



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 6437/1
Permit Holder:	Northern Corridor Developments Ltd
Duration of Permit:	16 May 2015 – 16 May 2020

ADVICE NOTE

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

As part of approval 2008/4601 under the *Environment Protection and Biodiversity Conservation Act 1999* the proponent provided a total of \$614, 111 to the former Department of Environment and Conservation on 23 April 2010 for the purchase of 459 hectares of land containing Carnaby's cockatoo (*Calyptorhynchus latirostris*) foraging habitat north of Gingin and 477 hectares of Carnaby's cockatoo (*Calyptorhynchus latirostris*) foraging habitat east of Badgingarra.

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

1. Purpose for which clearing may be done

Clearing for the purpose of constructing Howden Parade.

2. Land on which clearing is to be done

Lot 9029 on Deposited Plan 403752, Alkimos

3. Area of Clearing

The Permit Holder must not clear more than 2.02 hectares of native vegetation within the area cross hatched yellow on attached Plan 6437/1.

4. Application

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

5. 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*:

- clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- shall only move soils in *dry conditions*;
- ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- 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;

dry conditions means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;

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 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.



Jane Clarkson
A/SENIOR MANAGER
CLEARING REGULATION

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

16 April 2015

Plan 6437/1

31.6177°S

31.6177°S

115.693491°E

115.70956°E



115.693491°E

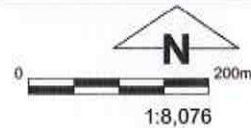
115.70956°E

31.626664°S

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Legend

-  Localities
-  Roads
-  Imagery
-  Clearing Instruments Activities
-  Local Government Authority



1:8,076

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

 Date 16.4.15

Jane Clarkson

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



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1. Application details

1.1. Permit application details

Permit application No.: 6437/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Northern Corridor Developments Ltd

1.3. Property details

Property: LOT 9029 ON DEPOSITED PLAN 403752, ALKIMOS
Local Government Authority: WANNEROO, CITY OF

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.02		Mechanical Removal	Road construction or upgrades

1.5. Decision on application

Decision: Granted
Decision Date: 16 April 2015

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 949 is described as Low woodland; banksia (Shepherd et al, 2001),	Clearing 2.02 hectares of native vegetation within Lot 9027 on Deposited Plan 403752, Alkimos, City of Wanneroo for the purpose of constructing Howden Parade.	Very Good; Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).	The vegetation under application consists of a Banksia attenuata and Banksia menziesii low open woodland over various herbs and shrubs (DER, 2015).
Heddle Vegetation Cottesloe Complex-Central And\South is comprised of woodland and open forest and closed heath (Hedde et al, 1980)		To Completely Degraded; No longer intact, completely/almost completely without native species (Keighery, 1994).	The vegetation under application is in a completely degraded to very good (Keighery, 1994) condition (DER, 2015). The condition and structure of the vegetation under application was obtained via a site inspection over the area under application by the Department of Environment Regulation on 18 February 2015.

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 application is to clear up to 2.02 hectares of native vegetation within Lot 9029, Alkimos for the purpose of constructing Howden Parade.

Several priority flora and two rare flora species have been recorded within 10 kilometres of the area under application. A Level 2 vegetation survey of the remnant vegetation across the former Lot 3 Romeo Road, Alkimos, which includes the area under application recorded a total of 149 native and 36 exotic species (ATA Environmental, 2004). The survey did not record any rare flora species. A priority 4 flora species was identified in the survey area (ATA Environmental, 2004). The priority 4 species was found commonly occurring on the ridge top of the parabolic dune with the vegetation consisting of Melaleuca systema, low open shrubland over Lomandra maritima herbland (ATA Environmental, 2004). This type of vegetation is not present within the proposed clearing area.

A vegetation survey identified two inferred Priority Ecological Communities (PEC) that may occur within the former Lot 3 Romeo Road, Alkimos (ATA Environmental, 2004). The two inferred PEC's are Floristic Community Types 24 – Northern Spearwood shrublands and 29b – Acacia shrublands on taller Quindalup dunes (ATA Environmental, 2004). The vegetation under application is a low open woodland of Banksia

attenuata and *Banksia menziesii* and not a representation of the two inferred PEC's (DER, 2015).

Several fauna species of conservation significance have been recorded within 10 kilometres of the area under application including Carnaby's cockatoo (Parks and Wildlife, 2007-). The vegetation under application consists of a *Banksia attenuata* and *Banksia menziesii* woodland. The native feeding records on the Swan Coastal Plain reveal that banksia species account for nearly 50 per cent for Carnaby's cockatoo, with the majority of records from *Banksia attenuata* (Shah, 2006). This species and the co-dominant *Banksia menziesii* are considered essential native food sources for Carnaby's cockatoo (Shah, 2006).

The proposed clearing will increase the risk of weeds and dieback spreading into adjacent vegetated areas. Weed and dieback management practices will help to mitigate the impact of spreading weeds and dieback.

Considering that the application area contains vegetation in a very good (Keighery, 1994) condition (DER, 2015) and comprises of two hectares of Carnaby's cockatoo preferred foraging habitat, the application area may contain high biodiversity values.

The proposed clearing may be at variance to this principle.

Methodology

References

ATA Environmental (2004)
DER (2015)
Keighery, B.J. (1994)
Parks and Wildlife (2007-)
Shah, B. (2006)

GIS Databases

-SAC Bio Databases (March 2015)

(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 fauna species of conservation significance have been recorded within 10 kilometres of the area under application including the Woylie (*Bettongia penicillata* subsp. *ogilbyi*), Carnaby's cockatoo (*Calyptorhynchus latirostris*) Chuditch (*Dasyurus geoffroii*) and the Black-flanked rock wallaby (*Petrogale lateralis* subsp. *lateralis*) (Parks and Wildlife, 2007-).

The area under application adjoins areas currently under development, with the use of heavy machinery and vehicles entering this area occurring on a daily basis (DER, 2015). Sections of the proposed clearing area have been subject to past disturbances such as tracks which have been previously created within the proposed clearing area for possible unexploded ordinance searches (Coterra Environment, 2015). Considering this it is unlikely the vegetation under application would support habitat for ground dwelling fauna.

The area under application is within a confirmed breeding area and mapped within an unconfirmed feeding area for Carnaby's cockatoo. These areas were mapped based on the presence of vegetation types that Carnaby's cockatoo show preference for when choosing a food source.

During the site inspection numerous *Banksia* trees that would provide foraging habitat for Carnaby's cockatoos were observed within the application area (DER, 2015). There were no trees observed within the applied area suitable for breeding purposes for black cockatoos (DER, 2015).

The native feeding records on the Swan Coastal Plain reveal that banksia species account for nearly 50 per cent for Carnaby's cockatoo, with the majority of records from *Banksia attenuata* (Shah, 2006). This species and the co-dominant *Banksia menziesii* are considered essential native food sources for Carnaby's cockatoo (Shah, 2006). Basic ecological theory, expert opinion and recent evidence suggests that the remaining native and pine plantation foraging habitat on the Swan Coastal Plain is just sufficient to support the current population of Carnaby's cockatoo. Therefore, it is considered that any reduction in foraging habitat will result in a reduction in the carrying capacity of the region and therefore a decline in the population of Carnaby's cockatoo. A recent study involving population analysis modelling suggests that if clearing continues to occur at its current rate without effective habitat restoration, the species is likely to decline to extinction in less than 20 years (Cockerill et al, 2013).

The application area is comprised largely of *Banksia* woodland in a very good (Keighery, 1994) condition (DER, 2015), therefore the native vegetation under application provides significant foraging habitat for Carnaby's cockatoo.

The proposed clearing is at variance to this principle.

The impacts identified above have been offset through the Commonwealth Environment Protection and Biodiversity Conservation Act 1999. The offset approved by the former Department of the Environment, Water, Heritage and the Arts (now Department of the Environment) required the proponent to contribute funds to the former Department of Environment and Conservation (DEC) for the purchase of 936 hectares of vegetation which included Carnaby's cockatoo foraging habitat. The offset was based upon the clearing of 157 hectares of

Carnaby's cockatoo foraging habitat which included the 2.02 hectares of native vegetation the subject of this application. The proponent has finalised the offset and the 936 hectare remnant was purchased by the former DEC for conservation purposes.

Methodology References
Cockerill et al (2013)
Coterra Environment (2015)
DER (2015)
Keighery, B.J. (1994)
Parks and Wildlife (2007-)
Shah, B. (2006)

(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 have been two rare flora species mapped within 10 kilometres of the application area, with the closest species being recorded approximately 5.4 kilometres from the application area. The two species have been mapped in different soil and vegetation types to the application area.

A vegetation survey did not identify any rare flora species within the former Lot 3 Romeo Road, Alkimos, which includes the area under application (ATA Environmental, 2004).

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

Methodology References
ATA Environmental (2004)

GIS Databases
-SAC Bio Databases (March 2015)

(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 at variance to this Principle**
In the local area (10 kilometre radius), 12 records of the Threatened Ecological Community (TEC) 26a: Melaleuca huegelii - Melaleuca acerosa shrublands over limestone ridges have been recorded. The nearest occurrence is approximately one kilometre from the area under application.

A vegetation survey within the former Lot 3 Romeo Road, Alkimos recorded 10 vegetation units of which none were a representation of the nearby TEC (ATA Environmental, 2004).

The proposed clearing is not at variance to this principle.

Methodology References
ATA Environmental (2004)

GIS Databases
-SAC Bio Databases (March 2015)

(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 at variance to this Principle**
The local area (10 kilometre radius) surrounding the application retains approximately 50 per cent native vegetation.

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). However, the Environmental Protection Authority (EPA) recognises the Perth Metropolitan Region as a constrained area, which provides for the reduction of vegetation complexes to a minimum of 10 per cent of the pre-European extent (EPA, 2006).

The Beard Vegetation Association and Heddle Vegetation Complex mapped within the application area retain approximately 58 and 39 per cent pre-European vegetation within the Swan Coastal Plain respectively. The City of Wanneroo retains 47 per cent pre-European vegetation (Government of Western Australia, 2013).

The area under application is considered to be significant as a remnant as it provides foraging for Carnaby's cockatoo however, does not occur within an extensively cleared landscape.

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

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DPaW Managed Lands (%)
IBRA Bioregion Swan Coastal Plain	1,501,221	586,975	39	36
Shire City of Wanneroo	67,516	31,428	47	51
Beard Vegetation Association in Bioregion 949	209,983	121,216	58	55
Hedde Vegetation Cottesloe Central/ South	44,818	17,528	39	13

Methodology

References
Commonwealth of Australia (2001)
EPA (2006)
Government of Western Australia (2013)

GIS Databases
-Hedde 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 at variance to this Principle

The nearest wetland to the area under application is a Resource Enhancement Wetland, Carabooda Lake, occurring 1.4 kilometres east of the area under application. A Conservation Category Wetland also occurs 2.2 kilometres east of the area under application.

Given the distance to hydrological features the vegetation under application is not considered to be growing in, or in association with, an environment associated with a watercourse or wetland.

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

The soils within the area under application are part of the Spearwood Dune System and are comprised of siliceous sands with some brown sands and leached sands (Northcote et al. 1960-68).

Sandy soils are highly susceptible to wind erosion and if left exposed for any length of time post clearing, wind erosion has the potential to result in appreciable land degradation. However, given the relatively small amount of clearing it is unlikely the proposed clearing will result in appreciable land degradation.

The application is not likely to be at variance to this principle.

Methodology

References
Northcote, et al. (1960-68)

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

A total of 35 Bush Forever sites (closest being site 383 approximately 550 metres away) have been recorded within 10 kilometres of the area under application. The Neerabup Nature Reserve, Yanchep National Park and Gngara-Moore River State Forest are approximately 1.7, 3.3 and 4.1 kilometres respectively away from the proposed clearing area.

Given that the area under application adjoins an area that is currently under development and that the width of

the proposed clearing is approximately 40 metres, it is unlikely the vegetation proposed to be cleared would act as a corridor to facilitate the movement of fauna to areas of conservation.

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

Methodology GIS Databases
-DPaW Managed Land
-Bush Forever

(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 at variance to this Principle

The nearest wetland to the area under application is a Resource Enhancement Wetland, Carabooda lake, occurring approximately 1.4 kilometres east of the area under application.

Groundwater salinity mapped within the application area is between 500 and 1000 milligrams per litre (marginal). Given this low salinity level, it is considered that the proposed clearing will not lead to a perceptible rise in the watertable and thus an increase in groundwater salinity levels.

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

Methodology GIS Databases
-Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
-Hydrography, linear
-Public 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 at variance to this Principle

The nearest wetland to the area under application is a Resource Enhancement Wetland, Carabooda Lake, occurring 2.3 kilometres east of the area under application. A Conservation Category Wetland also occurs 3.1 kilometres east of the area under application.

Given the distance to the nearest watercourse and wetlands and the sandy soil occurring within the application area (Northcote et al 1960-68), the proposed clearing will not cause or exacerbate flooding and is not at variance to this principle.

Methodology References
Northcote, et al. (1960-68)

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

Planning instruments and other relevant matters.

Comments The proposed clearing falls within the Perth Coastal Underground Water Pollution Control Area (Priority 3 Public Drinking Water Source Area). The Department of Water (DoW) was notified of the proposed clearing and advised that it had no comment (DoW, 2015).

No submissions from the public have been received for the proposed clearing.

The City of Wanneroo has granted planning approval to the applicant under the provisions of the City of Wanneroo District Planning Scheme No.2 and the Metropolitan Regional Scheme for the proposed clearing and bulk earthworks to allow for the construction of Howden Parade (City of Wanneroo, 2015a).

The City of Wanneroo (2015b) has advised that a proposed public open space is located at the southern end of the proposed clearing footprint and any clearing within this area should be kept to a minimum. Where the clearing cannot be avoided the applicant is to revegetate in accordance with the approved 'Conservation Area Management Plan' (Revision 2, October 12) for Trinity Estate, Alkimos (City of Wanneroo, 2015b).

In November 2008 the Local Structure Plan (LSP) for the former Lot 3 Romeo Rd, Alkimos (which includes the area under application) was referred to the former Department of the Environment, Water, Heritage and the Arts (DEWHA) (now Department of the Environment) due to Carnaby's cockatoo being recorded on site during a fauna survey. DEWHA assessed the impact of the proposed development on this species and granted approval (EPBC 2008/4601) with conditions on 11 September 2009 with a subsequent correction notice made on 9 November 2009 and a variation on 29 September 2011 (DEWHA, 2009). The approval was for the clearing of 157 hectares of significant habitat for Carnaby's cockatoo (*Calyptorhynchus latirostris*) within the Trinity Estate urban development proposal (total footprint of 226.0397 hectares) and required that an offset be provided. This offset requirement included:

- Providing funds to acquire 459 hectares of Carnaby's cockatoo foraging habitat north of Gingin;
- Providing funds to acquire 477 hectares of Carnaby's cockatoo foraging habitat east of Badgingarra; and
- Retaining as part of reserves, 5.52 hectares of Carnaby's cockatoo foraging habitat within public open space.

This offset has since been finalised whereby funds were provided by Northern Corridor Developments Ltd to the former Department of Environment and Conservation for the purchase of the abovementioned land parcels for conservation.

Several other clearing permits have been granted to Northern Corridor Developments Ltd within the scope of the Trinity Estate urban development proposal and have also been offset by the land purchases outlined above:

- Clearing Permit CPS 3085/2 – Approved clearing of 12 hectares
- Clearing Permit CPS 3519/1 – Approved clearing of 7.3 hectares
- Clearing Permit CPS 3682/2 – Approved clearing of 2.014 hectares
- Clearing Permit CPS 4118/1 – Approved clearing of 7.9 hectares
- Clearing Permit CPS 4638/1 – Approved clearing of 5.16 hectares
- Clearing Permit CPS 5271/1 – Approved clearing of 21.8 hectares
- Clearing Permit CPS 5746/1 – Approved clearing of 6.09 hectares

Methodology **References**
City of Wanneroo (2015a)
City of Wanneroo (2015b)
DEWHA (2009)
DoW (2015)

4. References

- ATA Environmental (2004) Lot 3 Romeo Road, Alkimos Flora and Vegetation Survey, Northern Corridor Developments LTD. Information received within Clearing Permit Application CPS 5746/1 - Northern Corridor Developments Ltd (DER Ref:A659830)
- City of Wanneroo (2015a) Additional information received for Clearing Permit Application CPS 6437/1 – Development approval granted to Northern Corridor Developments (DER Ref:A895697).
- City of Wanneroo (2015b) Submission received in relation to Clearing Permit Application CPS 6437/1 – Development approval granted to Northern Corridor Developments (DER Ref:A882190).
- Cockerill, A., Lambert, T, Conole, L. and Pickett, E. (2013). Carnaby's Cockatoo Population Viability Analysis Model Report. Report funded by the Department of Sustainability, Environment, Water, Population, and Communities through the Sustainable Regional Development Program. Parsons Brinckerhoff, Perth.
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Coterra Environment (2015) Clearing Permit Application Supplementary Report. Eastern Precinct, Howden Parade - Trinity Estate, Alkimos. Information received within Clearing Permit Application CPS 6437/1 - Northern Corridor Developments Ltd.
- DER (2015) Site Inspection Report for Clearing Permit Application CPS 6437/1 – Northern Corridor Developments Ltd. Site inspection undertaken on 18 February 2015 (DER Ref:A893351).
- DEWHA (2009) Copy of Approval from the then Department of Environment, Water, Heritage and the Arts of the Local Structure Plan for Lot 3 Romeo Rd, Alkimos (DER Ref:A895725).
- DoW (2015) Comments received in relation to Clearing Permit Application CPS 6437/1 - Northern Corridor Developments Ltd (DER Ref:A877395)

- 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 (2013) 2013 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2013. WA Department of Parks and Wildlife, Perth.
- Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.
- 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.
- Parks and Wildlife (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed March 2015.
- 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., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.