



## 1. Application details

### 1.1. Permit application details

Permit application No.: 1792/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Electricity Networks Corporation (Western Power)

### 1.3. Property details

Property:  
 LOT 4 ON PLAN 10087 (House No. 240 FLYNN NEERABUP 6031)  
 LOT 600 ON PLAN 302260 (House No. 959 PINJAR NEERABUP 6031)  
 LOT 11191 ON PLAN 217352 (House No. 1330 PERRY PINJAR 6065)  
 LOT 12887 ON PLAN 219810 ( PINJAR 6065)  
 SWAN LOCATION 5608 ( YANCHEP 6035)  
 STATE FOREST 65 ( YANCHEP 6035)  
 STATE FOREST 65 ( YANCHEP 6035)  
 STATE FOREST 65 ( NOWERGUP 6032)  
 STATE FOREST 65 ( YANCHEP 6035)  
 ROAD RESERVE ( NOWERGUP 6032)  
 LOT 3050 ON PLAN 202794 (Lot No. 3035 WESCO NOWERGUP 6032)  
 SWAN LOCATION 2695 (House No. 1460 OLD YANCHEP NOWERGUP 6032)  
 ROAD RESERVE ( NOWERGUP 6032)  
 ROAD RESERVE ( NOWERGUP 6032)  
 SWAN LOCATION 5665 (House No. 1520 OLD YANCHEP NOWERGUP 6032)  
 SWAN LOCATION 3207 (House No. 1550 OLD YANCHEP NOWERGUP 6032)  
 ROAD RESERVE ( NOWERGUP 6032)  
 SWAN LOCATION 3118 (House No. 1600 OLD YANCHEP NOWERGUP 6032)  
 SWAN LOCATION 3303 (House No. 1670 OLD YANCHEP NOWERGUP 6032)  
 ROAD RESERVE ( WANNEROO, CITY OF )  
 ROAD RESERVE ( NEERABUP 6031)  
 LOT 507 ON DIAGRAM 61476 (Lot No. 507 PEDERICK NEERABUP 6031)  
 ROAD RESERVE ( NEERABUP 6031)  
 LOT 1000 ON PLAN 37249 (House No. 190 PEDERICK NEERABUP 6031)  
 ROAD RESERVE ( NEERABUP 6031)  
 LOT 1001 ON PLAN 37249 (House No. 220 PEDERICK NEERABUP 6031)  
 LOT 1002 ON PLAN 37249 (House No. 240 PEDERICK NEERABUP 6031)  
 LOT 40 ON DIAGRAM 78186 (House No. 26 MATHER NEERABUP 6031)  
 LOT 41 ON DIAGRAM 84271 (House No. 34 MATHER NEERABUP 6031)  
 Local Government Area: City Of Wanneroo  
 Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
13.6		Mechanical Removal	Infrastructure Maintenance

## 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 project area contains four vegetation complexes described by Heddle (1980): Karrakatta Complex - Central and South (open Eucalypt forest and Banksia woodland); Cottesloe	The proposal is to clear 13.6ha of native vegetation in a 20m to 40m wide easement over a distance of approximately 27km. The route will impact on native vegetation in road reserves, State Forest,	Pristine: No obvious signs of disturbance (Keighery 1994)	Vegetation condition taken from Western Power EMP (December 2006)

Complex - Central and South (mosaic of woodland and open Eucalypt forest with closed heath on limestone outcrops); Herdsman Complex (sedgeland and fringing woodlands of Eucalyptus - Melaleuca spp), and; Karrakatta Complex North (low open Eucalypt forest and low Banksia woodland)

National Park and six Bush Forever sites (2.4ha in Bush Forever sites). Most of the cleared native vegetation will be allowed to regenerate to a height of approx 6m

### 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 proposed clearing of 13.6ha is for the installation of a 132kv transmission line from Wanneroo Substation to Pinjar Power Station. The proposal is to temporarily clear 20m x 20m areas for erecting poles and pylons, and for the development of an easement 20m wide under poles and 40m wide under pylons. An existing 3m firebreak will be widened to a 4m access track.

Some of the clearing is restricted to tree trimming and temporary clearing - with active rehabilitation and natural regeneration to a height of 6m beneath power lines.

The proposed area to be cleared traverses Gngangara-Moore River State Forest, Yeal-Gngangara Area (register of National Estate) and Bush Forever sites.

The Yeal-Gngangara Area (Register of National Estate) is a significant area of zoogeographically important remnant bushland with a rich diversity of habitats for birds, reptiles and amphibians. It area provides an important continuum from permanent open water to ridges and is under pressure from roads, power and gas pipelines, mining tenements and recreational pursuits.

The Bush Forever sites encompass significant flora and significance linkages for metapopulations to other sites, Conservation Category Wetlands and TECs.

To mitigate the impact on Bush Forever sites, Western Power have drafted an offset proposal to rehabilitate, at the 2:1 ratio, an existing minimum 5ha parcel of land within the Metropolitan Region.

To further mitigate the impact on the native vegetation, conditions have been placed on the permit to avoid and minimise clearing of native vegetation, to revegetate and rehabilitate the area under application, and to adopt hygiene practises for minimising the spread of dieback and weeds.

**Methodology**      Beard (1990); Heddle (1980); Western Power EMP (2006); SAC bio datasets: Orthomosaic Swan Coastal Plain DLI 01/04; Australian Heritage Database (Aust Govt Dept of Envir and Water Resources 2003)

#### (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**

The proposed clearing of multiple small areas and a narrow strip is unlikely to yield significant impacts on fauna habitat.

The area to be cleared is also surrounded by habitat that is heavily vegetated and of comparable biodiversity value.

**Methodology**      Western Power EMP (2006); SAC Bio datasets: Orthomosaic Swan Coastal Plain DLI 01/04

#### (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 are seven populations of Declared Rare Flora (DRF) and Priority Flora within a 10km radius of the proposed area to be cleared. The nearest DRF being Eucalyptus arguitifolia, which occurs along a limestone ridge formation approximately 1.5km to the west of the proposed area to be cleared.

The proposal does not include clearing any areas of limestone ridge formations.

It is unlikely that this proposal will impact on the continued existence of any rare flora.

**Methodology** SAC Bio datasets: DRF (DEC 2005); Clearing Regs ESAs (DEC 2005)

**(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**

There are fifty known TEC's within a 10km radius of the proposed area to be cleared. The closest TECs, with a buffer zone of 500m, are just under 2km from the area proposed to be cleared.

These TECs are in low lying seasonally inundated flats with a topsoil of grey sand/clay, whereas the proposed area to be cleared is in dune-swale terrain with leached sands.

It is unlikely that the proposed clearing will impact on vegetation necessary for the maintenance of TECs.

**Methodology** SAC Bio Datasets: TECs (DEC 2005); ESAs (DOE 2005)

**(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 objective for environmental protection and biodiversity conservation, (EPA 2002) is to retain 30% or more of the pre-european clearing extent of each vegetation community.

The proposed area to be cleared traverses three vegetation types as described by Beard (1990), all within the Intensive Land Use Zone where extensive clearing has already occurred and only one with a current extent of less than 30%, but well in excessive of the 10% level representing endangered.

	Pre-European (ha)*	Current extent (ha)*	Remaining (%)*	Conservation **status	% In reserves/ managed land
IBRA Bioregions - Swan Coastal Plain***	1 529 235	657 450	43.0	Least Concern	
Shire of Wanneroo	78 809	45 361	57.6	Least Concern	
Vegetation type:					
Beard: Type 6	79 001	18 398	23.3	Vulnerable	14.5
Beard: Type 949	116 545	96 277	82.6	Least Concern	22.3
Beard: Type 998	51 094	18 320	35.9	Depleted	32.9

\* (Shepherd et al. 2001)

\*\* (Department of Natural Resources and Environment (2002)

\*\*\* Within the Intensive Landuse Zone

The three vegetation types to be cleared are well represented in nearby and adjacent reserves.

The proposed temporary clearing of small areas, and a narrow strip, is unlikely to adversely impact on the vegetation within these reserves.

**Methodology** SAC Bio datasets: IBRA (EA 2000); Beard Current Extent of Native Vegetation (DA 2001); Bush Forever (DPI 2005); EPA Position Statement No. 2 (EPA 2000)

**(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 proposal is approximately 4km to the north-east of Joondalup Lake and 10km to the south-east of Loch McNess (both ANCA wetlands). The site is also 200m east of Camel Swamp and 800m west of Lake Pinjar damplands (both Geomorphic Wetlands, Swan Coastal Plain).

The proposed clearing of small areas and a narrow strip is not in a watercourse or wetland or buffer. Nor is it likely to change water tables.

**Methodology** SAC Bio datasets: Hydrography, Linear (DEC 2004); Geomorphic Wetlands SCP (DEC); RAMSAR Wetlands (CALM 2003); ANCA Wetlands (2001); EPP Areas and Lakes Gnanagara Mound (DEP); Clearing Regulations ESAs (DoE 2005)

**(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 proposal is for the widening of existing 3m firebreaks to 4m access tracks, and for clearing of 20m x 20m areas for poles and pylons.

The small area to be cleared in an area that is heavily vegetated is unlikely to cause appreciable land degradation.

**Methodology** SAC Bio datasets: Acid Sulphate Risk SCP (DAFWA 2004); Soils Statewide DA 1999)

**(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**

The proposed vegetation to be cleared passes through Gngangara-Moore River State Forest, Yeal-Gngangara Area (Register of National Estate) and three Bush Forever sites. It also abuts a further three Bush Forever conservation areas.

The temporary clearing of small pockets of well represented habitats is considered unlikely to significantly impact on conservation areas.

The Bush Forever Office of DPI has, in principle, accepted the offsets package proposed by Western Power to rehabilitate a 5 ha site and achieve a net benefit gain.

To further mitigate the impact on the native vegetation, conditions have been placed on the permit to avoid and minimise clearing of native vegetation, revegetate and rehabilitate the area under application and to adopt hygiene practises for minimising the spread of dieback and weeds.

**Methodology** Western Power EMP (2006); SAC Bio datasets: CALM Managed lands & Waters (CALM 2005); WRC Estate (DOE 2004); Bush Forever (DPI 2001); Register of National Estate (EA 2003); Cadastre (DLI 2006)

**(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 proposed clearing is within the Gngangara Mound EPP 1992. However as the clearing is of a temporary nature, and the cleared vegetation will be encouraged to naturally regenerate, is unlikely that the proposal will affect either groundwater-dependent ecosystems or the quality of surface and underground water.

**Methodology** SAC Bio datasets: Salinity Mapping (DOLA 2000); Acid Sulphate Soil Risk (DOE 2004); Groundwater Sites (DoW); Groundwater Salinity (DOE 2005); Hydrography, linear (DOE 2004)

**(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 proposal is for the temporary clearing of small pockets, and a narrow strip, of native vegetation in an area that is heavily vegetated. It is therefore unlikely to cause or exacerbate the incidence or intensity of flooding.

**Methodology** SAC Bio datasets: Swan Coastal Plain (DLI 2004); Hydrographic Catchments (DOE 2003); RIWI Act Groundwater Areas (WRC 2000).

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

**Comments**

There are no known Aboriginal sites of Significance in the proposed area to be cleared. The nearest identified Aboriginal Sites of Significance are: Orchestra Shell Caves approximately 2km to the west and south-west, and; Honey Possum Site approximately 2.4km to the south-east.

There is a Native Title Claim over the area under application. The Department of Environment and Conservation's advertising of the application in the West Australian newspaper constitutes legal notification of the native title representative body for the purpose of the future act procedures under the Native Title Act 1993. No response was received from the representative body.

**Methodology**

#### 4. Assessor's comments

Purpose	Method Applied	Comment
Infrastructure Maintenance	Mechanical Removal	13.6
		area (ha)/ trees
		Construction of 132kV transmission line.
		The assessable criteria have been addressed, and the proposal is not likely to be at variance to principles (b), (c), (d), (e), (f), (g), (i), and (j). It is at variance to principles (a) and (h).
		If clearing is permitted, it is recommended that offset, revegetation, weed and dieback management conditions be imposed.

#### 5. References

- ANCA (1996) A Directory of Important Wetlands in Australia. Second Edition. Australian Nature Conservation Agency, Canberra
- EPA (1992) Environmental Protection (Swan Coastal Plain Lakes) Policy 1992. Western Australian Government Gazette, 24 December, 1992, pp 6287-93
- EPA (1999) Review of the Environmental Protection (Swan Coastal Plains Lakes) Policy 1992. Environmental Protection Authority.
- EPA (2004) Guidance for the Assessment of Environmental Factors - terrestrial fauna for Environmental Impact Assessment in Western Australia. Report by the EPA under the Environmental Protection Act 1986. No 56 WA.
- EPA (2004) Guidance for the Assessment of Environmental Factors - terrestrial flora and vegetation surveys for Environmental Impact Assessment in Western Australia. Report by the EPA under the Environmental Protection Act 1986. No 51 WA.
- EPA (2006) Guidance for the Assessment of Environmental Factors -level of assessment of proposals affecting natural areas within the System 6 region and Swan Coastal Plain portion of the System 1 Region. Report by the EPA under the Environmental Protection Act 1986. No 10 WA.
- Government of Western Australia (1997) Wetlands Conservation Policy for Western Australia, Department of Conservation and Land Management and the Water and Rivers Commission, Perth WA.
- Government of Western Australia (2000) Bush Forever Volumes 1 and 2. Western Australian Planning Commission, Perth WA.
- 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.
- 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.
- 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.

#### 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
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)