Arborist Report

Client: JCPMB Pty Ltd

Address: Lot 6 DP 27147 &

Lot 7 DP 271474

Lot 1 DP 280108

10 – 12/ 91 Gardiner Street,

RUTHERFORD N.S.W 2320

Bradley Magus

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1.0 Executive Summary

- Abacus Tree Services have been requested to undertake a site inspection on thirty five (35) trees in relation to the proposed development at (Lot 6 DP 271474 & Lot 7 DP 271474) 10 – 12/91 Gardiner Street, Rutherford. The applicant proposes to undertake an industrial development as outlined in Appendix 1. Trees 1 – 32, 34 & 35 can be retained and incorporated into the development. The applicant has amended the plans to ensure that all trees are retained except for Tree 33 which is located on the property boundary. The applicant has designed the development to ensure maximum retention of trees. Conditions and recommendations are outlined in section 7 of the report.

2.0 Arborist Details

Bradley Magus **Contact Details:** P.O Box 333 Newcastle 2300 Ph: 0425 203 049 Email: abacustrees@gmail.com or bradmagus1@bigpond.com Web: www.abacustreeservices.com	**Qualifications** 1. Diploma Horticulture (1993) 2. Bachelor of Horticulture Science (1996) 3. Masters Land Economics (2002) 4. Diploma Horticulture (Arboriculture) (AQF 5) 2007 (Dux) 5. International Society of Arboriculture Certified Arborist (2007) 6. QTRA Assessor – 2011 & 2013

2.1 Introduction

Abacus Tree Services was commissioned by JCPMB Pty Ltd to assist in the preparation of an arborist report. An assessment was made on thirty five (35) trees located within close proximity to (Lots 6 & 7) 10 – 12/91 Gardiner Street, Rutherford. There is in total thirty five (35) trees that were assessed to determine the development at (Lots 6 & 7) 10 – 12/91 Gardiner Street, Rutherford. All trees that come under council requirements have been assessed within 5 metres of the proposed development.

The purpose of this report is to provide information and guidance to the applicant in relation to thirty five (35) trees only. The information in this report is to be used in correlation with other reports identified by Maitland Council and will provide Maitland Council with a framework for determining the development application (D.A).

This report and its recommendations are based upon a physical site inspection undertaken on the 12 September 2024.

The photographs included in this report were taken at the time of the inspection on the 12 September 2024.

2.2 Aims of this report/Procedure

The aim of this report is to assess the health and condition of thirty five (35) trees (Trees 1 - 35). The condition of the trees was assessed from ground level using the VTA (Visual Tree Assessment) method as outlined by Mattheck & Breloer (1999). The following criteria will be assessed within this report –

- An assessment of the dimensions (age, class, height and Diameter at Breast Height (D.B.H)
- An assessment of the health and condition of the trees;
- An assessment of the Useful Life Expectancy (U.L.E)
- Compilation of an appropriate report detailing the results of the above assessments
- Trees earmarked for retention to be assessed as per Australian Standards 4970-2009
- Hazard Rating, Recommendations for each tree

The (U.L.E) method of tree assessment, as outlined by Jeremy Barrell (1999) has been adopted within this report. U.L.E categories give an indication of the useful life expectancy anticipated for the tree that has been adopted for this report. Several factors are considered in determining this rating such as species, location, age, condition and health of the tree. The five U.L.E categories are outlined in detail within Appendix 2.

3.0 Disclaimer

This assessment has been prepared for the exclusive use of the applicant (JCPMB Pty Ltd), for the preparation of a development application submission. Information in this report relates to thirty five (35) trees (Trees 1 – 35) within the premises of (Lots 6 & 7) 10 – 12/91 Gardiner Street, Rutherford only and should not be used in conjunction with any other property.

This assessment was carried out from the ground, and covers what was reasonably able to be assessed and available to the assessor at the time of the inspection. The assessor carried out no aerial inspections. Information contained in this report covers only the trees that were examined and reflects the condition of the trees at the time of the inspection; furthermore the inspection was limited to a visual examination of the subject trees without dissection, excavation, probing or coring. Trees are living things and there condition will change over time. Therefore there is no guarantee that problems or deficiencies of the subject tree may not arise in the future.

3.1 Site Map

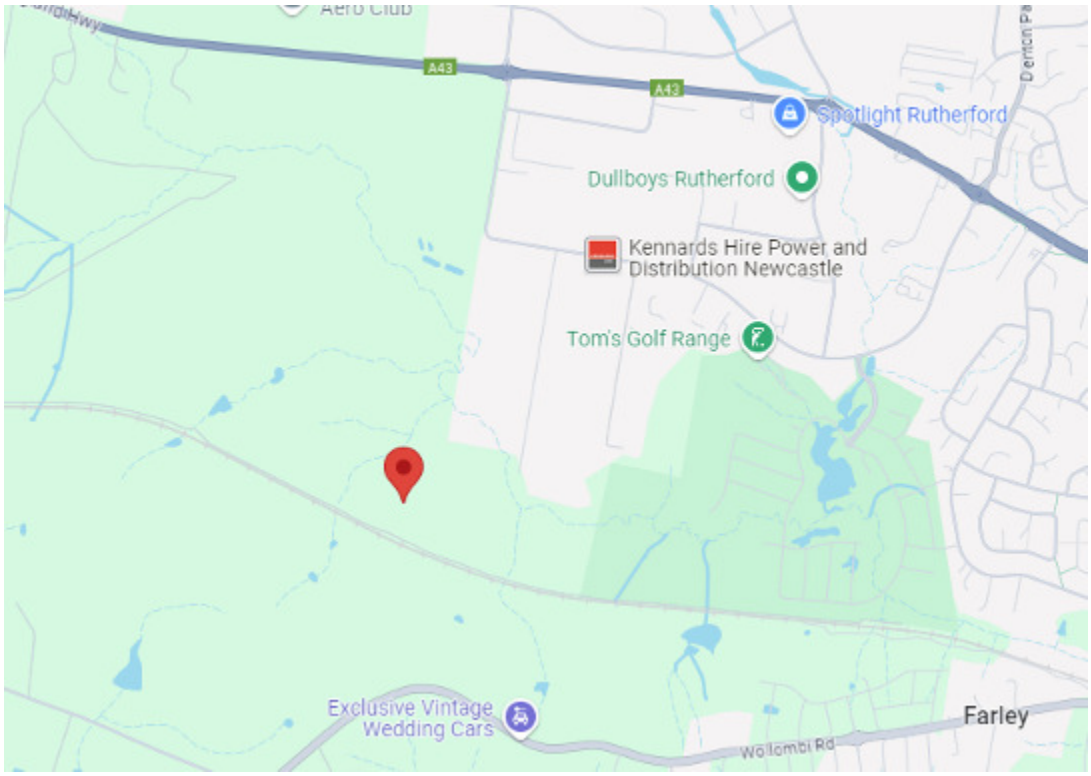


Figure 1
Location: Location of the subject property identified as (Lots 1, 6 & 7) 10 – 12/91 Gardiner Street, Rutherford
Source: www.googlemaps.com.au

3.2 Site Description

Trees 1 – 32, 34 & 35 are located wholly within Cowhill Road (unformed) and Lot 1 DP 280108, 91 Gardiner Street, Rutherford. Tree 33 is located on the boundary between Lot 7 DP 271474 and Lot 1 DP280108. The site is located in the municipality of Maitland Council. The species on site has been assessed against the requirements set out in Maitland Council's s Local Environmental Plan (2011) pursuant to Section 5.9 & 5.9AA (repealed) & Development Control Plan (2011) (Part B.5 – Tree Management) I have assessed the property against Schedule 5 (Environmental Heritage) within Maitland LEP. The property is not listed in accordance with Part 1 (Heritage Items) and/or Part 2 (Heritage Conservation Area).

The subject property has also been assessed against the SEPP Policy (Biodiversity and Conservation) 2021. This property or council area is not listed as being within Part 2 (Section 2.3) of the SEPP (Biodiversity and Conservation) 2021. All councils have items of local government and state heritage significance. These items are found in the NSW heritage website. The subject property has been assessed against the Heritage NSW database. In accordance with Heritage NSW listed items there are no listings (Items listed by Local Government & State Agencies) for the subject property. This also includes no trees of heritage significance for the subject property.

The site is set on a flat block with the immediate area being dominated by industrial developments and a railway line. The nearest major arterial road is the New England Highway. Trees 1 – 32, 34 & 35 are located within the adjoining allotments within close proximity to the subject property identified as (Lots 6 & 7) 10 – 12/91 Gardiner Street, Rutherford.

Figure 2 – Location of subject property identified as (Lots 6 & 7) 10 – 12/91 Gardiner Street, Rutherford

Figure 3 – Location of subject property identified as (Lots 6 & 7) 10 - 12/91 Gardiner Street, Rutherford

4.0 Tree Schedule

Species & dimension requirements on Pages 10 & 11. This page intentionally left blank

Tree No	Scientific Name	Common Name	DBH (MM)	Height (M)	AGE CLASS	Vigour	SPREAD N.E.S.W.	ULE	Comments
1	Corymbia maculata	Spotted Gum	195	11	YM	G	2,2,1,2	2a	Symmetrical, LCR = 95 – 100%
2	Corymbia maculata	Spotted Gum	120	8.5	SM	G	0,2,2,2	3d	Trunk damage to W quadrant at ground level, Symmetrical, LCR = 95 – 100%
3	Eucalyptus siderophloia	Grey Ironbark	1015	23	M	G	6,6,7,5	2d	Symmetrical, LCR = 95 – 100%
4	Eucalyptus siderophloia	Grey Ironbark	170	8	YM	G	2,2,1,2	2a	Canopy overhang by 0 – 5%, Symmetrical, LCR = 95 – 100%
5	Eucalyptus siderophloia	Grey Ironbark	190	12	YM	G	2,2,1,2	2a	Symmetrical, LCR = 95 – 100%
6	Eucalyptus siderophloia	Grey Ironbark	155	11	YM	G	2,2,1,2	2a	Symmetrical, LCR = 95 – 100%
7	Eucalyptus punctata	Grey Gum	120	8.5	YM	G	2,2,2,2	2a	Symmetrical, LCR = 95 – 100%
8	Corymbia maculata	Spotted Gum	155	14	YM	G	1,0,1,1	2d	Symmetrical, LCR = 75 – 80%
9	Melaleuca linarifolia	Snow in Summer	MS (180)	5.5	YM	G	1,3,2,2	2a	Symmetrical, LCR = 95 – 100%
10	Eucalyptus siderophloia	Grey Ironbark	270	16	YM	G	4,3,1,4	2d	Symmetrical, LCR = 95 – 100%
11	Eucalyptus siderophloia	Grey Ironbark	90	8	SM	G	1,1,0,1	2a	Suppressed, Symmetrical, LCR = 95 – 100%
12	Corymbia maculata	Spotted Gum	770	18	M	G	4,9,5,2	2d	0 – 5% canopy overhanging into subject property. MDW to E quadrant at 2 metres above ground level. Symmetrical, LCR = 90 – 95%
13	Melaleuca styphelloides	Prickly Leaved Paperbark	MS (360)	7	M	G	2,3,3,3	2a	Symmetrical, LCR = 95 – 100%
14	Eucalyptus siderophloia	Grey Ironbark	220	12	YM	G	4,4,3,2	2d	Symmetrical, LCR = 95 – 100%
15	Eucalyptus punctata	Grey Gum	MS (210)	6	YM	G	1,2,2,2	2a	Symmetrical, LCR = 95 – 100%
16	Corymbia maculata	Spotted Gum	310	22	M	G	7,4,1,5	2d	Symmetrical, LCR = 95 – 100%
17	Eucalyptus siderophloia	Grey Ironbark	160	10.5	YM	G	2,2,2,1	2a	Symmetrical, LCR = 95 – 100%
18	Eucalyptus siderophloia	Grey Ironbark	150	9	YM	G	3,1,2,1	2a	Symmetrical, LCR = 95 – 100%
19	Eucalyptus siderophloia	Grey Ironbark	195	13	YM	G	3,1,2,3	2d	Symmetrical, LCR = 95 – 100%
20	Eucalyptus siderophloia	Grey Ironbark	370	20	M	G	4,3,4,5	2d	Symmetrical, LCR = 95 – 100%
21	Corymbia maculata	Spotted Gum	120	11	YM	G	2,1,2,1	2a	Symmetrical, LCR = 95 – 100%

22	Corymbia maculata	Spotted Gum	395	24	M	G	5,3,3,2	2d	Symmetrical, LCR = 75 – 80%
23	Corymbia maculata	Spotted Gum	85	5.5	SM	G	1,1,1,1	2a	Symmetrical, LCR = 95 – 100%
24	Corymbia maculata	Spotted Gum	230	20	M	G	3,2,2,3	2d	Symmetrical, LCR = 95 – 100%
25	Corymbia maculata	Spotted Gum	235	17	M	G	5,3,4,4	2d	Symmetrical, LCR = 95 – 100%
26	Corymbia maculata	Spotted Gum	345	20	M	G	7,6,5,4	2d	MDW to NE quadrant at 8 metres above ground level (5 metres long)
27	Eucalyptus punctata	Grey Gum	115	7.5	SM	G	2,2,2,1	2a	Symmetrical, LCR = 95 – 100%
28	Eucalyptus punctata	Grey Gum	80	7	SM	G	2,2,1,1	2a	Symmetrical, LCR = 95 – 100%
29	Corymbia maculata	Spotted Gum	75	8	YM	G	1,1,1,1	2a	Symmetrical, LCR = 95 – 100%
30	Corymbia maculata	Spotted Gum	360	20.5	M	G	5,3,5,4	2d	Symmetrical, LCR = 95 – 100%
31	Eucalyptus siderophloia	Grey Ironbark	110	7	YM	G	1,1,1,1	2a	Symmetrical, LCR = 95 – 100%
32	Corymbia maculata	Spotted Gum	110	8	SM	G	1,1,1,1	2a	Symmetrical, LCR = 95 – 100%
33	Corymbia maculata	Spotted Gum	95	8	SM	G	1,1,1,1	2a	Symmetrical, LCR = 95 – 100%
34	Corymbia maculata	Spotted Gum	100	7	SM	G	1,1,1,1	2a	Symmetrical, LCR = 95 – 100%
35	Corymbia maculata	Spotted Gum	120	10	SM	G	1,1,1,1	2a	Symmetrical, LCR = 95 – 100%

Key:

Age class: Young = Y, Semi mature = SM, Mature = M, YM = Young Mature, Over mature = OM
DBH = Diameter at Breast Height LCR = Live Crown Ratio
Vigour = E = Excellent, G = Good, F = Fair, P = Poor, D = Dead, Do = Dormant
LDW = large deadwood over 40mm, MDW = Minor deadwood less than 40mm
N = north, E = east, W = west, S = south MS = multiple Stems
ULE = Useful Life Expectancy (See appendix 2 for guidelines)
MS = Multiple Stems S = Shrub
NCC = Newcastle City Council UFTM + Urban Forestry Technical Manual
SRZ = Structural Root Zone TPZ = Tree Protection Zone

4.1 Trees & Impact on Development

Trees are living organisms and their root systems play an integral role in stability and providing nutrient storage as well as water uptake. The majority of tree roots for Dicotyledons occur within the first metre of the soil. Therefore construction works can have a profound effect on their health and longevity as well as their structural stability. Tree distances from excavation works must be taken into consideration at the planning stage to ensure that the tree is not damaged.

There are several main factors that occur at the construction phase that can have a negative impact on the trees health and stability. These practices can include but are not limited to –

- Parking of vehicles and heavy machinery within the drip line of the tree.
- Stockpiling of materials within the drip line of the tree.
- Excavating within the drip line and damaging the structural root system.
- Raising soil levels in and around the base of the tree therefore reducing the trees ability for gaseous exchange.
- Damage to the tree due to heavy machinery and equipment resulting in large bark tears or loss of branches and scaffolds.

To reduce the effects of construction it is imperative to provide an area underneath the tree where no works are undertaken. The area where supervised works are undertaken is referred to as the structural root zone (SRZ). The S.R.Z/T.P.Z is an area where no to minimal activities listed above should occur. All trees require an S.R.Z/T.P.Z and will vary from species to species but for the purposes of this report the Australian Standards 4970 has now been adopted.

In conclusion the Australian Standards like similar methods for protecting trees is only a guide. To ensure the health and longevity of trees within construction sites it is imperative to provide a large protection zone taking into consideration that the tree will also grow over time. The greater area that can be put aside where no works occur will aid in the preservation of the tree. The activities listed above should be kept to a minimum and encroachment within the SRZ/TPZ will require the supervision by a qualified AQF 5 arborist. These impacts will be taken into consideration in the discussion & recommendations section of this report.

5.0 Discussion & Compliance to Australian Standards 4970 – 2009, 4373 – 2007 & Rural Fire Service (RFS) 10:50 Code

Abacus Tree Services has been approached by JCPMB Pty Ltd to undertake an arborist (assessment) report on trees that come under the requirements of Maitland Council DCP pursuant to section Part B.5 – Tree Management & trees that will be affected by the proposed development. There are thirty five (35) trees that have been assessed within the subject properties identified as (Lots 6 & 7) 10 – 12/91 Gardiner Street, Rutherford & the two adjoining allotments to the rear and side boundaries. The applicant proposes to construct an industrial development within the subject property identified as (Lots 10 & 12) 91 Gardiner Street, Rutherford (Appendix 1). All trees have been tagged for identification purposes that correspond with the site plan in Appendix 1.

Abacus Tree Services has relied upon the sketch drawings provided by GCA Engineering Solutions (Drawing number – 23263A Revision 12) to formulate distances and setbacks in accordance with Australian Standards 4970 – 2009. I have relied upon this information to be true and accurate. Any changes to the sketching and drawings will require the calculations to be reassessed in accordance with Australian Standards 4970 – 2009.

The table below represents the S.R.Z (Structural Root Zone) and TPZ (Tree Protection Zone) figures based on Australian Standards 4970 - 2009.

Tree No	SRZ (metres)	TPZ (metres)
1	1.79	2.34
2	1.57	2.00
3	1.79	12.18
4	1.72	2.04
5	1.79	2.28
6	1.65	2.00
7	1.57	2.00
8	1.67	2.00
9	1.68	2.16
10	2.08	3.24
11	1.50	2.00
12	3.00	9.24
13	2.31	4.32
14	1.91	2.64
15	1.88	2.52
16	2.18	3.72
17	1.56	2.00
18	1.63	2.00
19	1.79	2.34
20	2.32	4.44
21	1.55	2.00
22	2.41	4.74
23	1.50	2.00
24	1.94	2.76
25	1.88	2.82
26	2.28	4.14
27	1.50	2.00
28	1.50	2.00
29	1.50	2.00
30	2.29	4.32
31	1.50	2.00
32	1.50	2.00
33	1.50	2.00
34	1.50	2.00
35	1.50	2.00

All trees require a S.R.Z and a T.P.Z with Australian Standards 4970- 2009 being used as a guideline. Tree 1 has been given an SRZ and TPZ of 1.79 & 2.34 metres in accordance with Australian Standards 4970 - 2009. Tree 1 is located 3.7 metres to the back boundary. There is a proposed 6 metre wide easement in this location. There is 6 metres from the development to proposed building D. The proposed development will be located outside of the TPZ. The proposed 6 metre setback is put in place for Tree 3. The TPZ of Tree 3 will also allow the retention of Tree 1. This is based on the proviso that no change in the soil profile occurs from the trunk to the development. The entire TPZ is located inside the neighbouring development. Tree 1 is earmarked for retention.

Figure 3 – showing the location of Trees 2 & 3. The red arrows represent the side of the development. There is to be no change in the soil profile for a minimum of 5 metres into the development to accommodate the TPZ of Tree 3.

Tree 2 has been given an SRZ and TPZ of 1.57 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 2 is located 2.3 metres to the side boundary. The entire TPZ is located inside the neighbouring property. Tree 2 can be retained and incorporated into the development. This is based on the proviso that no change in the soil profile occurs within the TPZ.

Tree 3 has been given an SRZ and TPZ of 1.79 & 12.18 metres in accordance with Australian Standards 4970 - 2009. Tree 3 is the largest tree within the neighbouring property. Tree 3 is located 4.1 metres to the side boundary inside the neighbour's property. Tree 3 is located 10.1 metres to the proposed development. AS 4970 – 2009 indicates that the TPZ radius is taken from the centre of the trunk. This leaves a spatial separation of 10.67 metres from the centre of the trunk to the proposed development. The overall loss of TPZ has been calculated at 2.57% that complies with AS 4970 – 2009. The first 5 metres within the subject property is to be set aside as an area dedicated to the TPZ. This will include no change to the soil profile for 9.67 metres from the trunk. The current layout and design will allow the retention of Tree 3. Tree 3 is earmarked for retention.

Tree 4 has been given an SRZ and TPZ of 1.72 2.04 metres in accordance with Australian Standards 4970 - 2009. Tree 4 is located 3.7 metres to the boundary fence. The entire TPZ is located inside the neighbouring property. Tree 4 can be retained and incorporated into the development. This is based on the proviso that no change in the soil profile occurs within the TPZ.

Tree 5 has been given an SRZ and TPZ of 1.79 & 2.28 metres in accordance with Australian Standards 4970 - 2009. Tree 5 is located 3.1 metres to the side boundary within the neighbouring property. The entire TPZ is located inside the neighbouring property. Tree 5 can be retained and incorporated into the development. This is based on the proviso that no change in the soil profile occurs within the TPZ.

Tree 6 has been given an SRZ and TPZ of 1.65 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 6 is located 3.2 metres to the boundary fence. The entire TPZ is located inside the neighbouring property. Tree 6 can be retained and incorporated into the development. This is based on the proviso that no change in the soil profile occurs within the TPZ.

Tree 7 has been given an SRZ and TPZ of 1.57 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 4 is located 4 metres to the boundary fence. The entire TPZ is located inside the neighbouring property. Tree 7 can be retained and incorporated into the development. This is based on the proviso that no change in the soil profile occurs within the TPZ.

Tree 8 has been given an SRZ and TPZ of 1.67 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 8 is located 2.1 metres to the boundary fence. The entire TPZ is located inside the neighbouring property. Tree 8 can be retained and incorporated into the development. This is based on the proviso that no change in the soil profile occurs within the TPZ. The existing soil and organic layer is to be retained in this section. It will need to be fenced off before commencement of all civil and building works on site.

Tree 9 has been given an SRZ and TPZ of 1.68 & 2.16 metres in accordance with Australian Standards 4970 - 2009. Tree 9 is located 2.4 metres to the boundary fence. The entire TPZ is located inside the neighbouring property. Tree 9 can be retained and incorporated into the development. This is based on the proviso that no change in the soil profile occurs within the TPZ. The existing soil and organic layer is to be retained in this section. It will need to be fenced off before commencement of all civil and building works on site.

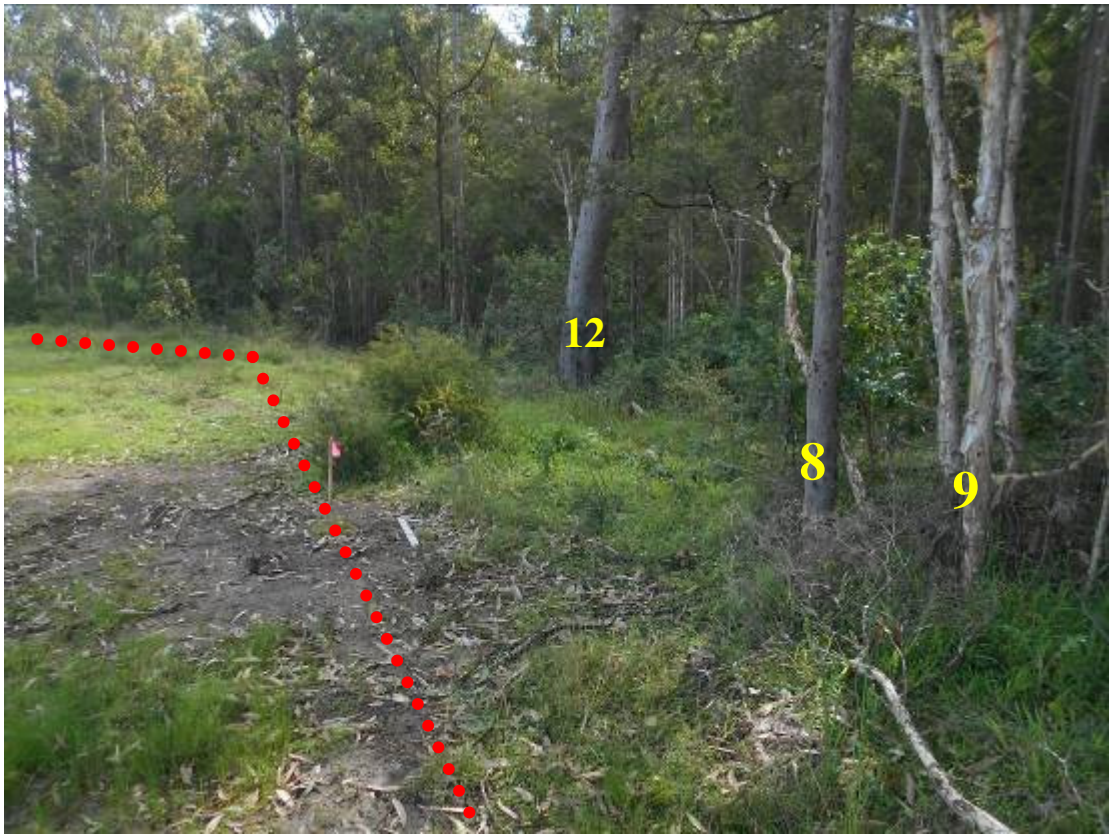


Figure 4 – showing the location of Trees 8, 9 & 12. Trees 8 & 9 have TPZ's that are entirely within the neighbouring property. It is imperative that no machinery enter into this zone. Perimeter fencing is to be established before commencement of all civil and building works on site as highlighted in red above.

Tree 10 has been given an SRZ and TPZ of 2.08 & 3.24 metres in accordance with Australian Standards 4970 - 2009. Tree 8 is located 3.5 metres to the boundary fence. The entire TPZ is located inside the neighbouring property. Tree 10 can be retained and incorporated into the development. This is based on the proviso that no change in the soil profile occurs within the TPZ. The existing soil and organic layer is to be retained in this section. It will need to be fenced off before commencement of all civil and building works on site.

Tree 11 has been given an SRZ and TPZ of 1.50 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 8 is located 3.4 metres to the boundary fence. The entire TPZ is located inside the neighbouring property. Tree 11 can be retained and incorporated into the development. This is based on the proviso that no change in the soil profile occurs within the TPZ. The existing soil and organic layer is to be retained in this section. It will need to be fenced off before commencement of all civil and building works on site.

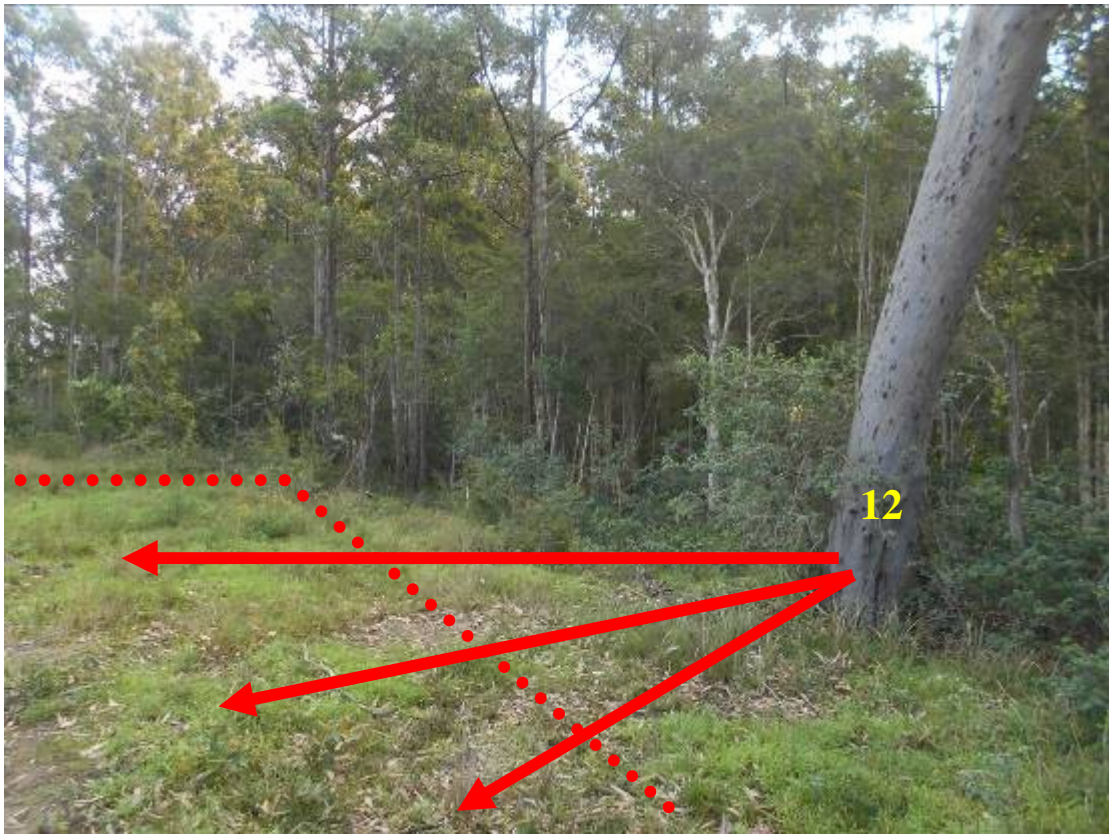


Figure 5 – showing the location of Tree 12 in the neighbouring property. Tree 12 will require retention and incorporation into the development. No change in the soil profile is to occur inside the proposed vegetation buffer.

Tree 12 has been given an SRZ and TPZ of 3.00 & 9.24 metres in accordance with Australian Standards 4970 - 2009. Tree 12 is located 2.8 metres to the side boundary. Tree 12 is located in the neighbouring property. Tree 12 is located 7.5 metres to the proposed visitor car parking spaces. Tree 12 is located 9 metres to the remaining section of hardstand area associated with Lot 6. AS 4970 – 2009 indicates that the TPZ radius is taken from the centre of the trunk. This leaves a spatial separation of 7.90 metres from the centre of the trunk to the proposed visitor car parking space. The section of car park will be located outside of the TPZ taken from the centre of the trunk. The overall loss of TPZ has been calculated at 3.24% that complies with AS 4970 – 2009. Tree 12 can be retained. This is based on the proviso that no change in the soil profile occurs within the TPZ. The existing soil and organic layer is to be retained in this section. It will need to be fenced off before commencement of all civil and building works on site.

Tree 13 has been given an SRZ and TPZ of 2.31 & 4.32 metres in accordance with Australian Standards 4970 - 2009. Tree 13 is located 3.9 metre to the boundary fence inside the neighbour's property. AS 4970 – 2009 indicates that the TPZ radius is taken from the centre of the trunk. This leaves a spatial separation of 4.14 metres from the centre of the trunk to the boundary fence. The proposed vegetation zone inside the subject property makes up the remaining section of TPZ. Tree 13 can be retained. This is based on the proviso that no change in the soil profile occurs within the TPZ. The existing soil and organic layer is to be retained in this section. It will need to be fenced off before commencement of all civil and building works on site.

Tree 14 has been given an SRZ and TPZ of 1.91 & 2.64 metres in accordance with Australian Standards 4970 - 2009. Tree 14 is located 0.7 metres to the boundary fence inside the neighbour's property. The entire TPZ inside the subject property will be within the vegetation area. Tree 14 can be retained. This is based on the proviso that no change in the soil profile occurs within the TPZ. The existing soil and organic layer is to be retained in this section. It will need to be fenced off before commencement of all civil and building works on site.

Tree 15 has been given an SRZ and TPZ of 1.88 & 2.52 metres in accordance with Australian Standards 4970 - 2009. Tree 15 is located 1.1 metres to the boundary fence inside the neighbouring property. The entire TPZ inside the subject property will be within the vegetation area. Tree 15 can be retained. This is based on the proviso that no change in the soil profile occurs within the TPZ. The existing soil and organic layer is to be retained in this section. It will need to be fenced off before commencement of all civil and building works on site.

Tree 16 has been given an SRZ and TPZ of 2.18 & 3.72 metres in accordance with Australian Standards 4970 - 2009. Tree 16 is located 2.6 metres to the corner of the boundary. Tree 16 is located inside the neighbouring property. The entire TPZ inside the subject property will be within the vegetation area. Tree 16 can be retained. This is based on the proviso that no change in the soil profile occurs within the TPZ. The existing soil and organic layer is to be retained in this section. It will need to be fenced off before commencement of all civil and building works on site.

Figure 6 – showing the location of the retained trees on site within the neighbouring property. Showing the location of Trees 14 – 16. All trees have been tagged on site for identification purposes.

Tree 17 has been given an SRZ and TPZ of 1.56 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 17 is the first of the trees that are located along the side boundary. Tree 17 is located 0.9 metres to the side boundary. AS 4970 – 2009 indicates that the TPZ radius is taken from the centre of the trunk. This leaves a spatial separation of 1.0 metres from the centre of the trunk to the boundary fence. The remaining section of TPZ is inside the proposed vegetation buffer. There is 1.0 metre of TPZ that extends into the subject property. There is a 5.5 metre vegetation buffer to the corner of the car parking spaces. This will also provide for growth of these species over the ensuing years. Tree 17 can be retained. This is based on the proviso that no change in the soil profile occurs within the TPZ. The existing soil and organic layer is to be retained in this section. It will need to be fenced off before commencement of all civil and building works on site.

Tree 18 has been given an SRZ and TPZ of 1.63 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 18 is located 2.3 metres to the side boundary inside the neighbouring property. The entire TPZ is located within the neighbour's property. The vegetation buffer will also provide for growth as the tree continues to grow. Tree 18 can be retained.

Tree 19 has been given an SRZ and TPZ of 1.79 & 2.34 metres in accordance with Australian Standards 4970 - 2009. Tree 19 is located 3.1 metres to the side boundary inside the neighbouring property. The entire TPZ is located within the neighbour's property. The vegetation buffer will also provide for growth as the tree continues to grow. Tree 19 can be retained.

Figure 7 – showing the location of Trees 17, 18 & 20. These trees can be retained and incorporated into the development.

Tree 20 has been given an SRZ and TPZ of 2.32 & 4.44 metres in accordance with Australian Standards 4970 - 2009. Tree 20 is located 1.3 metres to the side boundary fence inside the neighbouring property. AS 4970 – 2009 indicates that the TPZ radius is taken from the centre of the trunk. This leaves a spatial separation of 1.52 metres from the centre of the trunk to the boundary fence. Tree 20 is located 6.6 metres to the hardstand area associated with Lot 6 (Building E). There is a total of 2.92 metres of TPZ inside the subject property. This can be retained inside the proposed vegetation buffer zone. This is based on the proviso that no change in the soil profile occurs within the TPZ. The existing soil and organic layer is to be retained in this section. It will need to be fenced off before commencement of all civil and building works on site.

Tree 21 has been given an SRZ and TPZ of 1.55 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 21 is located 4.1 metres to the side boundary. The entire TPZ is located inside the neighbouring property. The vegetation buffer will also provide for growth as the tree continues to grow. Tree 21 can be retained.

Figure 8 – showing the location of Tree 22. Tree 22 is located 2 metres to the boundary.

Tree 22 has been given an SRZ and TPZ of 2.41 & 4.74 metres in accordance with Australian Standards 4970 - 2009. Tree 22 is located 2 metres to the side boundary. There is a 2.5 metre vegetation buffer within the TPZ. This provides a 4.5 metre buffer zone where no excavation or civil works will occur on site. AS 4970 – 2009 indicates that the TPZ radius is taken from the centre of the trunk. This leaves a spatial separation of 4.76 metres from the centre of the trunk to the proposed hardstand area. The overall loss of TPZ has been calculated at 0% that complies with AS 4970 – 2009. Tree 22 can be retained on the proviso that no change in the soil profile occurs inside the proposed vegetation buffer.

Tree 23 has been given an SRZ and TPZ of 1.50 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 23 is located 4 metres to the side boundary fence inside the neighbour's property. The entire TPZ is located within the neighbour's property. The vegetation buffer will also provide for growth as the tree continues to grow. Tree 23 can be retained.

Tree 24 has been given an SRZ and TPZ of 1.94 & 2.76 metres in accordance with Australian Standards 4970 - 2009. Tree 24 is located 4.3 metres to the side boundary fence inside the neighbour's property. The entire TPZ is located within the neighbour's property. The vegetation buffer will also provide for growth as the tree continues to grow. Tree 24 can be retained.

Tree 25 has been given an SRZ and TPZ of 1.88 & 2.82 metres in accordance with Australian Standards 4970 - 2009. Tree 25 is located 4.5 metres to the side boundary fence inside the neighbour's property. The entire TPZ is located within the neighbour's property. The vegetation buffer will also provide for growth as the tree continues to grow. Tree 25 can be retained.

Tree 26 has been given an SRZ and TPZ of 2.28 & 4.14 metres in accordance with Australian Standards 4970 - 2009. Tree 26 is located 1.5 metres to the boundary fence. The proposed vegetation buffer comprises another 2.5 metres. This leaves a distance of 4 metres where no civil or excavation works will take place. AS 4970 – 2009 indicates that the TPZ radius is taken from the centre of the trunk. This leaves a spatial separation of 4.21 metres from the centre of the trunk to the proposed edge of excavation and civil works. The overall loss of TPZ has been calculated at 0% that complies with AS 4970 – 2009. Tree 26 can be retained on the proviso that the proposed vegetation buffer remains at existing soil levels with no change to the soil profile.

Tree 27 has been given an SRZ and TPZ of 1.50 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 27 is located 0.4 metres to the boundary. The proposed vegetation buffer comprises another 2.5 metres. This leaves a distance of 2.9 metres where no civil or excavation works will take place. AS 4970 – 2009 indicates that the TPZ radius is taken from the centre of the trunk. This leaves a spatial separation of 2.97 metres from the centre of the trunk to the proposed edge of excavation and civil works. The overall loss of TPZ has been calculated at 0% that complies with AS 4970 – 2009. Tree 27 can be retained on the proviso that the proposed vegetation buffer remains at existing soil levels with no change to the soil profile.

Tree 28 has been given an SRZ and TPZ of 1.50 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 28 is located 4.3 metres to the boundary fence inside the neighbour's property. The entire TPZ is located within the neighbour's property. The vegetation buffer will also provide for growth as the tree continues to grow. Tree 28 can be retained.

Tree 29 has been given an SRZ and TPZ of 1.50 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 29 is located 3.2 metres to the boundary fence inside the neighbour's property. The entire TPZ is located within the neighbour's property. The vegetation buffer will also provide for growth as the tree continues to grow. Tree 29 can be retained.

Tree 30 has been given an SRZ and TPZ of 2.29 & 4.32 metres in accordance with Australian Standards 4970 - 2009. Tree 30 is located 2.6 metres to the side boundary. There is a 2.5 metre vegetation buffer within the TPZ. This provides a 5.1 metre buffer zone where no excavation or civil works will occur on site. AS 4970 – 2009 indicates that the TPZ radius is taken from the centre of the trunk. This leaves a spatial separation of 5.31 metres from the centre of the trunk to the proposed hardstand area. The overall loss of TPZ has been calculated at 0% that complies with AS 4970 – 2009. Tree 30 can be retained on the proviso that no change in the soil profile occurs inside the proposed vegetation buffer.

Tree 31 has been given an SRZ and TPZ of 1.50 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 31 is located 0.4 metres to the side boundary. There is a 2.5 metre vegetation buffer within the TPZ. This provides a 2.9 metre buffer zone where no excavation or civil works will occur on site. AS 4970 – 2009 indicates that the TPZ radius is taken from the centre of the trunk. This leaves a spatial separation of 2.97 metres from the centre of the trunk to the proposed hardstand area. The overall loss of TPZ has been calculated at 0% that complies with AS 4970 – 2009. Tree 31 can be retained on the proviso that no change in the soil profile occurs inside the proposed vegetation buffer.

Tree 32 has been given an SRZ and TPZ of 1.50 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 32 is located 3.8 metres to the side boundary fence. The entire TPZ will be located inside the neighbouring property. Tree 32 can be retained.

Tree 33 has been given an SRZ and TPZ of 1.50 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 33 is located on the boundary between the two properties. Tree 33 is located 0.3 metres to the proposed building. AS 4970 – 2009 indicates that the TPZ radius is taken from the centre of the trunk. This leaves a spatial separation of 0.36 metres from the centre of the trunk to the proposed development. The overall loss of TPZ has been calculated at 38.60% that doesn't comply with AS 4970 – 2009. The incursion into the SRZ has been calculated at 76% that will lead to loss of structural integrity. Tree 33 is earmarked for removal before commencement of building works on site.

Tree 34 has been given an SRZ and TPZ of 1.50 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 34 is located 3.6 metres to the side boundary fence inside the neighbour's property. The entire TPZ is located within the neighbour's property. The vegetation buffer will also provide for growth as the tree continues to grow. Tree 34 can be retained.

Tree 35 has been given an SRZ and TPZ of 1.50 & 2.00 metres in accordance with Australian Standards 4970 - 2009. Tree 35 is located 4.5 metres to the side boundary fence inside the neighbour's property. The entire TPZ is located within the neighbour's property. The vegetation buffer will also provide for growth as the tree continues to grow. Tree 35 can be retained.

6.0 Conclusions

- Abacus Tree Services has been approached by JCPMB Pty Ltd to undertake an arborist (assessment) report on trees that come under the requirements of Maitland Council DCP pursuant to section Part B.5 – Tree Management & trees that will be affected by the proposed development. There are thirty five (35) trees that have been assessed within the subject properties identified as (Lots 6 & 7) 91 Gardiner Street, Rutherford & the two adjoining allotments to the rear and side boundaries. The applicant proposes to construct an industrial development within the subject property identified as (Lots 6 & 7) 10 – 12/91 Gardiner Street, Rutherford (Appendix 1). Trees 1 - 35 have been assessed in accordance with Australian Standards 4970 – 2009. All trees have been tagged for identification purposes that correspond with the site plan in Appendix 1.

- Trees 1 – 32, 34 & 35 are located wholly within Cowhill Road (unformed) and Lot 1 DP 280108, 91 Gardiner Street, Rutherford. Tree 33 is located on the boundary between Lot 7 DP 271474 and Lot 1 DP280108. The site is located in the municipality of Maitland Council. The species on site has been assessed against the requirements set out in Maitland Council's s Local Environmental Plan (2011) pursuant to Section 5.9 & 5.9AA (repealed) & Development Control Plan (2011) (Part B.5 – Tree Management) I have assessed the property against Schedule 5 (Environmental Heritage) within Maitland LEP. The property is not listed in accordance with Part 1 (Heritage Items) and/or Part 2 (Heritage Conservation Area).

- The subject property identified as (Lots 6 & 7) 10 – 12/91 Gardiner Street, Rutherford is located in a Rural Fire Service (RFS) 10:50 area. Therefore all trees have been assessed in accordance with council requirements with potential exemptions under RFS 10:50 legislation. The search was undertaken on the 3 October 2024. Rules and regulations in relation to the RFS 10:50 can change and it is therefore up to the applicant to ensure they comply with the 10:50 code and any updates that may occur. Any tree removal in accordance with bushfire requirements is to be addressed as per the bushfire report.

- Protection fencing for Trees 1 – 32, 34 & 35 (34 in total) has been considered as they are located on an adjoining property. Several trees have TPZ's that encroach into the subject property. Protection fencing will aim to preserve the TPZ's inside the subject property. Trees 1 – 32, 34 & 35 will require retention in accordance with Australian Standards 4970 – 2009.

- Trees 1 – 32, 34 & 35 have the potential for future growth and therefore the canopy and root plate have the potential for future growth. All measures have been taken to minimise damage to the proposed buildings and hardstand areas however future growth has the potential to cause damage to the proposed buildings and/or hardstand areas.

- The applicant has therefore assessed all trees within 5 metres of the proposed development. This includes all trees on neighbouring properties within 5 metres of the proposed development. The applicant has assessed all trees necessary for the development to meet the requirements of Maitland Council DCP & Australian Standards 4970 – 2009.

- In order for the development to proceed in its current format will require the removal of Tree 33 (1 in total). This includes all trees inside the proposed development, hardstand areas and those that do not pass the requirements of AS 4970 – 2009. The applicant has designed the development and vegetation buffers to include Trees 1 – 32, 34 & 35 into the development. Trees 1 – 32, 34 & 35 (34 in total) can be retained and incorporated into the development. Conditions and recommendations in relation to retained trees will be outlined in section 7 of the report.

7.0 Recommendations

- It is recommended that JCPMB Pty Ltd embark on a management program for thirty five (35) trees (Trees 1 – 35) before commencement of the proposed building and constructions works as follows:

- It is recommended that Tree 33 (1 in total) be removed immediately (before commencement of building works) by a qualified arborist (minimum certificate 2 in arboriculture). It is recommended that professional indemnity and public liability insurances be current and sighted before commencement of works begin. The level of cover has to be one in agreement between JCPMB Pty Ltd and the arborist.

- It is recommended that Trees 1 – 32, 34 & 35 (34 in total) be retained and incorporated into the development. It is recommended that no change in the soil profile occur for 5 metres from the boundary in line with Tree 3. This includes a buffer zone as outlined in Figure 13. No change in the soil profile or organic layer is to occur in this zone. The applicant is to retain this section of the TPZ as a green corridor. No hardstand areas are allowed in this zone from the development (Building D) to the proposed turning circle. The 2.5 metre wide vegetation buffer is to have no change in the soil profile or organic layer. Levelling off the green and vegetation buffers is permissible but soil levels cannot be raised by no greater than 100 – 200mm above natural ground levels. The soils in these zones must not be compacted and allow for water and nutrient uptake. All levelling off and soil preparation is to be undertaken by non-mechanised methods. Proposed grass or garden beds are to be undertaken by non-mechanised methods inside the TPZ after completion of all civil, development and hardstand areas.

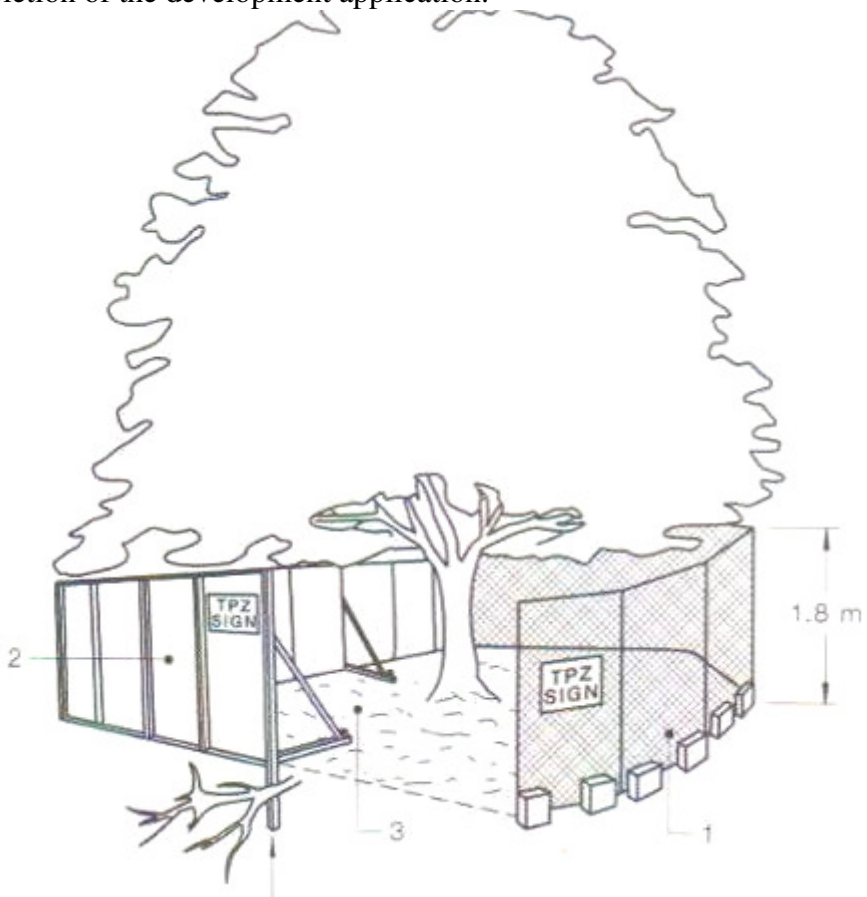
- It is recommended that protection measures be put in place that aid in the preservation of Trees 1 – 32, 34 & 35 (34 in total). It is recommended that 1.8 metre inter locking chain wire fencing be installed before commencement of all civil and building works on site as indicated in Figures 13 & 14. Protection fencing is to be installed 1 metre off Building D to protect Tree 5. Perimeter fencing is to continue up to the edge of the car parking zone as outlined in Figure 13. The fencing is to continue 1 metre from the hardstand area as outlined in Figure 13. The fencing is to continue for 2.5 metres from the side boundary fence as outlined in Figure 14. Protection fencing is to be installed before commencement of all civil & building works and remain in place until the release of the occupation certificate.

- It is recommended that all civil contractors that enter the site are made aware of the importance of preserving Trees 1 – 32, 34 & 35 and understand the tree protection measures that are put in place to preserve Trees 1 – 32, 34 & 35.

- All stockpile sites to be maintained at the front of the subject property and/or outside of all fenced zones at all times.

- It is recommended that all parking of vehicles and use of machinery be kept outside of the designated fenced zones at all times during civil and construction works on site. No placement or use of machinery is allowed within the designated TPZ fenced areas.

- This report is not for publication to the internet and submission of this report in the submission phase set out by Council is to be taken down upon completion of the development application.



- Figure 9 – showing the proposed fencing that is to be put in place before the commencement of civil and building works on site (Trees 1 – 32, 34 & 35 only).
  Source: Australian Standards 4970 - 2009

Bradley Magus (Member ISAAC & LGTRA)
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Bachelor of Horticulture Science

8.0 References

AS4373-2007 Pruning of Amenity Trees. Standards Australia

AS 4970 – 2009 Protection of trees on development sites

Clark R.J & Matheny N (1998) Trees & Development – A technical guide to Preservation of trees during land development: International Society of Arboriculture

Mattheck C., Breloer, (1999) The Body Language of Trees – a handbook for failure analysis 5th ed., London: The Stationery Office, U.K

Internet Sites

www.googlemaps.com.au

www.heritagensw.gov.au

www.rfs.nsw.gov.au

www.maitland.nsw.gov.au

www.planningportal.nsw.gov.au

9.0 APPENDIX 1 Site Maps

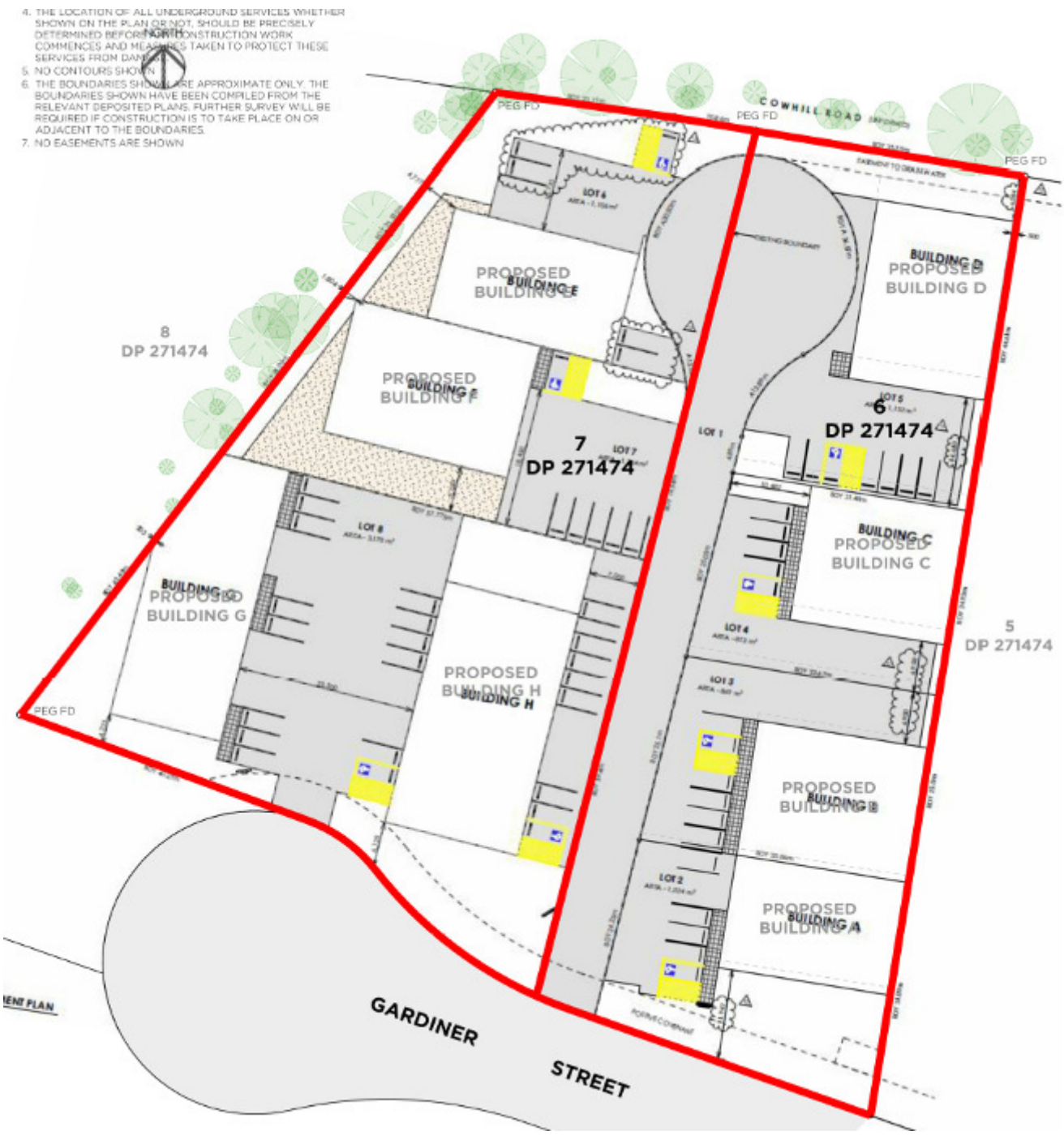

Figure 10 - Close up of the subject property and proposed development. Not to scale
Source: GCA

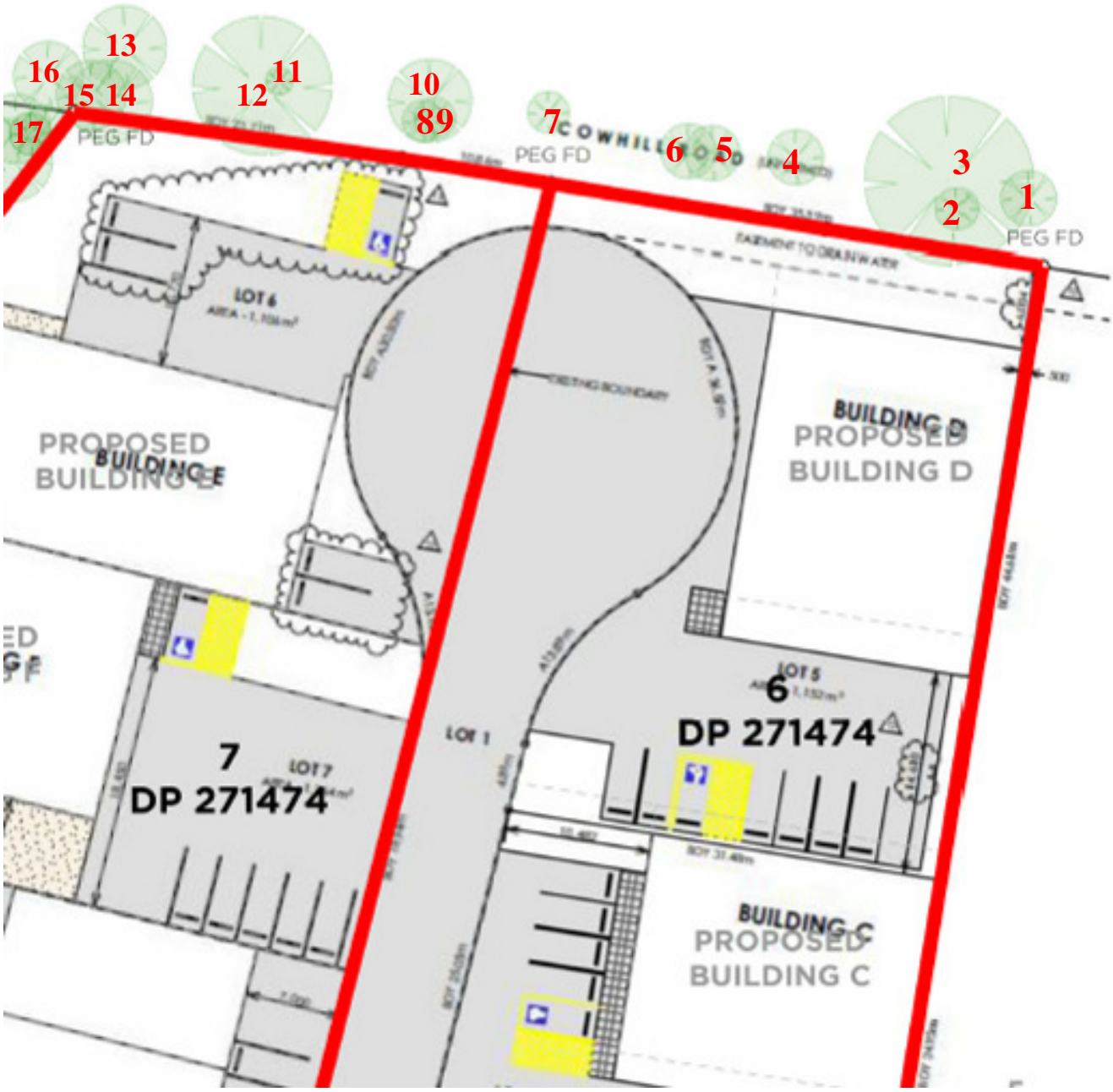

Figure 11 – showing the location of Trees 1 - 17

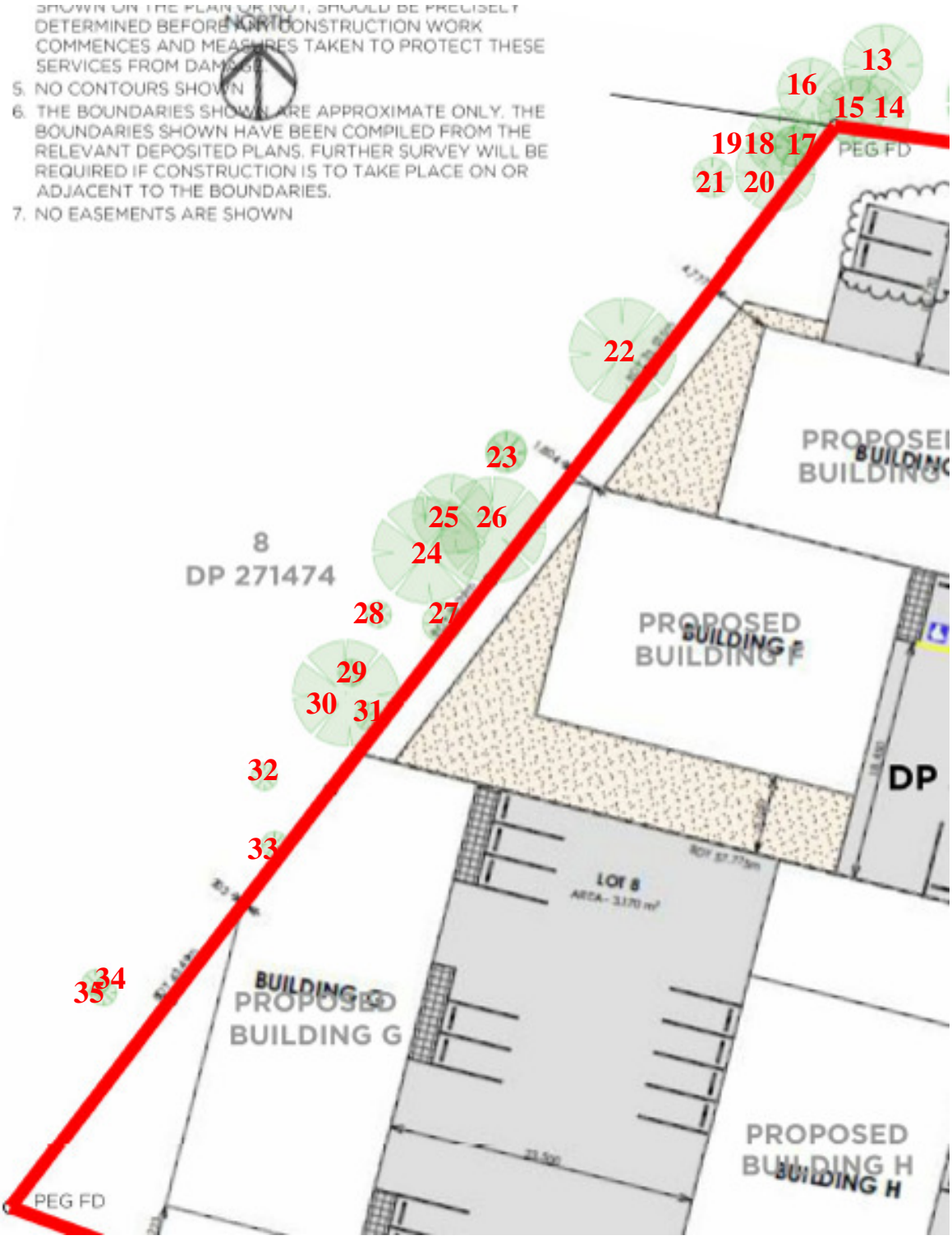

Figure 12 – showing the location of Trees 13 - 35

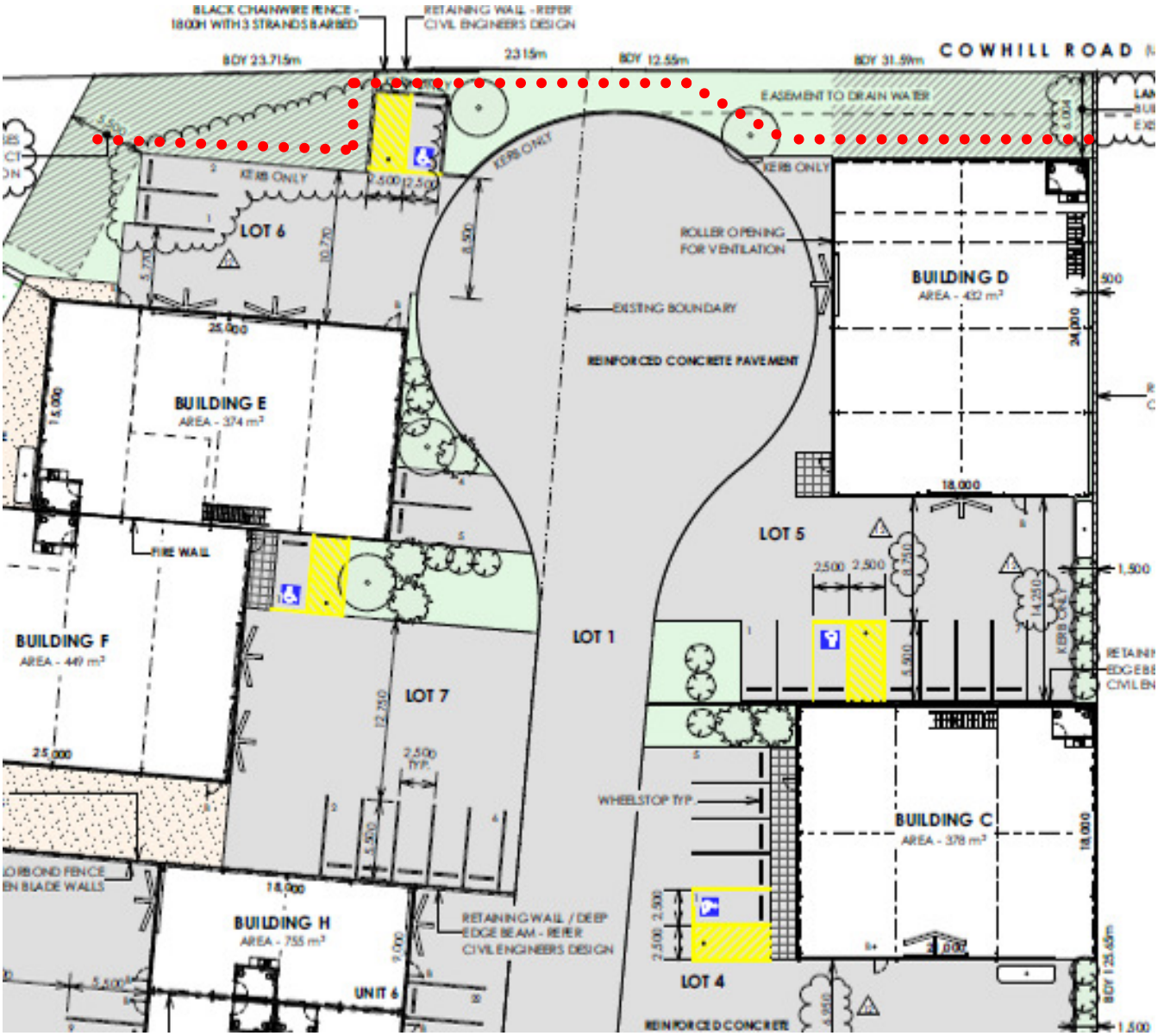

Figure 13 – showing the protection fencing that is to be put in place prior to all civil and excavation works on site. The fencing is to remain on site until the completion of all development works. The fencing can be removed upon commencement of the landscaping and vegetation buffers. No machinery is to enter into this zone at any time during the development. All landscaping works are to be undertaken by non-mechanised methods.

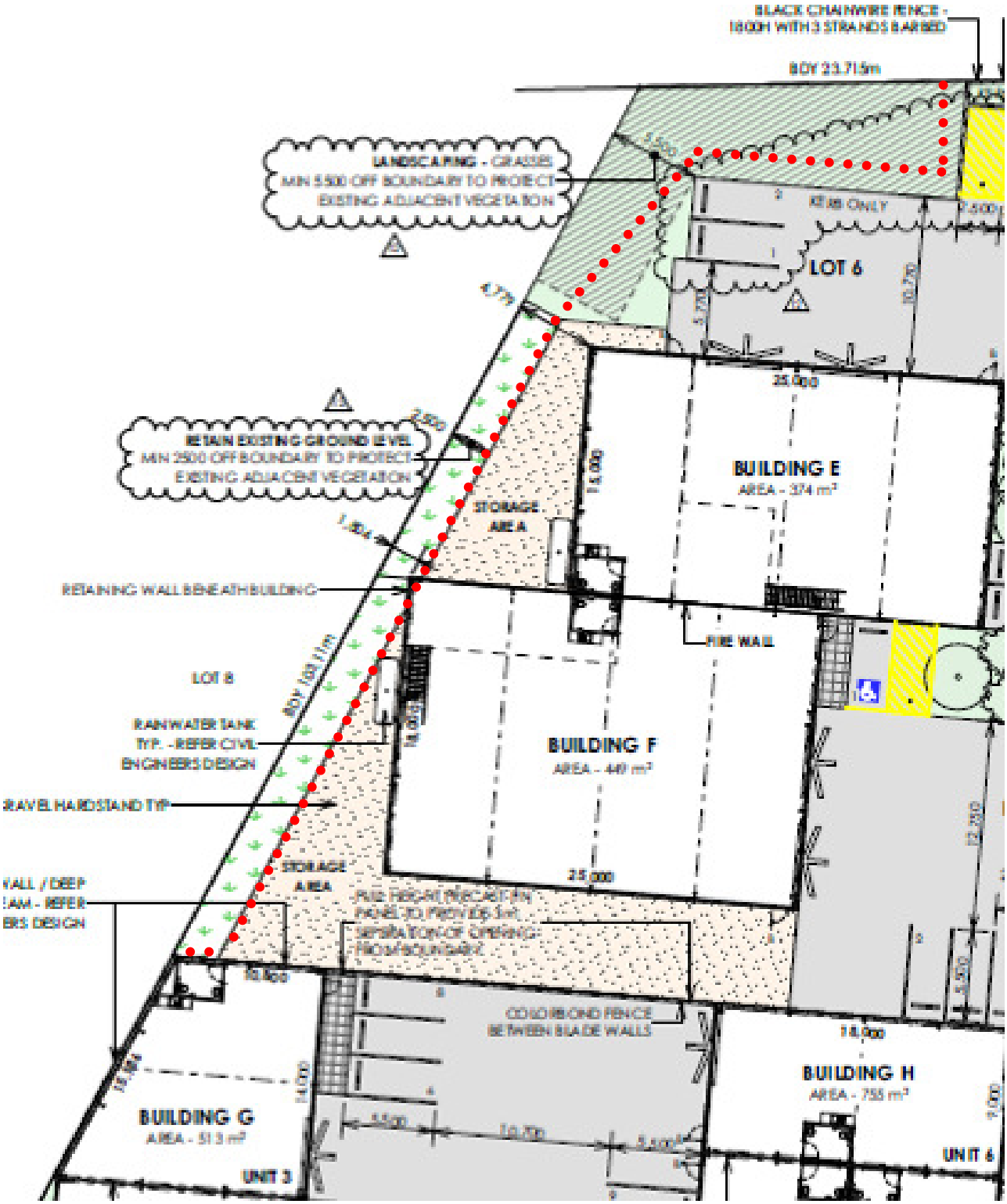

Figure 14 – showing the protection fencing that is put in place for retained trees. This includes fencing to extend along the length of the 2.5 metre wide vegetation buffer. The fencing is to be erected at 2.5 metres from the side boundary within the vegetation buffer. No machinery is to enter into this zone at any time during the development. All landscaping works are to be undertaken by non-mechanised methods.

APPENDIX 2 U.L.E (Useful Life Expectancy) Categories and Subgroups

Useful Life Expectancy – Classification

1. Long ULE > 40 Years

a. Structurally sound and can accommodate future growth
b. Long term potential with minor remedial treatment
c. Trees of special significance which warrant extra care

2. Medium ULE of 15-40years

a. Will live between 15 – 40 years
b. Will live for more than 40 years but would be removed for safety or other reasons
c. May live for more than 40 years but will interfere with more suitable specimens and need removal eventually
d. More suitable for retention in the medium term with some remedial care

3. Short ULE of 5-15 years

a. Trees that may only live between 5 – 15 more years
b. May live for more than 15 years but would need removal for safety or other reasons
c. Will live for more than 15 years but will interfere with more suitable specimens or provide space for replacement plantings
d. Require substantial remedial care but are only suitable for short term retention

4. Remove tree within 5 years

a. Dead, dying or seriously diseased
b. Dangerous trees through instability or loss of adjacent trees
c. Structural defects such as cavities
d. Damaged that are clearly not safe to retain
e. May live for more than 5 years but will need replacement to prevent interference or make space for more suitable trees
f. May or are causing damage to structures
g. That will become dangerous

5 Trees suitable to transplant

a. Small trees can be reliably moved or replaced
b. Young trees between 5 – 15 years
c. Trees that have been regularly pruned to control growth

Key	Criteria	Comments
Tree no		
Species	Relates to the thirty five on the site plan	
Remnant /planted Self Sown	May be coded – See Key for details	
Special Significance	A – Aboriginal C- Commemorative Ha- Habitat Hi- Historic M- Memorial R- Rare U- Unique form O- Other	May require specialist knowledge
Age Class	Y- Young- Recently Planted S-Semi mature (<20% of life expectancy M- Mature (20-80% of life expectancy) O- Over mature (>80% of life expectancy)	
Height	In Metres	
Spread	Average diameter of canopy in metres	
Crown Condition	Overall vigour and vitality 0 – Dead 1 – Severe decline (<20% canopy, major deadwood 2 – Declining 20-60% canopy density, twig dieback 3- Average/low vigour (60-90% canopy density, twig dieback) 4- Good (90-100% crown cover, little or no dieback or other problems) 5- Excellent (100% crown cover, no deadwood or other problems	
Failure Potential	Identifies the most likely failure and rates the likelihood that the structural defects will result in failure within the inspection period. 1- Low – Defects are minor (eg dieback of twigs, small wounds with good wound development) 2 – Medium – Defects are present and obvious egg Cavity encompassing 10-25% of the circumference of the trunk) 3 High- Numerous and/or significant defects present (eg cavity encompassing 30-50% of the circumference of the trunk, major bark inclusions) 4- Severe- Defects are very severe (eg fruiting	Requires specialist knowledge

	bodies, cavity encompassing more than 50% of the trunk)	
Size of defective part	Rates the size of the part most likely to fail. The larger the part that fails the greater the potential for damage. 1- Most likely failure less than 150mm in diameter 2- Most likely failure 150-450mm in diameter 3- Most likely failure 450-750mm in diameter 4- Most likely failure more than 750mm in diameter	
Target rating	Rates the use and occupancy that would be struck by the defective part: 1. Occasional use (jogging, cycle track 2. Intermittent use (e.g picnic area, day use parking 3. Frequent use, secondary structure (eg seasonal camping, storage facilities) 4. Constant use structures (year round use for a thirty five of hours each day, residences)	
Hazard rating	Failure potential + size of part + target rating Add each of the above sections for a thirty five out of 12	The final thirty five identifies the degree of risk. The next step is to determine a management strategy. A rating in this column does not condemn a tree but may indicate the need for more investigation and a risk management strategy.
Root Zone	C-Compaction D- Damaged/wounded roots E- Exposed roots Ga- Tree in graded bed Gi- Girdled roots Gr- Grass K-Kerb close to tree L+- Raised soil level L- Lowered soil level M- Mulched	

	Pa- Paving concrete bitumen Pr- Roots pruned O-Other	
Defects	B-Borers C-Cavity D-Decay Dw-Deadwood E-Epicormics I-Inclusions L- Lopped LDCMP- Leaf damage by chewing mouthpiece insects M- Mistletoe/parasites MBA- Multi branch attachments PD- Parrot damage PFS- Previous failure sites S-Splits/Cracks T-Termites TL- Trunk lean TW- Trunk wound O-Other	
Services/adjacent structures	Bs- Bus stop Bu- Building within 3 metres Hvo- High voltage open wire construction Hvb- High voltage bundled (ABC) Lvo- Low voltage open wire construction Lvb- Low voltage bundled (ABC) Na- No services above Nb- No services below ground Si- Signage SL- Street light T- Transmission U- Underground services O- Other	More than one of these may apply