Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2102/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **The Minister for AK Reserve**

1.3. Property details

Property: LOT 713 ON PLAN 48234 (FLOREAT 6014)
LOT 14 ON PLAN 24305 (MOUNT CLAREMONT 6010)
LOT 2103 ON PLAN 231341 (House No. 100 STEPHENSON MOUNT CLAREMONT 6010)

Local Government Area: City Of Nedlands & Town Of Cambridge

Colloquial name: New athletics and basketball stadia and associated infrastructure.

1.4. Application

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

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard vegetation types: 6: Medium woodland; tuart and jarrah. 998: Medium woodland; tuart (Hopkins et al, 2001; Shepherd 2006) Heddle vegetation complex: Karrakatta Complex - Central and South: Mosaic of woodland of E. gomphocephala and open forest of E. gomphocephala - E. marginata - E. calophylla; closed heath on the Limestone outcrops. (Heddle et al, 1980)	The area under application (2.2ha) is located within Lot 713 (AK Reserve), a 10.03 ha property; Lot 14, a 1.81 ha property; and Part Lot 2103, a 2.02 ha property. The clearing is construct a basketball and athletics stadium and associated infrastructure. This sporting precinct, being the AK Reserve Redevelopment Plan, is a requirement of the Perry Lakes Redevelopment Act 2005. ATA Environmental (Department of Sport and Recreation, 2007) identified six vegetation types within the area under application: - Closed Tall Scrub of Dryandra sessilis (Parrot bush) over Grassland of veldt grass and blowfly grass over Low Open Shrubland dominated by Geraldton carnation weed over Open Grassland of Blowfly grass with occasional Eucalyptus gomphocephala (tuart). - Low Open Forest of Banksia menziesii, Corymbia calophylla (Marri), Eucalyptus marginata (Jarrah) and Banksia grandis (Bull banksia) over Open Shrubland of Xanthorrhoea	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	The condition of the native vegetation under application was sourced from the Site Inspection (2007) and Consultant's Report (Department of Sport and Recreation, 2007). The condition ranged from completely degraded to very good, with an overall condition of Good.

preissii (Balga) over Open Grassland of veldt grass.

- Tall Closed Forest of Corymbia calophylla, Eucalyptus gomphocephala and Eucalyptus marginata over Shrubland of Xanthorrhoea preissii over Open Low Heath of Geraldton carnation weed over Open Grassland of veldt grass and wild oats.

- Tall Open Forest of Corymbia calophylla, Eucalyptus gomphocephala and Eucalyptus marginata over Low Woodland of Banksia menzeisii and Banksia attenuata over Xanthorrhoea preissii and Macrozamia riedlei over Grassland dominated by veldt grass.

- Eucalyptus marginata and Corymbia calophylla over couch lawn.

- Horse paddocks dominated by planted introduced species with occasional Eucalyptus marginata and Eucalyptus gomphocephala.

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments

Proposal is not likely to be at variance to this Principle

ATA Environmental conducted two flora surveys within AK Reserve Land (Lot 713, Lot 14 and Part Lot 2103), which includes the area under application (Department of Sport and Recreation, 2007). The survey conducted in April 2006 identified 42 species of native flora species and 27 species of introduced flora species and the survey conducted in August 2006 identified 53 species of native flora and 33 species of introduced flora (Department of Sport and Recreation, 2007).

In addition, ten fauna species of conservation significance could potentially occur within AK Reserve Land including, Carnaby's Black-Cockatoo (Calyptorhynchus latirostris); Forest Red-tailed Black Cockatoo (Calyptorhynchus banksiinaso); Black-striped Snake (Neelaps calonotus); and Rainbow Bee-eater (Merops ornatus) (Department of Sport and Recreation, 2007). Further, four trees containing hollows were identified (Department of Sport and Recreation, 2007).

The condition of the vegetation under application varies from completely degraded to degraded with the overall condition considered good (Site inspection, 2007). The vegetation under application comprised a predominantly intact tree storey (upper storey), a sparse shrub layer (middle storey) and an herb layer (lower storey) of predominantly weeds (Site inspection, 2007).

Given the high number of introduced flora species and the limited areas of structurally intact native vegetation in an overall good condition, the vegetation applied to be cleared is not likely to comprise high biological diversity.

Methodology

References:
- Department of Sport and Recreation (2007)
- Site Inspection (2007)

(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

ATA Environmental (Department of Sport and Recreation, 2007) advises that a fauna survey (no trapping was under taken) was conducted in April 2006 and an inspection for hollows was conducted in August 2006 within AK Reserve Land (Lot 713, Lot 14 and Part Lot 2103), which includes the area under application. Fauna that may potentially occur within AK Reserve Land includes up to 90 species of bird; up to four species of amphibians; up to 33 species of reptiles; and up to 16 species of mammals, including ten native and six introduced species (Department of Sport and Recreation, 2007). However, not all of these species would occur within the survey area due to an absence of specific microhabitat requirements (Department of Sport and Recreation, 2007).

Ten fauna species of conservation significance could potentially occur within AK Reserve land (Department of Sport and Recreation, 2007). Of these, Carnaby's Black-Cockatoo (Calyptorhynchus latirostris); Forest Red-tailed Black Cockatoo (Calyptorhynchus banksiinaso); Black-striped Snake (Neelaps calonotus); and Rainbow Bee-eater (Merops ornatus) were recorded in adjacent habitat (Department of Sport and Recreation, 2007). Further, four tuart trees (Tree No. 238, 240, 241 and X-240) containing hollows were identified within AK Reserve Land (Department of Sport and Recreation, 2007).

Carnaby's Black-Cockatoo is listed as a Schedule 1 species under the Wildlife Conservation (Specially Protected Fauna) Notice 2006. Fauna listed as Schedule 1 fauna are rare or likely to become extinct and are declared to be fauna in need of special protection. This species is also listed as Endangered under the Commonwealth Environmental Protection and Biodiversity Conservation Act 1999 as a matter of national environmental significance. This species is likely to utilise the survey area for feeding purposes, as suitable habitat exists (Department of Sport and Recreation, 2007).

Garnett and Corwley (2000) identify that while individual areas of feeding habitat can only support a number of birds for short periods of time, the progressive loss of such areas is an on-going concern for this species.

Given the number of fauna species that may potentially occur within the area of native vegetation and the vegetation in an overall good condition, the vegetation under application (2.2ha) is considered to may be comprise significant habitat, it is therefore, may be variance to this Principle.

Methodology References:
- Department of Sport and Recreation (2007)
- Garnett and Corwley (2000)

(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 no known records of Declared Rare Flora (DRF) in the local area (2km radius). The nearest recorded DRF (Caladenia huegelii) is located approximately 5.9km south-east of the area under application. The DRF, Caladenia huegelii grows in deep sandy soil, in mixed woodland of jarrah (Eucalyptus marginata) and Banksia, and flowers in September to October (Brown et al, 1998).

There are seven known records of four species of Priority flora recorded within the local area, with the closest record being approximately 400m south-west of the area under application.

ATA Environmental conducted two flora surveys within AK Reserve Land (Lot 713, Lot 14 and Part Lot 2103), which includes the area under application (Department of Sport and Recreation, 2007). The survey conducted in April 2006 identified 42 species of native flora and 27 species of introduced flora and the survey conducted in September 2006 identified 53 species of native flora and 33 species of introduced flora. No DRF and no Priority species were identified during the flora surveys (Department of Sport and Recreation, 2007).

Given the appropriately timed flora surveys did not identify any DRF or Priority flora, it is considered unlikely that the vegetation to be cleared includes, or is necessary for the continued existence of, rare flora. Therefore, the clearing as proposed is unlikely to be at variance to this Principle.

Methodology References:
- Department of Sport and Recreation (2007)
- Brown et al (1998)

GIS Database:
- SAC Bio Datasets 271107

(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 no Threatened Ecological Communities (TECs) located within the local area (2km radius). The nearest recorded TEC is located approximately 2.4km south-west of the area under application. This TEC has been identified as Callitris preissii (or Melaleuca lanceolata) forests and woodlands, Swan Coastal Plain. Of the six vegetation types ATA Environmental identified within the area under application, Callitris preissii (or Melaleuca lanceolata) forests and woodlands were not identified (Department of Sport and Recreation, 2007)

Given there are no TECs located within the local area and Callitris preissii (or Melaleuca lanceolata) forests and woodlands were not identified within the area under application, the vegetation applied to be cleared is unlikely to comprise or is necessary for the maintenance of a Threatened Ecological Community. Therefore the clearing as proposed is unlikely to be at variance to this Principle.

Methodology Reference:

- Department of Sport and Recreation (2007)
GIS Database:
- SAC Bio Datasets 271107

(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 vegetation under application is identified as Heddle Karrakatta Complex; Central & South, which is recognised as having current representation levels of 29.5% within the System 6 region and Swan Coastal Plain portion of the System 1 Region (EPA, 2006) and 18.0% within Swan Coastal Plain portion of the Perth Metropolitan Region (Government of Western Australia, 2000). In addition, this vegetation community is identified as having 2.5% (EPA, 2006) representation within secure tenure; with 8% of the Karrakatta Complex; Central & South proposed for protection within the Bush Forever study area (Government of Western Australia, 2000).

The vegetation within the area under application is identified as a component of Beard vegetation types 6 and 998 (Hopkins et al, 2001), of which there is 26.6% and 41.5% of Pre-European extent remaining respectively (Shepherd, 2006; EPA, 2006). Further, the area under application is located within the City of Nedlands and the Town of Cambridge, of which there is 12.5% and 24.5% of Pre-European extent remaining (Del Marco et al, 2004).

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents the clearance of ecological communities with an extent below 30% of that present Pre-European settlement (Commonwealth of Australia, 2001). Two of the vegetation types within the area under application (Beard Unit 6 and Heddle Karrakatta Central and South) are below the recommended minimum of 30% representation.

Although the identified Beard vegetation type and Heddle vegetation complex has less than the recommended 30% minimum of Pre-European extent remaining, the applied area is considered to be within a constrained area. The EPA (2006) recognises the Perth Metropolitan Region as a constrained area, providing for the reduction of vegetation complexes to a minimum of 10% of the Pre-European extent.

Given the above, the vegetation applied to be cleared is considered unlikely to be significant as a remnant of native vegetation, being representative of vegetation associations that have been extensively cleared.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	Conservation status*****	In secure tenure (%)
IBRA Bioregion*					
Swan Coastal Plain	1,501,456	571,758	38.1	Depleted	
City of Nedlands**	1,991	248	12.5	Vulnerable	
Town of Cambridge**	2,190	536	24.5	Vulnerable	
Beard vegetation types*					
6	56,534	15,013	26.6	Vulnerable	33.6
998	51,017	21,178	41.5	Depleted	35.2
Heddle vegetation complex					
Karrakatta Central & Sth***	44,912	14,729	29.5	Vulnerable	2.5
Karrakatta Central & Sth****	34,532	6,275	18.0	Vulnerable	8.0

* (Shepherd, 2006)
** (Del Marco et al, 2004)
*** (EPA, 2006) - System 6 region and Swan Coastal Plain portion of the System 1 Region
**** (Government of Western Australia, 2000) - Swan Coastal Plain portion of the Perth Metropolitan Region
***** (Department of Natural Resources and Environment, 2002)

Methodology

References:
- Commonwealth of Australia (2001)
- Del Marco et al. (2004)
- Department of Natural Resources and Environment (2002)
- EPA (2006)
- Government of Western Australia (2000)
- Heddle et al (1980)
- Shepherd (2006)

GIS Databases:
- Pre-European Vegetation - DA 01/01
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments

Proposal is not likely to be at variance to this Principle

There two Conservation Category Wetlands (CCWs), being perennial lakes, and a perennial swamp within the local area (2km radius). The two CCWs - Perry Lakes South and Perry Lakes North (also mapped as EPP Lakes) are located approximately 250m and 600m north; and the perennial swamp is located approximately 300m north-west of the area under application. Further, there are no watercourses within the local area.

Given the distance to the surrounding waterbodies it is considered unlikely that the vegetation under application is growing in, or is associated with, an environment associated with a watercourse or wetland.

Methodology

GIS Databases:
- EPP, Lakes - DEP 1/12/92
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC
- Hydrogology, linear - DOE 01/02/04

(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 Acid Sulphate Soil (ASS) risk mapping indicates the areas under application are mapped as having a Class 3 risk. This classification is defined as having no known risk of ASS or potential ASS.

Soils within the applied area are part of the Spearwood Dune System, which are described as well drained deep yellow sands. These soils have a high risk of wind erosion and phosphorus export and low risk of surface water runoff (State of Western Australia, 2005).

Given the sandy soils present on site, it is considered that there is the potential for the proposed clearing to result in wind erosion; however, appropriate management during the development stage would manage the risk from exposed surfaces. Therefore, it is considered that clearing as proposed may cause appreciable land degradation through wind erosion during the initial clearing and development stage

Methodology

Reference:
- State of Western Australia (2005)

GIS Database:
- Acid Sulphate Soil risk map, Swan Coastal Plain - DEC

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments

Proposal may be at variance to this Principle

Lot 713 (also know as AK Reserve), which encompasses half of the area under application, was located within Bush Forever Site 312 (Bold Park and Adjacent Bushland; also identified as a System 6 Conservation Reserve) and was identified as being part of a regionally significant fragmented bushland/wetland linkage (Government of Western Australia 2000). Following the enactment of the Perry Lakes Redevelopment Bill 2005, Lot 713 is no longer part of Bush Forever Site 312 (Department of Sport and Recreation, 2007).

In addition, there are four Bush Forever Sites located within the local area (2km radius) including Site 315 (Swanbourne Bushland; also identified as a System 6 Conservation Reserve) located ~1.4km south-west; Site 119 (Underwood Avenue Bushland) located ~1.6km east; Site 218 (Shenton Bushland) located ~1.7km south-east; and Site 220 (Lake Claremont) located ~2.0km south of the area under application.

The AK Reserve Redevelopment Plan (Department of Sport and Recreation, 2007) outlines that one of the important environmental values of the AK Reserve land (the area under application) is the ecological link that it provides between Bold Park and other adjacent bushland areas to the east. The Environmental Protection Authority and the Bush Forever office consider this connectivity important for the movement of fauna, in particular bird species (Department of Sport and Recreation, 2007).

Under the Perry Lakes Redevelopment Act 2005 a flora corridor, running in a west to east direction shall be established, rehabilitated and protected within Lot 713 (AK Reserve) (Department of Sport and Recreation, 2007). This is required under:
- Section 27(4) (a) that as much of the existing flora on the AK Reserve land as possible is conserved in a corridor running in a broadly east-west direction; and
- Section 27(4) (b) that the corridor is enhanced with flora that is indigenous to the land so as to create a continuous belt of such flora.

Although the vegetation within Lot 713, is no longer part of Bush Forever Site 312 (Department of Sport and Recreation, 2007), the vegetation to be removed under the current proposal is still within a System 6 Reserve and may potentially impact the environmental values of an identified ecological linkage between surrounding

conservation areas. This impact will be controlled through the Perry Lakes Redevelopment Act 2005, but the clearing as proposed is considered may be at variance to this Principle.

Methodology

References:
- Department of Sport and Recreation (2007)
- Government of Western Australia (2000)

GIS databases:
- DEC Managed Lands and Waters - CALM 1/07/05
- Bushforever - MFP 07/01
- Swan Coastal Plain North 20cm Orthomosaic - DLI06
- System 6 Conservation Reserves - DEP 06/95

(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

There two Conservation Category Wetlands (CCWs), being perennial lakes, and a perennial swamp within the local area (2km radius). The two CCWs - Perry Lakes South and Perry Lakes North (also mapped as EPP Lakes) are located approximately 250m and 600m north; and the perennial swamp is located approximately 300m north-west of the area under application. Further, there are no watercourses within the local area.

The area under application is not located in a Public Drinking Water Source Area and is considered to have a low salinity risk.

Given the distance to the nearest waterbody and the low salinity risk, the clearing as proposed is considered unlikely to cause deterioration in the quality of surface and ground water.

Methodology

GIS Databases:
- Hydrography, linear - DOE 01/02/04
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain DEC
- Public Drinking Water Source Areas (PDWSAs) ý DOW
- Salinity Risk LM 25m - DOLA 00

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

Comments

Proposal is not likely to be at variance to this Principle

There are no wetlands mapped within the area under application with the nearest wetland, being conservation category wetlands, located approximately 250m and 600m north of the area under application. Further, there are no watercourses mapped within the local area (2km radius). Given the distance to the nearest wetland or watercourse from the area under application, the clearing as proposed is considered unlikely to cause or increase the incidence or intensity of localised flooding.

Methodology

GIS Databases:
- Hydrography, linear - DOE 01/02/04
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain DEC

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

Comments

Department of Planning and Infrastructure (Strategic Biodiversity Planning, 2007; TRIM Ref DOC40108) advised that Lot 713 previously formed part of Bush Forever area 312, until the Perry Lakes Redevelopment Bill 2005 was passed, whereby the existing local planning scheme and the Metropolitan Regional Scheme were suspended for this land. However, this site still provides an important ecological corridor and serves as a habitat for wildlife.

As the proposed clearing seems to adhere to the AK Reserve Redevelopment Plan, Strategic Biodiversity Planning (2007) has no objections, but recommends the following conditions to protect the significant vegetation:
- Prior to the commencement of clearing/any works, the proponent is to construct temporary fencing along the edge of the proposed clearing site, and the native vegetation to be retained be clearly marked.
- Identified tree No. 241 be retained, as it could be a potential nesting ground for the Carnaby's Black Cockatoo.

These issues have been addressed in the assessment. The tree hollows have been identified in Principle (b); to mitigate the potential impact on habitat, fauna management conditions will be imposed on a clearing permit if granted.

The area under application is within the Proclaimed Groundwater Area of Perth. Therefore any abstraction of groundwater would require a licence. However, this application for new athletics and basketball stadiums and associated infrastructure is not associated with ground water extraction.

There is no other RIWI Act Licence, Works Approval or EP Act Licence that affects the area under application.

There are no Aboriginal Sites of Significance listed within the area under application.

The AK Reserve Redevelopment Plan comprises Lot 713 on Plan 48234 or AK Reserve, which is owned by the Department of Infrastructure LOT 14 on Plan 24305, was owned by Main Roads and LOT 2103 on Plan 231341 was owned by the University of WA.

The proposed scheme amendment, AK Reserve Redevelopment Plan, was referred to the Environmental Protection Authority (EPA) for assessment under Section 48 in December 2006 (EPA, 2007; TRIM Ref 33537). On the 19 February, EPA finalised a decision; EPA determined that the AK Reserve Redevelopment Plan should not be assessed, with the level of assessment being Not Assessed-Advice given under Section 48a(1)(A) (no appeals). EPA provided advice and recommendations on three environmental issues: Contamination, Flora and Vegetation, and Draft Masterplan.

- Flora and Vegetation: The proposal to retain vegetation as a flora corridor and rehabilitate degraded areas as proposed in the Landscape Report is strongly supported.
- Draft Masterplan: It is noted that an area of vegetation adjacent (south) of the flora corridor contains Karrakatta Complex - Central and South. This complex has only 18% of its original extent remaining in the Perth Metropolitan area, of which only 8% is currently protected in secure reserves. There is a general presumption against further, clearing of vegetation complexes with less than 10% remaining in secure reserves.

On the 03 September 2007 the Department of Sport and Recreation on behalf of the AK Reserve Minister submitted an application to the Western Australian Planning Commission (WAPC) to amalgamate Lot 713 (~10.03 ha) and the north-west section of Lot 2103 (~2.02 ha). This proposal for an amended area for Lot 713 of 12.056 ha was approved by WAPC on 08 November 2007 (TRIM Ref ED2046).

On the 03 September 2007 the Department of Sport and Recreation on behalf of the AK Reserve Minister submitted an application for Development Approval (Perry Lakes Redevelopment Act 2005) to the Western Australian Planning Commission (WAPC). On the 21 November 2007 the WAPC granted Development Approval with 12 conditions, for the construction of Basketball and Athletics stadium and all related infrastructure within Lot 713, Lot 14 and Part Lot 2103 [also known as AK Reserve Land] (TRIM Ref DOC40318).

Condition 12 states that 'Prior to the commencement of works affecting the Flora Corridor, further plans shall be submitted to the Commission regarding the AK Reserve North West Precinct Flora Management Strategy (August 2007) that detail all development, vegetation retention and replanting proposals, and once such plans are approved, they shall be implemented with the strategy to the satisfaction of the Western Australian Planning Commission.'

Lot 713 on Plan 48234 or AK Reserve is zoned Parks and Recreation; LOT 14 on Plan 24305 and LOT 2103 on Plan 231341 are zoned Urban under the Metropolitan Regional Scheme. The AK Reserve Redevelopment Plan (Department of Sport and Recreation, 2007; TRIM Ref DOC33537) outlines that on the 3 February 2006, the Metropolitan Regional Scheme ceases to apply to the AK Reserve Land (Lot 713, Lot 14 and Part Lot 2102), which is declared to be part of the AK Redevelopment area.

Methodology GIS databases:

- Aboriginal Sites of Significance - DIA 28/02/03
- Metropolitan Regional Scheme - DPI 07/10/05
- RIWI Act, Groundwater Areas - DOW
- RIWI Act, Surface Water Areas - DOW

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Recreation	Mechanical Removal	2.2	The assessable criteria have been addressed and the clearing as proposed is may be at variance to Principles (b), (g) and (h).

5. References

Brown A., Thomson-Dans C. and Marchant N., (1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.

Commonwealth of Australia (2001). National Targets and Objectives for Biodiversity Conservation 2001-2005, AGPS, Canberra.

Del Marco, A., Miles, C., Taylor, R., Clarke, K. and Savage, K. (2004) Local Government Biodiversity Planning Guidelines for the Perth Metropolitan Region - Edition 1. Western Australian Local Government Association, West Perth.

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.

Department of Sport and Recreation (2007) AK Reserve Redevelopment Plan, August 2007, Department of Sport and

Recreation on behalf of the AK Reserve Minister. TRIM Ref DOC33537
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.
Garnett, S. and Corwley G. (2000). The Action Plan for Australian Birds. Environment Australia and the Royal Australasian Ornithologists Union.
Government of Western Australia (2000) Bush Forever Volumes 1 and 2. Western Australian Planning Commission, Perth 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, 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. (2006). 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. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.
Site Inspection (2007) Site Inspection Report, Department of Environment and Conservation (DEC), Western Australia. TRIM Ref DOC39879
State of Western Australia (2005) Agmaps Land Manager CD Rom.

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)