



## CLEARING PERMIT

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

### PERMIT DETAILS

Area Permit Number: 4118/1  
File Number: 2010/010716-1  
Duration of Permit: From 18 April 2011 to 18 April 2013

### PERMIT HOLDER

Northern Corridor Developments Ltd

### LAND ON WHICH CLEARING IS TO BE DONE

Lot 1001 on Plan 61236 Marmion Avenue (Alkimos 6038)

### AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 7.9 hectares of native vegetation within the areas shaded yellow on attached Plan 4118/1.

### CONDITIONS

#### **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) shall not move soils in wet conditions;
- (c) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (d) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

### 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; and

*weed/s* 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*.

A handwritten signature in black ink, appearing to read "Kelly Faulkner", written over a horizontal line.

Kelly Faulkner  
MANAGER  
NATIVE VEGETATION CONSERVATION BRANCH

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

23 March 2011



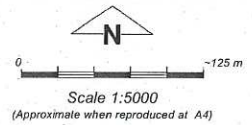
# Plan 4118/1



## LEGEND

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

Swan Coastal Plain North  
20cm Orthomosaic - Landgate  
2009



Geocentric Datum Australia 1994

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

Date 23/3/11  
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.



Department of  
Environment and Conservation

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## 1. Application details

### 1.1. Permit application details

Permit application No.: 4118/1  
Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Northern Corridor Developments Pty Ltd

### 1.3. Property details

Property: LOT 1001 ON PLAN 61236 (ALKIMOS 6038)  
Local Government Area:  
Colloquial name:

### 1.4. Application

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

### 1.5. Decision on application

Decision on Permit Application: Granted  
Decision Date: 23 March 2011

## 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
The vegetation under application is mapped as vegetation types: Heddl vegetation complex: Cottesloe Complex - Central and South: Mosaic of woodland of <i>E. gomphocephala</i> and open forest of <i>E. gomphocephala</i> - <i>E. marginata</i> - <i>E. calophylla</i> ; closed heath on the Limestone outcrops (Heddl et al 1980)	The amended proposal is to clear 7.9 ha within Lot 1001 Marmion Avenue (181 ha property) for the purpose of disposal of surplus fill material.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Vegetation clearing description based on a site vegetation survey under taken during 15 October 2004 (ATA Environmental 2004) and site visit conducted by DEC officers on 17 January 2011 (DEC 2011).
Beard vegetation type: 949 - Low woodland; banksia (Hopkins et al 2001; Shepherd 2009)	The vegetation under application comprises areas of <i>Banksia</i> woodland in good (Keighery, 1994) condition, and <i>Dryandra sessilis</i> (Parrot bush) closed scrub including <i>Hibbertia hypericoides</i> , <i>Calothamnus quadrifidus</i> , and <i>Jacksonia stricta</i> ; in the eastern section of Lot 1001; in degraded to very good (Keighery, 1994) condition.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	
		Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	

## 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 may be at variance to this Principle**  
The areas under application were amended from 17 ha to 7.9 ha. The amended area under application contains two vegetation communities, *Banksia attenuata* and *Banksia menziesii* low woodland and *Dryandra sessilis* closed scrub with a majority being in good (Keighery 1994) condition (ATA Environmental 2004).  
  
A flora survey carried out in October 2004, identified 180 species including 30 exotic species of flora within a 226 ha survey area within Lot 1001 and 1002 (formerly known as Lot 3 Romeo Road); Lot 1001 comprises the amended area under application. The survey did not identify any rare or priority flora species occurring within the amended area under application (ATA Environmental 2004).

The flora survey has also inferred a Priority Ecological Community (PEC) within the amended area under application, that being Floristic Community Type (FCT) 28: Spearwood *B. attenuata* or *B. attenuata*-Eucalyptus woodlands (ATA Environmental 2004). In addition, 66 fauna species were recorded during a fauna survey within Lots 1001 and 1002, including the conservation significant species Carnaby's black cockatoo (*Calyptorhynchus latirostris*) (ATA Environmental 2008). In addition, the Graceful Sun Moth (*Synemon gratiosa*) has been historically recorded 4.5 km south of the areas under application and DEC compiled 2010 survey data shows up to 20 records of Graceful Sun Moth within 1 km of the amended area under application with the closest record being 400 m north.

Consultants (Coffey Environments 2011, Coterra Environment 2011) engaged by the applicant provided supporting information to DEC on 16 February 2011 and 18 March 2011, including an amendment to the areas under application from 17 ha to 7.9 ha of native vegetation, to exclude the western areas under application in excellent (Keighery, 1994) condition that may provide suitable habitat for the conservation significant Graceful Sun Moth.

Given the above, it is considered that the proposal in its current form may be variance to this Principle.

#### Methodology

##### References:

- Coffey Environments (2011)
  - Coterra Environment (2011)
  - ATA Environmental (2004)
  - ATA Environmental (2008)
  - Keighery (1994)
- GIS Database:
- SAC Bio Datasets (accessed 13/1/2011)

#### **(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 may be at variance to this Principle**

Within the local area (~ 5 km radius) five species of conservation significant fauna have been recorded.

The majority of the vegetation under application is in good (Keighery 1994) condition and comprises two fauna habitat types identified within the areas under application (ATA Environmental 2004 and 2008). A fauna survey of both Lot 1001 and 1002 under taken in November 2007 identified 27 fauna vertebrate species including two species of burrowing frogs, two mammal species Honey Possum (*Tarsidpes rostratus*) and the South Western Free-tail Bat (*Mormopterus* sp) and 23 reptiles species (ATA Environmental 2008).

Other species of conservation significance such as the Rainbow Bee-eater (*Merops ornatus*), Peregrine Falcon (*Falco peregrinus*), Western Brush Wallaby (*Macropus irma*), Southern Brush-tailed Phascogale (*Phascogale tapoatafa tapoatafa*), Black-Striped Snake (*Neelaps calonotus*) and the Quenda (*Isodon obesulus fusciventer*) have not been recorded during the fauna survey but have been identified in similar habitat in the local area during previous surveys (ATA Environmental 2008).

The fauna survey also recorded 39 bird species within the survey area including the conservation significant species Carnaby's black cockatoo (*Calyptorhynchus latirostris*) (ATA Environmental 2008). The amended area under application comprises areas of Banksia woodland in good (Keighery 1994) condition (ATA Environmental 2004; DEC 2011). Carnaby's black cockatoos are known to feed on seeds, nuts and flowers of a large variety of plants including Banksia, Eucalyptus and Grevillea, with the Northern Region of the Swan Coastal Plain considered being an important area throughout the season for this species (Shah 2006).

DEC notes that the Department of Sustainability, Environment, Water, Population and Communities approved an offset to mitigate the clearing of Carnaby's black cockatoo habitat within Lot 1002 and 1001 Marmion Avenue (formerly known as Lot 3 Romeo Road).

The Graceful Sun Moth (*Synemon gratiosa*) (listed as threatened under the WA Wildlife Conservation Act 1950 and endangered under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999) has been historically recorded 4.5 km south of the amended area under application and DEC compiled 2010 survey data shows up to 20 records of Graceful Sun Moth within 1 km of the amended area under application with the closest record being 400 m north. This species requires *Lomandra* spp. as host plants and shows some preference for high quality vegetation (Williams 2009). The amended area under application comprises areas of Banksia woodland in good (Keighery 1994) condition and *Lomandra hermaphrodita* has been identified within close proximity of the 9 hectares in the western areas under application (ATA Environmental 2004). In addition, *Lomandra hermaphrodita* has been observed within Lot 1001 in Banksia low woodland in low densities (DEC 2010; DEC 2011); DEC considers that even a sparse distribution of *L. hermaphrodita* (i.e. less than 5 plants/ 1 m<sup>2</sup>) within vegetation communities may have the Graceful Sun Moth present. Therefore, it is considered the western areas under application may provide habitat for the conservation significant Graceful Sun Moth.

Consultants (Coffey Environments 2011, Coterra Environment 2011) engaged by the applicant provided

supporting information to DEC on 16 February 2011 and 18 March 2011, including an amendment to the areas under application from 17 ha to 7.9 ha of native vegetation, to exclude the western areas under application in excellent condition that may provide suitable habitat for the conservation significant Graceful Sun Moth.

Given the above, it is considered that the proposal in its current form may comprise significant habitat values; therefore may be variance to this Principle.

**Methodology**    References:  
- Coffey Environments (2011)  
- Coterra Environment (2011)  
- DEC (2010)  
- DEC (2011)  
- Keighery (1994)  
- Shah (2006)  
- Williams (2009)  
GIS Database:  
- SAC Bio Datasets (accessed 27/1/2011)

**(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 rare flora species, *Eucalyptus argutifolia*, recorded in the local area (~ 10 km radius) being 5.1 km east of the areas under application.

This species occurs on shallow soils over limestone on slopes or gullies of limestone ridges or outcrops (Western Australia Herbarium 1998-).

The vegetation under application comprises *Banksia* woodland and *Dryandra sessilis* closed scrub on Spearwood sands (DEC 2011). A vegetation survey undertaken in October 2004 did not identify this species or any other rare flora within the area under application (ATA Environmental 2004). Therefore, the proposed clearing is not considered likely to be at variance to this Principle.

**Methodology**    References:  
- ATA Environmental (2004)  
- DEC (2011)  
- Western Australia Herbarium (1998-)  
GIS Database:  
- SAC Bio Datasets (accessed 13/1/2011)

**(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**  
Twelve recordings of the Threatened Ecological Community (TEC) 26a: *Melaleuca huegelii* - *Melaleuca acerosa* shrublands over limestone ridges was recorded in the local area (~5 km radius). The nearest occurrence is 1.6 km north of the areas under application.

The amended area under application contains *Banksia attenuata* and *Banksia menziesii* low woodland and *Dryandra sessilis* closed scrub (ATA Environmental 2004; DEC 2011), which is not representative of TEC 26a.

A flora and vegetation survey undertaken during October of 2004 did not identify any TEC occurring within the amended area under application. Therefore, the proposed clearing is not considered likely to be at variance to this Principle.

**Methodology**    References:  
- ATA Environmental (2004)  
- DEC (20011)  
GIS Database:  
- SAC Bio Datasets (accessed 13/1/2011)

**(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 amended area under application is located within the City of Wanneroo, within which there is 47.4% of pre-1750 vegetation extent remaining. In addition, there is approximately 48.4% of pre-European vegetation remaining in the local area (~5 km radius). The amended 7.9 ha under application is within a large tract of

bushland of approximately 226 ha (formerly known as Lot 3 Romeo Road) and is adjacent to Neerabup National Park, which is approximately 400 ha.

The vegetation under application is mapped as Heddle Cottesloe Complex - Central and South and Beard vegetation association 949: Low woodland; banksia of which there is 58.4% of pre-European extent remaining (EPA 2006; Shepherd 2009).

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

In addition, the area under application is not a significant remnant in the local area due to its connectivity to other bushland to the east and north. Therefore, the proposal is not considered likely to be at variance to this Principle.

	Pre-European (ha)	Current extent (ha)	Remaining %
Bioregion*			
Swan Coastal Plain	1,501,209	587,889	39.1
City of Wanneroo*	67,698	32,088	47.4
Local Area (~5 km radius)	7,850	~3,800	~48.4
Heddle vegetation complex			
Cottesloe-Central & South	44,995	18,474	41.1
Beard type in Bioregion*			
949	209,983	122,087	58.1

\* (Shepherd 2009)

\*\* (EPA 2006)

- Methodology** References:
- Commonwealth of Australia (2001)
  - EPA (2006)
  - Shepherd (2009)
- GIS Databases:
- Heddle Vegetation Complexes
  - NLWRA, Current Extent of Native Vegetation
  - Pre-European 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 Proposal is not likely to be at variance to this Principle**

The nearest wetland to the amended area under application is a Resource Enhancement Wetland, Carabooda Lake, occurring ~1.3 km north-east and a Conservation Category Wetland, Nowergup Lake, occurring ~2.2 km west of the amended area under application. The amended area under application is located ~2.9 km east of the coastline and ~26 km west of the nearest watercourse (Chandala Brook).

Given the distance to the nearest watercourse and wetlands, the proposed clearing is not considered likely to be at variance to this Principle.

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

**(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 soils within the area under application are part of the Spearwood Dune System and comprise of siliceous sands with some brown sands and leached sands (Northcote et al. 1960-68), which are considered to have a high risk of wind erosion (Department of Agriculture 2005). There is a low salinity risk within the applied area.

Given the high risk of wind erosion, the proposed clearing may cause short term appreciable land degradation.



Therefore, the proposal may be at variance to this Principle.

- Methodology** References:
- Department of Agriculture (2005)
  - Northcote et al. (1960-68)
- GIS Database:
- 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 may be at variance to this Principle**

The nearest conservation area is Neerabup National Park which is also Bush Forever site 383 and occurs directly adjacent to the amended area under application (eastern section of Lot 1001).

The proposed clearing is considered to cause fragmentation of fauna habitat that is under application which may impact on the adjoining Neerabup National Park by limiting faunal movement out of the amended area under application into the conservation area and vice versa. In addition, the amended area under application is a part of a continuous north-south bushland linkage (Government of Western Australia 2000). This linkage also connects Bush Forever site 383 with Bush Forever site 398.

As the amended area under application is directly adjacent to Neerabup National Park, the proposed clearing could also impact on this conservation area through the spread and introduction of weeds species or dieback by machinery.

Given the above, the proposed clearing may impact on the environmental values of an adjacent conservation area.

- Methodology** Reference:
- Government of Western Australia (2000)
- GIS Databases:
- Bushforever
  - DEC Tenure
  - NLWRA, Current Extent of Native Vegetation

**(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 amended area under application is a Resource Enhancement Wetland, Carabooda Lake, occurring ~1.3 km north-east and a Conservation Category Wetland, Nowergup Lake, occurring ~2.2 km west of the amended area under application. The amended area under application is located ~2.9 km east of the coastline and ~26 km west of the nearest watercourse (Chandala Brook).

The amended area under application is not within a Priority Drinking Water Source Area (PDWSA) and has a low salinity risk. Therefore, it is unlikely for the proposed clearing to cause deterioration to the quality of underground water.

Given the distance to the closest wetlands and watercourse, and low salinity risk, the proposed clearing is not considered to be at variance to this Principle.

- Methodology** GIS Databases:
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
  - Hydrography, linear
  - Priority Drinking Water Source Area (PDWSA)
  - Salinity Risk

**(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 nearest wetland to the amended area under application is a Resource Enhancement Wetland, Carabooda Lake, occurring ~1.3 km north-east and a Conservation Category Wetland, Nowergup Lake, occurring ~2.2 km west of the amended area under application. The amended area under application is located ~2.9 km east of the coastline and ~26 km west of the nearest watercourse (Chandala Brook).

Given the distance to the nearest watercourse and wetlands, the proposed clearing is not considered likely to be at variance to this Principle.

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

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

#### **Comments**

The consultants engaged by the applicant provided additional information on 16 February 2011 and 18 March 2011 in response to DEC's letter of 7 February 2011 which raised environmental and planning issues pertaining to the proposed clearing.

- The applied area of 17 ha was amended to 7.9 ha, to exclude the western areas in excellent condition that may have provided suitable habitat for the conservation significant Graceful Sun Moth.
- A current letter of authority from Northern Corridor Developments Ltd.
- Development Approval from City of Wanneroo.
- Information that the 1.06 ha of public open space within the amended area under application is identified primarily for drainage purposes and vegetation retention has not been proposed within this POS.

The Local Structure Plan (LSP) for Lots 1002 and 1001 (formerly known as Lot 3 Romeo Road) Marmion Avenue, Alkimos (which include the areas under application) has been referred to the Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) (previously the Department of Environment, Water, Heritage and the Arts) by the proponent due to Carnaby's black cockatoo being recorded on site during a fauna survey.

DSEWPC assessed the impact of the proposed development on the Carnaby's black cockatoo and granted approval with conditions and an offset on the 11 September 2009 (DEWHA, 2009). The offset proposal was to mitigate the clearing of up 157 ha of habitat within Lots 1002 and 1001 (which includes this amended proposal to clear of 7.9 ha of native vegetation) and includes:

- Providing \$300,000 to acquire 459 ha of Carnaby's black cockatoo foraging habitat north of Gingin;
- Providing \$314,111 to acquire 477 ha of Carnaby's black cockatoo foraging habitat east of Badgingarra; and
- Retaining as part of reserves, 5.52 ha of Carnaby's black cockatoo foraging habitat within public open space.

W.A. Planning Commission (2011) granted approval for WAPC Application No. 139130 subject to conditions of a subdivision within Lot 1001 (immediately south of the areas under application) and WAPC Application No. 141275 for the western side of Lot 1001 and WAPC Application No. 142057, which is related to No. 139130.

The City of Wanneroo (2011) advised that an application for a subdivision (WAPC Application No. 143264), which includes the western sections under application, has been received and the area will become residential in the near future.

In addition a Local Structure Plan provided with an application to clear 2 ha within Lot 1001 for a nursery (CPS 3682/1) shows two areas of public open space within the areas under application, 0.65 ha in the most northern section and 1.06 ha in the most eastern section under application (Coffey Environments 2010).

A permit to clear 12 ha of native vegetation within an area of 121 ha (CPS 3085/2) was granted on 4 November 2009. This approved area, which includes the 17 ha currently under application, was granted for the purpose of conducting geotechnical searches. The clearing permit allowed for the clearing of native vegetation to a height no less than 100 millimetres.

An Alkimos-Eglinton Metropolitan Region Scheme Amendment No. 1029/33 was assessed by the Environmental Protection Authority (EPA, 2005). The report and recommendations are outlined in EPA Bulletin 1207.

A submission (2011) was received in objection to the proposed clearing on Lot 1001 Marmion Avenue. Concerns were raised in relation to the use of degraded sites for fill disposal, the fill should be used for something productive (i.e. if it is topsoil then it should be used for revegetation) and the cost should not be a consideration; this is considered in the assessment of the application.

Lot 1001 is zoned Urban under the Metropolitan Regional Scheme.

#### **Methodology**

References:

- City of Wanneroo (2011)
- Coffey Environments (2010)
- Coffey Environments (2011)
- Coterra Environment (2011)
- DEWHA (2009)
- EPA (2005)
- Submission (2011)
- WA Planning Commission (2011)

GIS Database:

- Metropolitan Regional Scheme

#### 4. References

- ATA Environmental (2004) Lot 3 Romeo Road, Alkimos Flora and Vegetation Survey, Northern Corridor Developments Ltd
- ATA Environmental (2008) Lot 3 Romeo Road, Alkimos Vertebrate Fauna Assessment, Northern Corridor Developments Ltd
- City of Wanneroo (2011) Direct Interest Submission for Clearing Permit Application CPS 4118/1. DEC Ref A364933 and A364973
- Coffey Environments (2010) Application for a Clearing Permit (CPS 3682/1) and Supporting Information. DEC TRIM Ref DOC124921
- Coffey Environments (2011) Modification to Clearing Permit CPS 4118/1 Northern Corridor Developments Ltd, Response to DEC Letter Dated 7 February 2011. Coffey Environments. DEC Ref A369136
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Coterra Environment (2011) Modification to Clearing Permit CPS 4118/1 Northern Corridor Developments Ltd, Response to DEC Letter Dated 7 February 2011. Coterra Pty Ltd. DEC Ref A381199
- DEC (2010) Site Inspection Report for Clearing Permit Application CPS 3519/1, Lot 1001 and Lot 1002 Romeo Road, Alkimos. Site inspection undertaken 29/01/2010. Department of Environment and Conservation, Western Australia. TRIM Ref DOC 117702
- DEC (2011) Site Inspection Report for Clearing Permit Application CPS 4118/1, Lot 1001 Marmion Avenue, Alkimos. Site inspection undertaken 17/01/2011. Department of Environment and Conservation, Western Australia. DEC Ref A364209
- Department of Agriculture (2005) AgMaps Land Manager CD-rom for the Shires of Serpentine-Jarrahdale, Kwinana, Rockingham, Mandurah, Murray, Boddington, Waroona and Harvey. Department of Agriculture, Western Australia. ISSN: 1448-235X.
- DEWHA (2009) Copy of Approval from the Department of Environment, Water, Heritage and the Arts of the Local Structure Plan for Lots 1001 and 1002 Romeo Rd, Alkimos. TRIM Ref DOC100704.
- EPA (2006) Guidance for the Assessment of Environmental Factors - Level of Assessment for Proposals Affecting Natural Areas Within the System 6 Region and Swan Coastal Plain Portion of the System 1 Region. Guidance Statement No 10. Environmental Protection Authority, Western Australia.
- Government of Western Australia (2000) Bush Forever Volumes 1 and 2. Western Australian Planning Commission, Perth WA.
- Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- Shah, B. (2006) Conservation of Carnaby's Black-Cockatoo on the Swan Coastal Plain, Western Australia. December 2006. Carnaby's Black-Cockatoo Recovery Project. Birds Australia, Western Australia.
- Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.
- Submission (2011) Direct Interest Submission for Clearing Permit Application CPS 4118/1. DEC Ref A360855
- Western Australian Herbarium (1998-). FloraBase-The Western Australian Flora. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/> (Accessed 13/01/11).
- Williams M.R (2009) Butterflies and Day-flying Moths in a Fragmented Urban Landscape, South-west Western Australia: Patterns of Species Richness. Pacific Conservation Biology V15,p 32-46. TRIM Ref DOC88237

#### 5. 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
DoIR	Department of Industry and Resources
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)

