

Draft Report

Scattered Tree Assessment, Beveridge North West (PSP 1059), Victoria

Prepared for

Metropolitan Planning Authority

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Ecology and Heritage Partners Pty Ltd

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GLOSSARY

Acronym	Description
DBH	Diameter at Breast Height
DEPI	Victorian Department of Environment and Primary Industries
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EVC	Ecological Vegetation Class
FFG Act	Flora and Fauna Guarantee Act 1988
LOT	Large Old Tree
MOT	Medium Old Tree
TRZ	Tree Retention Zone
VBA	Victorian Biodiversity Atlas (DEPI)
VLOT	Very Large Old Tree

CONTENTS

1	INTRODUCTION	6
1.1	Background	6
2	METHODS	7
2.1	Nomenclature	7
2.2	Desktop Assessment	7
2.3	Field Surveys	7
3	RESULTS	9
3.1	Scattered Tree Assessment.....	9
4	HABITAT COMPENSATION COSTS FOR SCATTERED TREE REMOVAL	11
5	REFERENCES	12
6	FIGURES.....	13
7	APPENDICES	14
APPENDIX 1.....		15
	Appendix 1.1 – Scattered Tree Data	15
	Appendix 1.2 – Tree Retention Zones.....	17

1 INTRODUCTION

1.1 Background

Ecology and Heritage Partners Pty Ltd was commissioned by Metropolitan Planning Authority to conduct a Biodiversity Assessment (Scattered Tree Assessment) at Beveridge North West (PSP 1059), Victoria. The purpose of the assessment was to identify the number and type of scattered native trees present within the study area.

To streamline the environmental approvals process within Melbourne's growth areas, the State Government released the Biodiversity Conservation Strategy (BCS) (DEPI 2013d). The BCS identifies conservation reserves to be protected and offsets for native vegetation and matters of National Environmental Significance lost within the growth areas. The BCS replaces the requirement to obtain any permits for native vegetation removal under local, Victorian and Federal legislation.

To facilitate the planning approvals process for Melbourne's growth corridors and enable the implementation of the BCS, the Victorian Government introduced the 'Time Stamping' project (DSE 2009). This project captured, and 'time stamped' native vegetation information within the new urban growth corridors. This data has been mapped, and is now being used to calculate native vegetation offsets for future development under the BCS. Native vegetation includes patches of remnant native vegetation as well as remnant, scattered indigenous trees. If a proponent intends to remove any native vegetation that has been 'time stamped', they are required to pay a Habitat Compensation fee to DEPI to compensate for its loss (DEPI 2013e).

This report satisfies and completes the scattered indigenous tree assessment requirements for the preparation of the Beveridge North West Precinct Structure Plan (PSP 1059).

2 METHODS

2.1 Nomenclature

Common and scientific names of vascular plants follow the Victorian Biodiversity Atlas (VBA) (DEPI 2013a) and the Census of Vascular Plants of Victoria (Walsh and Stajsic 2007). Vegetation community names follow DEPI's Ecological Vegetation Classes (EVC) benchmarks (DEPI 2013b).

2.2 Desktop Assessment

The following resources and databases were reviewed over the duration of the project:

- Department of Environment and Primary Industries' Biodiversity Interactive Maps showing historic and current EVCs (DEPI 2013c); and,
- Biodiversity Conservation Strategy for Melbourne's Growth Corridors (DEPI 2013d).

Liaison was undertaken with the Metropolitan Planning Authority (MPA) to confirm the extent and intensity of the proposed methodology.

The Department of Environment and Primary Industries (DEPI) identified a number of potential scattered trees within the study area and provided point locations on aerial imagery of the trees requiring investigation.

2.3 Field Surveys

The scattered trees identified by DEPI, along with any other scattered trees present in the study area, were identified and, if found to be remnant indigenous trees, mapped for the current assessment. A total of five properties were assessed (see Figure 1 for Property Numbers).

Scattered tree assessments were undertaken by an experienced botanist with current Certificates of Competency in conducting Vegetation Quality Assessments (habitat hectares) from DEPI. The scattered tree assessment was undertaken on 17 September 2013. All scattered indigenous trees were assigned a sequential number and recorded as a point location on aerial maps using handheld GPS devices and ArcGIS software (Figure 1). A diameter at breast height (DBH) measurement was taken for each tree using a diameter tape. The size class and conservation significance was determined for all indigenous trees according to the relevant Ecological Vegetation Class (EVC) benchmark. Benchmark tree measurements for relevant EVCs are provided in Table 1. The survey assessment date, duration and assessor are provided in Table 2.

Table 1: Relevant EVC benchmark information pertaining to tree size classes.

Bioregion	Ecological Vegetation Class	Very Large Old Tree (cm)*	Large Old Tree DBH (cm)	Medium Old Tree DBH (cm)*	Small Old Tree DBH (cm)*
Victorian Volcanic Plain	Higher Rainfall Plains Grassy Woodland (EVC 55_63)	105+ (eucalypts) 60+ (Blackwood and Drooping Sheoak)	70 – 104 (eucalypts) 40 – 59 (Blackwood and Drooping Sheoak)	53 – 69 (eucalypts) 30 – 39 (Blackwood and Drooping Sheoak)	<53 (eucalypts) <30 (Blackwood and Drooping Sheoak)

Notes: * Very Large Old Trees are at least 1.5 times the trunk diameter of a large old tree; Large Old Trees are >1.0 to <1.5 times trunk diameter; Medium Old Trees >0.75 to <1.0 times trunk diameter and; Small Old Trees are <0.75 times trunk diameter, as defined by the relevant DSE benchmarks and the Port Phillip and Westernport Native Vegetation Plan (DEPI 2013b; PPWCMA 2006).

Table 2: Scattered Tree survey date, duration, access issues and assessor.

Landowner Number	Property Number	Access	Assessment Date	Duration	Assessor
1	110757, 110760	Approved – 17/9/2013 Met farm manager and undertook induction.	17-Sept-13	11.00am – 12.00pm; 12.30pm – 4.00pm	Marc Freestone
3	111232	Approved – 17/9/2013 Landowner present during survey	17-Sept-13	4.00pm – 4.30pm	Marc Freestone
6	110756	Signed consent, no verbal contact. Mobile number was wrong and no answer on landline.	17-Sept-13	11.30am – 12.00pm	Marc Freestone
7	112242	Signed consent, no verbal contact. No phone number provided.	17-Sept-13	12.00pm – 12.30pm	Marc Freestone
9	110841	Approved – 12/5/2013	17-Sept-13	4.30pm – 5.00pm	Marc Freestone

3 RESULTS

3.1 Scattered Tree Assessment

A total of 27 indigenous remnant trees were recorded within the study area (Figure 1, Appendix 1). The species include River Red Gum *Eucalyptus camaldulensis*, Swamp Gum *Eucalyptus ovata* and Manna Gum *Eucalyptus viminalis* subsp. *viminalis*. The number of indigenous remnant trees within each size class is as follows:

- 21 Very Large Old Trees (VLOTs);
- 5 Large Old Trees (LOTs); and
- 1 Medium Old Tree (MOT).

All trees correspond to Higher Rainfall Plains Grassy Woodland (EVC 55_63). Higher Rainfall Plains Grassy Woodland is an open woodland dominated by Swamp Gum, Manna Gum and River Red Gum (as opposed to Plains Grassy Woodland EVC 55_61 which is dominated by River Red Gum only). The understorey is species rich with grasses and native herbs.

Scattered indigenous remnant trees within the study area are assigned the lowest conservation significance rating based on the Bioregional Conservation Status (BCS) of the relevant pre-1750s EVC (DSE 2007a; DEPI 2013c). Very Large, Large and Medium scattered indigenous trees within the study area are representative of the Plains Grassy Woodland EVC, which has a Bioregional Conservation Status of Endangered. Therefore, all scattered indigenous remnant trees are of **High** conservation significance.

All other trees within the study area are planted, including young River Red-gum and non-indigenous or exotic species such as Sugar Gum *Eucalyptus cladocalyx*. Trees were determined to be planted due to them being located in obvious rows and small in size. Planted trees were not included in the assessment as they did not meet the definition of a remnant tree (DEPI 2013f). The details of indigenous trees recorded within each property are presented in Appendix 1.

A total of four trees that were identified by DEPI as being potential scattered indigenous trees were not observed during this assessment. This included two trees in Property Number (PN) 110757 and one tree each in PN 111232 and PN 110760. These trees were either not present, dead and fallen over (with no part of the tree extending more than 1.3 metres above the ground) or not indigenous tree species (the tree in PN 110760 was an exotic Cypress *Cupressus* sp.). A total of five additional indigenous scattered trees, which DEPI had not identified, were recorded during this assessment, including two trees in PN 110756 and one tree each in PN 110757, PN 112242 and PN 110841.

Tree #21 was a recently dead tree (termed a stag), which has recently partially fallen over. However, as the fallen trunk of this tree is still more than 1.3 metres above the ground, it still qualifies as a scattered tree (Angela Robb, DEPI, pers. comm., 23 August 2012).

No trees recorded during this assessment were within a patch of native vegetation.

Under the BCS, habitat compensation fees are only required for the removal of Very Large Old Trees (VLOTs), Large Old Trees (LOTs) and Medium Old Trees (MOTs). No fees apply to Small Trees (STs).

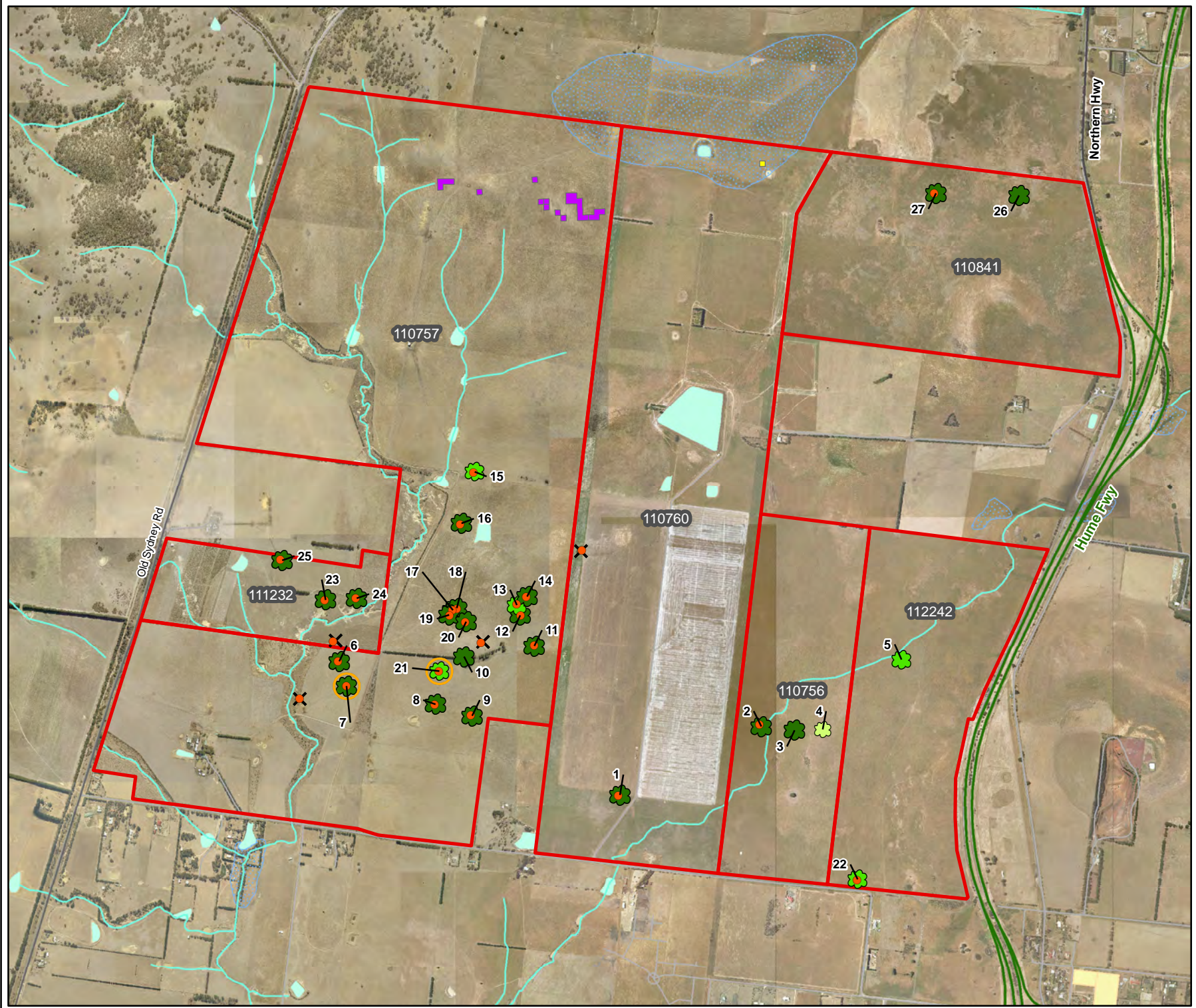
4 HABITAT COMPENSATION COSTS FOR SCATTERED TREE REMOVAL

Under the Biodiversity Conservation Strategy (BCS) DEPI have outlined habitat compensation costs (offset costs) that are required to be paid to DEPI before the removal of native vegetation and scattered trees is permitted. These costs go towards managing conservation areas within the Urban Growth Boundary. The cost to remove a scattered tree is the same for all size classes of scattered tree (VLOT, LOT, MOT), although no fee is required to remove Small Trees (DEPI 2013e). Under the *Draft Habitat Compensation Under the Biodiversity Compensation Strategy* released in May 2013, the cost is **\$13,218** per scattered tree considered removed (DEPI 2013e). This includes stags, and trees that experience impacts to their Tree Retention Zone, but are not physically removed (Appendix 1.2).

5 REFERENCES

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- NRE 2002. Native Vegetation Management: A Framework for Action. Department of Natural Resources and Environment, Victoria.
- PPWCMA 2006. Port Phillip and Western Port Native Vegetation Plan. Port Phillip and Western Port Catchment Management Authority.
- Walsh, N.G., Stajsic, V. 2007. A census of the vascular plants of Victoria, 8th ed. ed. Royal Botanic Gardens Melbourne.

6 FIGURES



Legend

- Study Area
- Original trees provided by client
- ✕ Tree no longer exists

Scattered trees

- Very Large Old Tree
- Large Old Tree
- Medium Old Tree
- Denotes stag

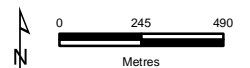
Time Stamped Native Vegetation (2013)

- 125 Plains Grassy Wetland
- 22 Grassy Dry Forest



Figure 1 - Overview

Ecological features
 Scattered Tree Assessment
 PSP 1059 Beveridge North West



VicMap Data: The State of Victoria does not warrant the accuracy or completeness of information in this publication and any person using or relying upon such information does so on the basis that the State of Victoria shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information.

7 APPENDICES

APPENDIX 1

Appendix 1.1 – Scattered Tree Data

Table A1.1. Scattered trees recorded during the present assessment.

Property #	Tree ID	Scientific name	Common name	DBH (cm)	Size Class	Conservation Significance	Bioregion	EVC	Latitude	Longitude	Notes
110760	1	<i>Eucalyptus ovata</i>	Swamp Gum	105	VLOT	High	VVP	PGW_HR	-37.46419	144.95321	
110756	2	<i>Eucalyptus camaldulensis</i>	River Red Gum	179	VLOT	High	VVP	PGW_HR	-37.46155	144.96048	
	3	<i>Eucalyptus ovata</i>	Swamp Gum	110	VLOT	High	VVP	PGW_HR	-37.46174	144.96217	
	4	<i>Eucalyptus ovata</i>	Swamp Gum	63	MOT	High	VVP	PGW_HR	-37.46172	144.96358	
112242	5	<i>Eucalyptus ovata</i>	Swamp Gum	93	LOT	High	VVP	PGW_HR	-37.45896	144.96768	
110759	6	<i>Eucalyptus ovata</i>	Swamp Gum	143	VLOT	High	VVP	PGW_HR	-37.45854	144.93911	Dying
	7	<i>Stag</i>	-	80	VLOT	High	VVP	PGW_HR	-37.45954	144.93945	Dead and standing
	8	<i>Eucalyptus viminalis subsp. viminalis</i>	Manna Gum	140	VLOT	High	VVP	PGW_HR	-37.46037	144.94395	
	9	<i>Eucalyptus ovata</i>	Swamp Gum	127	VLOT	High	VVP	PGW_HR	-37.46086	144.94579	
	10	<i>Eucalyptus viminalis subsp. viminalis</i>	Manna Gum	135	VLOT	High	VVP	PGW_HR	-37.45846	144.94546	
	11	<i>Eucalyptus ovata</i>	Swamp Gum	153	VLOT	High	VVP	PGW_HR	-37.45808	144.94903	
	12	<i>Eucalyptus viminalis subsp. viminalis</i>	Manna Gum	137	VLOT	High	VVP	PGW_HR	-37.45684	144.94835	
	13	<i>Eucalyptus viminalis subsp. viminalis</i>	Manna Gum	100	LOT	High	VVP	PGW_HR	-37.45641	144.94820	
	14	<i>Eucalyptus viminalis subsp. viminalis</i>	Manna Gum	121	VLOT	High	VVP	PGW_HR	-37.45608	144.94873	
	15	<i>Eucalyptus viminalis subsp. viminalis</i>	Manna Gum	94	LOT	High	VVP	PGW_HR	-37.45097	144.94620	
	16	<i>Eucalyptus ovata</i>	Swamp Gum	132	VLOT	High	VVP	PGW_HR	-37.45305	144.94546	
	17	<i>Eucalyptus viminalis subsp. viminalis</i>	Manna Gum	135	VLOT	High	VVP	PGW_HR	-37.45656	144.94493	
18	<i>Eucalyptus viminalis subsp. viminalis</i>	Manna Gum	125	VLOT	High	VVP	PGW_HR	-37.45649	144.94513		

Property #	Tree ID	Scientific name	Common name	DBH (cm)	Size Class	Conservation Significance	Bioregion	EVC	Latitude	Longitude	Notes
	19	<i>Eucalyptus viminalis subsp. viminalis</i>	Manna Gum	119	VLOT	High	VVP	PGW_HR	-37.45676	144.94473	
	20	<i>Eucalyptus viminalis subsp. viminalis</i>	Manna Gum	109	VLOT	High	VVP	PGW_HR	-37.45704	144.94559	
	21	-	Stag	90	LOT	High	VVP	PGW_HR	-37.45903	144.94418	Dead and partially fallen
112242	22	<i>Eucalyptus ovata</i>	Swamp Gum	85	LOT	High	VVP	PGW_HR	-37.46783	144.96519	
111232	23	<i>Eucalyptus ovata</i>	Swamp Gum	140	VLOT	High	VVP	PGW_HR	-37.45604	144.93847	
	24	<i>Eucalyptus ovata</i>	Swamp Gum	105	VLOT	High	VVP	PGW_HR	-37.45599	144.94006	
	25	<i>Eucalyptus ovata</i>	Swamp Gum	119	VLOT	High	VVP	PGW_HR	-37.45440	144.93631	
110841	26	<i>Eucalyptus viminalis subsp. viminalis</i>	Manna Gum	174	VLOT	High	VVP	PGW_HR	-37.44026	144.97414	
	27	<i>Eucalyptus viminalis subsp. viminalis</i>	Manna Gum	119	VLOT	High	VVP	PGW_HR	-37.44010	144.96994	

Appendix 1.2 – Tree Retention Zones

Tree Retention Zones (TRZs) should be implemented to prevent indirect losses of native vegetation during construction activities (DSE 2010). A TRZ applies to a tree and is a specific area above and below the ground, with a radius 12 x the DBH. At a minimum standard a TRZ should consider the following:

- A TRZ of trees should be a radius no less than two metres or greater than 15 metres;
- Construction, related activities and encroachment (i.e. earthworks such as trenching that disturb the root zone) should be excluded from the TRZ;
- Where encroachment exceeds 10% of the total area of the TRZ, the tree should be considered as lost and offset accordingly;
- Directional drilling may be used for works within the TRZ without being considered encroachment. The directional bore should be at least 600 millimetres deep;
- The above guidelines may be varied if a qualified arborist confirms the works will not significantly damage the tree (including stags / dead trees). In this case the tree would be retained and no offset would be required; and,
- Where the minimum standard for a TRZ has not been met an offset may be required.

A Tree *Protection Zone* (TPZ) is different to a TRZ. A TPZ applies to any scattered trees used as an offset and is designed not only to prevent the tree from indirect damage, but also to give it sufficient space to recruit new trees in the future. A TPZ is defined as an area of twice the canopy diameter, which should be fenced and protected from adverse impacts (e.g. grazing, burning, soil disturbance, removal of logs, etc.) (DSE 2007).