



ARBORICULTURAL IMPACT ASSESSMENT REPORT

Prepared For: The Graham Family
Site Address: 51 Quirk Street,
DEE WHY, NSW, 2099

Inspection Dates: 17th May 2024
Report Date: 21st May 2025



Image 1: The property as seen from the street.

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1 Introduction

1.1 Background

- 1.1.1 Blues Brothers Arboriculture has been engaged by the owners to inspect and report on trees for development purposes. A new dwelling is proposed by Development Application.
- 1.1.2 The scope of works includes the assessment or identification of a single tree located to the rear of the property.
- 1.1.3 Information supplied and relied upon in the preparation of this report included:
- Detail survey produced by Burton & Field; Reference E5333-78003, dated 12/04/2018.
 - Architectural suite of plans produced by Bianchino Architect; Issue A, Dated May 2025; inclusive of:
 - Site Plan; and,
 - Floor Plans.
 - Stormwater Management Plans produced by VTAA P/L; Revision A, Dated 26/04/2025.
 - Before You Dig Australia (BYDA); Job 50239561, Requested 21/05/2025.
 - Planning portal property report, Accessed 21/05/2025.
- 1.1.4 The use of these documents / sources is acknowledged with thanks.
- 1.1.5 The NSW Rural Fire Service online tool for determining eligibility under the '10/50' legislation was interrogated for the purposes of this report.
- As at the date of this report, the property is not eligible to use the code of practice. Relevant clearing provisions do not apply to the property.
- 1.1.6 The Arborist understands the assessed tree has demonstrated a history of live branch failures during fair weather. Neighbours on both sides of the site have expressed their concerns regarding the safety of the tree.

1.2 Definitions & Abbreviations:

- 1.2.1 **The Standard** refers to the Australian Standard AS4970:2009 – *Protection of trees on development sites*.
- 1.2.2 **The site** refers to the land within the vicinity of the proposed development.
- 1.2.3 An **Exempt Tree** is a tree that that does not meet Council's definition of a protected tree.
- 1.2.4 **A significant root** is defined as any woody root with a diameter of 30mm or larger.
- 1.2.5 **AGL** – Above Ground Level
- 1.2.6 **LGA** – Local Government Area.
- 1.2.7 **DBH** – Diameter at Breast Height; Approximately 1.4 metres above ground level measured in metres.
- 1.2.8 **DGL** – Diameter at Ground Level; Measured above the root flare / collar measured in metres.
- 1.2.9 **TPZ** – Tree Protection Zone. Calculated per the standard:
$$TPZ\ radius = 12 \times DBH$$
- 1.2.10 **SRZ** – Structural Root Zone. Calculated per the standard:
$$SRZ\ radius = (DGL \times 50)^{0.42} \times 0.64$$
- 1.2.11 **FFL** – Finished Floor Level.
- 1.2.12 **RL** – Reduced Level.
- 1.2.13 **SEPP** – State Environmental Planning Policy.
- 1.2.14 **BYDA** – Before You Dig Australia – Formerly DBYD
- 1.2.15 **FRP** – Fibre-reinforced Plastic. A commonly used engineered surface for boardwalks.
- 1.2.16 **RTK-GPS** – Real-Time-Kinematic Global Positioning Satellite. A 'corrected', survey grade spatial positioning system capable of providing centimetre level positional data.
- 1.2.17 **RPAS** – Remote Piloted Aerial System – Commonly known as a drone.



1.3 Change log:

1.3.1 Version 1 – Original.

1.4 Disclaimers & Disclosures:

- 1.4.1 This report is considered limited to what could reasonably be seen from ground level only and expresses no commentary on changes which may have, or will, impact the trees or their environment outside the scope of works.
- 1.4.2 The Arborist discloses they hold no conflicts of interest in the property, with the client, or interests otherwise with exception of that essential for the preparation of an unbiased opinion relating to the assessed trees.
- 1.4.3 The Arborist discloses this report has been prepared without the use of Generative AI in accordance with published Practice Notes from the NSW Land and Environment Court.

2 Methodology

2.1 Visual Tree Assessment

- 2.1.1 The tree was visually inspected from ground level only in accordance with VTA (Visual Tree Assessment); a methodology derived by Mattheck and Breloer (1994) and the TRAQ (Tree Risk Assessment) methodology derived by ISA.
- 2.1.2 Canopy Assessment included foliage condition (volume and colour); the presence of pests and diseases, dieback, deadwood and epicormic growth.
- 2.1.3 Tree condition included assessment of structural stability, previous pruning and any damage/disturbance which may have occurred.
- 2.1.4 No destructive or aerial investigations occurred to the tree.
- 2.1.5 Accessible hollows, where found or suspected, were probed to ascertain their size and extent to assist in calculating ratios of notional cavity size and useful life expectancy.
- 2.1.6 An existing tree numbering schema was not found on any of the supplied plans. The Arborist assigned tree numbers for reference within this report.

Tree tagging did not occur.
- 2.1.7 Access to neighbouring properties was not obtained as part of the scope of works other than ungated, publicly accessible lands.

The assessment of trees located on respective properties was limited to what was reasonably visible over (or through) existing boundary fences.
- 2.1.8 Trunk diameters of neighbouring trees (as applicable) were based on a visual approximation based on that reasonably seen from within the site.
- 2.1.9 Tree data is displayed in Appendix 1.
- 2.1.10 Appendix 2 – Arboricultural mark-up including Tree identification, TPZ and SRZ zones and the degree of encroachment proposed by the development.
- 2.1.11 Tree height and canopy width were estimated with the assistance of a Leica Disto X4 (Laser Distometer).
- 2.1.12 A forestry Diameter tape was utilised in the measuring of trunk diameters of high significance trees.
- 2.1.13 Tree significance ratings were assessed using a the IACA STARS methodology for assessing tree significance & retention values¹.

¹ IACA, 2010, *IACA Significance of a Tree, Assessment Rating System (STARS)*, Institute of Australian Consulting Arboriculturists, Australia, www.iaca.org.au

3 Results

3.1 Desktop Research

3.1.1 Research from the NSW Planning portal revealed the following information for the properties:

- Zoning: R2 – Low Density Residential.
- Landslide Risk Land:
 - Area A – Slope <5°
 - Area B – Flanking Slopes 5° to 25°

3.1.2 In accordance with published directives of Northern Beaches Council, a protected tree is a tree meeting the following criteria²:

- Has a height of 5m or more;
- Located more than 2m from the outside enclosing wall of an approved building.
- Not listed on the *Exempt Tree Species List*.

3.1.3 None of the assessed trees were listed in the Council significant tree register or listed under the Threatened species conservation Act 1995.

3.1.4 Interpretation of DBYD data indicates the property contains civil assets that may require additional works of protection (ie. Sewer encasement):

- *Sydney Water* sewer main and access chamber (sighted) traversing bottom of the site.
- *Jemena* gas main traversing the shared driveway.

² Northern Beaches Council: Trees on Private Land: <https://www.northernbeaches.nsw.gov.au/planning-development/tree-management/private-land>

3.2 The Site

- 3.2.1 The site is formally identified as Lot 64, Section A, DP8139.
- 3.2.2 Located in the in the south of Dee Why, the previously developed site presented with a modest Southeasterly aspect at the top of an exposed escarpment to dwellings below on Headland Road.
- 3.2.3 Structures on the site included a single storey weatherboard dwelling centrally located and a detached weatherboard double garage.
- 3.2.4 Landscaping on the site was dominated by areas of exposed rock nearest the top and bottom boundaries. A small area of lawn was found below the dwelling with small garden beds occupying remaining outdoor space.
- 3.2.5 A significant depression was noted in the lower third of the site. Observations of a pool-style fence with gate and an overgrown state of vegetation indicated this part of the site was mostly unusable for the occupant.

Properties on both sides of the site appeared to have undertaken infilling works to level the depression which would ordinarily extend across several properties.
- 3.2.6 Vegetation and landscaping otherwise appeared in modest condition, relatively well maintained.
- 3.2.7 The sole tree of the assessment was located within the depression of the lower yard.

3.3 The Development

- 3.3.1 A new dwelling is proposed by development application (DA).
- 3.3.2 Supplied plans imply all existing improvements on the site will be demolished to accommodate construction.
- 3.3.3 The development proposes the construction of a new two-storey dwelling inclusive of:
- Lower-ground floor granny flat (secondary),
 - Main dwelling accommodation, covered recreation areas and a semi-pervious deck / terrace
 - Ground floor double garage inclusive of new driveway, crossover and layback.
 - Ground floor accommodation, living and entertainment spaces inclusive of deck.
- 3.3.4 The supplied stormwater management plan indicates an OSD is not a requirement of this development. Stormwater management pipes are proposed to be suspended from the building, discharging to the Quirk St kerb.
- 3.3.5 It is understood a landscape plan is currently being prepared. From discussions, it is assumed that levelling of the lower section of yard is desired and is likely to include associated retaining walls subject to future detail.
- 3.3.6 Sections and elevations have not been provided for this assessment. It is anticipated the development will require a degree of bulk excavation to permit construction.
- 3.3.7 The owner has indicated the Sydney Water Sewer main & access chamber is likely to be rehabilitated as part of the proposed development.

The scope of remediation works is uncertain as at the date of writing; the Arborist has adopted a worst-case scenario assessment of impacts which is based on conventional trenching of soils to replace failed pipework.

In accordance with Sydney Water Technical guidelines, the *zone of influence* for such works is set at 2.35m from the indicated pipe centre.

3.4 The Tree

- 3.4.1 A single Norfolk Island Pine (*Araucaria heterophylla*) was the sole tree of the assessment.

The mature, single-trunked specimen stood with a height of 19m with a canopy spread of 18m. Its scores of health and vigour were *Good* and scored a *High Landscape Significance* value.

The tree had a DBH of 104cm representing a TPZ area of 12.5m radially from trunk centre. The DGL was 110cm representing an SRZ of 3.4m radially from trunk centre.

- 3.4.2 The tree had been previously pruned of its lower limbs giving a raised appearance. Pruning appeared mostly consistent with AS4373:2007 – *Pruning of amenity trees*.

Epicormic growth was noted about the lower trunk at previous pruning sites. This is considered somewhat *abnormal* for the species which typically would not exhibit such reactionary behaviours.

- 3.4.3 The tree was seen with **four suspended hangers** within the crown representing an **imminent risk** to human life and /or property should failure (mobilisation) occur. Branches similar to those which have failed were present in the crown.

The owners indicated the tree has demonstrated a long-standing history of live branch failures during various weather conditions. Examples were provided in both *fair weather* and *East Coast Low* examples.

The Arborist was able to correlate these claims with evidence of previous branch failures on the main stem.

It is understood that neighbours on three sides of the tree have expressed safety concerns relating to the tree. These include the prevalence of branch drop and concerns for whole tree failure off the escarpment onto dwelling houses below.

- 3.4.4 Despite concerns of whole tree failure, the Arborist saw little evidence indicating whole tree failure was likely.

It was however noted that the exposed rock in the vicinity appeared naturally fractured. The tree additionally existed in a region with severely restricted soil volumes and likely relies on fissures for stability and the uptake of water and nutrients.

4 Construction Impacts:

4.1.1 The development proposal is unlikely to directly impact the tree based on the available information provided.

4.1.2 The bulk of potential tree impacts relates to Sydney Water sewer main rehabilitation.

At the worst-case scenario, a 12.8% encroachment of the TPZ area would occur, marginally missing the SRZ area of the tree. This represents *major encroachment* per AS4970:2009.

Noting the prevalence of shallow rock on the site, it is likely the tree has utilised the soil previously disturbed for the original sewer main installation for support and stability.

Noting the typical work ethic of many Sydney Water accredited service providers, it *is likely* that any discovered tree roots would be severed as part of remedial works.

Sewer remediation, regardless of its scale, is likely to cause *at least* a **moderate impact** to the tree. Tree stability could be weakened.

4.1.3 Assumed landscaping works which seek to level the rear yard is likely to require infilling of soils and the construction of retaining walls.

Based on the supplied levels, approximately 3.5m of soil infilling is possible. Regardless of the type of soil imported, this depth of soil is likely to cause significant downward pressure on roots which exist below grade which will prevent water and oxygen availability – both essential for life.

Retaining walls in support of landscaping are likely to require engineered strip footings. The excavation of soil (rock) to facilitate installation is likely to sever any roots encountered for engineering compliance.

Landscaping works, as assumed, are likely to cause **high impacts** to the tree.

5 Conclusion

- 5.1.1 A single tree was assessed or identified as part of the scope of works, seen with good scores of health and high landscape significance.

Despite this, the tree presents as a significant risk to surrounding properties due to a history of branch loss.

- 5.1.2 The proposed development represents a modest change to the site. The assessed tree is unlikely to be directly impacted by the construction of the dwelling but likely impacted by supporting works.

- 5.1.3 This report finds the removal of the tree to be warranted as part of the development due to the safety hazards posed. These risks are not dissimilar to those experienced by occupants of the surrounding surf fronts at Manly, Freshwater and Dee Why Beaches where Council has undertaken tree removal works due to the risk of falling branches and cones on the public below.

5.2 Review of Council Policy:

- 5.2.1 Council policy seeks to retain *prescribed trees*, and those which Council considers having *High retention values* as part of the consideration of development applications (DAs).

- 5.2.2 Despite the objectives of Council policy, the removal of this tree on the basis of safety risks posed is warranted due to the potential impacts on not only the clients properties, but also surrounding properties.

- 5.2.3 In lieu of the loss of a high significance tree, the Arborist considers the site to present ample scope for the replacement planting of new trees on the site.

6 Recommendations:

6.1 Trees for removal

- 6.1.1 It is recommended that the tree (T1) be removed as part of the development application.

This recommendation is made on the basis of the safety hazards posed by the tree and the likelihood of development impacts associated with either landscaping or remediation of the sewer main.

6.2 Trees for retention:

- 6.2.1 There were no other trees of the assessment.

6.3 Construction Recommendations:

- 6.3.1 It is recommended that a replacement planting strategy occurs as part of the development to replenish canopy coverage lost to the development.

Replacement planting should occur on a two-for-one basis within the site perimeter.

Replacement trees should be nominated on a landscape plan which accompanies and compliments the development proposal.

It is recommended that replacement planting consider the planting of locally endemic species.

- 6.3.2 It is recommended that works within the TPZ area of all trees to be retained are cautious of *significant roots (1.2.4)* which may exist below ground. These roots shall be protected as much as possible in accordance with *the standard (1.2)* and advice from an AQF5 qualified Arborist. *This may require the undertaking of **manual excavation techniques**.*

- 6.3.3 A project Arborist is not required to oversee this development.

There are no trees to be retained as part of the development. A tree protection plan is not required except where Council refuses the removal of the tree. In such circumstances, the standard Council conditions for tree protection shall be applied.



Appendix 1 – Tree Data Summary

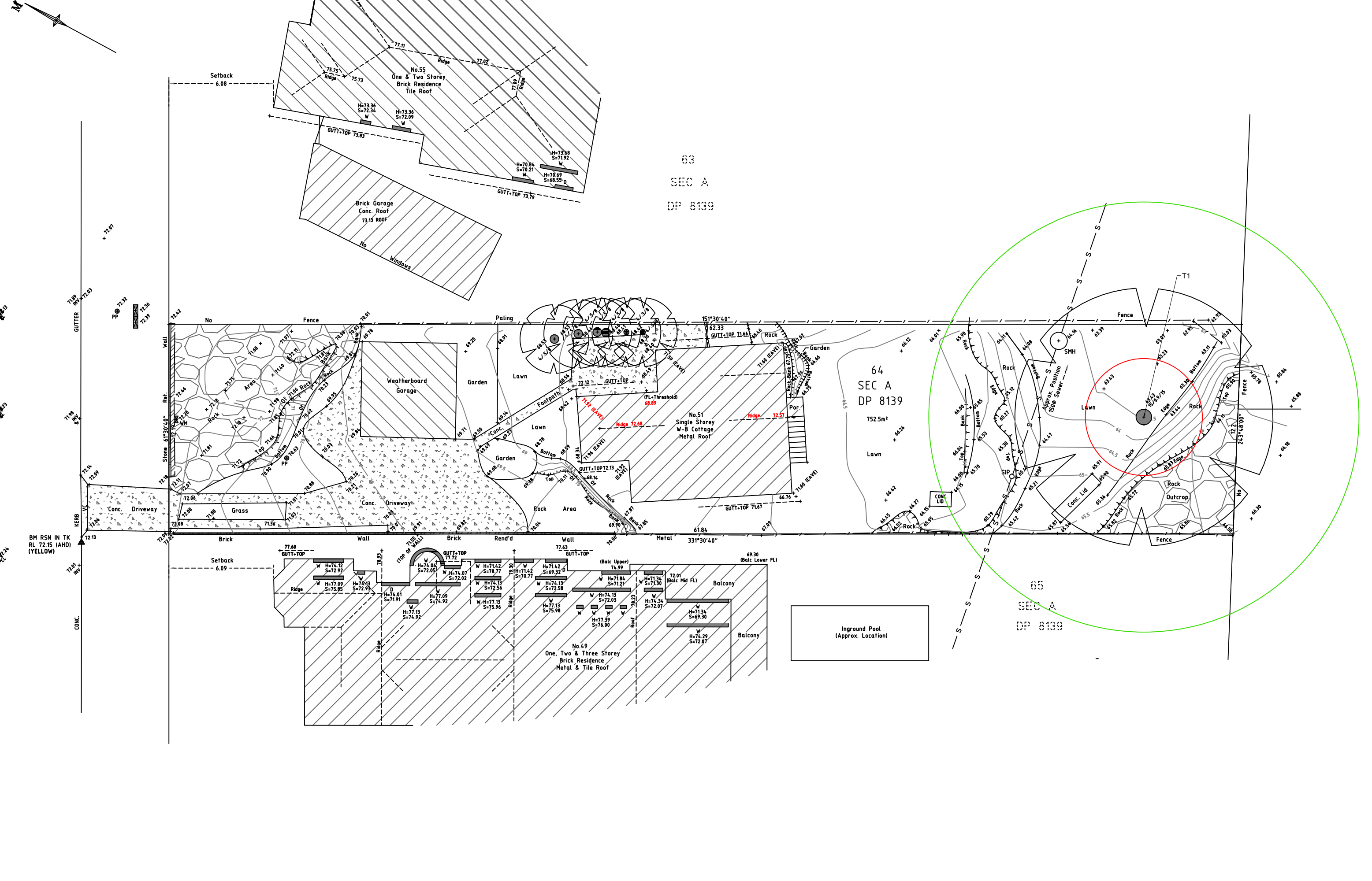
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Tree Data Summary - 51 Quirk St, Dee Why - Assessed 17/05/2024																			
Tree ID	Species	Height (m)	Canopy dims n/s in metres	DBH (cm)	DGL (cm)	Foliage condition	Maturity	Trunk type	Trunk lean	Canopy Balanced	Past Pruning	Stability	Vigour	Canopy deadwood	Significance value	Tree Retention Value	Notes	TPZ (M) Radius	SRZ (M) Radius
T1	<i>Araucaria heterophylla</i> (Norfolk Island Pine)	19	18	104	110	Good	Mature	Single	Upright	Yes	Raised	Mostly Stable	Good	0-5%	High	High	Suspended hanger noted in canopy. Owner reports consistent (multiple) occurrences of live branch failure during fair weather conditions. Tree exists in area of reduced soil volume in an exposed location for strong Southerly winds. Sydney Water Sewer Main located within 6m of base of tree - indicated to be rehabilitated due to regular overflows Tree exhibits epicormic growth at pruning sites which is atypical of the species.	12.5	3.4



Appendix 2 - Tree identification and incursion potentials

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Title:
Tree Identification

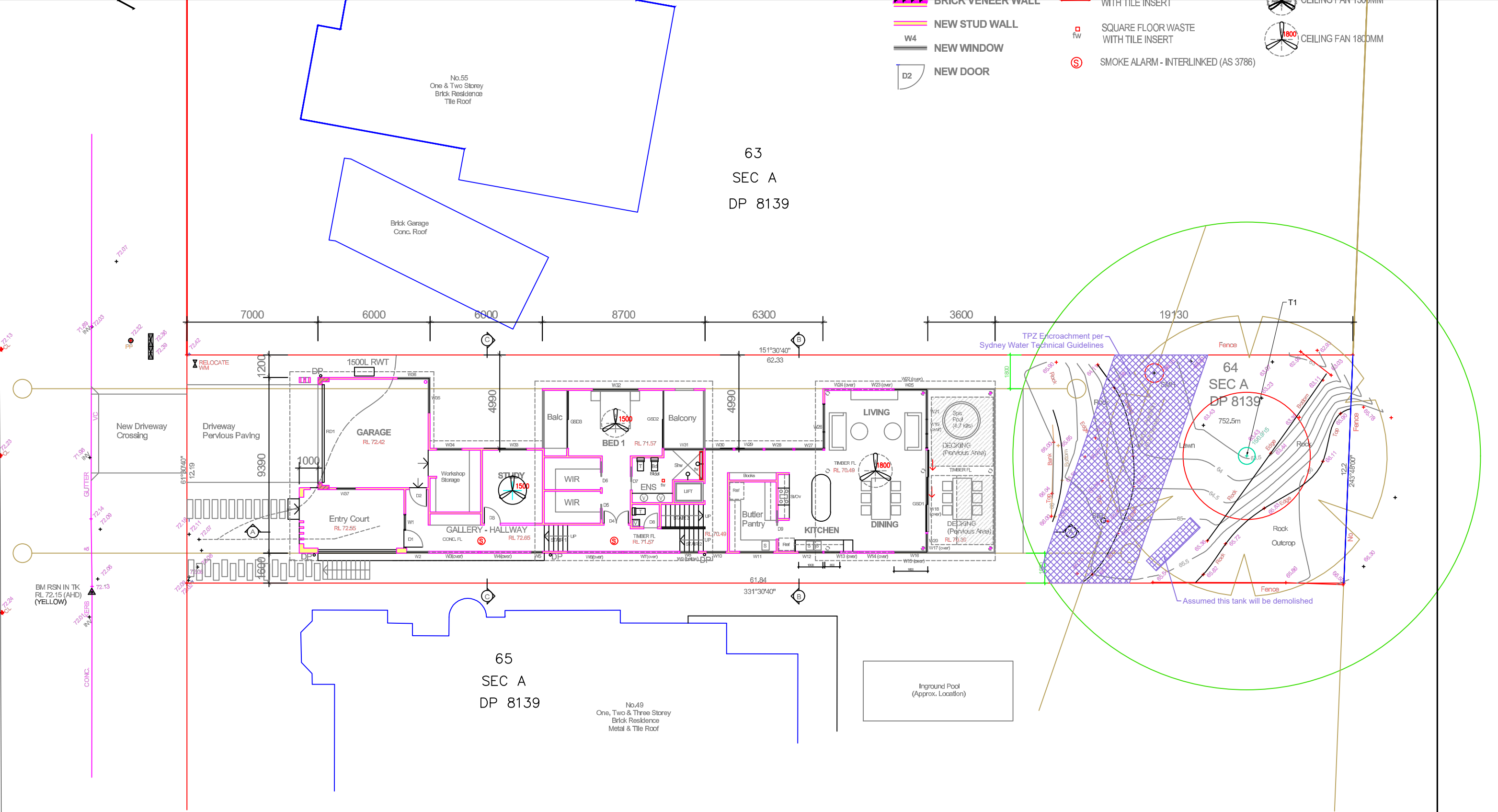
Project:
51 Quirk St Dee Why.dwg

Revision:
01

Plot Date:
21/05/2025

Key:

Tree Protection Zone (TPZ)
Structural Root Zone (SRZ)
Canopy Spread
Encroachment Area



ANCHINO architect e : Interior Design : Fitout No. 4832	AMENDMENTS A FOR DA 05.05.2025	NOTE: All dimensions to be checked on site. Figured dimensions to be taken in preference to measuring off the drawings. This design & drawing & all it's content is the property of Bianchino Architect & may not be copied in part or it's entirely without the expressed written permission of Bianchino Architect	PROJECT PROPOSED NEW HOUSE	LOCATION 51 QUIRK STREET DEE WHY NSW	SCALE 1:200 (A3 size)	DESIGNED J.B.
			DRAWING TITLE PROPOSED GROUND FLOOR PLAN	CLIENT GRAHAM RESIDENCE	DATE MAY 2025	DRAWN JB
						DRAWING NO. 2024 - 08 DA-04 ISSUE -A

	Blues Brothers Arboriculture PO BOX 4, TERREY HILLS, NSW, 2084 0439991122 www.bluesbros.com.au gordon@bluesbros.com.au	Title: Encroachment Potentials Project: 51 Quirk St Dee Why.dwg	Revision: 01	Key: Tree Protection Zone (TPZ) Structural Root Zone (SRZ) Canopy Spread Encroachment Area
			Plot Date: 21/05/2025	

Appendix 3 – Photographs



Image 2: The tree with respect to an existing Sewer Access chamber and exposed rock.



Image 3: The tree with respect to the existing property. Note extensive rock about the base of the tree resulting in an assessment of reduced soil availability.



Image 4: Past pruning has resulted in the tree having a raised crown form. Epicormic coppice noted about the tree is not typically found on this species.



7 About the Author

Personal Details

Address: PO BOX 4, TERREY HILLS, NSW, 2084

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Current Position

2014-present: Sole Trader:

Currently self employed as a Consulting Arborist (AQF 5).
Servicing the Greater Sydney Area and Surrounds

Part Time – Margot Blues Consulting Arborist

Education

2024 ISA
ISA TRAQ Re-certification.

2019-present ISA
ISA TRAQ (Tree Risk Assessment Qualification)
ISA Professional Member

2017 TAFE Top Ryde,
NSW
Diploma Arboriculture (AQF 5)

2011 TAFE Brookvale,
NSW
Diploma of IT (Networking)

Past Experience

Involvement with the preparation of Numerous Arboricultural Impact Assessment reports across the Greater Sydney Basin and beyond.

Involvement with the undertaking of tree health assessment reporting for trees relating to ongoing management not limited to the undertaking of Risk assessment and destructive testing.

NSW Land and Environment Court as an Expert Witness in the Arboricultural field as part of Class 1 development application appeals.

Extensive on-site experience as a Project Arborist. Personal experience in a former family business has provided valuable insight into the possibilities of excavation and implementation of developments.