is in a 'completely degraded' (Keighery, 1994) condition. The southern half has an unsealed access path to the beach and patches of aggressive weed invasion.

Native vegetation present within Portion A includes *Acacia cochlearis*, *Acanthocarpus preisii*, *Hardenbergia comptoniana*, *Scaevola crassifolia*, *Tetragonia decumbens*, *Olearia axillaris* and *Lepidosperma gladiatum*. Weeds species include *Arctotheca calendula*, *Arctotis stoechadifolia*, *Gazania linearis*, *Trachyandra divaricata*, *Lupinus angustifolius*, *Pelargonium capitatum* and Buffalo grass (*Buchloe dactyloides*).

Approximately 0.006 ha of vegetation is in 'very good' (Keighery, 1994) condition.

As Above	As Above	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	As Above
As Above	As Above	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	As Above
As Above	As Above	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	As Above

### 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 not likely to be at variance to this Principle**

CPS1974/2 has been amended to modify the boardwalk location; the amendment does not lead to an increase in clearing area, just a change in the clearing boundary.

To the east of the areas under application, lands support heavy urbanisation and native vegetation exists mainly in a linear strip along the primary coastal dune swales.

Portion A of the area under application along Compass Circle was observed to range in condition from 'completely degraded' to 'good' (Keighery, 1994) condition with and with the majority in 'good' (Keighery, 1994) condition. This Portion has aggressive invasion by several weeds species, with native vegetation having been cleared and mowed in some areas with replacement of native vegetation by weeds and two unsealed beach access paths along its length. Given this, Portion A is considered to represent poor quality habitat for fauna and supports low floristic diversity (DEC, 2007).

Portion B south of Compass Circle is in 'very good' (Keighery, 1994) condition with a high floristic diversity and is considered to represent suitable habitat for fauna. This area however, covers only 0.095 ha and the proposed clearing of spot holes for the boardwalk posts and of swale crests for the boardwalk itself is unlikely to significantly impact on the floristic diversity and fauna habitat of this area.

Considering the heavy weed invasion and other forms of disturbance across the majority of the area under application, and the limited clearing of vegetation in 'very good' (Keighery, 1994) condition clearing is not considered likely to be at variance to this principle.

Methodology      References:

- DEC (2007)
- Keighery (1994)

**(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 not likely to be at variance to this Principle**

Five indigenous fauna species of conservation significance have been recorded within a 10 km radius of the area under application. These include the following Schedule 1 species:

- Leatherback Turtle (*Dermochelys coriacea*) (vulnerable)
- Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) (endangered)
- Crystal Cave Crangonyctoid (*Hurley sp.*) (critically endangered)

Priority species:

- Quenda (*Isoodon obesulus subsp. fusciventer*) P5

and Specially Protected fauna the South West Carpet Python (*Morelia spilota subsp. imbricata*).

The area under application was observed to support coastal heath on primary dune swales (DEC, 2007). Considering this, the area under application is unlikely to provide suitable habitat for Carnaby's Black Cockatoo and the Crystal Cave Crangonyctoid. Given the position of the area under application within the primary dune swales and proximity to the urban area, the area under application is unlikely to provide suitable nesting sites for the Leatherback Turtle.

However, the vegetation in Portion B was found to be structurally intact and supporting dense vegetation will little weed invasion (DEC, 2007). The area under application therefore may support suitable habitat for the Southern Brown Bandicoot (*Isoodon obesulus subsp. fusciventer*) and South West Carpet Python. However, given the size of the area under application, being 0.095 ha the area is not likely to be significant habitat for these two species.

Given that the area under application is not likely to support significant habitat for fauna indigenous to Western Australia clearing is not likely to be at variance to this principle.

**Methodology References:**

- DEC (2007)
- DEC fauna habitat notes. February 2007

GIS Databases:

- SAC Bio datasets 08/08/2007

**(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**

There is one species of Declared Rare Flora (DRF), one species of Priority 2 flora, six taxa of Priority 3 flora and two species of Priority 4 flora located within a 10 km radius of the area under application. The nearest DRF, *Eucalyptus argutifolia*, is approximately 950 m east of the area under application and the nearest Priority flora, *Stylidium maritimum*, is located approximately 2 km south of the area under application.

The area under application was observed to support coastal heath on white sands of the primary dune system (DEC, 2007).

The vegetation complex, topography and soil type present on site (DEC, 2007) is considered to be inconsistent with the habitat requirements of the nearby recorded flora of conservation significance (Western Australian Herbarium, 1998). Given this the area under application is not considered necessary for the continued existence of rare or priority flora and is not likely to be at variance to this principle.

**Methodology References:**

- Western Australian Herbarium (1998-)
- DEC (2007)

GIS Databases:

- SAC Bio datasets 20/04/2007

**(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**

Within a 10 km radius of the area under application there are three occurrences of Threatened Ecological Communities (TECs). These TECs are:

- SCP 26a: *Melaleuca huegelii* - *M. acerosa* shrublands of limestone ridges



- SCP 19b: Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain, and;
- Aquatic root mat community No.1 of caves of the Swan Coastal Plain.

The area under application was observed to support coastal heath on white sands of the primary dune system (DEC, 2007).

Based on the floristic composition, soil and landform types observed within the area under application (DEC, 2007), the vegetation is inconsistent with those representing the above listed TECs (Gibson et al. 1994).

Given the area under application is not likely to comprise or be necessary for the maintenance of a TEC clearing as proposed is considered not likely to be at variance to this principle.

**Methodology**    References:  
 - DEC (2007) (TRIM Ref. DOC32064)  
 - Government of Western Australia (2000)  
 - Gibson et al. (1994)  
 GIS Databases:  
 - SAC Bio datasets 20/04/2007

**(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 not likely to be at variance to this Principle**  
 The Environmental Protection Authority (EPA) supports the retention of remnant native vegetation to a 30% threshold level as recommended in the National Objectives Targets for Biodiversity Conservation below which, species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000).

The vegetation types under application retain more than this 30% threshold level.

Hedde Vegetation Complex, Quindalup Complex also has greater than the recommended 30% minimum of Pre-European extent remaining (49.5% remaining) however Heddles Quindalup Complex incorporates more than just vegetation of the primary dune system. When a 20 km stretch of the primary dune system extending north and south of the area under application (covering approximately 851 ha) is examined approximately 39% of native vegetation remains.

Given the size of the area under application (being 0.095 ha) and the level of vegetation representation remaining, the proposed clearing is considered unlikely to be at variance to this principle.

**Methodology**    References:  
 - EPA (2000)  
  
 - Shepherd (2007)  
 GIS Databases:  
 - Pre-European Vegetation - DA 01/01  
 - Hedde Vegetation Complexes - DEP 21/06/95  
 - Interim Biogeographic Regionalisation of Australia - EA 18/10/00

**(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 not likely to be at variance to this Principle**  
 The nearest wetland to the area under application is a Conservation Category Wetland (CCW), which is also an Environmental Protection Policy lake, located 4.5 km east of the application site. No watercourses are located in the local area.

The area under application was observed to be coastal heath on primary dunes with no wetland dependent vegetation present (DEC, 2007).

Given the area under application does not support wetland dependant vegetation or vegetation growing in association with a wetland the proposed clearing is not considered likely to be at variance to this principle.

**Methodology**    References:  
 - DEC (2007)  
 GIS Databases:  
 - Geomorphic wetlands (Mgt Categories) - Swan Coastal Plain - DOE 15/09/04  
 - EPP, Lakes - DEP 1/12/92  
 - Hydrography, linear - DOE 1/2/04  
 - Hydrography, linear (hierarchy) - DOW

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

**Comments Proposal may be at variance to this Principle**

The vegetation under application lies within soils associated with coastal dune formations with chief soils being calcareous sands on the dunes (Northcote et al. 1960-68).

The area under application was observed to support white sands of the primary coastal dune formation (DEC, 2007). Considering the sandy nature of the soils and the location of the area under application, the proposed clearing has the potential to cause wind erosion of soils.

Given the risk of wind erosion associated with the removal of vegetation from sandy soils clearing as proposed may be at variance to this principle.

Development Approval from the Western Australian Planning Commission has been given for the proposal with conditions which require disturbed areas to be stabilised on completion of construction and thereafter maintained and for a 150 mm thick layer of mulch to be placed over the disturbed areas and the site rehabilitated (Western Australian Planning Commission 2008).

**Methodology**

**References:**

- DEC (2007)
- Northcote et al. (1960-68)
- Western Australian Planning Commission (2008)

**GIS Databases:**

- Soils, Statewide - DA 11/99
- Acid Sulphate Soil risk map, Swan Coastal Plain, DEC

**(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 at variance to this Principle**

Portion B under application is located within Bush Forever site 397 south of Compass Circle and Portion A borders Bush Forever site 397.

Portion A was observed to range in condition from 'completely degraded' to 'good' (Keighery, 1994) with the majority in 'good' (Keighery, 1994) condition and Portion B is considered to be in 'very good' (Keighery, 1994) condition (DEC, 2007).

The proposal involves clearing of vegetation within Bush Forever site 397 and within the fragile fore dune environment. Clearing also has the potential to indirectly impact the environmental values of Bush Forever site 397 through the spread and/or introduction of weed species, by machinery. There are serious consequences associated with the spread of exotic species into areas of coastal native vegetation, including the potential decline or local extinction of species and the destabilisation of the fore dune system.

Despite the area under application being 0.095 ha, Portion B is within Bush Forever site 397 and clearing of vegetation in both Portion A and B of the proposal risks the introduction and/or spread of weeds. Given this, clearing as proposed is likely to impact on the environmental values of an area of conservation significance and is considered to be at variance to this principle.

To mitigate clearing within Bush Forever site 397 the Western Australian Planning Commission has requested rehabilitation of the whole site area from Compass Circle to Tarwhine Turn at a ratio of 2:1. Conditions also include minimising the area of vegetation cleared and stabilisation and mulching of disturbed areas (Western Australian Planning Commission 2008).

To mitigate the impact of disturbance in the spread of weeds a condition will be placed on this permit for weed control.

As the application area is within Bush Forever site 397 an offset condition will be placed on this permit.

**Methodology**

**References:**

- DEC (2007)
- Western Australian Planning Commission (2008)

**GIS Databases:**

- Bushforever - MFP 07/01

**(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 nearest wetland to the area under application is located 4.5 km east of the application site and no watercourses are located in the local area. The area is within 150m of the ocean and groundwaters are considered saline.

The area under application was observed to be located on the primary coastal dune swales with sandy soils of the Quindalup dune system and supporting deep rooted perennial vegetation (DEC, 2007).

Soils of the Quindalup system generally have a high risk of phosphorus export (State of Western Australia 2005). Removal of deep-rooted perennial vegetation has the potential to result in an increase in nutrients being discharged from the soil and associated deterioration in the quality of local ground and surface waters.

Soils of the Quindalup system generally also have high infiltration rates therefore the likelihood of water erosion of soils with associated deterioration in surface water quality through sedimentation is low.

Given the area under application is 0.095 ha in size it is considered unlikely that clearing will cause an appreciable increase in the release of phosphorous from the soil. Given this clearing is not considered likely to be at variance to this principle.

**Methodology**

References:

- DEC (2007)
- State of Western Australia (2005)

GIS Databases:

- Groundwater Salinity, Statewide - DOW
- Salinity Risk LM 25m - DOLA 00

**(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**

The area under application is situated on primary coastal dune swales supporting sandy soils (DEC, 2007). These swales are associated with the Quindalup dune system on which soils are generally considered to have high infiltration rates.

The nearest wetland to the area under application is located 4.5 km east of the application site and no watercourses are located in the local area.

Considering the high infiltration rates of soils within the area under application and distance from wetlands and watercourses, the area under application is not considered likely to cause or exacerbate the incidence or intensity of flooding in the immediate or surrounding area.

**Methodology**

References:

- DEC (2007)

GIS Databases:

- Hydrography, linear - DOE 1/2/04
- Hydrography, linear (hierarchy) - DOW
- Geomorphic Wetlands (Classification), Swan Coastal Plain - DEC

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

**Comments**

CPS1974/2 has been amended to modify the boardwalk location; the amendment does not lead to an increase in clearing area, just a change in the clearing boundary.

A Development Approval with conditions has been granted from the Western Australian Planning Commission for the proposed boardwalk. Conditions include:

- The scope of the application is to be limited to the proposed boardwalk, lookout and fencing;
- Uniform fencing, constructed of either post and rail or post and wire materials, is to be installed along the proposed boardwalk and lookout prior to the commencement of any works;
- Disturbed areas are to be stabilised and maintained;
- Mulch to a thickness of 150 mm is to be placed over disturbed areas, and the area from Compass circle to Tarwhine Turn rehabilitated with locally endemic native vegetation at a ratio of 2:1;
- Searches are to be conducted for unexploded ordnances;
- Construction is to be limited to the hours of 0700-1700 hours, Monday the Friday and 0730-1700 hours on Saturday, with no work on Sundays.

Bush Forever (2007) have provided advice on the proposed clearing. Bush Forever have no objection to the clearing of Portion A (area under application to the north along the road reserve of Compass Circle) however it is recommended:

1. There is to be no vegetation, earth spoil or other debris disposed of, within the boundary of the adjoining Bush Forever site 397;
2. The removal of vegetation should be minimal and restricted to that essential for the proposed development works, and where possible shall minimise the removal of mature remnant vegetation;
3. All construction works is to be done in an environmentally sensitive manner with minimal disturbance to the natural vegetation. Temporary fencing should be constructed for the duration of the works;
4. A mitigation package for any clearing, based on a ratio of 2:1, in accordance with EPA Position Statement No.9, where 'like for like, or better' is recommended.

Bush Forever (2007) recommended that the pathway constituting Portion B be modified, so two pathways go in an east to west direction, instead of north to south to minimise the need for clearing where the proposed Portion B is. As such, the requirement for clearing approval for this section may be premature. The current proposed walk path location has too steep a gradient, and is not conducive to the natural environment, and therefore is not supported by Strategic Biodiversity Planning.

The City of Wanneroo (2007) have submitted a project proposal for the coastal pathway and Site Inspection (2007) provided additional information in which Portion B (covering 0.006 ha) will constitute a raised boardwalk of varying height to reduce gradient where topography is too steep and will involve minimal vegetation clearing. The boardwalk will require clearing only for the struts that hold up the boardwalk as well as on points where the topography and gradient requires the boardwalk to be resting on the dune surface, for example on the apex of dunes swales and at the far southern section of Portion B where the boardwalk starts. For aesthetic reasons the City of Wanneroo aims to keep vegetation clearing for Portion B minimal.

The area under application receives frequent pedestrian traffic which is unmanaged and is causing degradation of the dune vegetation. Construction of a boardwalk is likely to reduce the formation of these damaging paths by restricting traffic to designated areas (DEC, 2007).

In order to reduce the impact of the development on local biodiversity the City of Wanneroo (2007) propose:

1. Collection of seed/cuttings and salvage of various plants by local Coast Care volunteers and local bush regeneration contractors for use in bushland rehabilitation projects within City-managed nature conservation reserves;
2. A temporary construction fence be erected prior to clearing, in order to delineate the construction site from the nature conservation area;
3. A permanent coastal foreshore fence be installed in conjunction with the pathway installation;
4. Suitable topsoil will be stripped and stockpiled on site for respreading on the batters, and;
5. Cleared vegetation will be used as brush for nearby coastal dune rehabilitation projects.

Part of portion B under application occurs within a Registered Site of Aboriginal Significance.

The area under application is located on soils with a Class 3 Acid Sulphate Soil (ASS) Risk. These soils are defined as having no known risk of ASS occurring within 3 m of the natural soil surface that could be disturbed by the proposed development activities.

There is no required RIWI Act Licence or EPA Act Licence that affects the areas under application.

#### Methodology

References:

- Bush Forever (2007)
  - City of Wanneroo (2007)
  - DEC (2007)
  - Department of Indigenous Affairs (2007)
  - Western Australian Planning Commission (2008)
- GIS Databases:
- Acid Sulfate Soil Risk Map, Swan Coastal Plain

## 4. Assessor's comments

#### Comment

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and the proposed clearing is at variance to principle (h) and may be at variance to principle (g).

## 5. References

- EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority. City of Wanneroo. (2007). Compass Circle, Yanchep - Foreshore pathway construction: Project Proposal. (TRIM Ref. DOC32554).
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## 6. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment (now DEC)
DMP	Department of Mines and Petroleum (ex DoIR)
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DEC)