GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS
Area Permit Number:246/1
File Number:19202
Duration of Permit: From 28 November 2004 to 28 November 2009.

PERMIT HOLDER
Public Transport Authority of Western Australia

LAND ON WHICH CLEARING IS TO BE DONE
Lot 340 on Diagram 57923, Part Lot 0 on Plan 6977 and Cockburn Sound Location 2849 known as New Metro Rail South Street (Murdoch) Transit Station.

AUTHORISED ACTIVITY
1. Clearing of up to 3.2 hectares of native vegetation within the area cross hatched yellow on attached Plan 246/1.

CONDITIONS
1. The Permit Holder shall not clear any native vegetation within the area cross hatched red on attached Plan 246/1.

2. The Permit Holder shall not cause or permit the discharge of stormwater into the area cross hatched red on attached Plan 246/1.

3. The Permit Holder shall selectively remove or kill all plant species that are not native vegetation within the area cross hatched red on attached Plan 246/1 during the months of June or July each year.

4. The Permit Holder shall construct a chain mesh security fence to a height of at least two metres enclosing the area cross hatched red on attached Plan 246/1. The fence shall be constructed to exclude public access and shall be completed by 30 March 2005.

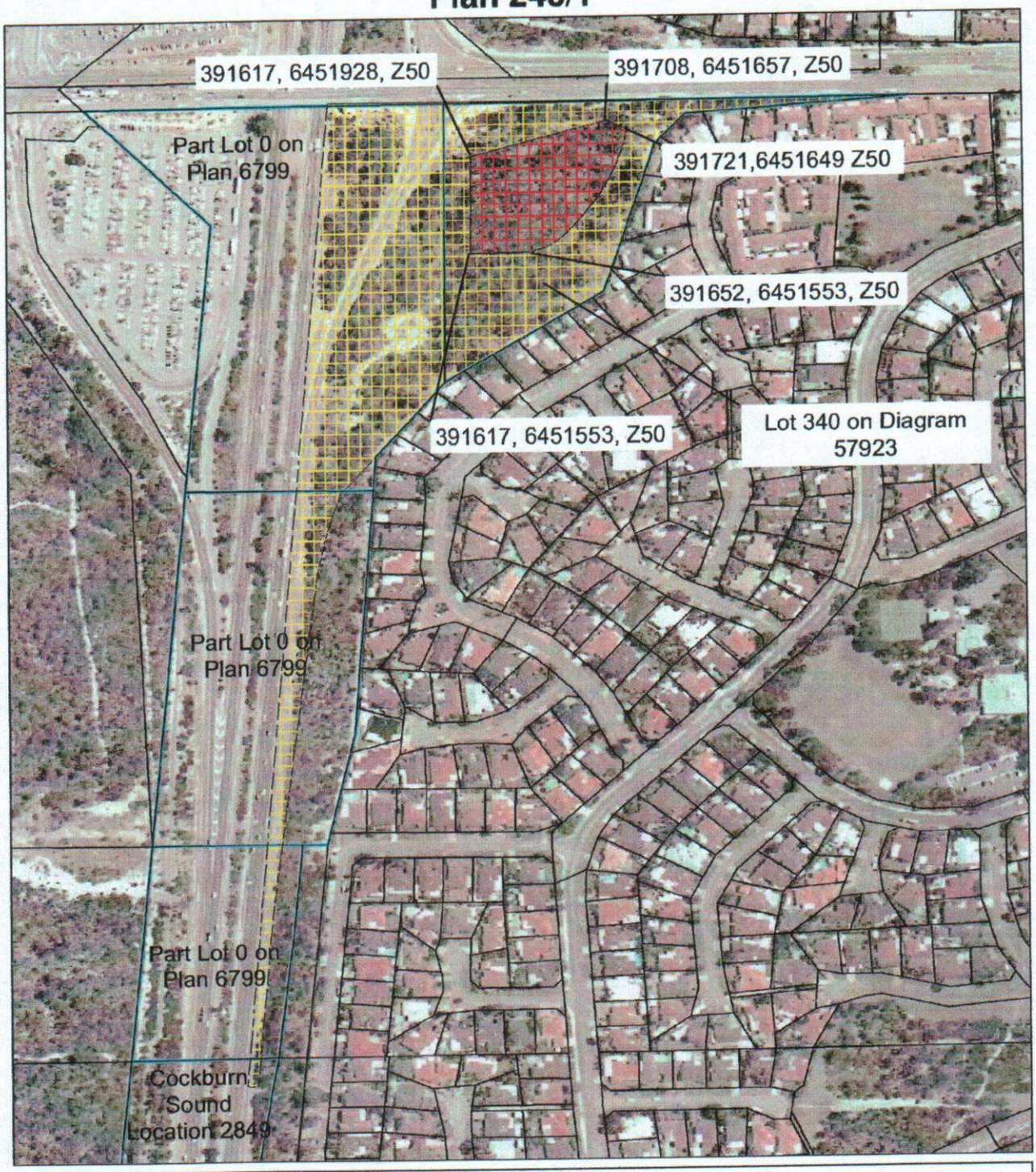
5. Prior to commencing clearing, the Permit Holder shall trap all specimens of Isoodon obesulus (Quenda) within the area cross hatched red and yellow on attached Plan 246/1 and deliver to Department of Conservation and Land Management at 17 Dick Perry Ave Kensington by 10:00am the following day.

6. The Permit Holder shall:
(a) count the number of Caladenia huegelii present; and
(b) count the number of flowering Caladenia huegelii present,
during the month of September each year within the area cross hatched red on attached Plan 246/1. The Permit Holder shall submit this information in a report to the CEO by 30 June each year.

Derek Carew-Hopkins

Chief Executive Officer, Department of Environment.
29 October 2004

Plan 246/1



LEGEND

- Land parcels related to instrument

Clearing Instruments

- Areas Subject to Conditions
- Areas Approved to Clear

- Cadastre - DLI 1/03/04
- Swan Coastal Plain North 1m Orthomosaic - DLI 01/04

N

0 100 m

Scale 1:4000
(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.

Date 29/10/04

Derek Carew-Hopkins
Chief Executive Officer, Department of Environment

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

Government of Western Australia

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Department of Environment
Government of Western Australia

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 246/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: MR Reece Waldock CEO Western Australian Public Transport Authority

1.3. Property details

Property: LOT 340 ON DIAGRAM 57923 (Lot No. 340 KWINANA LEEMING 6149)
PART LOT 0 ON PLAN 6977 (MURDOCH 6150)
COCKBURN SOUND LOCATION 2849 (Lot No. 2849 KWINANA MURDOCH 6150)
Colloquial name: Road reserve, Kwinana Fwy & South St, Leeming

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
3.2		Mechanical Removal	Railway construction or 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 site is a small area of woodland, bounded by South Street to the north, Kwinana Freeway to the west, residential housing to the east and south-east and continuous with a narrow strip of bush along the freeway to the south. The vegetation consists of Banksia/Eucalypt woodland. The northern part of the site contains some very large, mature marri trees (Corymbia calophylla) and the southern part of the site contains Jarrah (Eucalyptus marginata). Four Banksia species, the Candle Banksia (B. attenuata), Firewood Banksia (B. menzeisii) Holly-leafed Banksia (B. ilicifolia) and Bull Banksia (B. grandis), are distributed throughout the site with the first two being the most common. The understorey is of mixed shrubs, and included grasstrees (Xanthorrhoea preissii) and zamias (Macrozamia reidlei). Around the western and northern boundaries of the site there are some Kunzea sp. and paperbark trees (Melaleuca preissiana). (Bamford Consulting Ecologists 2004).	The proposed carpark will occupy ca. 80% of the site, with 0.8ha of the best quality vegetation to be retained in a reserve in order to protect a population of Caladenia huegelii. This remnant will be bounded by the station complex, South Street and a Freeway on-ramp. (Bamford Consulting Ecologists 2004).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	Most of the vegetation is in good condition. An area in the southern part of the site had been burnt in the recent past. There is a firebreak around the housing, and these areas have the greatest human impact, such as garden waste and rubbish being dumped over fences, and the illegal dumping of pool water through pipes in the fence. The area is also used for dog walking. (Bamford Consulting Ecologists 2004).

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 City of Melville has advised that Beckley Bushland is recognised as a Priority 1 bushland area primarily for reasons relating to its condition (very little weed cover and good quality vegetation). Appellants identified that the bushland to be impacted on by this proposal is high in biodiversity (both flora and fauna).

However, the Beckley Bushland was not identified in the Bush Forever study as an area of regional significance that requires conservation. 'Regionally significant bushland has been identified on the basis of criteria relating to its conservation value. Important among these criteria is the achievement, where possible, of a comprehensive representation of all the ecological communities originally occurring in the region, principally through protecting a target of at least 10% of each vegetation complex' (Bush Forever 2000, p viii). Bush Forever Sites are 'representative of regional ecosystems and habitats'.

Methodology Bush Forever (2000).

(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**

It is likely that the vegetation under application provides significant habitat for fauna species in the local area, which is otherwise substantially built-up. The Kwinana road reserve could provide alternative habitat for some species.

A fauna survey has been carried out for the area under application, largely reliant on literature and museum records in addition to sightings (Bamford Consulting Ecologists, 2004). No trapping was carried out.

- There is no information on the likelihood of threatened invertebrate fauna presence in the vegetation under application.
- 5 amphibian species may occur on the site, as there are wetlands adjacent to the project area. Three of these species may utilise the habitat during the non-breeding season; the proposed development will reduce populations of most species because of loss of habitat.
- 28 reptile species may occur on the site (no reptiles were recorded during the site visit); loss of native vegetation will result in comparable population declines. Species likely to survive in the retained native vegetation will be those that are small and occur at high population densities, whereas there will probably be insufficient habitat for larger species (which will also be more vulnerable to road kills).
- 66 bird species may utilise the area under application; 24 species are of conservation significance whilst the majority are widespread in southwest WA. The proposed vegetation clearing will contribute to incremental loss of foraging habitat for Carnaby's Black-Cockatoo (Calyptorhynchus latirostris, S1 status); 13 other bird species are predicted as unable to persist in the area after clearing.
- 11 native mammal species are predicted to occur in the area. Nine species are bats that may be reliant on tree hollows. Brushtail possums may be present. The abundance of diggings indicate that Quendas are present in the bushland (Isoodon obesulus, Priority 5 species: Taxa in need of monitoring). The population is estimated at approximately 10-15 individuals; 'the number of Quenda on the site may be artificially high, as development in nearby areas may have concentrated the local Quenda population into a smaller area' (Bamford Consulting Ecologists 2004). The proponent will relocate the Quenda in consultation with CALM prior to any works commencing since it is not likely that they would survive the reduction in habitat otherwise.

The Environmental Protection Authority considered these matters and determined that impacts are quite small in a regional context. EPA have advised that relocation of the Quenda in consultation with CALM is appropriate.

Methodology Bamford Consulting Ecologists (2004)

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

Comments **Proposal is at variance to this Principle**

A flora survey of the area under application (Ecoscape (Australia) Pty Ltd 2004) indicated that 22 Caladenia huegelii would be impacted by the original plan (which had the slip road buffered from houses on Beckley Circle by a 25m strip of vegetation). Less than 800 C. huegelii individuals have been recorded; the South St population is the third largest population. The plan was therefore redesigned to include a 0.8 ha reserve within the bushland (transplanting the two C. huegelii plants that would be affected by the revised plan into the reserve), at the cost of the 25m buffer strip (presently 3.6m). This proposal is therefore in line with recommendations of both State and Federal Government, as indicated below.

The Commonwealth Department of Environment and Heritage ('DEH', Environment Australia 2003) advised that pursuant to Section 75 of the Environmental Protection and Biodiversity Conservation Act 1999, it does not consider the NMR proposal a 'controlled action' provided that NMR ensures that:

- The population of C. huegelii is protected at a secure reserve (of 0.9* ha) at the site.
- The hydrological regime at the reserve is permanently maintained and is subject to regular monitoring
- A Hydrology Management Plan for the site is developed by an appropriate hydrology expert and implemented (this is to be submitted to the DEH). This shall reflect annual changes in hydrology and the chemical/nutrient composition of groundwater at the site.
- NMR ensures that invasive weeds are effectively controlled.

[*DoE notes the discrepancy between the area requested by the DEH and that of the proposed reserve.]

The Western Australian Minister for the Environment has authorised the Public Transport Authority to take declared flora, subject to:

(a) the number and area of plants authorised to be taken to be finalised upon receipt of the PTA's further advice following its investigation of redesign options, with the objective being for the least number of plants to be taken;
(b) conditions to be developed by CALM for the salvage of the taken plants; and
(c) the appropriate protection of any plants and associated habitat to be retained at the site following any redesign.

The Environmental Protection Authority has considered these matters and determined that medium term security of the C. huegelii specimens provides sufficient time for the long term viability of the population to be monitored and if necessary, alternative plans to be developed.

Methodology Ecoscape (Australia) Pty Ltd (2004).

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a significant ecological community.

Comments **Proposal is not at variance to this Principle**

No known significant or threatened ecological communities have been identified.

Methodology GIS databases:
- Threatened Ecological Community Database - CALM 15/07/03[Data supplied does not necessarily represent a comprehensive listing of threatened ecological communities in the area in question. The comprehensiveness is dependent on the amount of survey carried out. The database is subject to updates and amendments].
- Threatened Plant Communities - DEP 06/95.

(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 vegetation type (Beard veg type – 1001 or Heddle veg type - Bassendean Complex-Central and South) has 27.8% or 27.0% of the pre-European extent remaining, respectively. These values are above the 10% target recommendation for vegetation representation set by the Environmental Protection Authority (2003) and Bush Forever (2000).

	Pre-European area (ha)	Current extent (ha)	Remaining %*	Conservation status**	Reserves/CALM-managed land, % veg
IBRA Bioregion - Swan Coastal Plain	1,498,297***	626,512	41.8	Depleted	23.8
Beard veg type - 1001	57,327	15,958	27.8	Vulnerable	3.7
Heddle veg type - Bassendean Complex-Central and South	87,477	23,624	27.0	Vulnerable	2.4

* Shepherd et al. (2001)
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*** Area within the Intensive Landuse Zone

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GIS databases:
- Pre-European Vegetation - DA 01/01.
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(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 development is not within 200m of a river, creek or estuary. The site is not within a proclaimed groundwater or surface water protection area.

Methodology GIS databases:
- Hydrography, linear - DOE 01/02/04.
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- EPP, Lakes - DEP 28/07/03.
- EPP, Wetlands (draft) - DEP 21/07/04.
- ANCA wetlands - CALM 08/01.

(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 site has a moderate to low risk of acid sulphate soils occurring at a depth of >3m; no risk of occurrence <3m from soil surface. However the area is somewhat marginal and a 1m change in the watertable shifts the area from moderate to high. Should there be a need to de-water or to complete deep excavations, the DoE has advised that a preliminary acid sulphate soil assessment be carried out. The NMR has no plans to carry out either, with the deepest excavations to 1.2 to 1.5m for a re-located water pipe.

Methodology GIS database: Acid Sulphate Soil risk map, SCP DOE 01/02/04.

(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 vegetation type (Beard veg type - 1001, Heddle veg type - Bassendean Complex-Central and South) has been extensively cleared. Additionally, only 3.7 / 2.4 % of the current extent is protected in secure tenure. The benchmark of 15% representation in conservation reserves (Janis Forest Criteria 1997) has not been met for this vegetation complex.

Methodology Shepherd et al. (2001).
GIS databases:
- Pre-European Vegetation - DA 01/01.
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(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 proposal will involve drainage of the land, which will be contained in an infiltration basin within the site. There is no plan in the submitted proposal to implement control of pollution or discharges from the carpark area. The proponent has indicated that a plan to this effect will be formulated.

Methodology

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

Comments **Proposal is not at variance to this Principle**

Flooding impacts unlikely to occur as a result of the proposed clearing due to its size and location.

Methodology

(k) Planning instrument or other matter.

Comments **Proposal is not at variance to this Principle**

The property is zoned as transport reserve. This recognises that the land lies within the primary transport corridor for the south west metropolitan region and also at a major intersection with a connecting east-west road in South St. The Southern Suburbs Railway project has been implemented to provide a socially and environmentally more sustainable means of transportation for the south-west corridor.

Methodology

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Railway construction or maintenance	Mechanical Removal	3.2	**Grant**	The proposal is seriously at variance with Principles (b) and (c) and is at variance with Principle (h). However the proponent has committed to a number of measures that improve the environmental outcomes of the proposal. The revised proposal for the South St station should provide a suitable outcome for the short-term conservation of the rare flora at the site, while facilitating transport requirements. The commitments to offsets and

translocation of Quenda, undertaken by the proponent, will contribute in a reasonable environmental outcome.

5. References

Bamford Consulting Ecologists (2004) Fauna of the proposed carpark, corner of South St and Kwinana Freeway. Commissioned by RPS Bowman Bishaw Gorham and New Metrorail. 3 June 2004. DoE TRIM No HD18406.

Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.

Ecoscape (Australia) Pty Ltd (2003) Declared rare and priority flora – proposed South Street railway station, prepared for New Metrorail. DoE TRIM ref HD18446

Environment Australia (2003) Department of Environment Australia correspondence dated 11 August 2004 DoE TRIM ref CRN208431.

EPA (2003) 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.

Heddle, 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, BJ (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.

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Clearing Permit Decision Report

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Colloquial name: Road reserve, Kwinana Fwy & South St, Leeming

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2. Site information

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The site is a small area of woodland, bounded by South Street to the north, Kwinana Freeway to the west, residential housing to the east and south-east and continuous with a narrow strip of bush along the freeway to the south.

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Methodology GIS database: Acid Sulphate Soil risk map, SCP DOE 01/02/04.

(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.

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(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 proposal will involve drainage of the land, which will be contained in an infiltration basin within the site. There is no plan in the submitted proposal to implement control of pollution or discharges from the carpark area. The proponent has indicated that a plan to this effect will be formulated.

Methodology

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

Comments **Proposal is not at variance to this Principle**

Flooding impacts unlikely to occur as a result of the proposed clearing due to its size and location.

Methodology

(k) Planning instrument or other matter.

Comments **Proposal is not at variance to this Principle**

The property is zoned as transport reserve. This recognises that the land lies within the primary transport corridor for the south west metropolitan region and also at a major intersection with a connecting east-west road in South St. The Southern Suburbs Railway project has been implemented to provide a socially and environmentally more sustainable means of transportation for the south-west corridor.

Methodology

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Railway construction or maintenance	Mechanical Removal	3.2	**Grant**	The proposal is seriously at variance with Principles (b) and (c) and is at variance with Principle (h). However the proponent has committed to a number of measures that improve the environmental outcomes of the proposal. The revised proposal for the South St station should provide a suitable outcome for the short-term conservation of the rare flora at the site, while facilitating transport requirements. The commitments to offsets and

translocation of Quenda, undertaken by the proponent, will contribute in a reasonable environmental outcome.

5. References

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Environment Australia (2003) Department of Environment Australia correspondence dated 11 August 2004 DoE TRIM ref CRN208431.

EPA (2003) 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.

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