Tree Assessment Report

Prepared for

Catholic Diocese of Bathurst

St Matthew's Catholic School, Mudgee

Project Manager: TSA Management Pty Ltd

Consultant's Representative: Emma Bunn | emma.bunn@tsamgt.com

T: 02 9276 1400 | M: 0432 789 755

Site Address: 48 Bruce Rd Mudgee NSW 2850.

LOT 40 DP 756894

(State Significant Development)

Date of Site Inspection: 27th November 2019

Version 3 20/4/20

REPORT PREPARED BY:

McArdle and Sons Arboricultural Services Pty Ltd

"When Experience counts" Since 1956

ACN 094 297 408

PO Box 4060, Tamworth, NSW 2340

Phone: 02 6769 0372 Mob 0418 165 650

E: danmcardle@mcardleandsons.com.au

CONSULTING ARBORIST

Dan McArdle

AQF 5 Arborist, *Dip Arb, Dip Ag*

Tree Contractors Association Australia Inc
A National Tree Amenity Industry Body

Arboricultural Industry Licence
TCAA: 99/1003/19

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SUMMARY

Trustees of the Roman Catholic Church for the Diocese of Bathurst has commissioned McArdle and Sons Arboricultural Services Pty Ltd to conduct a Tree Assessment and Report of the State Significant Development (SSD) Project name: St Matthew's Catholic School located at 48 Bruce Rd Mudgee NSW (LOT 40 DP 756894)

Mr Dan McArdle holds the qualification of AQF level 5 Consulting Arborist, conducted the site inspection on the 27th November 2019.

The aim of this report is to:

- Identify tree species, size, health and condition, Tree Useful Life Expectancy and Retention Values.
- Identify significant tree, heritage or commemorative status.
- Make recommendation on remediation and or removal of trees.
- Specify Tree Protection Zones (TPZ) and Structural Root Zones (SRZ).
- Identify trees with habitats.

Site: St Matthew's Catholic School Site Land zonings: Ru 14 Primary Production and the northwest corner is zoned residential. (Fig 5).

Heritage: There are no heritage items listed for the site or the site being in a Heritage Conservation Area. Research of Mid- Western Regional Council's LEP 2012 and DCP 2013 was undertaken to establish Heritage Conservation area (Heritage Map HER_ 006H LEP 2013 (Fig 6) and Sensitivity Biodiversity Map BIO_006 (Fig7 - 8). Cultural search (Appendix B)

There trees identified in this report are not listed the Significant Tree Register (4.7 DCP 2013). Trees (44-62) are **Eucalyptus *microcarpa* Grassy Woodlands** and listed as endangered biological community and being retained.

Inspection: All trees on St Matthew's site have been inspected and documented on the 27th November 2019, all information can be found in the Tree Survey Assessment Table (pages14-21). The tree survey is not including a risk assessment and only attention is noted where a fault or structural damage / dead wood or hazard is observed and a remediation recommended, trees with habitat hollows is also noted in the Tree Survey Assessment Table.

Conclusions: There are 46 trees to be retained and tree protection installed , 16* trees to be removed, 17 trees require remedial pruning and 8 trees with habitat hollows or bee hives.*(* Potential TPZ incursion Tree 17requires clarification making 17 trees for removal.)*

Consideration should be given to my general comment regarding the Eucalyptus *nicholii* in conclusions of this report where options may be explored with further consultation. (page24)

Recommendations: Full list of recommendations can be found (page 25) , appointment of a Project Arborist AQF5 Qualification is required, Tree protection installed prior to start of works(AS 4970- 2009 Protection of trees on development sites) and suitable licensed AQF 3 Arborist contractor for remedial pruning (AS 4373-2007 Pruning of amenity trees)

Further information regarding this report please contact our office on 02 6769 0372 or mobile 0418165650.

Dan McArdle *Consulting Arborist Dip Arb; Dip Ag*
McArdle and Sons 0418165650
TCAA Arboricultural Industry Licence 99100319

INTRODUCTION

Trustees of the Roman Catholic Church for the Diocese of Bathurst has commissioned McArdle and Sons Arboricultural Services Pty Ltd to conduct a Tree Assessment and Report specifically relating trees with in development site of St Matthews Catholic School which is located at the corner of 48 Bruce Road Mudgee NSW. Appointed client's representative is TSA Management Pty Ltd. (Ms. Cassandra Naccarella).

Mr Dan McArdle holds the qualification of AQF level 5 Consulting Arborist conducted the evaluation using Visual Tree Assessment (VTA) method and best industry practices. The systems are in accordance with industry best practice and impact assessments are based upon the Australian Standards, Risk Management ISO 3100-2009 and guidelines set down by TCAA of Australia.

PROJECT BRIEF

The SSD DA seeks consent for the construction of a new multi-purpose secondary education facility within the Mudgee Region that meets future demands for the developing region.

The new secondary school to be known as St Matthews Catholic High School Mudgee School will cater for 680 secondary school students (4-Stream Year 7-12) and will comprise of a cluster of five low-rise school buildings (1-2 storeys) including;

- Block A - Professional Hub (office and administration)
- Block B - Spiritual Hub (Chapel)
- Block C - Community Hub (Multi- purpose hall, Music/Dance Studio and canteen)
- Block D – STEM Research Hub (teaching spaces)
- Block E - Knowledge and Learning Hubs (General Teaching spaces)
- Yarning Circle (Outdoor learning area)
- Outdoor Student Assembly Area and COLA
- Student free play area
- Staff and student amenities
- Associated site landscaping and public domain improvements
- On-site parking and access arrangements off Bruce Road, including:
    - On-grade car park for staff, students and visitors (75 spaces – including 2 accessible spaces)
    - A 12 bay student drop-off and pick-up area
    - A 3-bay bus drop-off and layover area
    - Bus turning area and servicing access
    - Dedicated separate driveway for service vehicles
    - Bicycle parking for 30 bicycles
- Associated earthworks, civil works, perimeter roadworks, fencing, services and utilities connections and augmentation, including:
    - Roadworks to Broadhead Road and Bruce Road to the full extent of the site frontages
    - Roadworks to the Broadhead Road and Bruce Road intersection to cater for bus movements
    - Footpath along the site frontage of Broadhead Road and suitable pedestrian crossing to connect to existing footpath.
    - Stormwater infrastructure upgrades adjacent to and within the site, including new culverts and drains, levee, and bioswale.
    - Connection to existing sewer line within the site
    - Electrical and water connections into the site

AIMS

The aim of this Arborist report is to:

- Identify tree species, size, health and condition, Tree Useful Life expectancy and Retention Values.
- Identify significant registered trees, and Heritage conservation area or commemorative/cultural status.
- Make recommendation on remediation and or removal of trees.
- Specify Tree Protection Zones (TPZ) and Structural Root Zones (SRZ).
- Identify habitat trees.

METHODOLOGY

The collection of data is performed in the field by an AQF Level 5 arborist. This assessment summaries the tree species, height and diameter, the trees health and structural condition for each trees, hazards, Tree useful life expectancy and retention values. Determine tree protection zones of trees that can be affected by construction.

Testing on site may include:

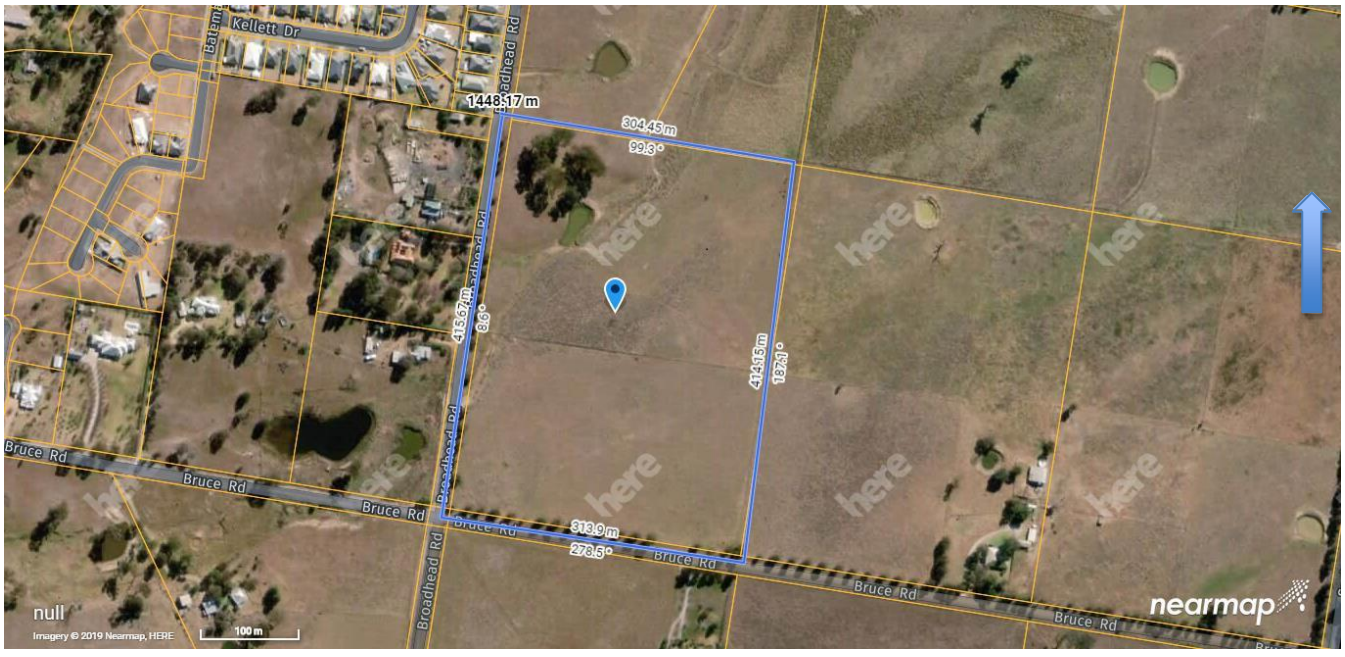
Mallet sounding and non-invasive testing for hollows or decay by probing of cavities, note white ant infestation and or other. Invasive tests will determine depth of decay around cavities.

All inspections and testing is ground based. It should be noted that this Tree Assessment Report cannot be considered final until all aerial inspections if specified in the tree survey have been completed, as these may reveal further defects.

This data was recorded in a Tree Survey Assessment Table and various assessment methods were used including*:*

1. *Tree Useful Life Expectancy (TULE) (Burrell Approved TCAA use 2014).* The rating is of the expected life span of the tree and takes into account age, life span of the species, local environmental conditions, location, and tree safety.
2. *Health & Structural Condition of Tree Assessment.* This describes the vigour and vitality of the tree**.**
3. *Tree Hazard & Site Assessment.* This assessment identifies structural defects that predispose a tree to failure located near a target. It is a useful WH&S requirement. *(Only comments have been included in this report, this report is not a risk assessment).*
4. Some trees have special restrictions including cultural, historical or threatened category and may be reviewed as part of this report or further reporting

THE SITE:



SITE LOCATION: 48 Bruce Rd Mudgee NSW, Lot 40 DP 756894 (Fig 1)

The collection of data was comprehensive and inspections were conducted on 27th November 2019. Only trees with in the specific site have been surveyed and referenced in this report.
At the time of the inspection the area is experiencing severe dry period due to drought conditions, on the day of the inspection the day was clear and visibility was good.

The location of the proposed site is 4.1 km South from Mudgee CBD, approximately 12 hectare in size, and is bounded by Bruce Road to the South, Broadhead Road to the West.
Topography sloping to the north east, open aspect, there is a water course transiting the block entering the site from Broadhead Rd South West entry and exiting the site northern boundary and continuing on to the Cudgegong River. Located off this water course in the northwest sector of the block is a single earth dam water storage.

High and Low voltage electrical conductors border the western boundary on Broadhead Rd, all trees on this boundary are subject to Utility pruning to maintain clearance from the conductorsSoil testing pH2 was undertaken testing in 4 locations across the site.

HABITAT
Habitat hollows in tree trunks and branches, active bee hives and bird activity were observed and these habitat sites are confined to the mature Eucalyptus *microcarpa* trees located in the North West Corner.

TREE SPECIES
There are only 3x species of trees on site: Eucalyptus *nicholii,* Eucalyptus *scoparia* are planted species, only Eualyptus *macrocarpa* is indigenous to the area of Mudgee and are remnant vegetation.

HERITAGE Research was undertaken for Heritage items and Heritage Conservation area of the site.

MEMORIALS/ CULTURAL_Research was undertaking to establish cultural or memorial sites.

SITE MAP:

TREE LOCATION MAP: Indicating tree numbers and approximate location (Fig 2).

ALLEANZA ARCHITECTURE

CATHOLIC EDUCATION DIOCESE OF BATHURST

TSA MANAGEMENT

ST MATTHEW'S CATHOLIC SCHOOL

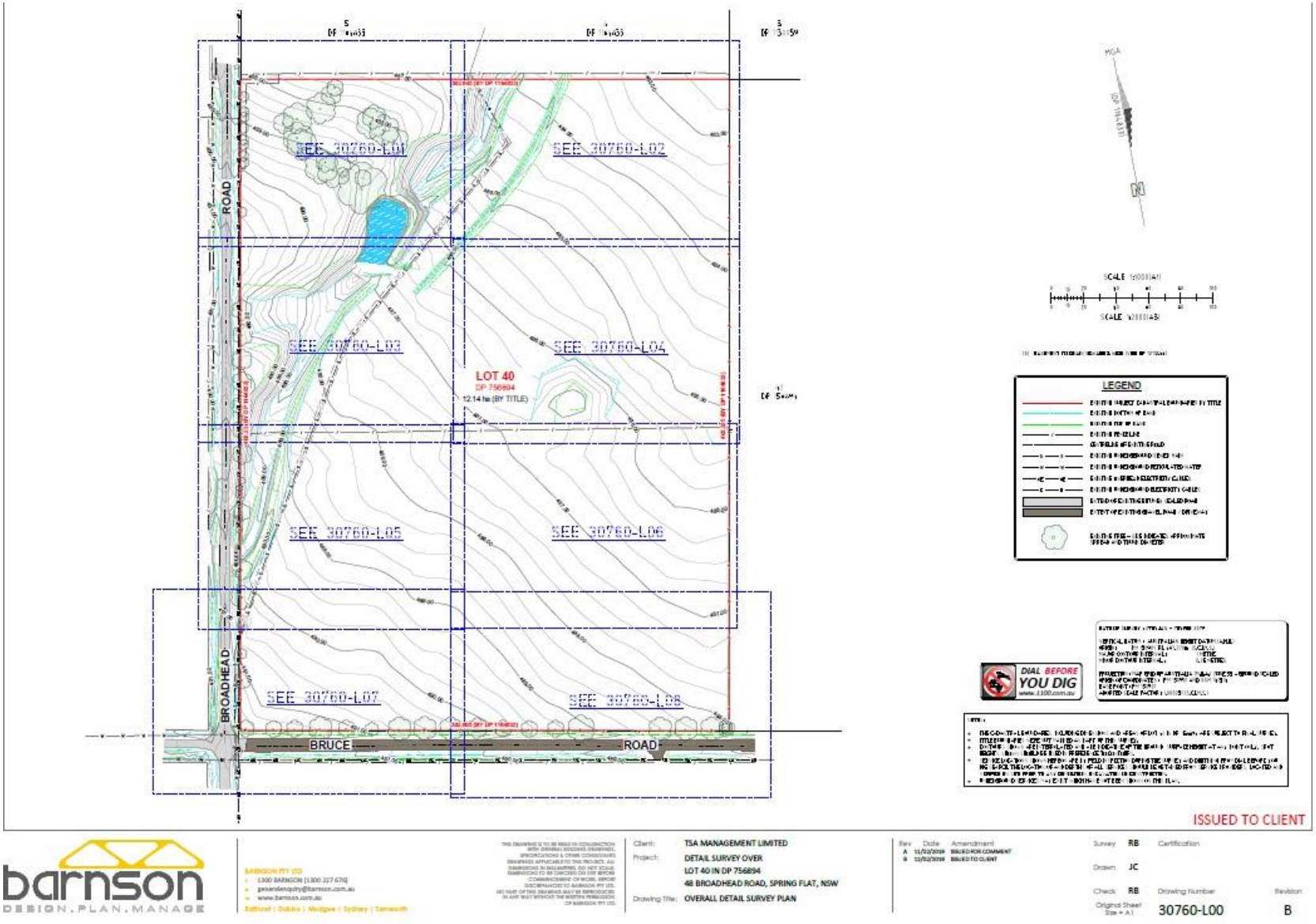
Corner of BROADHEAD and BRUCE RD. MUDGEE
Lot 40 of DP 756894

STATE SIGNIFICANT DEVELOPMENT APPLICATION

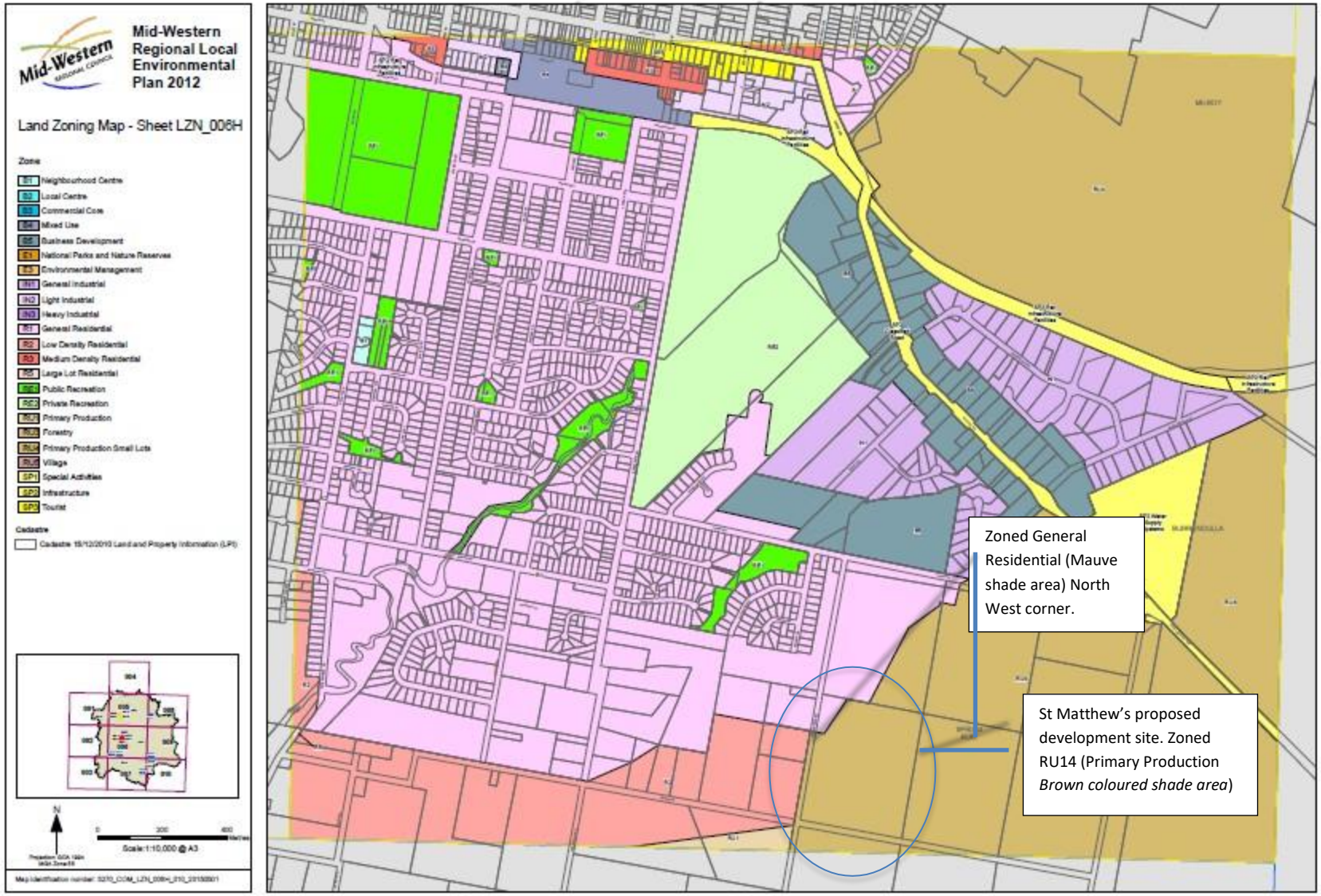
SITE PLAN

18150	DA008	13

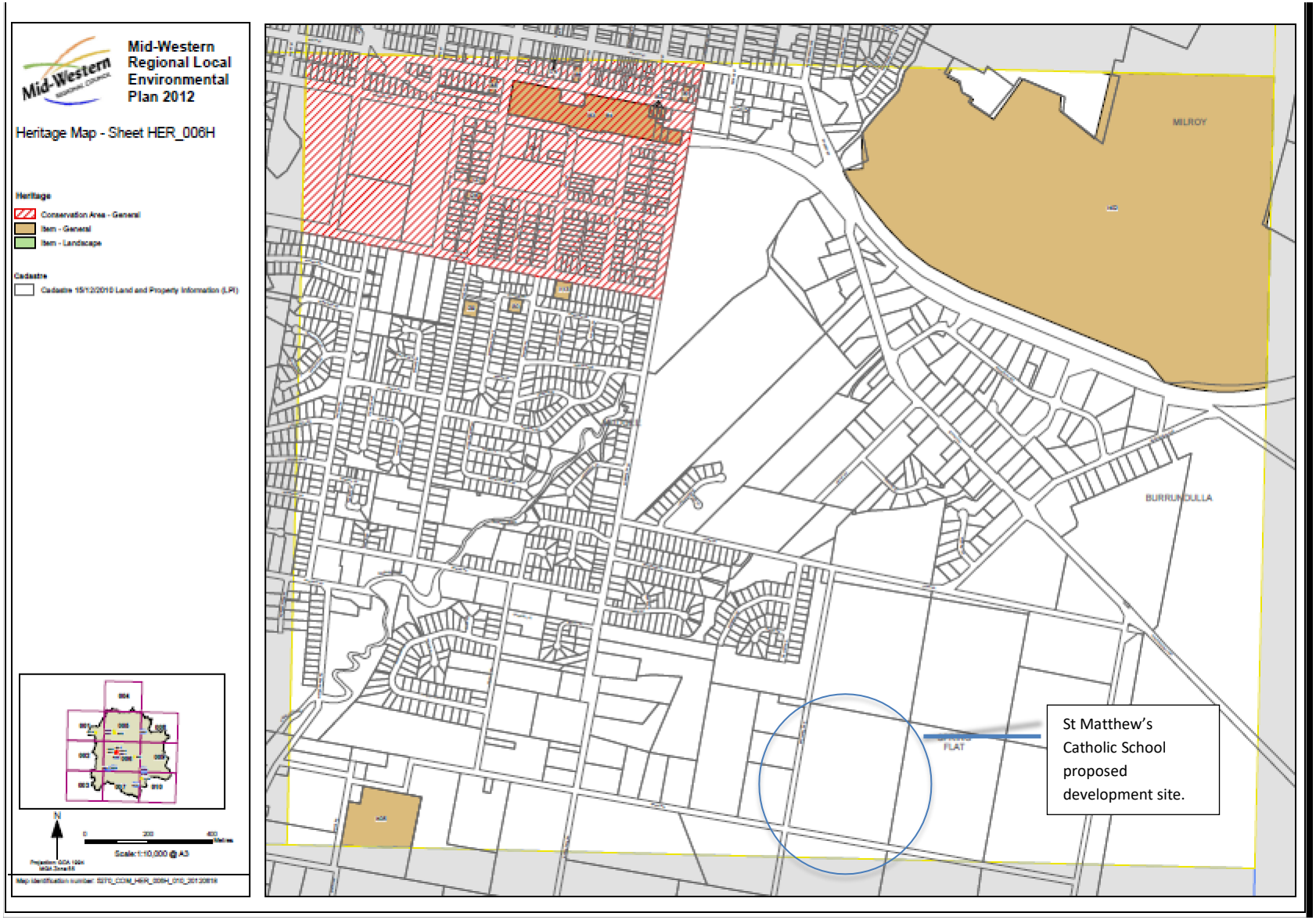
SITE MASTER PLAN: (FIG 3)



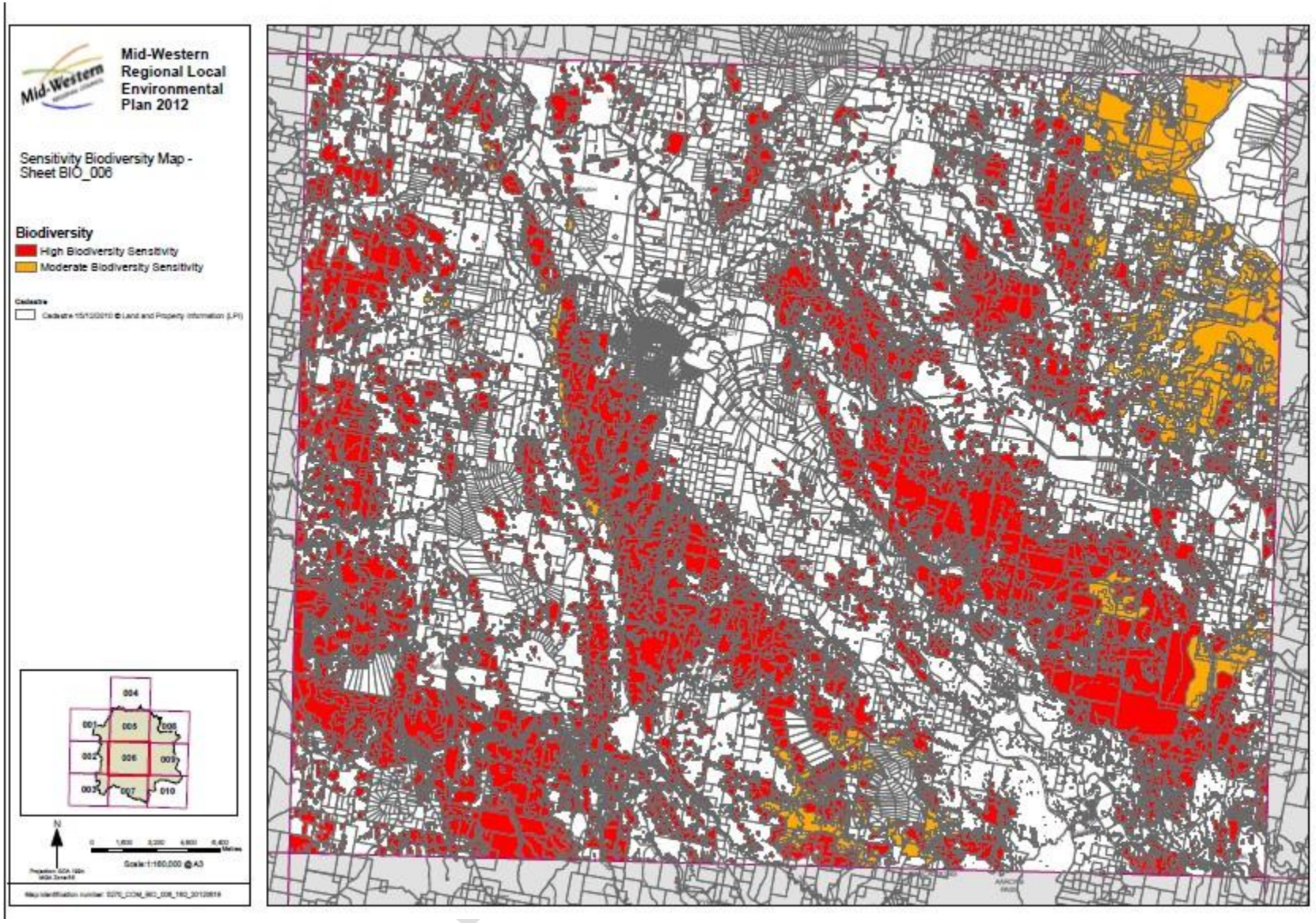
Site Survey Plan (Fig 4)



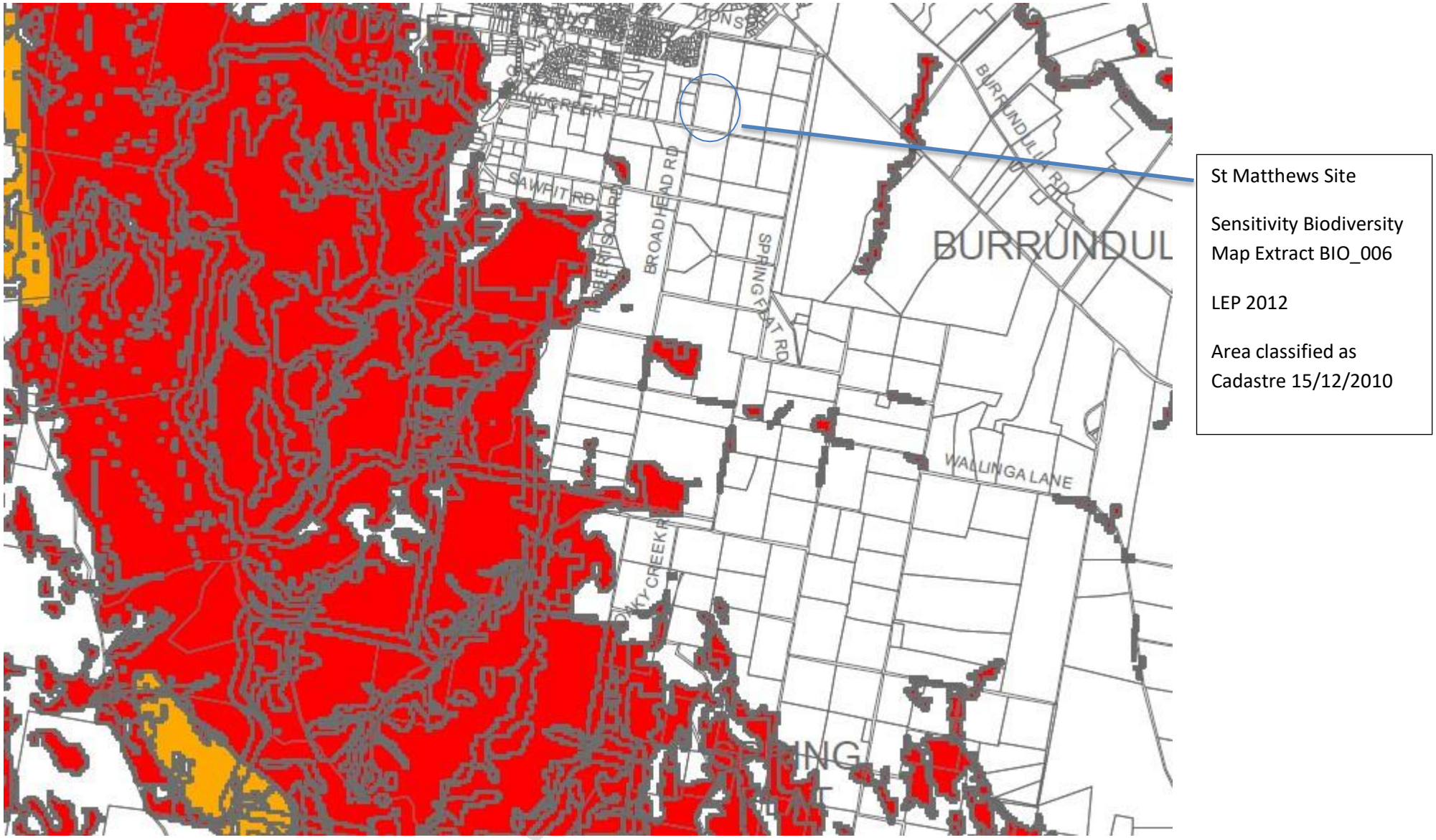
Land Zone Map: LZN_006H LEP 2012 (Fig 5)



Heritage Map : HER_ 006H LEP 2012 (Fig 6)



Sensitivity Biodiversity Map: Sheet BIO_006 LEP 2012 (Fig 7)



St Matthews Site

Sensitivity Biodiversity Map Extract BIO_006

LEP 2012

Area classified as Cadastre 15/12/2010

Extract Sheet BIO_006 LEP 2012 Sensitivity Biodiversity Map LEP 2012 (Fig 8)

TREE SURVEY ASSESSMENT TABLE

Tree No.	Location GPS	Scientific & Common Name	Crown Spread (m)	Height (m)	DBH (cm)	Basal Flare (cm)	Condition of Tree *(Health &Structure)*	SRZ	TPZ	TULE	Retention Value	Recommendation
1	**S 32*37.322'** **E 149*36001'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	3	9	25	32	Mature, Moderate Condition	2.0	3.0	D2	Medium	RETAIN Tree protection required
2	**S 32*37.323.** **E 149*35.999'**	Dead	3	8	15/20		Dead stump broken in ground	-	-	C4	Low	Not habitat, REMOVAL
3	**S 32*37.323'** **E 149*35.001'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	5	10	40	40	Mature, Moderate Condition, Growth habit to west.	2.25	4.8	D2	Medium	Prune Dead Wood RETAIN Tree protection required
4	**S 32*37.322'** **E 149*35.998'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	10	12	50	60	Mature, Borers at 3m, Fungal Attack ,Mistletoe infestation	2.6	6.0	D3	Medium	Remedial prune RETAIN Tree protection required
5	**S 32*37.321'** **E 149*35.986'**	Dead	8	9	50	60	Dead	-	-	C4	Low	Not habitat, REMOVAL
6	**S 32*37.318'** **E 149*35.975'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	9	8	40	48	Mature, Moderate Condition, Epicormics	2.4	4.8	D3	Medium	RETAIN Tree protection required

7	**S 32*37.316'** **E 149*35.944'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	10	12	80	100	Mature, Moderate Condition, Co-Dominate Stem, inclusion @ primary & secondary union at Borers attack moderate.	3.3	9.6	D3	Medium	RETAIN Tree protection required
8	**S 32*37.315'** **E 149*35.934'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	10	10	60	70	Mature, Good Condition	2.8	7.2	D2	Medium	RETAIN Tree protection required
9	**S 32*37.313'** **E 149*35.923'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	9	12	50/40	90	Mature, Good Condition, Inclusion Crown	3.1	7.2	D2	Medium	Prune Dead Wood RETAIN Tree protection required
10	**S 32*37.311'** **E 149*35.913'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	9	10	48	55	Mature, Poor Condition, Sparse Foliage Crown, Fungal Attack, Inclusions in secondary Union	2.5	5.7	D3	Medium	Remedial Prune RETAIN Tree protection required
11	**S 32*37.310'** **E 149*35.903'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	10	12	55	80	Mature, Moderate Condition, Physical Damage primary Union Separated	-	-6.6	C4	Low	REMOVAL
12	**S 32*37.310** **E 149*35.892'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	10	10	60	70	Mature, Moderate Condition, Fungal Attack, Inclusions at 4m	2.8	7.2	D3	Medium	Remedial Prune RETAIN Tree protection required
13	**S 32*37.305'** **E 149*35.882**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	12	12	50/60	80	Mature, Poor Condition, Sparse Foliage Crown, Borers, Co dominate stem, Inclusions Fracture	-	-	D3	Low	REMOVAL
14	**S 32*37.305'** **E 149*35.872'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	10	12	80	90	Mature, Moderate Condition, Inclusions at 3m	3.3	7.2	D2	Medium	Remedial Prune RETAIN (Proposed Access point) Tree protection required

15	**S 32*37.305'** **E 149*35.861'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	6	7	30	40	Mature, Poor Condition, Epicormics, Fungal Attack 40% Decline	-	-	D3	Low	REMOVAL + Replant
16	**S 32*37.303'** **E 149*35.852'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	10	10	50	60	Mature, Moderate Condition	2.2	7.2	D2	Medium	Remedial Prune TPZ to be defined. Tree protection required RETAIN
17	**S 32*37.302'** **E 149*35.841**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	10	10	45	65	Mature, Good Condition	2.7	5.4	D2	Medium	RETAIN (Proposed Access point to carpark) Drive width impacts TPZ. Clarification required. TPZ to be defined. Tree protection required if retained. Possible removal required.
18	**S 32*37.300'** **E 149*35.830'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	10	12	80	70	Mature, Good Condition	3.3	9.6	D2	Medium	(Proposed Access point to carpark) Tree protection required
19	**S 32*37.299'** **E 149*35.822'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	9	12	80	85	Mature, moderate condition. White Ants observed in base	3.3	9.6	D2	Medium	RETAIN. Tree protection required
20	**S 32*37.298'** **E 149*35.813'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	6	6	60	70	Mature, Poor Condition, Physical Damage @ 1m heavily pruned .power lines	2.8	7.2	D3	Medium	RETAIN. Tree protection required
21	**S 32*37.281'** **E 149*35.815'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	8	7	60	70	Mature, Moderate Condition, heavily pruned .power lines	2.8	7.2	D3	Medium	RETAIN. Tree protection required
22	**S 32*37.274'**	Dead	3	5	30		Dead	-	-	C4	Low	Not habitat

	E 149*35.817'											REMOVAL
23	**S 32*37.264'** **E 149*35.817**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	7	7	55	60	Mature, moderate condition , heavily pruned .power lines	2.4	6.6	D3	Medium	RETAIN. Tree protection required
24	**S 32*37.256'** **E 149*35.862'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	12	7	65	70	Mature, Moderate Condition, , heavily pruned .power lines	2.8	7.8	D3	Medium	RETAIN. Tree protection required
25	**S 32*37.245'** **E 149*35.281'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	8	7	50	60	Mature, Moderate Condition, Fungal Attack, fungal attack dead wood, , heavily pruned .power lines	2.4	6.0	D3	Medium	Remedial Prune Dead Wood RETAIN
26	**S 32*37.226'** **E 149*35.824'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	8	7	50	55	Mature, Moderate Condition, , heavily pruned .power lines	2.7	6.0	D3	Medium	RETAIN. Tree protection required
27	**S 32*37.210'** **E 149*35.825'**	Dead	2	5	28		Dead	-	-	C4	Low	Not habitat REMOVAL
28	**S 32*37.207'** **E 149*35.828'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	10	7	50	50	Mature, Good Condition, Natural Lean to North. , heavily pruned .power lines	2.4	6.0	D3	Medium	RETAIN. Tree protection required
29	**S 32*37.199'** **E 149*35.829'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	7	6	45	55	Mature, Good Condition, , heavily pruned .power lines	2.7	5.4	D3	Medium	RETAIN. Tree protection required

30	**S 32*37.191'** **E 149*35.830'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	8	6	40	45	Mature, Moderate Condition, Inclusions at 2m, heavily pruned .power lines	2.2	4.8	D3	Medium	RETAIN. Tree protection required
31	**S 32*37.183'** **E 149*35.832'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	8	6	40	50	Mature, Poor Condition, Fungal Attack	2.4	4.8	D3	Low	Remedial prune , RETAIN. Tree protection required
32	**S 32*37.175'** **E 149*35.834'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	9	6	45	55	Mature, Moderate Condition , heavily pruned .power lines	2.4	5.4	D3	Medium	RETAIN. Tree protection required
33	**S 32*37.167'** **E 149*35.836'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	10	7	50	60	Mature, Moderate Condition , heavily pruned .power lines	2.6	6.0	D3	Medium	RETAIN. Tree protection required
34	**S 32*37.159'** **E 149*35.836'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	8	7	60	50	Mature, Poor Condition, physical damage @ 2m Fungal Attack, Split out Union and Inclusions , heavily pruned .power lines	2.4	7.2	D3	Medium	Remedial prune, RETAIN. Tree protection required
35	**S 32*37.127'** **E 149*35.843'**	*Eucalyptus nicholii* Narrow-leaved Black Peppermint	6	5	30		Dead	-	-	C4	Low	Not habitat REMOVAL
36	**S 32*37.111'** **E 149*35.846'**	*Eucalyptus scoparia* Wallangarra White Gum	3	5	Multi	30	Immature, poor form, , heavily pruned .power lines	-	-	D3	Low	Removal + replant away from power lines
37	**S 32*37.109'** **E 149*35.848'**	*Eucalyptus scoparia* Wallangarra White Gum	2	5	20	25	Immature, 50% dead Sparse Foliage Crown, heavily pruned .power lines	-	-	D3	Low	Removal + replant away from power lines

38	**S 32*37.105'** **E 149*35.849'**	*Eucalyptus scoparia* Wallangarra White Gum	3	5	20	30	Semi-Mature, moderate condition , heavily pruned .power lines	-	-	D3	Low	Removal + replant away from power lines
39	**S 32*37.103'** **E 149*35.849'**	Stag	3	5	15		Dead	-	-	C4	Low	Removal + replant away from power lines
40	**S 32*37.100'** **E 149*35.840'**	*Eucalyptus scoparia* Wallangarra White Gum	4	5	20	28	Semi-Mature, Moderate Condition	-	-	D3	Low	Removal + replant away from power lines
41	**S 32*37.096'** **E 149*35.851'**	*Eucalyptus scoparia* Wallangarra White Gum	4	6	Multi	30	Semi-Mature, Poor Condition	-	-	D3	Low	Removal + replant away from power lines
42	**S 32*37.094'** **E 149*35.851'**	*Eucalyptus scoparia* Wallangarra White Gum	5	6	28	35	Semi-Mature, Moderate Condition	-	-	D3	Low	Removal + replant away from power lines
43	**S 32*37.089'** **E 149*35.851'**	Stag	3	5	15		Dead	-	-	C4	Low	REMOVAL
44	**S 32*37.100'** **E 149*35.864'**	Stag	6	12	110		Dead, Habitat Bees Birds, Ecologist required confirmation	3.3	9.6	C4	High	Prune to leader length make safe. RETAIN Tree protection required
45	**S 32*37.099'** **E 149*35.868'**	*Eucalyptus microcarpa* Western Grey Box	12	14	100	120	Mature, Good Condition, 10% Dead Wood	3.5	12.0	D2	High	Prune Dead Wood RETAIN Tree protection required
46	**S 32*37.097'** **E 149*3.5879'**	*Eucalyptus microcarpa* Western Grey Box	10	14	80	100	Mature, Good Condition, 10% Dead Wood	3.3	9.6	D2	High	RETAIN Tree protection required

47	**S 32*37.093'** **E 149*35.885'**	*Eucalyptus microcarpa* Western Grey Box	12	14	110	140	Mature, Good Condition, Habitat Hollows Ecologist required confirmation	3.8	13.2	D2	High	RETAIN Tree protection required
48	**S 32*37.0092'** **E 149*35.885'**	*Eucalyptus microcarpa* Western Grey Box	7	10	50	55	Mature, Good Condition, Cavity at 2m, Habitat Hollows Ecologist required confirmation	2.5	6.0	D2	High	RETAIN Tree protection required
49	**S 32*37.104'** **E 149*35.899'**	*Eucalyptus microcarpa* Western Grey Box	12	15	110	140	Mature, Good Condition, Lean to Northwest	3.8	13.2	D2	High	Branch hanging Prune to make safe. RETAIN Tree protection required
50	**S 32*37.103'** **E 149*35.900'**	*Eucalyptus microcarpa* Western Grey Box	8	8	50	70	Mature, Good Condition, Lean to North. Habitat Hollows Ecologist required confirmation	2.5	8.4	D2	High	RETAIN Tree protection required
51	**S 32*37.108'** **E 149*35.901'**	*Eucalyptus microcarpa* Western Grey Box	10	12	80	90	Mature, Good Condition, Bees Habitat Hollows Ecologist required confirmation	3.1	9.6	D2	High	RETAIN Tree protection required
52	**S 32*37.111'** **E 149*35.904'**	*Eucalyptus microcarpa* Western Grey Box	12	15	80/80	120	Mature, Moderate Condition, 20% Dead Wood, Heavily lopped in past	3.5	13.5	D2	High	Remedial Prune Dead Wood RETAIN Tree protection required
53	**S 32*37.122'** **E 149*35.891'**	*Eucalyptus microcarpa* Western Grey Box	5	10	60	85	Mature, Poor Condition,70% dead Physical Damage at Base	3.0	7.2	D3	High	Habitat RETAIN Tree protection required
54	**S 32*37.144'** **E 149*35.891'**	Stag	8	10	90	90	Dead Habitat Hollows Ecologist required confirmation	3.1	10.8	C4	Medium	Prune leaders to reduce load on stump, retain as habitat. RETAIN Tree protection required

55	**S 32*37.125'** **E 149*35.889'**	*Eucalyptus microcarpa* Western Grey Box	14	14	110	150	Mature, Moderate Condition, Heavily lopped in past.	3.9	13.2	D2	High	RETAIN Tree protection required
56	**S 32*37.119'** **E 149*35.885'**	Stag	7	10	70	85	Dead Habitat Hollows Ecologist required confirmation	3.0	8.4	C4	High	Reduce Height to make safe RETAIN as habitat Tree protection required
57	**S 32*37.119'** **E 149*35.880'**	*Eucalyptus microcarpa* Western Grey Box	12	16	70	85	Mature, Good Condition, mistletoe	3.0	8.4	A2	High	Remedial prune, mistletoe RETAIN Tree protection required
58	**S 32*37.116'** **E 149*35.879'**	*Eucalyptus microcarpa* Western Grey Box	8	15	60	90	Mature, Good Condition, Lean to West 10% dead wood	3.1	7.2	A2	High	RETAIN Tree protection required
59	**S 32*37.116'** **E 149*35.878'**	*Eucalyptus microcarpa* Western Grey Box	18	16	60/110	135	Mature, Good Condition, 10% Dead Wood steel chain embedded in west low branch	3.7	15.0	D2	High	Remove steel chain if possible RETAIN Tree protection required
60	**S 32*37.113** **E 149*35.871'**	*Eucalyptus microcarpa* Western Grey Box	6	9	55	68	Mature, Poor Condition, tree has lost canopy, impacted by lightning strike	2.8	6.6	D3	High	RETAIN Tree protection required
61	**S 32*37.110'** **E 149*35.871'**	*Eucalyptus microcarpa* Western Grey Box	12	14	120	130	Mature, Good Condition, 20% Dead Wood, Habitat Hollows Ecologist required confirmation	3.7	14.4	D2	High	Habitat RETAIN Tree protection required
62	**S 32*37.108'** **E 149*35.870'**	*Eucalyptus microcarpa* Western Grey Box	12	12	80	95	Mature, Good Condition, Growth habit to North	3.2	9.6	D2	High	RETAIN Tree protection required

TREE ANALYSIS PHOTOS

Eucalyptus *nicholii*: Trees (1-19) bordering Bruce Rd looking south

Eucalyptus *nicholii*: Trees (20-35) bordering Broadhead Rd looking south west.

Eucalyptus *scoparia*: Trees (36-43) bordering Broadhead Rd looking north west.

Eucalyptus *microcarpa*: Trees (44-62) on North West ridge looking

DISCUSSIONS

The following are referenced in the Tree Survey Assessment Table:

- All trees inspected have been tagged and assigned a number and referenced on the TREE LOCATION MAP (fig 1) of its approximate location on the site.
- Trees have been GPS located, identified, sized, inspected for health and condition.
- Tree Useful Life expectancy has been applied and rated in TULE column.
- Tree Retention Value applied at High, Medium and Low.
- Tree Protection Zones/Structural Root Zones identified for trees to be protected where they may be impacted by construction, all measurements are from the centre of the tree.(radius measure)

Where noted in the Tree Survey Assessment Table several trees have significant faults and or require remediation of the canopy or removal, this report is not including a risk assessment and only attention is noted where a fault or structural damage / dead wood is present, remediation actions or other are listed in the Recommendations column.

AMMENITY

The amenity of the area directly relates to retention values, as does habitat and or significant trees of the area. 48 Bruce Rd has adjoining properties with trees lining the boundaries and consistence with the current St Matthew's site.

- Eucalyptus *nicholii* is not indigenous to Mudgee area, (Trees 1-35) are bordering 2x boundaries fence lines, the trees have been assessed as in moderate to poor condition but still retain the amenity of the area , several trees are dead and several trees with significant faults, power lines adjacent the trees in Broadhead Rd will require regular pruning by the utility company. These trees have been planted and assume without testing the average age to be 30 years old, typical age is medium longevity. Trees bordering Bruce Rd boundary (1-19) are a mix of good to poor condition with several tree having structural related problems. Eucalyptus *nicholii* is listed as Vulnerable (NSW) in its natural habitat of the New England and Northern Tablelands districts. (*Retention Value Medium)*

- Eucalyptus *scoparia* is not indigenous to Mudgee area, (Trees 36-43) these trees have been assessed as in moderate to poor condition with several trees dead, the planting location adjacent electrical conductor is not suitable. Eucalyptus *scoparia* in their natural environment on the Northern Table lands district and is listed Vulnerable. (NSW). (*Retention Value Low)*

- Eucalyptus *microcarpa* is indigenous to Mudgee area, (Trees 44-62) are growing in their natural environment. I have assessed these trees in general as in good to moderate condition, several trees are dead *(STAGS,)* habitat hollows are present in several identified trees (*refer to Tree Survey or Conclusions*)**, Eucalyptus *microcarpa* Grassy Woodlands** is listed as Endangered biological Community clarification requires an Ecologist for identification of habitat, flora and fauna species. *(Retention Value High)*

SITE: (Specific notes)

The area has been under the influence of a significant drought, these conditions were experience at the time of the inspection on 27th of November 2019.
Researching information from Mid-Western Regional Council's web site and meeting with the Town Planner was undertaken to establish if the trees on site were registered on the Significant Tree Register and Heritage conditions were to apply to the site.

Memorial and cultural searches have returned no recorded sites. (Appendix B).

SOIL: pH2 testing was completed on site at 4 locations range 5-6 pH2.

TREE PROTECTION ZONES AND STRUCTURAL ROOT ZONES (TPZ/ SRZ)

Tree protection is important in preventing physical damage to trees and their root systems, implementing tree protection fencing to AS 4970 2009. Proposed site access between Trees (16-18) (*Site Master Plan* FIG. 3) require protection from impacts of branch breakage from high loads and compaction of soils by equipment can impact on tree health, clarification required for access width of entrance road impact may result in Tree 17 being removed.
Trees listed in the Tree Survey Assessment Table have been identified for Tree Protection, a radius measurements from the centre of the tree is specified and will require protection at the defined TPZ measurement and fencing installed prior to any demolition or earthworks. Fencing can be around groups of trees and not individual where groups are to be protected. (No entry is permitted into these TPZ without The Project Arborist consent)

AMENITY REDUCED BY THE FOLLOWING

In terms of the trees numbered for removal they have little scientific historical, cultural or social value. Several species have a contribution to the landscape which will be removed. Replenishment of desirable tree species is required in order to ensure biodiversity is kept within the local environment.

VALUATION

The value for each tree is based on size, useful life expectancy, importance of position in landscape, presence of other trees, relationships of the species to the amenity setting, the form of the tree and in rare cases historical associations or botanical interest.

If these trees are reported as having historical, cultural, social or scientific value, in addition to any contribution for the landscape and scenic value of the land, then special consideration and further investigation is essential. The intrinsic value to public amenity and any contribution to the local ecosystem or to biodiversity must be noted. Threatened species list has been researched for the indigenous trees that are on site.

CONCLUSIONS

Research Mid-Western Regional (MWRC) council data base, LEP 2012 and DCP 2013, meeting with Town Planner I can confirm that the trees on the site Lot 40 DP756894; 48 Bruce Rd Mudgee are not listed on the Significant Tree Register (MWRC 4.7 DCP 2013), and the site is not in a Heritage Conservation area or a Sensitivity Biodiversity area. *(See LEP 2012 maps Fig 6-8)*
Researching endangered species and other Heritage sites website for cultural or memorial items that may impact the development in respect to the trees has not revealed any such related items.

The results of Threatened Species research I have concluded only the Eucalyptus *microcarpa* (Trees 44-62) has a High Retention Value and must be retained and protected from development. Eucalyptus *microcarpa* Grassy Woodlands is listed as ENDANGERED BIOLOGICAL COMMUNITY.
Eucalyptus *nicholii* and Eucalyptus *scoparia* are listed as vulnerable species in NSW for trees in the natural communities of the New England and Northern Tablelands districts and not related to planted trees in Mudgee. (*Refer: Ecologist for identification of Habitat, flora and fauna is required and not included in this report*).

Eucalyptus nicholii (Trees 1-35)

Maintaining the present amenity of the area is a consideration for retaining the Eucalyptus *nicholii*, the retention value of these trees is medium and Tree Useful Life Expectancy (TULE) has been assessed as medium to short term requiring medium to substantial remedial care.
These trees have been introduce to the Mudgee area and planted along the two border fence line.
Trees located on Bruce Rd border (Trees 1-19) several trees are dead and require removal and several trees requiring remedial pruning.

Trees located on Broadhead Rd border (Trees 20-35) will require consistence pruning by the utility company to maintain electrical conductor clearances.

- *General comment is that Eucalyptus nicholii life span is medium longevity, typically 35-45 years outside their natural environment, I have estimated these trees to be maximum 30 years old without testing. Remedial care will be required and ongoing to maintain these trees.*

- *Any landscape proposal to replace these Eucalyptus nicholii trees and maintain the amenity of the street scape could be considered a suitable option for the long term amenity of the area.*

Several trees are dead and require removal and several trees requiring remedial pruning because of broken branches or structural problems, specific detail are listed in the Tree Survey Assessment Table for each tree.

Eucalyptus *scoparia* (Trees 36-43)

These are immature /semi mature trees, introduced to the Mudgee area, they are in poor condition, with several dead trees in the mix, planted adjacent electrical conductors requires utility company pruning to maintain clearances regularly, retention value is low and TULE short term with substantial remedial care.

Eucalyptus *microcarpa* (Trees 44-62)

This group of trees are located on the North West ridge, they are remnant grassy woodlands community and are listed as endangered community (refer to Ecologist for clarification on habitat activity and grass plants), I have assessed these trees as High Retention value and to be preserved,
Refer to the Tree Survey Assessment Table for remediation recommended. Several dead trees require to be made safe and retained as habitat.

IN BRIEF

TREES TO BE RETAINED & TREE PROTECTION INSTALLED: 1, 3, 4, 6, 7, 8, 9, 10, 12, 14, 16, 17*, 18, 19, 20, 21, 23, 24, 25, 26, 28, 29, 30, 31, 32, 33, 34, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61 & 62 all (TPZ /SRZ) radius measurements located in the Tree Survey Assessment Table (TPZ & SRZ column)

TREES TO BE REMOVED: 2, 5, 11, 13, 15, 22, 27, 35, 36, 37, 38, 39, 40, 41, 42 & 43.(Tree 17* may be added)

TREES TO REQUIRE REMEDIAL PRUNING: 3, 4, 9, 10, 12, 14, 16, 25, 34, 44, 45, 49, 52, 54, 56, 57 & 59.

TREES IDENTIFIED WITH HABITAT HOLLOWS: 44, 47, 48, 50, 51, 54, 56 & 61.
TREES REQUIRE FURTHER CLARFICATION: 17*

RECOMMENDATIONS

1 Install tree protection fencing prior to any construction work, all fencing must comply with AS 4970 2009 Protection of Tree on Development Sites. Tree Protection Zone measurements are noted in the Tree Survey Assessment Table as Radius from the centre of the tree.
Signs must be erected on the fences "NO ENTRY" with the Appointed Project Arborist phone number.
Review TPZ for Tree 17*

2 A suitable qualified licenced AQF 3 Arborist contractor must be engaged to complete the works and all pruning work to the Australia Standards AS 4373 2007 Pruning of Amenity Trees. Also (see *Safe work NSW engaging a contractor*). Pruning work must be audited by the appointed Project Arborist.

3 Remedial pruning and remove only the trees specified as specified in the Tree Survey Assessment Table, any variation must have approval of the Consulting Arborist.

4 All tree waste can be mulched and stockpiled on site as per Environment Protection Authority (EPA) Raw mulch Order 2016. The generated mulch is to be used on site.

5 Excavations or entry within the tree protection must be undertaken with the AQF 5 Consulting Arborist on site.

6 The development approval must include a tree planting programme to replace the trees removed, species selection in consultation with the appointed Project Arborist.

7 Project Arborist AQF 5 qualification must be appointed audit all tree protection installations prior to demolition, excavation or construction.

GLOSSARY

Crown: The width of the foliage in the upper canopy of the assessed tree to the four cardinal points.

Crown lifting: means the removal of the lower branches of the tree.

Crown thinning means the portion of the tree consisting of branches and leaves and any part of the stem from which branches arise.

Drip line: Where the canopy releases water shed from the foliage during precipitation.

DBH/Diameter: Diameter of trunk at 1.4meters in height of assessed tree.

Dead wooding means the removal dead branches from a tree.

Dieback: Tree deterioration where the branches and leaves die.

Flush cut: A cut that damages or removes the branch collar or removes the branch and stem tissue and is inconsistent with the branch attachment as indicated by the bark branch ridge.

Genus/ Species: The Genus and species of each tree has been identified using its scientific name. Where the species name is not known the letters species is used. The common name for trees may vary considerably in each area of geographical differences and so will not be used in the field survey.

Height: Height has been estimated to + / - 2 metres.

ISA: International Society of Arboriculture.

Maturity: Tree maturity has been assessed as over mature (last one third of life expectancy), mature (one third to two thirds life expectancy) and semi mature (less than one third life expectancy).

Remedial (restorative) pruning: includes: Removing damaged, Dead wood; trimming diseased or infested branches. Trimming branches back to undamaged tissue in order to induce the production of shoots from latent or adventitious buds, from which a new crown will be established.

Retention Value: Rating as High Moderate or Low. Determining factors and not limited to; health vigour, age habitat environmental, landscape heritage etc.

SRZ- Structural Root Zone: An area within the trees root zone in which roots stabilize the tree. Roots cut in this zone can cause instability and lead to anchorage loss.

Structural Integrity: Describes the internal supporting timber. (Substantial to frail)

TULE- Tree Useful Life Expectancy: An estimation of the trees useful life expectancy using appropriate industry methods.

TPZ- Tree Protective Zone: This zone should be considered as optimal for tree growth and sustainability however the size of the zone is subjective and should be reassessed when individual design and construction methods are being discussed.

Tree Age: Trees have either been assessed as mature, immature or semi-mature.

Tree Numbering: All trees listed in the tree survey have been numbered and plotted

Vigour: This is an indication of the tree health. Trees have either been assessed as Good Vigour, Moderate Vigour or Poor Vigour.

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APPENDIX A TULE – TREE USEFUL LIFE EXPECTANCY

McArdle and sons Categories	1 Long TULE	2 Medium TULE	3 Short TULE	4 Remove	5 No Potential for Retention REMOVE IMMEDIATELY	6 Small, Young or regularly clipped:
	Trees that appeared to be retainable at the time of assessment for more than 40 years with low level of risk	**Trees that appeared to be retainable at the time of assessment for 15 to 40 years with and with low to medium level risk**	**Trees that appeared to be retainable at the time of assessment for 5 to 15 years with medium to high level of risk**	**Trees that should be removed within the next 5 years High to Very high level of risk**	**Trees that must be removed immediately. Very high to Extreme level of risk**	**Trees that can be easily transplanted or replaced.**
A	Structurally sound treeslocated in positions thatcan accommodate futuregrowth	Trees that may only livefor between 15 and 40more years	Trees that may only livefor between 5 and 15more years	Dead, dying, suppressedor declining treesthrough disease orinhospitable conditions.	Dead, dying or declining trees diseased orinhospitable conditions.	Small trees less than 5meters in height
B	Trees that could bemade suitable forretention in the longterm by Intervention Works.	Trees that may live formore than 40 years, butwould need to beremoved for safety or Nuisance reasons	Trees that may live formore than 15 years, butwould need to beremoved forsafety ornuisance reasons	Dangerous trees throughinstability or recent lossof adjacent trees	Dangerous trees throughinstability or recent lossof adjacent trees	Young trees less than 15years old but over 5meters in height
C	Trees of specialsignificance forhistorical,commemorative or rarityreasons that wouldwarrant extraordinaryefforts to secure theirlong term retention	Trees that may live formore than 40 years, butshould be removed toprevent interferencewith more suitable individuals or to providespace for new planting	Trees that may live formore than 15 years, butshould be removed toprevent interference with more suitableindividuals or to providespace for new planting	Dangerous trees through structural defectsincluding cavities,decay, included bark,wounds or poor form	Dangerous trees through structural defectsincluding cavities,decay, included bark,wounds or poor form	Trees that have been regularly pruned to artificially controlgrowth
D		Trees that could bemade suitable forretention in the mediumterm by Intervention Works.	Trees that requiresubstantial Intervention Works, and are only suitable forretention in the shortterm	Damaged trees that areclearly not safe to retain	Damaged trees that areclearly not safe to retain and must be removed immediately	
E				Trees that may live formore than 5 years, butshould be removed toprevent interference with more suitable individuals or to providespace for new planting	High Toxicity Allegan trees, asthmatic and poisonous trees and must be removed immediately.	
F				Trees that may causedamage to existingstructures within 5 years	OTHER with legitimate explanation to be removed immediately	
G				Trees that will becomedangerous after removalof other trees for reasonsgiven in 1A-1F		
INSPECTION FREQUENCY	Inspection frequency 1-5 Years by competent inspector unless event monitored.	Inspection frequency 1-5 Years by competent inspector unless event monitored.	Inspection frequency 1-3 years by competent inspector unless event monitored.	Inspection frequency to 1 year by competent inspector unless event monitored.	1-7 days by competent inspector and event monitored	Inspection frequency Biannually by competent inspector

TULE Adapted with permission Jeremy Burrel 2014 for TCAA licensed Climbing Arborist.

APPENDIX B

Office of Environment & Heritage
NSW GOVERNMENT

AHIMS Web Services (AWS)
Search Result

Purchase Order/Reference : dar
Client Service ID : 474547

dan mcardle
1592 Ogunbil rd
Ogunbil 2340
Attention: dan mcardle
Email: danmcardle@mcardleandsons.com.au

Date: 31 December 2019

Dear Sir or Madam:

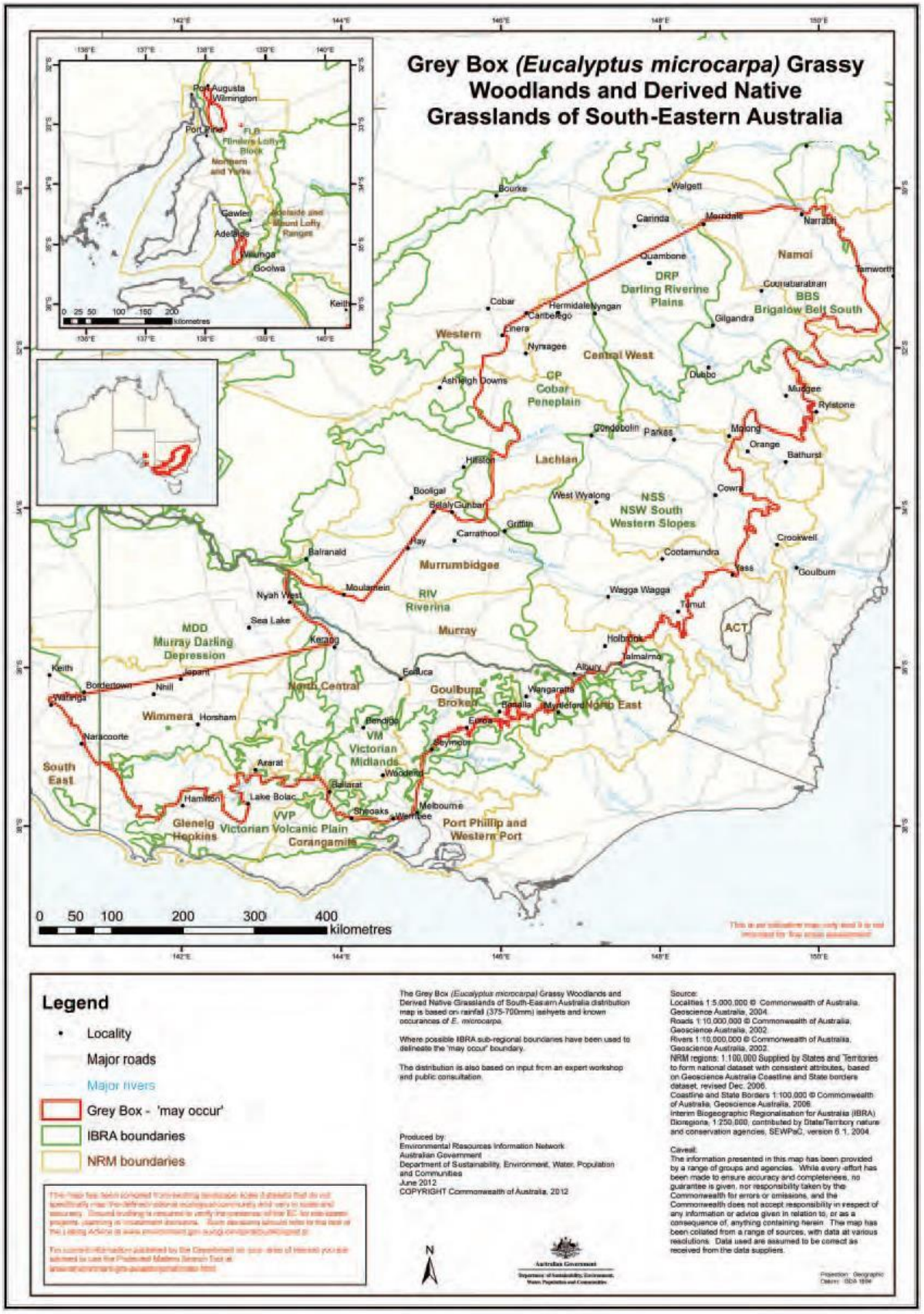
AHIMS Web Service search for the following area at Lot : 40, DP:DP756894 with a Buffer of 50 meters, conducted by dan mcardle on 31 December 2019.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.

A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

APPENDIX C Grassy Box Woodlands map



APPENDIX D TREE PLANTING SPECIFICATIONS AND MAINTENANCE

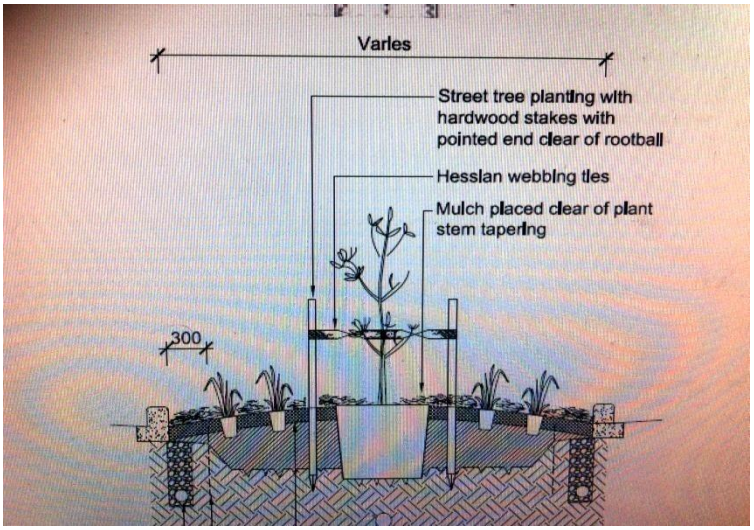
McArdle & Sons Pro Tree Service

Before planting, careful consideration should be given to the location of trees and shrubs to minimise future problems. A basic guide for planting follows:

1. Don't plant too close to buildings or in-ground pools or plant large trees too close together: Determine the height and canopy of trees when fully grown. Allow room for root growth (at least twice the height of the tree). Large trees should be planted at least three metres from buildings.
2. Check when planting under wires or over drainage lines: Determine the mature size of the tree and the size and nature of its root system.
3. Consider your neighbours when choosing plants: Consider the effect on neighbouring properties (i.e. shading, loss of views, impacts on foundations, fences and services).
4. Use trees to provide your home with summer shade and/or winter sun: Plant deciduous trees (suitable to the climate and soils of this Shire). Consider the summer and winter shadows of evergreen trees.
5. Don't grow climbers on trees: Climbers can strangle trees, leading to the tree's eventual death.
6. Retain and protect as many trees as possible when building or extending your home. (This will be a Council requirement).
7. Use locally native and non-invasive species in your garden: Increase the success rate of your garden. Attract native fauna to your garden. Reduce the amount of watering required.
8. Don't excavate or alter the ground level around trees: Can cause root damage or starving of the roots. Can cause limb drop, instability or tree death. Substantially altering soil level within three metres of the trunk is in breach of the Tree Preservation Order.
9. When buying plants, check their characteristics: Check on mature size, shade characteristics, potential for roots to cause damage, flowers, fruits and pollen, to determine their suitability.

Mature trees do need maintenance: Remove or trim misshapen branches. Check for fungal rots or other diseases. If in doubt, contact Council for a tree inspection or contact an experienced Arborist. Indiscriminate lopping can be dangerous to your safety and the health of the tree.

Staking of trees should be carried out similar to the diagram opposite.



APPENDIX E INDIGENOUS TREE REPLENISHMENT

McArdle & Sons Pro Tree Service

Indigenous trees found in Mudgee area.

Tree list Botanical Name	Common Name
Eucalyptus albens	White box
Eucalyptus melliodora	Yellow box
Eucalyptus blakelyii	Blakely's red gum
Eucalyptus bridgesiana	Apple box
Eucalyptus dealbata	Forest red gum
Eucalyptus macarthurii	Paddys River Box
Eucalyptus macrorhyncha	Red stringybark
Eucalyptus pauciflora	Snow gum
Eucalyptus polyanthemos	Red box
Eucalyptus rossii	Scribbly gum
Eucalyptus sideroxylon	Red ironbark
Eucalyptus viminalis	Ribbon gum

APPENDIX F

Tree Retention Values

Addressing the Tree Retention Value consists of several factors:

- Useful life expectancy is measured as long term(greater than 40 years) to plans for removal (less than 5 years)
- Landscape significant rating relates to the amenity it provides, the environmental value and its contribution to heritage.

Tree retention value is determined as High, Moderate, Low or Very Low.

Useful life expectancy (ULE) – ULE is measured as:

- long term (greater than 40 years),
- medium term (15 to 40 years),
- short term (5 to 15 years), and
- plan for removal (less than 5 years).

ULE is the period for which the tree can practically be retained. It is affected by the tree's health and vigour, its structural condition, risk it may present, conflict with infrastructure, suitability in its location and conflict with changing land use.

Landscape significance – A tree's significance in the landscape relates to the amenity it provides, it environmental value and its contribution to heritage. These are affected by the tree's species, its ecological importance, its size and form, its location and its visual prominence. Landscape significance is categorised on a seven-point scale of significant, very high, high, moderate, low, very low and insignificant. Heritage listed trees have the highest rating and weed species have the lowest rating.

Tree retention value – Tree Retention Value is based on a tree's ULE and the landscape significance of the tree. The matrix at table 1 below is used to determine the retention value, which is rated as high, moderate, low or very low.

Table 1 Methodology used to assess Tree Retention Values[1]

	Landscape Significance Rating						
Tree sustainability period	1 significant	2 very high	3 high	4 moderate	5 low	6 very low	7 insignificant
greater than 40 years	high						
15 to 40 years			moderate				
5 to 15 years					low		
less than 5 years						very low	

APPENDIX G TREE MANAGEMENT NOTES

McArdle & Sons Pro Tree Service

It is important to **minimize compaction of the soil** around the drip line. We recommend no heavy machinery operate within the three metres area of the preserved trees. For smaller machines we recommend restricted access within the Tree Protection Zone and also limit movement in this area with smaller type machines.

Rooting hormone is recommended at the prescribed rate around the excavated area and inside the affected trees drip line to promote healthy recovery. Continue the use treatments associated with root growth and vigor. Apply hessian bagging over excavated areas inside the TPZ where roots are encountered.

Weed Removal To reduce competition with the tree the area within the *TPZ* is to be kept free of weeds. These are best removed by the application of foliar herbicide with Glyphosate as the active constituent. This is the preferred method rather than removal by cultivation of the soil within the drip-line, to minimise root disturbance to the tree. The removal of woody weeds such as Privet should use the cut and paint method of herbicide application. Weeds are to be controlled within the *TPZ* for the duration of the project.

Mulching inside the Tree Protection Zone at the applicable depth of 50-100 mm with organic material being 75%leaf litter and 25% wood, and this being composted material preferably from the same genus and species of tree as that to where the mulch is to be applied, i.e. species specific mulch. The depth and type of mulch is to be maintained for the duration of the project.

Watering In the event of prolonged dry periods, or where a tree has been transplanted, or where excavation nearby, especially up slope, leads to drying out of a soil profile, or modification to ground water flow, or flows across an existing ground surface to the tree and its growing environment; deep root watering thoroughly at least twice a week is to be undertaken to irrigate the tree. The need for such watering is determined readily by observing the dryness of the soil surface within the drip-line of the tree by scraping back some mulch. Mulch is to be reinstated afterwards. In the event of disrupted ground or surface water flows to the tree due to excavation, filling or construction, a reticulated irrigation system may be required to be installed within the *TPZ*. If an irrigation system is to be installed, consideration must be given to volume, frequency, and drainage of water delivered, and this should be in consultation with a qualified Consulting Arborist.

Pruning the tree; including Dead wood and crown thin to council regulations and in accordance with AS4373-2007 `Pruning Amenity of Trees'. Australian Standards

Fertilising A tree will not be fertilised during its protection within the *TPZ.* If a tree is to be fertilised this should be in consultation with a qualified Consulting Arborist.

Regular monitoring of tree protection in adherence with the approved tree protection plan throughout the development process must be undertaken in consultation with the Consulting Arborist for the project to ensure that tree protection measures are maintained. Inspections are to be carried out monthly reports until completion of construction. Any problems will be rectified that may occur. A Qualified Arborist with appropriate qualifications and experience will be on site if any excavation work within the Critical Root Zone is required and will provide notes in the final report. Maintenance will continue after three months of completion.

APPENDIX H DISCLAIMER

McArdle & Sons Pro Tree Service

McArdle & Sons Arboricultural Services Pty Ltd does not assume responsibility for liability associated with the tree on or adjacent to this project site, their future demise and/or any damage, which may result therefrom.

Any legal description provided to McArdle & Sons Arboricultural Services Pty Ltd is assumed to be correct. Any titles and ownerships to any property are assumed to be good and sound. McArdle & Sons Arboricultural Services Pty Ltd takes care to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.

McArdle & Sons Arboricultural Services Pty Ltd reports and recommendations shall not be viewed by others or for any other reason outside its intended target, either partially or whole, without the prior written consent of the consultant. Unauthorised alteration or separate use of any section of the report invalidates the whole report. McArdle & Sons Arboricultural Services Pty Ltd cannot be held responsible for any consequences as a result of work carried out outside specifications, not in compliance with Australian Standards or by inappropriately qualified staff.

Sketches, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale. All recommendations contained within this report represent the current industry best practice methods of inspection. McArdle & Sons Arboricultural Services Pty Ltd shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

LIMITS OF OBSERVATION

McArdle & Sons Arboricultural Services Pty Ltd makes every effort to accurately identify current tree health and safety issues. Results may or may not correlate to actual tree structural integrity. There are many factors that may contribute to limb or total tree failure. Not all these symptoms are visible. There can be hidden defects that may result in a failure even though it would seem that other, more obvious defects would be the likely cause of failure.

All standing trees have an element of unpredictable risk. McArdle & Sons Arboricultural Services Pty Ltd endeavors to identify the risk that the tree represents; however a level of risk associated with every tree will remain. McArdle & Sons Arboricultural Services Pty Ltd does not provide any warranty or guarantee that problems, deficiencies or failures with regard to the plant/s, property or building/s will not arise in the future.

Ongoing monitoring may foresee deterioration of a tree and allow remedial action to be taken to prevent injury or damage. The timing for re-inspection on individual trees is subjective and will vary however an annual inspection is advisable for trees in subsequent years.

FURTHER RESEARCH The report does not cover threatened, heritage or existing trees in relation to remnant forest. Further reporting may be considered as part of the relevant RISK ASSESSMENT.

LIMIT OF OBSERVATIONS BY RODNEY M. PAGE

“There are many factors that may contribute to limb or total tree failure. Factors include, decay (in the trunk, crown or branch junctions), external damage to branches leading to decay, poor branch taper, included bark, root rot/ decay. Not all these symptoms are visible i.e. internal decay; of these some external symptoms may indicate the presence of Dead wood but not the extent of decay. The most solid looking piece of timber may be riddled with breaks in continuity of growth caused by insect damage or poor pruning practices or other physical damage caused many years previous. Trees don’t heal; they simply box in the damaged area ((CODIT) Compartmentalization of Decay In Trees.) and continue to expand in girth, completely disguising the fact that the branch or trunk has a hollow or decayed section. Having said this, not all areas, of decay past or present suggest a point of failure.”

In addition to this information, other variables that can contribute to limb or total tree failure are tree species, wood densities, weight, age, location, exposure to the elements, soil types, disease and pests, birds using trees as habitat and food sources, termites causing structural problems and human influences such as, altered drainage, compaction or leaching of minerals.