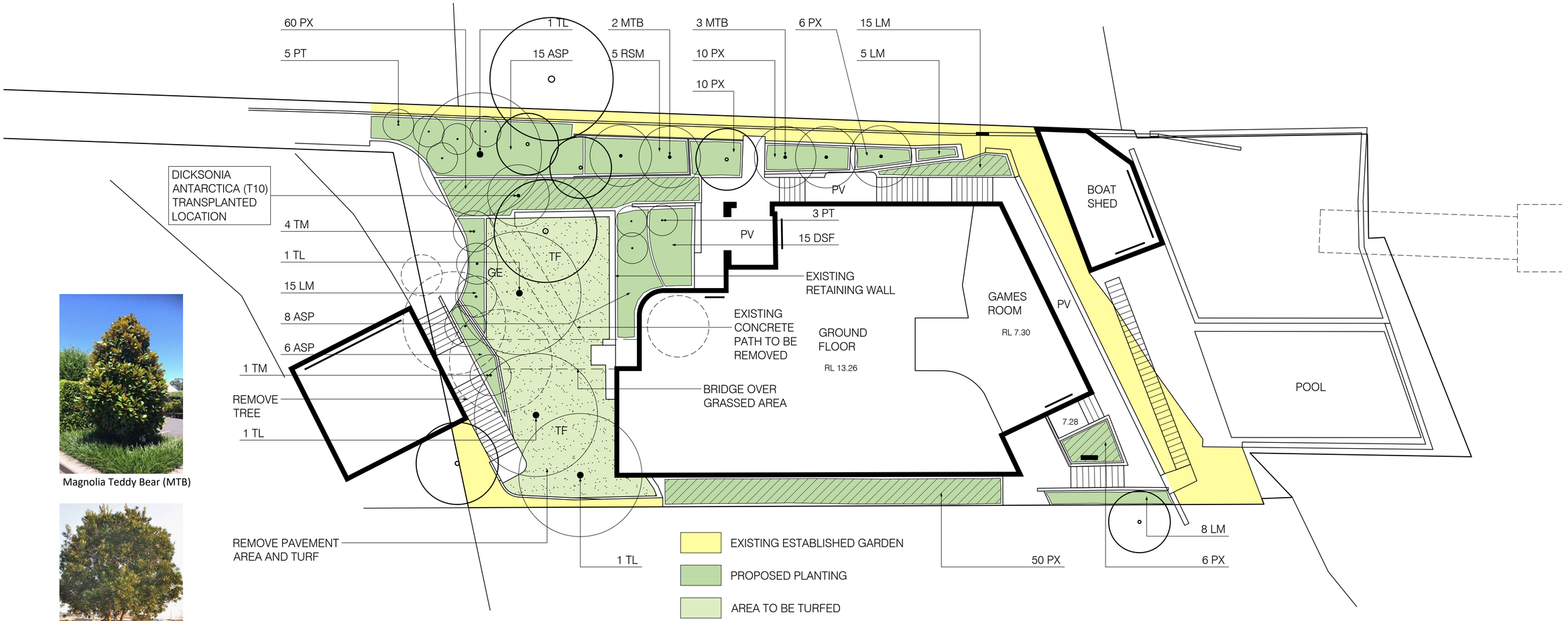
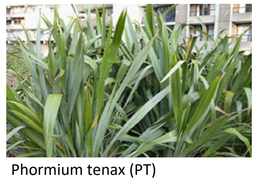


Magnolia Teddy Bear (MTB)

Tristaniopsis laurina (TL)

Raphiolepis 'Snow Maiden' (RSM)



Phormium tenax (PT)

Thysanolaena maxima (TM)

Philodendron Xanadu (PX)

Liriope muscari (LM)

Aspidistra elatior (ASP)

Dichondra 'Silver Falls' (DSF)

NOTES AND SPECIFICATIONS

EXCAVATIONS
Prior to carrying out any excavations, the contractor is to confirm locations of all services. Services pits and lids are not to be covered by any material. Trim and grade area to form a smooth even finish to required falls.

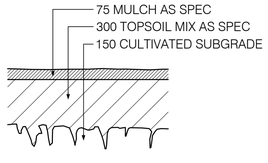
GARDEN BED / MULCH
The topsoil to all deep soil garden bed areas shall be four (4)parts site topsoil to one (1) part organic compost thoroughly blended together prior to placing into position. Where the site topsoil is considered not suitable, an imported topsoil blend meeting the requirements of AS4419-1998 shall be used. Garden bed subgrades are to be cultivated to a depth of 150mm. Topsoil depths to all garden bed areas to be 300mm (min). At the completion of all planting operations apply a 75mm layer of mulch over entire garden bed taking care not to smother plants. Reduce depth of mulch around base of plants to form “watering dish”. Mulch used shall be Pine Bark Nuggets as supplied by ANL or similar. All proposed planting is subject to suitable topsoil depths on site. Where there is insufficient depth due to presence of bedrock or other structures, the proposed planting is to be modified to suit in accordance with instructions from landscape architect.

TURF / GARDEN EDGING
Turf used for this site shall be Sir Walter Buffalo or similar soft leaf variety. Unless specified otherwise, turf shall be laid over 150mm topsoil and finished flush with adjacent surfaces. Water turfed areas immediately after turfing operations. Topdress any excessively undulating areas to form a smooth level surface with a coarse grade washed river sand. All garden edging as denoted by ‘GE’ on the plan is to be constructed as per detail.

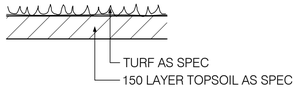
EXISTING TREES TO BE RETAINED
The existing trees indicated for retention shall be protected for the duration of the construction period. Install temporary protective fence around trunk of tree as required. Do not store or otherwise place bulk or harmful materials under or near a tree which is to be retained. Do not attach stays, guys and the like to a tree which is to be retained. Where it is absolutely necessary to prune tree roots / limbs contractor to ensure all Council approvals have been obtained. All tree work is to be carried out by a qualified and insured arborist. Where an arborist report has been prepared for the existing tree on site; The landscape plan shall be read in conjunction with this report. All trees identified for retention shall be protected and managed in accordance recommendations of this report. These recommendations will take precedence over any measures outline in the landscape plan.

MAINTENANCE / ON GOING CARE
Maintain all landscape areas to ensure plant health and occupant safety for period of 12 months beginning from date of practical completion to the satisfaction of Council. Maintenance will include but is not limited to the following activities: Mowing and edging lawn areas, fertilizing all plant material, pruning, watering, replacing failed planting, treating for pests and diseases, topping up of mulch areas and weeding garden beds as required. On completion of the initial 12 month period, all maintenance responsibilities shall be handed over to building management / property owner for on-going care. Note: All trees will require ongoing annual observation and maintenance by qualified arborist to ensure occupant safety, tree health and to avoid damage to surrounding structures and property.

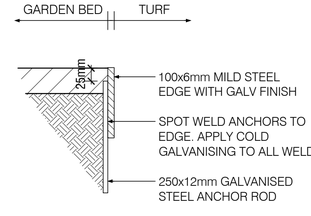
DISCREPANCIES
Should there be any discrepancies on the drawings with existing site conditions; contractor is to notify the landscape architect prior to proceeding with the works



A GARDEN BED NTS



B TURFING DETAIL NTS



C STEEL EDGE NTS

PLANT SCHEDULE

Code	Plant Name	Pot Size	Mature Size	Qty
ASP	Aspidistra elatior	200mm	1.0m	29No.
DSF	Dichondra ‘Silver Falls’	100mm	Ground Cover	15No.
LM	Liriope muscari	150mm	0.5m	43No.
MTB	Magnolia ‘Teddy Bear’	75Litre	6.0m	5No.
PT	Phormium tenax	300mm	2.0m	8No.
PX	Philodendron Xanadu	200mm	0.5m	142No.
RSM	Raphiolepis ‘Snow Maiden’	200mm	Trim to 0.8m	5No.
TL	Tristaniopsis laurina	75Litre	8.0m*	4No.*
TM	Thysanolaena maxima	300mm	2.0-3.0m	5No.

184 Kurraba Road Kurraba Point *Council RFI 26 October 2023

EXISTING TREE LEGEND

EXISTING TREE TO BE REMOVED

EXISTING TREE TO BE RETAINED

PROPOSED TREE

N

SURFACE TREATMENT LEGEND

TF	Turf
SGE	Steel Garden Edge (to detail)
GE	Garden Edge (to detail)
CL	Clothes Lines (to client requirements)
CB/TP	Colorbond / Timber Paling (1.8 high)
T	Tile (to client requirements)
RWT	Rainwater Tank (to Engineers Specifications)
PV	Pavers
SC	Stencilled Concrete (Charcoal/gunmetal)
TPF	Tree Protection Fence (1.8m Chain mesh)
GVL	Gravel Surface / Path (Nepean River Pebble)
CP	Concrete Path
B	Bench Seat
TD	Timber Deck

Rev A Council RFI 26 Oct 2023

Michael Siu
Landscape Architects
RLA No. 663
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02 9557 9833 I 0417 280 249

Landscape Planting Plan

Proposed Alterations and Additions
184 Kurraba Road Kurraba Point

Scale: 1:200@A3 Dwg: L01/1- K26714 21 April 2023

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PERICA & ASSOCIATES
URBAN PLANNING P/L

20 November 2023

Request to Contravene the Building Height Standard (Clause 4.6)

184 Kurraba Road, Kurraba Point

(Alterations and Additions to a Dwelling)

Introduction

This written statement is made pursuant to the provisions of Clause 4.6 of North Sydney Local Environmental Plan 2013 ("NSLEP 2013") and supports a development application (DA) for alterations and additions to an existing dwelling at No. 184 Kurraba Road (including minor works to a RoW on No. 184A Kurraba Road, Kurraba Point). It should be read in conjunction with the Statement of Environmental Effects by Perica and Associates Urban Planning Pty Ltd to which it is attached, plans by Antonio Caminiti Architect (as amended since DA lodgement) and the information submitted with the DA and recent the "View Loss Analysis" undertaken by impact Antonio Caminiti Architect dated 17 November 2023.

This request to contravene the Building Height development standard in Clause 4.3 of NSLEP 2013 ("Clause 4.6 Request") has been updated in November 2023, after the previous Clause 4.6 Request and after DA lodgement, in response to a Request for Further Additional Information from the assessing officer (dated 25/10/2023). In turn, this involved requested revision to commentary and assessment regarding view impacts, following a site inspection of four (4) properties raising view impact concerns where access was able to be gained, and to include a "height blanket" and subsequently revisions to the plans to reduce impacts to neighbours and further associated view impact assessment.

Also, from 1 November 2023, the NSW Department of Planning and Environment introduced changes to Clause 4.6 itself (primarily to remove former clauses relating to addressing zone objectives and objectives of the standard, and a requirement for concurrence from the Secretary of Planning), although these only apply to DA's lodged after 1 November 2023.

The proposal exceeds the maximum Building Height control in Clause 4.3 of NSLEP 2013. This control is a "development standard" in accordance with the definition in Section 1.4 of the Environmental Planning and Assessment Act 1979 (EPA Act 1979).

Clause 4.6 of NSLEP 2013 relevantly states (as applicable to DAs prior to 1/11/2023):

4.6 Exceptions to development standards

(1) The objectives of this clause are as follows:

(a) to provide an appropriate degree of flexibility in applying certain development standards to particular development,

(b) to achieve better outcomes for and from development by allowing flexibility in particular circumstances.

(2) Development consent may, subject to this clause, be granted for development even though the development would contravene a development standard imposed by this or any other environmental planning instrument. However, this clause does not apply to a development standard that is expressly excluded from the operation of this clause.

(3) Development consent must not be granted for development that contravenes a development standard unless the consent authority has considered a written request from the applicant that seeks to justify the contravention of the development standard by demonstrating:

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(a) that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and

(b) that there are sufficient environmental planning grounds to justify contravening the development standard.

(4) Development consent must not be granted for development that contravenes a development standard unless:

(a) the consent authority is satisfied that:

(i) the applicant's written request has adequately addressed the matters required to be demonstrated by subclause (3), and

(ii) the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out, and

(b) the concurrence of the Director-General has been obtained.

(5) In deciding whether to grant concurrence, the Director-General must consider:

(a) whether contravention of the development standard raises any matter of significance for State or regional environmental planning, and

(b) the public benefit of maintaining the development standard, and

(c) any other matters required to be taken into consideration by the Director-General before granting concurrence.

(6) –(8)… [not relevant]

1. Identifying and quantifying the non-compliance

Clause 4.3 of NSLEP 2013 specifies a maximum Building Height of 8.5m, by reference to the relevant LEP Map (extract below). This building height applies to land to the north and south, while land to the immediate west has a higher height limit (12m).

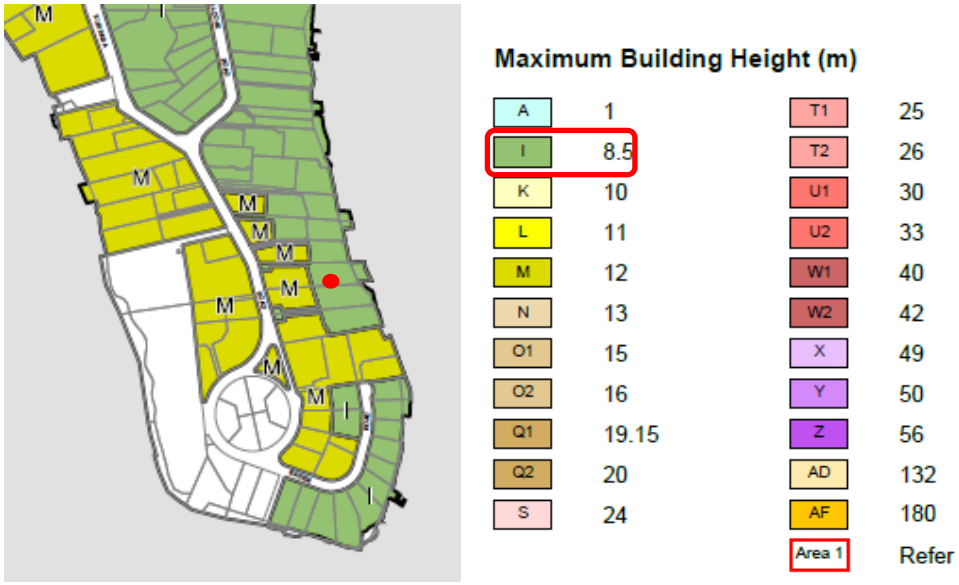

Figure 1 – Height Map extract NSLEP 2013

The proposal does not project above the existing roof ridge (except for a minor lift overrun, which is within the height limit). However, the roof of the existing building is above the existing height limit and there are proposed new works beyond the current building envelope which exceed the height limit.

There are two potentially different methods to measure the existing ground level datum, both of which have been adopted by the Land and Environment Court of NSW. One involves establishing/interpolating existing ground level from footpaths or perimeter ground levels, where sites have been extensively excavated (i.e. *Bettar v Council of the City of Sydney [2014], NSWLEC 1070*, or "Bettar"). The other involves measurement from the lowest level of an existing building vertically at every point, even if to a basement level (i.e. *Merman Investments Pty Ltd v Woollahra Municipal Council* [2021] *NSWLEC 1582,* or "Merman"). Due to these different relevant approaches, the architect has shown two height lines, in red (Bettar) and blue (Merman).

In this instance, I favour the Bettar approach due to the extent of excavation at the site for the dwelling (particularly at the lowest portions of the site) and in any event I do not favour utilising a basement level of a building for establishing existing ground level. In my view, a basement is defined relative to existing ground level (i.e. it must be below existing ground level), so a basement cannot not be both below existing ground and existing ground at the same time. If an existing building or building improvement is to be used to establish existing ground as in Merman, then it should be the ground level of the building (or the building level closest to ground level), not its basement, in my view.

Despite this, and in case of disagreement, the building height is given under both approaches (or Bettar and Merman), as shown in the plans. The numerical extent of building height in both approaches is summarised in the following table, related to the revised proposal:

Measure	**Bettar Approach (max)**	**Merman Approach (max)**
Existing Building	9.05m	11.25m
Proposed Building	9.16m	11.27m

Table 1 – Building Height (figures by Antonio Caminiti Architect)

The "Bettar" method for measuring height is more appropriate for this developed site and the approval authority has established this as the appropriate method for this area. Gyde Consulting's response to Council's request for additional information in relation to a proposed development at 184B-190 Kurraba Road (adjacent and to the south of the subject site) quotes Council's letter dated 13 June 2023, stating: "*Please provide a 3D height blanket diagram as measured from the extrapolated topography in accordance with Bettar v Council of the City of Sydney [2014] NSWLEC 1070*".

The height non-compliance is best illustrated in the sections within the plans by Antonio Caminiti Architect, with an extract below.

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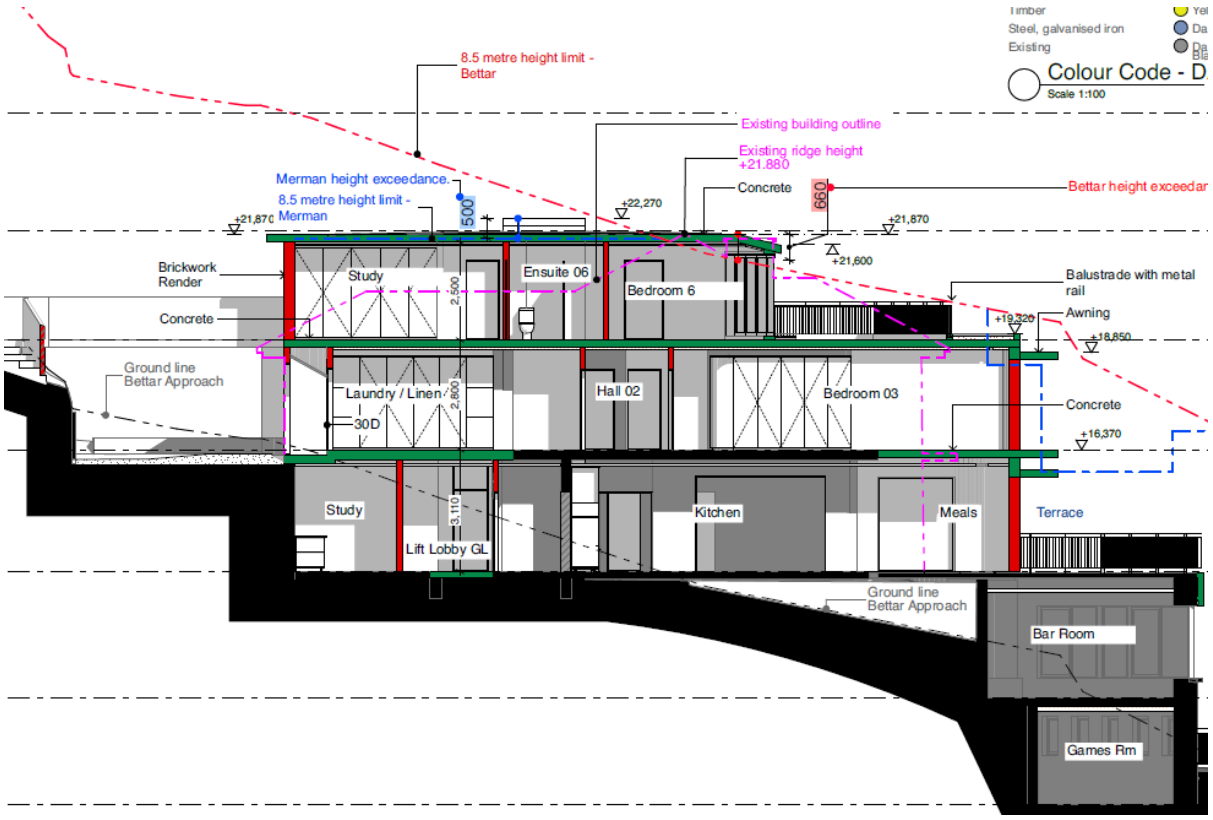
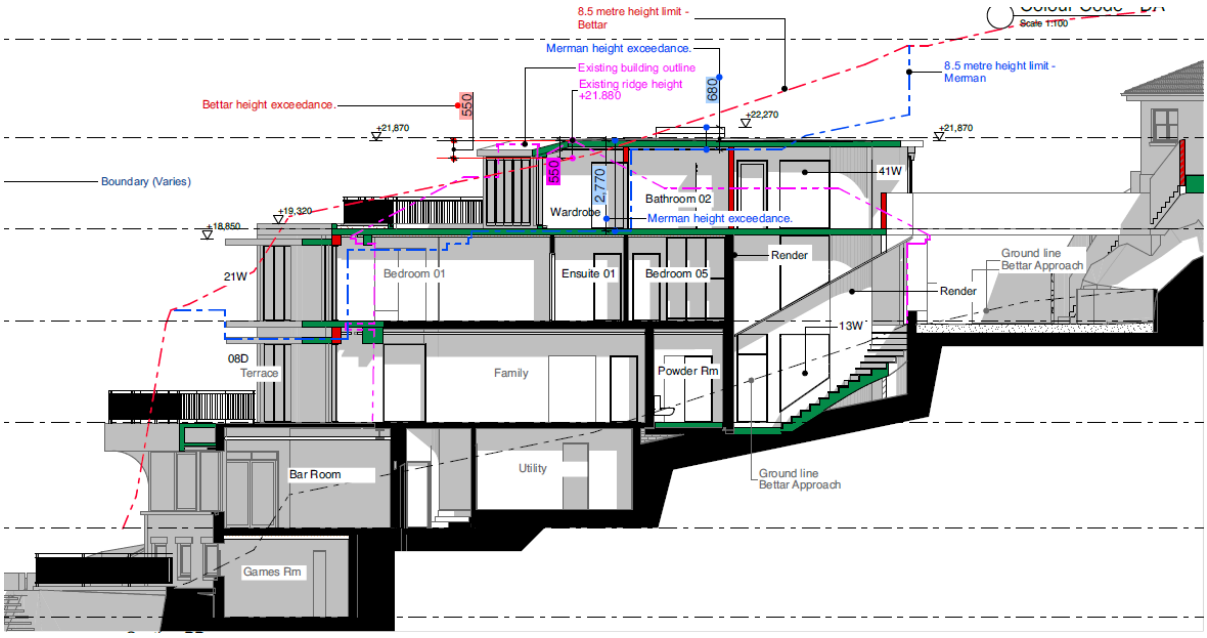
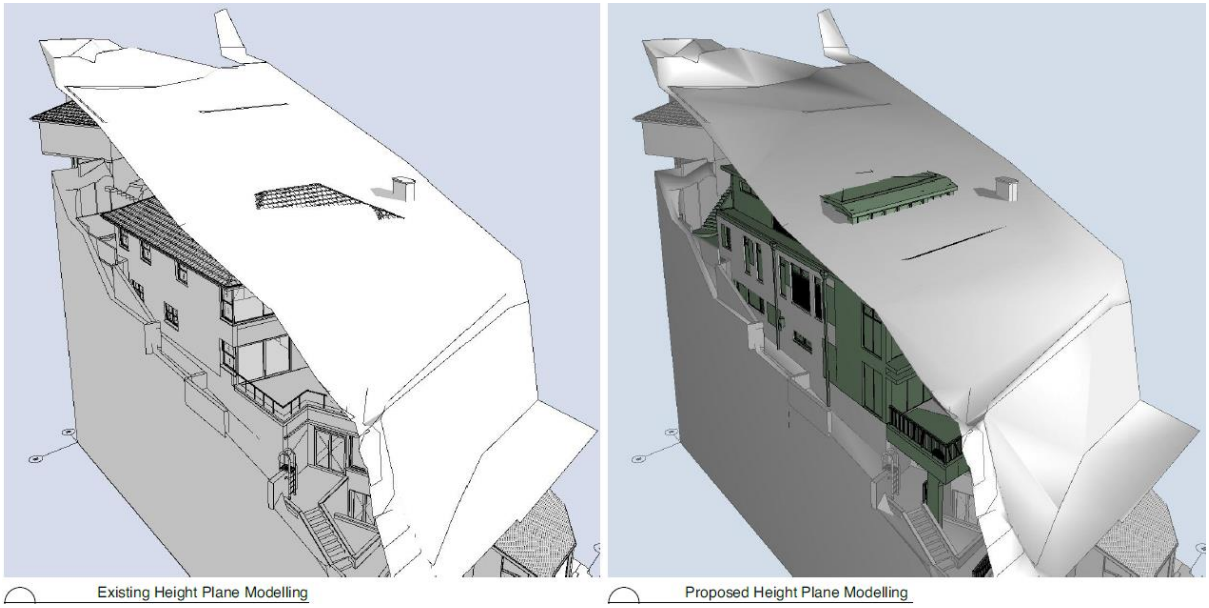




Figures 1 and 2 – Height contravention (Sections – Antonio Caminiti Architect)

Using the Bettar approach, the proposal results in a height non-compliance of 0.66m, being a 7.8% increase above the height limit, although only a 110mm increase above the existing height of the existing building (or 1.3% increase).

A "Height Blanket" has also been prepared by Antonio Caminiti Architect to illustrate both the existing height non-compliance and the proposed height non-compliance, in 3 dimensions, using the Bettar method:



Figures 3 – Height contravention/Height "blanket" (Sections – Antonio Caminiti Architect)

It is noted that the additional area of height exceedance covers a less than 5% of the building footprint in 2-dimensions, and a very minor percentage in terms of the comparison to the compliant building bulk in 3-dimensions.

As can be seen, the highest point of the building, being the lift overrun above the roof, is within the height limit.

3. Clause 4.6 (3)(a) and 3(b) of NSLEP 2013

Clause 4.6(3) of NSLEP 2013 states:

> *(3) Development consent must not be granted for development that contravenes a development standard unless the consent authority has considered a written request from the applicant that seeks to justify the contravention of the development standard by demonstrating:*
>
> *(a) that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and*
>
> *(b) that there are sufficient environmental planning grounds to justify contravening the development standard*

(a) that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case

The issue of compliance being "unreasonable or unnecessary" was well summarised in the Land and Environment Court judgement *Wehbe v Pittwater Council* [2007] NSWLEC 827 ("the Wehbe case").

In this regard, the Wehbe case outlined 5 possible ways to demonstrate whether compliance would be unnecessary or unreasonable, by establishing:

i. Compliance with the underlying objectives of the standard being breached, notwithstanding the numerical non-compliance; or
ii. That the objectives of the standard are not relevant to the proposal; or
iii. Requiring compliance with the development standard would "thwart" the achievement of the objectives of that standard; or
iv. The development standard in question has been "virtually abandoned" by the Council; or
v. The zoning of the land is not appropriate for the site and therefore the associated standards are not appropriate (with some qualifications).

This justification does not rely on a case related to pathways 2-5 above. However, it is noted that variations to height controls can and do occur on a case-by-case basis, and are not uncommon in the North Sydney LGA. It is also noted there appears to be many buildings within Kurraba Point which appear to be above the 8.5m limit.

This report and written justification does argue compliance with underlying objectives of the standard in question are achieved.

In terms of the objectives of the standard, Clause 4.3(1) of NSLEP 2013 is relevant and contains the following objectives:

(a) to promote development that conforms to and reflects natural landforms, by stepping development on sloping land to follow the natural gradient,

(b) to promote the retention and, if appropriate, sharing of existing views,

(c) to maintain solar access to existing dwellings, public reserves and streets, and to promote solar access for future development,

(d) to maintain privacy for residents of existing dwellings and to promote privacy for residents of new buildings,

(e) to ensure compatibility between development, particularly at zone boundaries,

(f) to encourage an appropriate scale and density of development that is in accordance with, and promotes the character of, an area,

(g) to maintain a built form of mainly 1 or 2 storeys in Zone R2 Low Density Residential, Zone R3 Medium Density Residential and Zone E4 Environmental Living.

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The following responds to these objectives, as relevant to the proposed height non-compliance of new works (as the objectives in respect to the height non-compliance are relevant for a contravention request):

a) *to promote development that conforms to and reflects natural landforms, by stepping development on sloping land to follow the natural gradient*

This is achieved, as the works exceeding the height limit do not alter the ground condition and the new works are essentially the same as the existing ridge line. The new works are also well setback from the streetscape presentation and the dwelling continues to step down the slope, with the landform. The proposed works and non-complying height cause no significant change to the silhouette of the building.

b) *to promote the retention and, if appropriate, sharing of existing views*

Detailed consideration has also been given to analysing view impacts, including following inspection of 3 units at No. 182 Kurraba Road and No. 176 Kurraba Road, who raised issues regarding view impacts in response to public notification of the proposal.

The plans have recently been amended since DA lodgement to specifically seek to reduce potential impacts upon views available to neighbours. This has included a "View Loss Analysis" undertaken by impact Antonio Caminiti Architect dated 17 November 2023, as well as analysis by the author of this report.

As the analysis is long and detailed, it has been included as an attachment to this Clause 4.6 Request.

Very detailed consideration was given to this issue in the redesign and original design, by amendments to the upper level extension since DA lodgement, increased setbacks and reduced building massing above the height limit, revising the roof form, reasonably limiting ceiling heights, limiting the size of the upper addition, the proposed roof matching the roof ridge, providing a lift where the lift over-run is within the height limit, providing a large northern side setback and limiting the eastern extension at the upper level.

In summary, it is concluded that view impacts arising from the height non-compliance, are either non-existent or at worst negligible, both in themselves and also in the context of the remaining views unaffected by the proposal, in qualitative and quantitative terms. The proposal results in reasonable view retention and view sharing, thereby being consistent with this objective of the height control.

c) *to maintain solar access to existing dwellings, public reserves and streets, and to promote solar access for future development*

The proposed new works above the height limit do not cause any significant adverse overshadowing impacts, noting the works are generally within the overall roofscape, essentially no higher than the existing height and the new upper-level works are well setback form the southern side boundary, complying with DCP controls.

The proposed works will not cause additional overshadowing to any public reserves or streets.

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The proposed works do not hinder reasonable development of adjoining sites, including to the south, in terms of solar access.

d) *to maintain privacy for residents of existing dwellings and to promote privacy for residents of new buildings*

The new works above the height limit have considered privacy, both for the site and surrounding properties.

The side and rear edges of the upper-level extension (which exceeds the height limit) are well-setback and set within the edges of the walls below. This has the effect of visually recessing the upper-level addition and reducing downward overlooking to neighbouring adjoining properties. The side boundary setbacks to the upper-level extension are fully compliant with the DCP and significantly exceed the side setback requirement to the north. The design and siting of the upper-level extension have the effect of directing outlook across and out from the property, rather than down to neighbours, reasonably minimising any privacy impacts.

The majority of window openings to the upper-level extension occur to the north (for solar access) and to the east (for solar access and outlook), which also has benefits in being the areas with greatest setbacks, in turn reasonably reducing privacy impacts.

e) *to ensure compatibility between development, particularly at zone boundaries*

The site is technically at a zone boundary, as land to the west is zoned R4 – High Density Residential, while land to the east is within Sydney Harbour, within a Waterways zoning.

The height non-compliance does not change the overall siting of the development. The land to the west in the R4 zone is on significantly higher land, with generous setbacks from the western boundary. In terms of the relationship to the east, the proposed building scale is similar to existing surrounding development, when viewed from the east. This is shown in the photo from the east below, which also illustrates the higher building forms to the west, in the R4 zone and with a higher applicable Height standard (and also noting the landscaped area in the Foreshore area and lower two levels are not being altered as viewed from the east):

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The height of the proposed works generally matches the existing roof ridge, while the scale of the roof additions is relatively minor, and not excessive. The setbacks and landscaped elements also help to visually mitigate the building in the streetscape.

The proposed works will be compatible within the surrounding context of the site.

f) ***to encourage an appropriate scale and density of development that is in accordance with, and promotes the character of, an area***

The density of the development is being retained as a single dwelling, while the scale is contextually appropriate.

In terms of the character of the area, this has been addressed in the S.E.E., including responding to the various objectives and principles related to the wider South Cremorne Planning Area and the Kurraba Point South Neighbourhood. The proposal is consistent with the character of the area.

In terms of the Kurraba Point South Neighbourhood, significant elements in the Neighbourhood are identified, including:

- Predominantly residential use;
- Steep fall in the land;

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- Varying landscaping;
- Significant reserves;
- Irregular lot pattern;
- Deep narrow lots;
- *Buildings generally setback a minimum from the boundary with a skewed alignment to respective street frontages;*

The proposal is consistent with these significant existing elements.

The Neighbourhood Area contains the following Desired Future Character statement:

6.1.2 Desired Future Character

Diversity

P1 Primarily medium to high density residential accommodation, generally comprising attached dwellings, multi dwelling housing and residential flat buildings according to zone.

P2 Limited opportunities for low density housing, generally comprising dwelling houses and dual occupancies.

P3 Any increases in density should be concentrated in the vicinity of Kurraba Wharf.

6.1.3 Desired Built Form

Siting

P1 Buildings address both the street, as well as the foreshore.

P2 In narrow streets, towards rear boundary (subject to foreshore building line) to produce a more open streetscape

P3 Sites should provide front setbacks to allow for soft landscaping.

Colours and materials

P4 Development adjoining foreshore or bushland areas (such as at Wonga Road) use muted colours and non-reflective materials, such as brick and timber to ensure the scenic and environmental qualities are enhanced.

The proposal is consistent with all the stated desired future character aspects of the neighbourhood, noting in particular:

- The use is permissible in the zone and does not change the existing use;
- There is no increase in density (being retained as a single dwelling) and the site is not in the vicinity of Kurraba Wharf, as desired;
- The building addresses the foreshore, and improves the address and surveillance to the street;
- The new bulk is located towards the rear and complies with the FBL;

- Landscaping complies with the DCP control and no landscaping visible form the streetscape is being removed;
- Appropriate materials are used.

The proposal, including height non-compliance, is wholly sympathetic to the existing and desired future character of the area within the DCP.

g) *to maintain a built form of mainly 1 or 2 storeys in Zone R2 Low Density Residential, Zone R3 Medium Density Residential and Zone E4 Environmental Living*

The existing building is predominantly 3 storeys. The addition to height is at the current roof level and essentially no higher than the existing roof ridge (except a minor lift overrun in an area complying with the height limit).

The existing dwelling is several levels and is compatible with the predominant form in the area. The additional works exceeding the height limit do not significantly change the perceived scale or built form, particularly within the streetscape, but also from the waterway.

In summary, the proposal is wholly consistent with the objectives of the development standard and using the accepted approach in *Wehbe v Pittwater Council* [2007] NSWLEC 827, compliance with the development standard can therefore be considered unnecessary or unreasonable.

(b) that there are sufficient environmental planning grounds to justify contravening the development standard

The case *Four2Five v Ashfield Council [2015] NSWLEC 1009, NSWLEC 90, NSWCA 248* raises the issue that the grounds should relate to a site and specific proposal (and non-compliance), rather than generic reasons.

The case *Initial Action Pty Ltd v Woollahra Municipal Council [2018] NSWLEC 118* highlighted that:

1. The term "environmental planning grounds" is not defined and would include the objects of the EPA Act (Section 1.3);
2. The grounds must relate to the contravention of the development standard in question, not the whole development;
3. Environmental planning grounds can include a lack of environmental impact; and
4. The consent authority must indirectly be satisfied the applicant's written request provides sufficient environmental planning grounds, not directly form an opinion about there being sufficient environmental planning grounds to justify the contravention.

Also, given the term "environmental planning grounds" is wide in its nature, context and understanding, and given the Objects of the EPA Act 1979 give effect to all other planning instruments, DCPs and wide assessment criteria, a wide appreciation of the term is warranted.

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In this context, the following environmental planning grounds are given to justify the proposed contravention of the Building Height development standard, on this particular site and for this particular development:

a) Given the location adjoining a Foreshore Building Line/Harbour and the nature of adjoining development to the north, south and west, there is benefit in the proposed additions at roof level in terms of minimising overall impacts to neighbours and the Harbour;

b) To the extent that the decision in Merman may apply, if it is used to determine existing ground level, then in accordance with Paragraph 74 of that judgement there is an environmental planning ground that justifies the contravention of the height standard, given prior excavation of the site distorts the maximum building height plane;

c) The proposed height is compatible with adjoining and surrounding development;

d) The height non-compliance will not be readily visible form the street and will not be discernible from surrounding development when viewed from the Harbour waters, also noting higher building forms to the immediate west, which also have a higher 12m applicable height limit;

e) The roof form adopted is a flat roof, with reasonable ceiling heights, while the overall height is essentially no higher than the existing roof ridge (except for a small lift overrun in an area which complies with the height limit), which results in both a contextually appropriate form;

f) The height non-compliance has been reduced since DA lodgement, after detailed consideration of view impacts to neighbours;

g) The site is steeply sloping and localised areas of non-compliance arise from such land slope, which is relatively common in areas with steep slope transitions, while the actual areas of height non-compliance are relatively minor;

h) Design measures have been incorporated into the design of the upper addition to mitigate impacts on neighbours in terms of views, privacy and overshadowing;

i) Reasonable view protection and view sharing is accommodated by the proposal, including in the redesign and original design, by amendments to the upper level extension since DA lodgement, increased setbacks and reduced building massing above the height limit, revising the roof form, reasonably limiting ceiling heights, limiting the size of the upper addition, the proposed roof matching the roof ridge, providing a lift where the lift over-run is within the height limit, providing a large northern side setback and limiting the eastern extension at the upper level;

j) Altering and adapting the dwelling is likely to have less overall environmental impacts compared to a new dwelling or dual occupancy, noting the foreshore location;

k) The additional height and height non-compliance will significantly improve the amenity of the dwelling, yet not at any significant impacts on neighbours;

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l) The existing building exceeds the height limit and the additional height and bulk is minor;

m) The design and layout of rooms giving rise to the height non-compliance supports sustainable living and energy use and is consistent with principles of ESD;

n) In terms of the Objects of the EPA Act, the proposal, specifically including the non-compliant height of the building, is consistent with the following Objects of the Act:

i. *to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations* – noting adaptive reuse of existing built assets, improved orientation and amenity, use of light and ventilation, and improved outlook/healthy living from the non-compliance, all while not increasing reliance on car travel nor significant impacts on other land;

ii. *to promote the orderly and economic use and development of land* – noting the adaptive alterations that balance environmental and amenity considerations for residents at the site and neighbours is orderly, while adaptive reuse and extensions including the non-compliance represents economic use of land on a well-connected site;

iii. *to promote the sustainable management of built and cultural heritage* – noting the acceptable heritage outcome including the proposed height;

iv. *to promote good design and amenity of the built environment* – for the same reasons above; and

v. *to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants* – as the height exceedance allows improved amenity and thereby a healthy environment for residents, without significant impacts to others.

o) As noted previously, the Objects of the EPA Act provide a framework for the Act itself, and its operative provisions, which include giving effect to other Environmental Planning Instruments. The proposal and specifically the height non-compliance is also consistent with the aims and objectives within North Sydney LEP 2013 (Clause 1.2(2), as outlined in the S.E.E.).

4. Clause 4.6(4) of NSLEP 2013

Clause 4.6(4) of NSLEP 2013 states:

(4) Development consent must not be granted for development that contravenes a development standard unless:

(a) the consent authority is satisfied that:

(i) the applicant's written request has adequately addressed the matters required to be demonstrated by subclause (3), and

(ii) the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out, and

(b) the concurrence of the Secretary has been obtained

These are matters for the consent authority to be satisfied (as opposed to the applicant justifying as in Clause 4.6(3)). Despite this, further commentary is given to assist the consent authority in its deliberations.

Clause 4.6(4)(a)(i) has been addressed in the previous Section of this written request. The objectives of the standard have also been addressed in the previous Section of this written request.

In terms of Clause 4.6(4)(a)(ii) and the zone objectives, this is related to the whole proposed development, not just the height non-compliance.

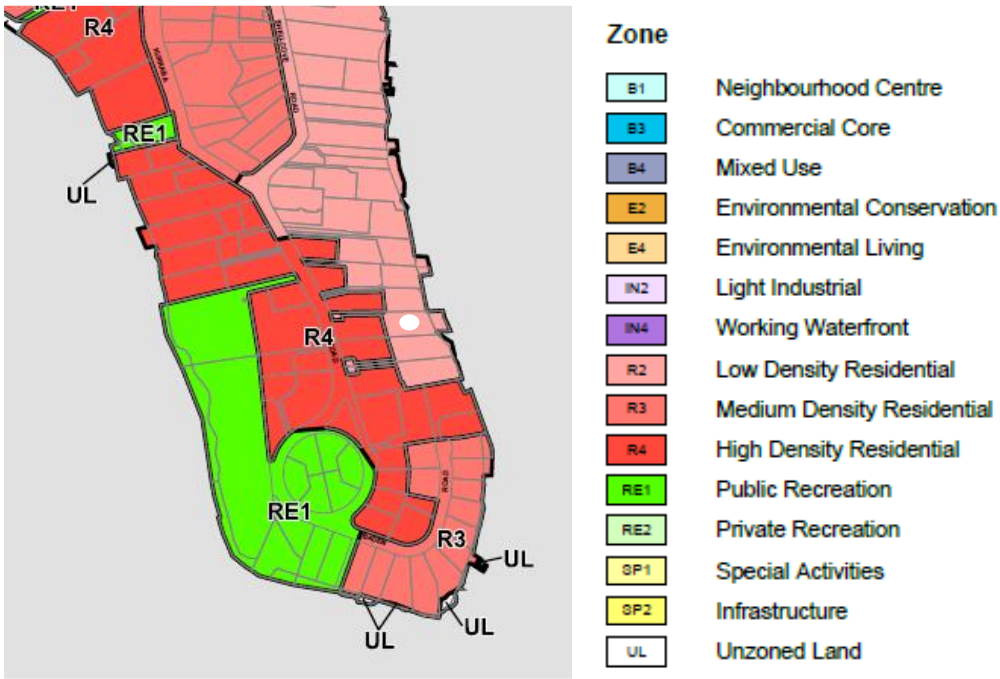

Figure 3 – Zoning Map extract NSLEP 2013

The zone objectives are:

- *To provide for the housing needs of the community within a low density residential environment.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
- *To encourage development of sites for low density housing, including dual occupancies, if such development does not compromise the amenity of the surrounding area or the natural or cultural heritage of the area.*

- *To ensure that a high level of residential amenity is achieved and maintained*

It is considered the proposal is consistent with these zone objectives, noting:

- The proposal maintains a dwelling house use, which is the ultimate form of low-density housing.
- The second objective is not relevant to the proposed use (yet achievement of this objective elsewhere is not compromised by the proposal).
- The proposal does not cause any significant impact on the amenity of the surrounding area, despite some relatively minor localised impacts, and does not compromise the natural or cultural heritage of the area.
- A high level of amenity is provided for the proposed development, improved compared to the existing situation, yet not at the expense of the loss of amenity (to any significant degree) to surrounding land.

The proposal is consistent with the zone objectives applying to the site. The objectives of the Building Height development have been addressed in a previous section of this Statement.

Clause 4.6(4)(b) – Concurrence of the Secretary

Concurrence of the Secretary is not required.

5. Clause 4.6(5) of NSLEP 2013

Clause 4.6(5) of NSLEP 2013 states:

> *(5) In deciding whether to grant concurrence, the Secretary must consider:*
>
> *(a) whether contravention of the development standard raises any matter of significance for State or regional environmental planning, and*
>
> *(b) the public benefit of maintaining the development standard, and*
>
> *(c) any other matters required to be taken into consideration by the Secretary before granting concurrence.*

In these regards, the North Sydney Council has delegation from the Secretary for the Department of Planning and Environment to consider and decide upon Clause 4.6 Variation Requests, subject to matters to be determined by a Local Planning Panel.

Despite this, in terms of Clause 4.6(5) (a)-(c), the following response is given;

(a) No matter of significance for State or Regional environmental planning arises or is compromised by the non-compliance;

(b) The integrity of the development standard will not be compromised by granting approval, noting the site-specific and proposal-specific considerations in this instance, which should not give rise to universal precedence elsewhere. In the circumstances of this application, there is no public benefit of marinating the

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development standard. To the contrary: for the environmental planning reasons outlined in this written request; and given the consistency with the objectives of the development standard and zoning, allowing the proposal, including its height non-compliance, will provide a public benefit in this instance;

(c) There are no other known required or nominated matters by the Secretary to be taken into account.

For all the reasons given in this written justification, the proposal should be approved and is justified, notwithstanding the numerical non-compliance with the Building Height development standard in Clause 4.3 of North Sydney Local Environmental Plan 2013.

Jason Perica
Director

Attachment – View Loss and View Sharing Analysis (17/11/2023)

ATTACHMENT – VIEW LOSS AND VIEW SHARING ANALYSIS

Prior to discussing this issue, the methodological approach warrants discussion and explanation.

In terms of a request to erect height poles, this was not possible due to the resulting impact upon the roof, dwelling and waterproofing/safety in a highly exposed environment. Fortunately for this case, it is easy to gauge impacts due to existing dwellings elements and matching height, such as the existing chimney and roof, and detailed and accurate 3D modelling informed by survey data undertaken by the architect.

Prior to addressing the view sharing principles in *Tenacity Consulting v Warringah Council [2004] NSWLEC 140* ("Tenacity"), it is appropriate to summarise the methodological processes to visually montage the view impacts upon photos from neighbouring properties. There is a technical guide issued by the Land and Environment Court of NSW, and the process undertaken has followed that guide, as summarised below:

Steps/Process	Details	Notes
1. Properties Inspected	Nos 201/182 Kurraba Road. 101/182 Kurraba Road. G01/182 Kurraba Road. 176 Kurraba Road.	These were the only properties able to gain access where a view impact claimed in a submission (No 186 was understood to be unable to be contacted).
2. Climate Condition and Times	Date: 2/11/2023. Time: 12-12.45pm for 182 Kurraba Road. 3pm-3.30pm for 176 Kurraba Road. Weather conditions: Fine, slight breeze.	Good visibility.
3. Identifying Photo Locations	Undertaken in consultation with assessing planner.	Assessing planner and author discuss and agree on appropriate locations for each property (owner allowed access).
4. Camera operator	Jason Perica.	Author of this submission.
5. Camera Used	Nikon digital SLR, 18mm-55mm.	High quality resolution (2MB per photo).
6. Focal Length of photos	35mm and 18mm.	35mm focal length used for "single shot" of worst view

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Steps/Process	Details	Notes
		impact, 18mm used for panorama photos.
7. Process to verify base data of proposal and photos	Architect used 3D modelling from *Archicad* (Version 25) program, utilising survey data of RLs to AHD. Photo locations provided on a floor plan by camera operator for each property. Architect verifies photo location and overlays visual model "wire frame" with photo to verify accuracy.	Guided by Land and Environment Court process.
8. Process	At least 2 representative photos used for each property (2 per level for G01 182 Kurraba Rd and 3 for No. 176 Kurraba Road), nominated by author/planner. Photomontage(s) undertaken for 35mm photos and a panorama view provided (latter involved some "stitching of photos laterally using *Adobe Photoshop Lightroom (Version 7)* computer program).	Photos 1m in from edge of balcony or glass line, generally "either end" of properties, with some other internal photos. Process allows a robust assessment of view impacts to be ascertained.

Table 1 – Summary of Methodology for Photomontages

The resulting view impact photomontages have been compiled for each property by the Architect, as provided by a separate attachment (dated 17 November 2023).

The following provides commentary on the view impacts for each property visited, using the principles in *Tenacity*. Some extracts of the photomontages attached are extracted in the discussion below.

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Discussion of View Sharing for Neighbouring Properties

G01/182 Kurraba Road, Kurraba Point

This unit occupies the lower two levels of No. 182 Kurraba Road, being to the north-west of the subject property, on higher land. The building is nearing completion, after development approval for significant alterations and additions to a residential flat building.

Upper Level (Living)

The upper level (one level above the lowest level of the building) contains living areas to the east (kitchen, living, dining), with an "L"-shaped balcony off the living space.

Figure 1 – Photo Locations G01/182 Kurraba Road

The panorama of views from the upper-level balcony (north) of G01, 182 Kurraba Road is illustrated below (photo 1 location from above):

Figure 2 – Panorama G01 Upper Level, 182 Kurraba Road (Balcony) – Location 1

The photomontage on a photo at 35mm focal length over the subject site/proposal is depicted below from Location 1 of G01, 182 Kurraba Rd, upper level:

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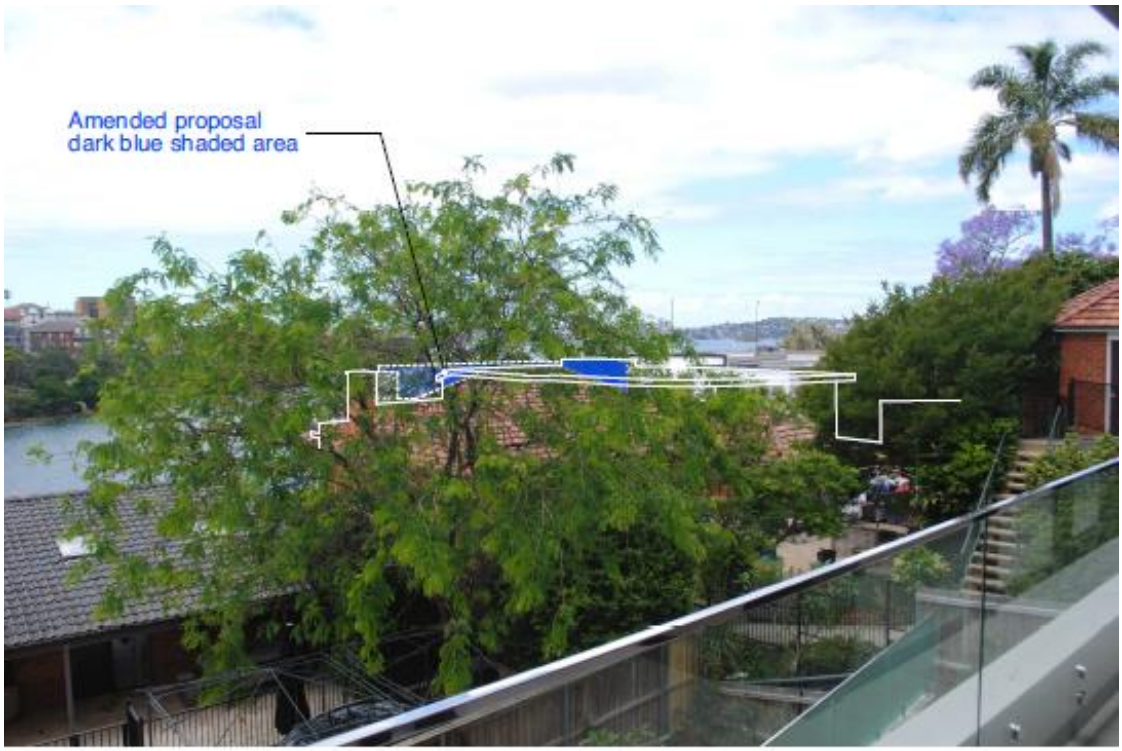

Figure 3 – Montage of proposal at 35mm focal length G01, 182 Kurraba Road – Location 1

The photomontage on a photo at 35mm focal length over the subject site/proposal is depicted below from Location 2 of G01, 182 Kurraba Rd, upper level:

Figure 4 – Montage of proposal at 35mm focal length G01, 182 Kurraba Road – Location 2

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Considering the principles within Tenacity, as can be seen and adduced:

- The view impacts at locations 1 and 2 are similar;
- There are essentially no view impacts arising from the height non-compliance. The very minor view impact behind the tree (adjoining the white building at 186 Kurraba Road) is caused by the lift overrun and roof in the foreground that fully complies with the height limit, with the lower non-compliance behind that compliant form. Some further elaboration is below;
- There is a wide arc of existing views available from the south-east to the north-east, including valued water views, the shores of Cremorne Point, shores of Rose Bay/Point Piper, water-land interface, land/sky interface, and sky;
- The retained views are available from within the living areas and from an adjoining balcony;
- The proposal is lower than the adjoining building to the east (white in the photos above);
- The impact can reasonably be described as negligible or non-existent;
- The proposal can be considered reasonable, given the degree of impact on views, and the totality of views that remain available.

In terms of the second dot point above, the northern portion of the view impact next to the white dwelling at No. 186 Kurraba Road is highlighted below and arises from the lift overrun and roof structure in the foreground, which is fully height-compliant (as shown in the View Loss analysis and details by Antonio Caminiti Architect). The height non-compliance does not lead to view loss in that area. To the north, the proposal has been amended to eliminate a previous view impact.

Lower Level (Bedrooms) – G01, 182 Kurraba Rd

The lower level of G01, 182 Kurraba Road contains bedrooms, which may be used as a study, depending on the needs and desires of the future residents.

For the lower level, two photos were taken from the two bedrooms facing east, one to the north (Location 1) and one towards the south (Location 2), 1m inside the glass line, as below:

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Figure 5 – Photo Locations, G01 Lower Level, 182 Kurraba Road (Bedrooms)

Photos 1-2 – Unit G01/182 Kurraba Road, lower-level bedrooms

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The following shows a panorama from the northern bedroom (Location 1) of the Lower level of G01, 182 Kurraba Road:

Figure 6 – Panorama G01 Lower Level, 182 Kurraba Road (Balcony) – Location 1

It can be seen based on the photos that the proposal will have no view impacts (only a negligible area of sky outlook affected, behind a tree).

101/182 Kurraba Road, Kurraba Point

This unit occupies one whole level of No. 182 Kurraba Road (3 levels above the rear yard), being to the north-west of the subject property, on higher land. The building is nearing completion, after development approval for significant alterations and additions to a residential flat building.

The unit contains living areas to the east (kitchen, living, dining), with an "L"-shaped balcony off the living space.

Figure 7 – Photo Locations 101/182 Kurraba Road

The panorama of views from 101, 182 Kurraba Road is illustrated below (photo 1 location)

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Figure 8 – Panorama 101, 182 Kurraba Road (Balcony north) – Location 1

The photomontage on a photo at 35mm focal length over the subject site/proposal is depicted below from Location 1 of 101, 182 Kurraba Road:

Figure 9 – Montage of proposal at 35mm focal length 101, 182 Kurraba Road – Location 1

The photomontage on a photo at 35mm focal length over the subject site/proposal is depicted below from Location 2 of 101, 182 Kurraba Road:

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Figure 10 – Montage of proposal at 35mm focal length 101, 182 Kurraba Road – Location 2

Considering the principles within Tenacity, as can be seen and adduced:

- The view impacts at locations 1 and 2 are similar, although at Location 2 towards the south, the tree in the foreground shields less of the site and proposal;
- There are essentially no view impacts arising from the height non-compliance. The very minor view impact (adjoining the white building at 186 Kurraba Road) is caused by the lift overrun and roof in the foreground that fully complies with the height limit, with the lower non-compliance behind that compliant form;
- There is a wide arc of existing views available from the south-east to the north-east, including valued extensive water views, the shores of Cremorne Point, the far shores of Rose Bay and Point Piper, water-land interface, land/sky interface, and sky;
- The retained views are available from within the living areas and from an adjoining balcony;
- The proposal is lower than the adjoining building to the east (white in the photos above);
- The view impact from the hight non-compliance can reasonably be described as either non-existent or negligible, both in qualitative and quantitative terms;
- The proposal can be considered reasonable, given the degree of impact on views, and the totality of views that remain available.

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201/182 Kurraba Road, Kurraba Point

This unit occupies one whole level of No. 182 Kurraba Road (4 levels above the rear yard), being to the north-west of the subject property, on higher land. The building is nearing completion, after development approval for significant alterations and additions to a residential flat building. The unit contains living areas to the east (kitchen, living, dining), with an "L"-shaped balcony off the living space.

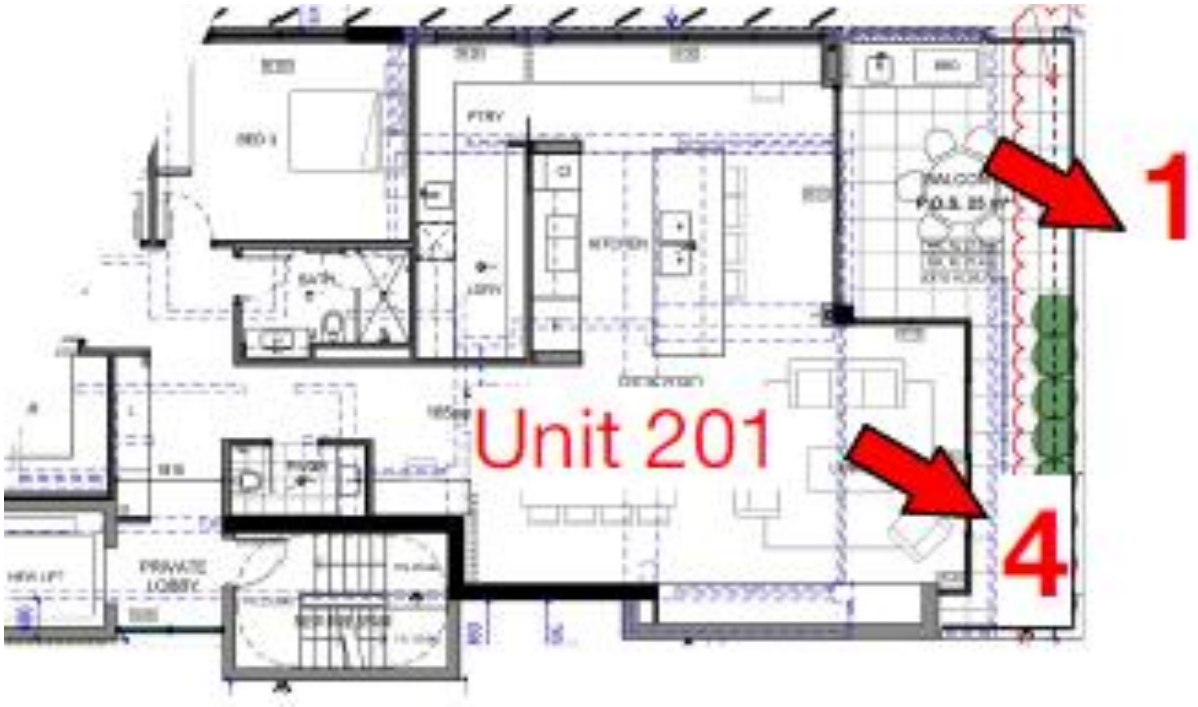

Figure 11 – Photo Locations 201/182 Kurraba Road

The panorama of views from 201, 182 Kurraba Road is illustrated below (Photo 1 location):

Figure 12 – Panorama 201, 182 Kurraba Road (Balcony north) – Location 1

The photomontage on a photo at 35mm focal length over the subject site/proposal is depicted below from Location 1 of 201, 182 Kurraba Road:

Figure 13 – Montage of proposal at 35mm focal length 201, 182 Kurraba Road – Location 1

The photomontage on a photo at 35mm focal length over the subject site/proposal is depicted below from Location 4 of 201, 182 Kurraba Road:

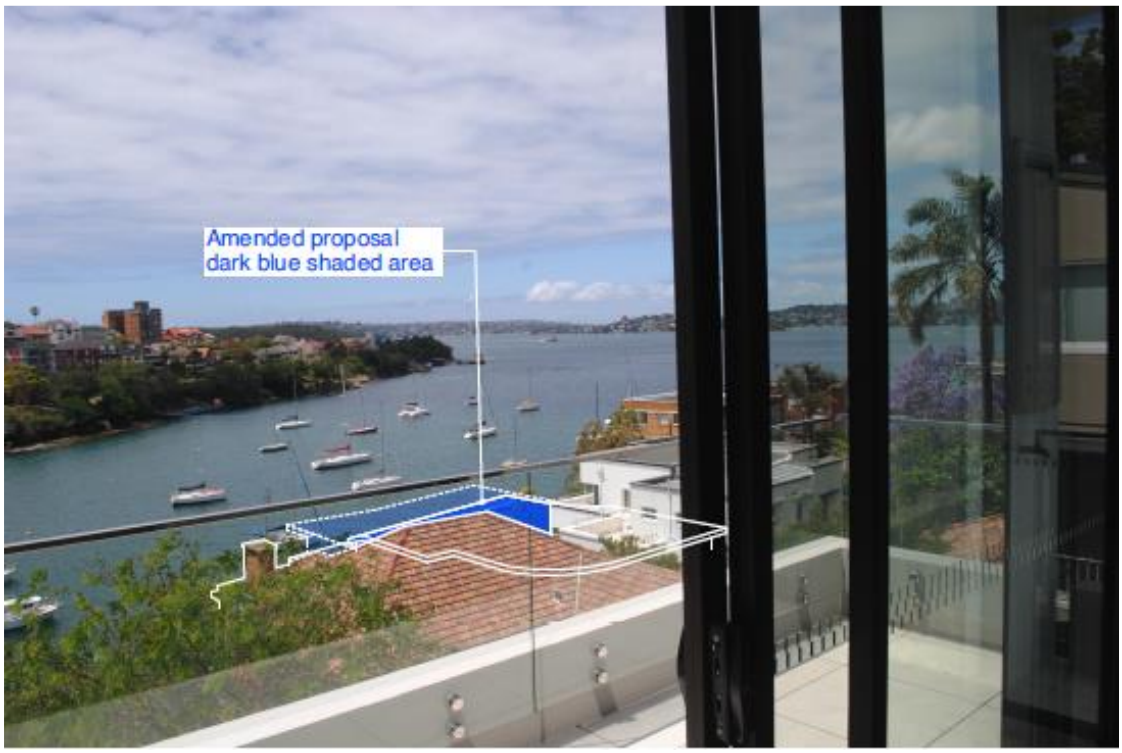

Figure 14 – Montage of proposal at 35mm focal length 201, 182 Kurraba Road – Location 4

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Considering the principles within Tenacity, as can be seen and adduced:

- The view impacts at locations 1 and 4 are very similar;
- The views affected are more downwards, given the relative height between the properties;
- The view impacts are across a side boundary;
- There is a wide arc of existing views available from the south-east to the north-east, including valued extensive water views, the shores of Cremorne point, the far shores of Rose Bay and Point Piper, water-land interface, land/sky interface, and sky;
- The views are available from within the living areas and from an adjoining balcony;
- There is an extremely small area of water view glimpses that will be affected by the proposal;
- Otherwise, areas of water views, views to the far side of the Harbour from Rose Bay to Point Piper, the shores of Cremorne Point, water-land interface, land/sky interface and sky will not be affected by the proposal;
- The impact can reasonably be described as negligible, both in qualitative and quantitative terms;
- The proposal can be considered reasonable, given the degree of impact on views, and the totality of views that remain available.

176 Kurraba Road, Kurraba Point

This is a two-storey dwelling located to the north-west of the subject site, on higher ground and immediately to the north of No. 182 Kurraba Road. The property is listed as a heritage item in North Sydney LEP 2013.

Living, dining and kitchen rooms are on the ground floor, with adjoining rectangular balcony, with a backyard below and bedrooms above.

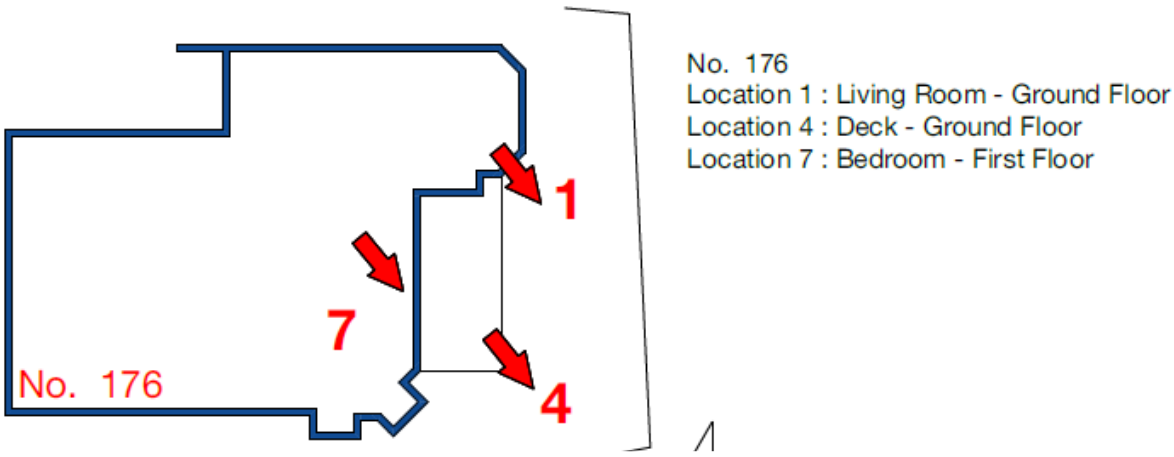

Figure 15 – Photo Locations 176 Kurraba Road

The panorama of views from 176 Kurraba Road is illustrated below (photo 4 location):

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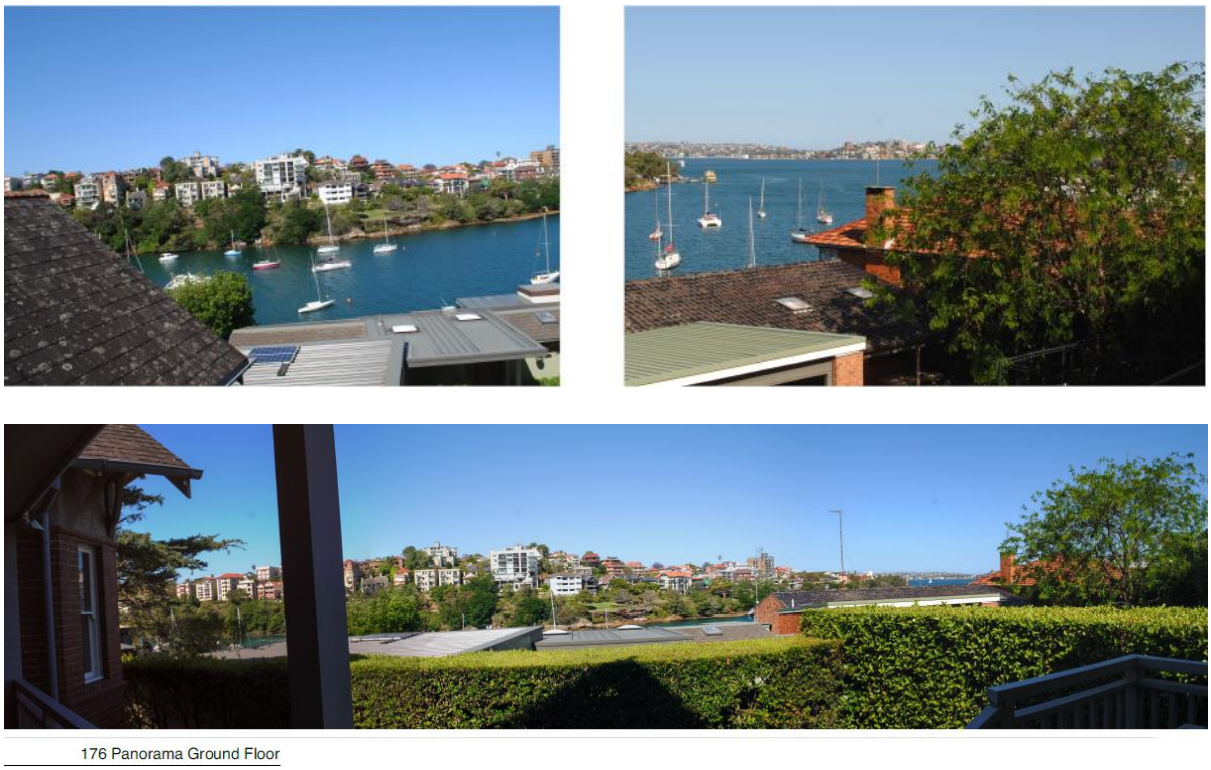

Figure 16 – Panorama 176 Kurraba Road – First Floor (top) and Ground Floor

The photomontage on a photo at 35mm focal length over the subject site/proposal is depicted below from Location 1 of 176 Kurraba Road (ground floor):

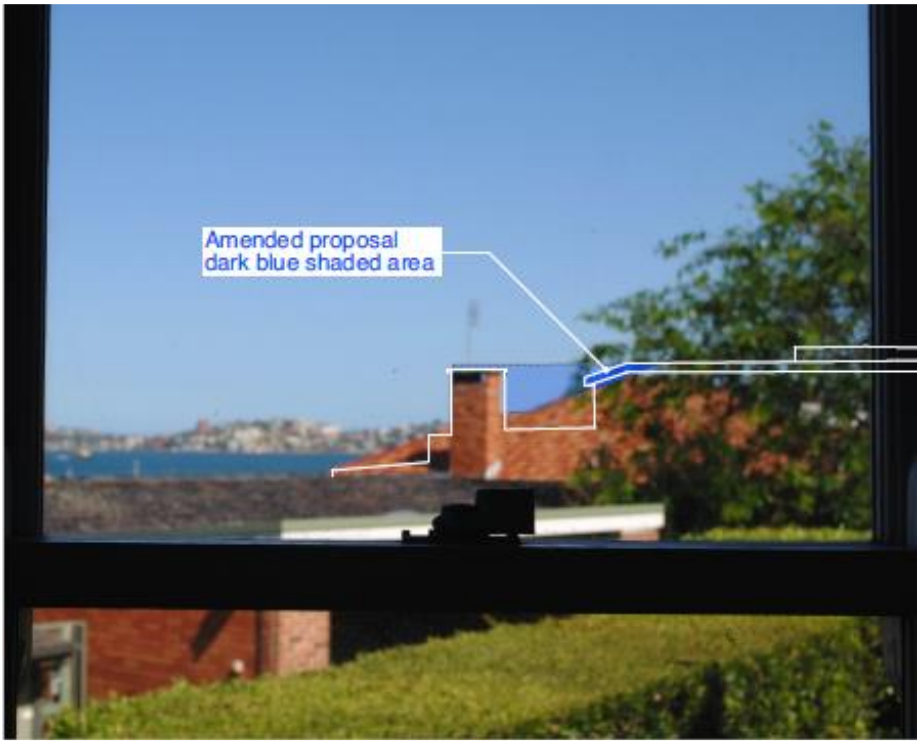

Figure 17 – Montage of proposal at 35mm focal length 176 Kurraba Road – Location 1

The photomontage on a photo at 35mm focal length over the subject site/proposal is depicted below from Location 4 of 176 Kurraba Road (ground floor):

Figure 18 – Montage of proposal at 35mm focal length, 176 Kurraba Road – Location 4

The photomontage on a photo at 35mm focal length over the subject site/proposal is depicted below from Location 7 of 176 Kurraba Road (first floor):

Figure 19 – Montage of proposal at 35mm focal length, 176 Kurraba Road – Location 7

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Photo 3 – 176 Kurraba Road view east from First Floor bedroom (unaffected)

Considering the principles within Tenacity, as can be seen and adduced:

- The "view" impact to the ground floor levels is negligible: indeed they are not view impacts but outlook impacts, being very minor impacts to a small portion of sky, through a tree. Importantly, this also relates to an area of the roof that fully complies with the height control;
- The view impacts to the first floor are off a bedroom, across a side boundary, behind a tree and either non-existent or negligible;
- There is a wide arc of existing views available from the south-east to the north-east, including valued water views, the shores of Cremorne point, shores of Rose Bay and Point Piper, water-land interface, land/sky interface, and sky;
- The existing outlook from the living areas and from an adjoining balcony are largely unaffected;
- The proposal can be considered reasonable, given the negligible degree of impact on views, and the totality of views that remain available.

186 Kurraba Road, Kurraba Point

Access was not able to be gained to No. 186 Kurraba Road. As outlined in the SEE and from interpolation rather than direct observation from that site:

- There is an existing dwelling at No. 186 Kurraba Road. The proposed DA for that site and adjoining sites has not been assessed in any detail as approval is not certain, and in any event the closest proposed dwelling to the subject site appears to concentrate

outlook more to the east and south-east (as would be expected given the views) than the existing building, with screening to windows and opening directed towards the subject site.

- The adjoining dwelling does have windows and rooms that are oriented both to the east and to the north (the latter towards the subject site), as shown below.

Photo 4 – 186 Kurraba Rd from No. 184

- Those side windows, where they exist, are within rooms that have primary outlook to the east through windows in the same room(s) (apart from balconies), such that it is expected that the lateral views over the subject site, where affected, should be considered in the context of other available unaffected views, and in the context of being across a side boundary, wherein views are much harder to protect (as recognised in "Tenacity").
- It is expected the most valuable views will be retained and the view impacts from the proposal will be very minor to minor in the context of all views available and remaining to the adjoining dwelling at No. 186 Kurraba Road.
- It is very clear, and important, that any view impacts upon No. 186 Kurraba Road arise from a height and FBL-compliant form, and could/should be reasonably anticipated from development at the subject site. View impacts do not arise from the height non-compliance.

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View Impacts from Kurraba Road

In terms of view impacts from the footpath to the Harbour, there is a very limited location where views are obtained, which is also limited to a driveway rather than a footpath. This impact has been modelled, as below in Figure 20, and shows a negligible impact.

The view impact shown is from height-compliant form, as the foreground roof element is compliant with the building height. An alternative compliant form which could be erected on or at the end of the driveway, including fencing, would produce a similar or likely greater impact. Also, the landscaping in the foreground will produce a similar effect, over time.

Figure 20 – View from driveway to 184 Kurraba Road and montage

Any impact upon views from non-compliant height from Kurraba Road can properly be described as non-existent or negligible.

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Arboricultural Impact Assessment

TREEISM
Arboricultural Services

Prepared For
Thjomas and MaryAnn Bergi
184 Kurraba Road
KURRABA POINT NSW 2089

SITE ADDRESS
184 KURRABA ROAD
KURRABA POINT NSW 2089

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JULY 2023

Document Set ID: 9690101
Version: 1, Version Date: 16/08/2023

Contents

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1 Introduction

1.1 Brief

1.1.1 This Arboricultural Impact Assessment (AIA) was prepared by Chantalle Hughes of Treeism Arboricultural Services. This report was commissioned by Thomas Beregi, owner of the subject site. The Site is identified as Lot 1 of DP581841 and Lot 3 of DP508566 and is known as 184 Kurraba Road, Kurraba Point, New South Wales.

1.1.2 The purpose of this report is to identify the species of each assessed tree, assess their vigour, condition, landscape prominence and ascribe a Retention Value to each tree.

1.1.3 This report identifies the potential impacts the proposal will have on the retention or long-term viability of each tree and aims to provide guidelines for tree protection and maintenance during development.

1.2 Context

1.2.1 Acknowledgement of the original inhabitants of the Northern Sydney area is complex. The Aboriginal Heritage Office (AHO) states…' Clan names which can be found on most maps for the northern Sydney region of the AHO partner Councils are the following: Gayamaygal, Gamaragal, Garigal, Darramurragal and many more'…..exact clan name knowledge has been lost, or at the very least is hard to find, as traditional inhabitants of Australia were told to 'give up their language, stop practicing ceremony and hide their Aboriginality'.

1.2.2 The Department of Planning, Industry and Environment 'Espade' states the site geology as 'Hawkesbury Sandstone consisting of medium to coarse-grained quartz sandstone with minor shale and laminite lenses. Sandstones are either massive or cross-bedded sheet facies with vertical or subvertical joint sets. The combination of bedding planes and widely spaced joints gives sandstone outcrops a distinctive blocky appearance.'

1.2.3 Details of vegetation as per Espade states 'Mostly uncleared open-woodland (dry sclerophyll) with pockets of tall open-forest (wet sclerophyll) and closed-forest (rainforest). On exposed crests and ridges there is usually a low open-woodland containing *Eucalyptus* (sic) *gummifera, E. oblonga, E. haemostoma, E. capitellata* and *Banksia serrata*. On the more sheltered sideslopes, a dry sclerophyll open-forest containing *E. sieberi, E. piperita, Angophora costata* and *Allocasuarina littoralis* predominate. The understorey is dominated by shrub species of the families Epacridaceae, Myrtaceae, Fabaceae and Proteaceae. Within sheltered gullies, wet sclerophyll closed-forests of *Eucalyptus pilularis, E. saligna, Tristania* (sic) *laurina* and occasionally *Ceratopetalum apetalum* occur. *Callicoma serratifolia, Backhousia myrtifolia* and *Pteridium esculentum* form a closed scrubby understorey. Many sheltered valley floors are overrun with weeds (garden escapes washed in with sediment). Weed species include *Ligustrum* spp., *Lantana camara, Ipomoea indica* and *Tradescantia albiflora*.

1.3 Methodology

1.3.1 In preparation for this report, ground level, visual tree assessments[1] or limited VTA (e.g. where access was limited), of twelve (12) trees was completed by Chantalle Hughes of Treeism Arboricultural Services on 26th April 2023. Inspection details of these trees are provided in Appendix 3 — Schedule of Assessed Trees.

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1.3.2 The tree heights were visually estimated or measured using a Nikon ForestryPro, unless otherwise noted in Appendix 3, the trunk Diameter at Breast Height were measured at 1.4 metres above ground level (DBH) using a diameter tape unless indicated otherwise. Tree canopy spreads were stepped out with field observations written down, and photographs of the site and trees were taken using an iPhone 13.

1.3.3 The Structural Root Zone (SRZ) and the Tree Protection Zone (TPZ) of each tree is calculated using the formula provided within the Australian Standard 4970-2009 Protection of trees on development sites (AS4970).

1.3.4 Retention Values were ascribed utilising the STARS methodology.

1.3.5 Tree data and field observations were entered into a data dictionary on a Trimble TDC600. Data was managed through Terraflex Trimble Connect.

1.4 Plans and Documents Referenced

1.4.1 Architectural Plans, Project no. 2205, Drawing no's. 2205.7.1 to 2205.7.9 & 2205.6.6, dated 7 July 2023, authored by Antonio Caminiti Architect.

1.4.2 Survey Plan, Reference no. 4523/21, dated 25 November 2021, authored by ESA Survey Consultants Pty Ltd.

1.4.3 AS4970-2009 Protection of trees on development sites, Standards Australia.

1.4.4 AS4373-2007 Pruning of amenity trees, Standards Australia.

1.4.5 This AIA takes account Chapter 2 Vegetation in Non-Rural Areas of the State Environmental Planning Policy (Biodiversity and Conservation) 2021 'The SEPP' and Part B, Section 16 Tree and Vegetation Management, North Sydney Development Control Plan 2013 (NSDCP).

1.5 Limitations

1.5.1 Care has been taken to obtain all information from reliable sources. All data has been verified as far as possible; however, I can neither guarantee nor be responsible for the accuracy of information provided by others.

1.5.2 This report is not intended to be a comprehensive tree risk assessment; however, the report may make recommendations, where appropriate, for further assessment, treatment or testing of trees where potential structural problems have been identified, or where below ground investigation may be required.

1.5.3 No aerial inspections, root mapping or woody tissue testing were undertaken as part of this tree assessment.

1.5.4 Information contained in this report only reflects the condition of the trees at the time of inspection. Trees are dynamic, living things which can be subject to change without notice in certain circumstances.

1.5.5 No Hydraulic or Landscape Plans were viewed as part of this assessment.

1.5.6 This AIA is not intended as an assessment of any impacts on the trees by any proposed future development of the site.

[1] Visual Tree Assessment (VTA) is a procedure of defect analysis developed by Mattheck and Breloer (1994) that uses the growth response and form of trees to detect defects.

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2 Observations and Discussion

2.1 Assessed Trees

2.1.1 Twelve (12) trees were assessed or identified and are included in this report. Details of these are included in the Schedule of Assessed Trees—Appendix 3.

2.1.2 Tree numbers—of the twelve (12) assessed trees, the following is noted:

- Five (5) trees are prescribed and located within the subject site—Tree 2, 5, 7, 8 & 10.
- Three (3) are non-prescribed/exempt under NSDCP— Tree 1, 3 & 6.
- Four (4) trees are located on neighbouring property—Tree 4, 9, 11 & 12.

2.1.3 Species origin — Of the nine (9) prescribed subject site/neighbouring trees, the following is noted:

- One (1) tree is locally native species —Tree 12.
- One (1) tree is introduced native species —Tree 11.
- Seven (7) are introduced exotic species —Tree 2, 4, 5, 7, 8, 9 & 10.

2.1.4 The nine (9) prescribed trees and their respective Retention Value (RV) are identified in Table 1, below. Note: Refer to Appendix 2 for the methodology used to assess the Retention Value of a tree.

Table 1—Tree ID and RV, where L = Low, M = Medium, H = High, R = proposed removal.

Tree No.	*Genus & species* **Common Name**	RV	Tree No.	*Genus & species* **Common Name**	RV
2	*Murraya paniculata* **Orange Jessamine**	**L**	**9**	*Camellia japonica* **Camellia**	**L**
4	*Gleditsia triacanthos* **Honey Locust**	**M**	**10**	*Dicksonia antarctica* **Soft Tree Fern**	**M**
5	*Acer palmatum* **Japanese Maple**	**M**	**11**	*Melaleuca bracteata* 'Revolution Gold' **Golden Honey Myrtle**	**L**
7	*Lagerstroemia indica* **Crepe Myrtle**	**M**	**12**	*Glochidion ferdinandi* **Cheese Tree**	**H**
8	*Cupressocyparis leylandii* **Leyland Cypress**	**L**			

2.2 Threatened Species

2.2.1 No species of assessed tree is subject to threatened conservation status under Australian and/or State Government legislation (i.e. Chapter 2 of State Environmental Planning (Biodiversity and Conservation) 2021 and the Commonwealth Environment Protection and Biodiversity Conservation Act 1999).

2.2.2 The site is not identified on the Department of Planning and Environments Biodiversity Values Map (BV).

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3 Impact of the Proposed Development

3.1 Prescribed Trees Proposed for Removal

3.1.1 Three (3) prescribed subject site trees are proposed for removal, (it is assumed non-prescribed/exempt trees will be removed to accommodate works):

- **Tree 7 Crepe Myrtle –** This specimen is located too close to the proposed elevated path, the existing retaining wall and stairs within the TPZ are to be demolished (see Figure 2 below/page 8). This specimen could not be safely retained.
- **Tree 8 Leyland Cypress** - This specimen is located too close to the proposed elevated path, the existing retaining wall and stairs within the TPZ are to be demolished (see Figure 2 below/page 8). Again, this specimen could not be safely retained.
- **Tree 10 Soft Tree Fern -** This specimen is located within the footprint of the proposed lift and stairway within the main residential dwelling and could not be safely retained. Transplanting of this species is an option should the owners wish to relocate it elsewhere within the site.

3.2 Potential Impacts on Trees Proposed for Retention

3.2.1 Under the Australian Standard 4970-2009 Protection of trees on development sites (AS4970), encroachments less than 10% of the Tree Protection Zone (TPZ) are considered to be minor. No specifications are provided in AS4970 for potential impacts of 10% or greater. This 10% is interpreted as the threshold figure, if the proposed encroachment is greater than 10% of the TPZ or inside the SRZ, the project arborist must demonstrate that the tree(s) would remain viable.

3.2.2 When determining the potential impacts of encroachment into the TPZ, the project arborist should consider the following items listed under Clause 3.3.4 of AS4970-2009:

(a) Location and distribution of the roots to be determined through non-destructive investigation methods (pneumatic, hydraulic, hand digging or ground penetrating radar). Photographs should be taken, and a root zone map prepared.

(b) The potential loss of root mass resulting from the encroachment: number and size of roots.

(c) Tree species and tolerance to root disturbance.

(d) Age, vigour and size of the tree.

(e) Lean and stability of the tree. NOTE: Roots on the tension side are likely to be most important for supporting the tree and are likely to extend for a greater distance.

(f) Soil characteristics and volume, topography and drainage.

(g) The presence of existing or past structures or obstacles affecting root growth.

(h) Design factors.

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3.2.3 Disturbance within the Structural Root Zone (SRZ), and extent of encroachments into the TPZ's of prescribed trees to be retained are summarised in Table 2 below.

Table 2: Estimated encroachments of permanent structures into the SRZ and TPZ of trees proposed for retention. Note 1: These figures are based on the SRZ and TPZ's offsets of the trees as calculated under AS4970 and do not necessarily reflect the actual root zones of the trees. Existing at or below ground structures, site topography and soil hydrology will influence the presence, spread and direction of tree root growth.

Tree No.	Tree	Tree located on site	SRZ affected	TPZ area (m^2)	TPZ encroachment (approx. m^2)	TPZ encroachment (approx. %)
2	Orange Jessamine	✓	**x**	13	0	0
4	Honey Locust	**x**	**x**	34	0	0
5	Japanese Maple	✓	**x**	28	0	0
9	Camellia	✓	**x**	28	0	0
11	Golden Honey Myrtle	**x**	**x**	13	0	0
12	Cheese Tree	**x**	**x**	25	0	0

3.2.4 **Tree 2** Orange Jessamine – located on subject site.

Structural Root Zone impacts:

- Only removal of existing pathways and re-landscaping is to occur within the SRZ of this specimen.

Tree Protection Zone impacts:

- No new works are proposed within the TPZ of this specimen, removal of pathways and re-landscaping are the only proposed works (see Figure 1 below/next page).
- Care when landscaping to ensure an increase of soil levels does not exceed 100mm within the calculated TPZ. Existing retaining walls appear to be proposed for retention.

Pruning impacts:

- No pruning is foreseen to accommodate works.

3.2.5 **Tree 4** Honey Locust - located on neighbouring property.

Structural Root Zone impacts:

- Only removal of existing pathways and re-landscaping is to occur within the SRZ of this neighbouring tree.

Tree Protection Zone impacts:

- No new works are proposed within the TPZ of this specimen, removal of pathways and re-landscaping are the only proposed works (see Figure 1 below/next page).
- Again, care when landscaping to ensure an increase of soil levels does not exceed 100mm within the calculated TPZ of this specimen.
- Existing retaining walls appear to be proposed for retention.

Pruning impacts:

- No pruning is foreseen to accommodate works, the canopy does not extend over the subject site.

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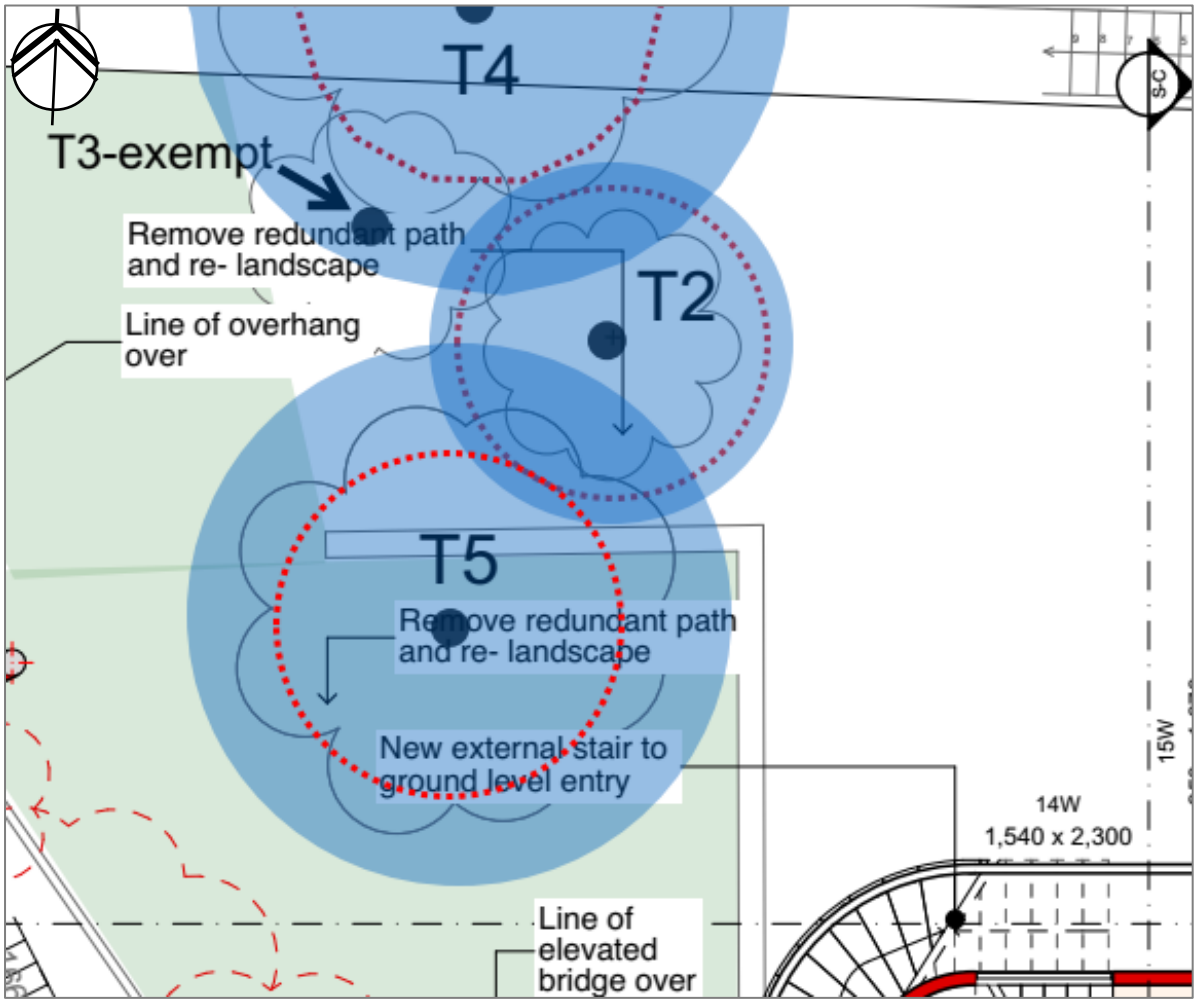

Figure 1 – Tree 2, (3), 4 and 5 – Mark up of Proposed- First Floor Plan, dwg no. 2205.7.6, 7/7/23 authored by Antonio Caminiti Architect. Red dotted circle notes SRZ, blue shaded circle TPZ. Marked up by Treeism. NOT TO SCALE.

3.2.6 **Tree 5** Japanese Maple - located on subject site.

Structural Root Zone impacts:

- Only removal of an existing pathway and re-landscaping is to occur within the SRZ of this tree.

Tree Protection Zone impacts:

- No new works are proposed within the TPZ of this specimen, removal of the pathway and re-landscaping are the only proposed works (see Figure 1 above).
- Care when landscaping to ensure an increase of soil levels does not exceed 100mm within the calculated TPZ of this specimen.
- Importantly, the existing retaining wall to the north and west of this tree is to be retained (see Figure 1 above).

Pruning impacts:

- No pruning is foreseen to accommodate works.

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3.2.7 **Tree 9** Camellia - located on neighbouring property.

Structural Root Zone impacts:

- The existing retaining wall to the east of this tree within the SRZ of this specimen is to be retained (see Figure 2 below).

Tree Protection Zone impacts:

- The existing retaining wall to the east of the stem, within the TPZ of this neighbouring tree, is to be retained. No root ingress has been able to breach this wall (see Plate 7 Appendix 5), thus any works within the subject site will not impact this tree.

Pruning impacts:

- No pruning is required to accommodate the proposed works.

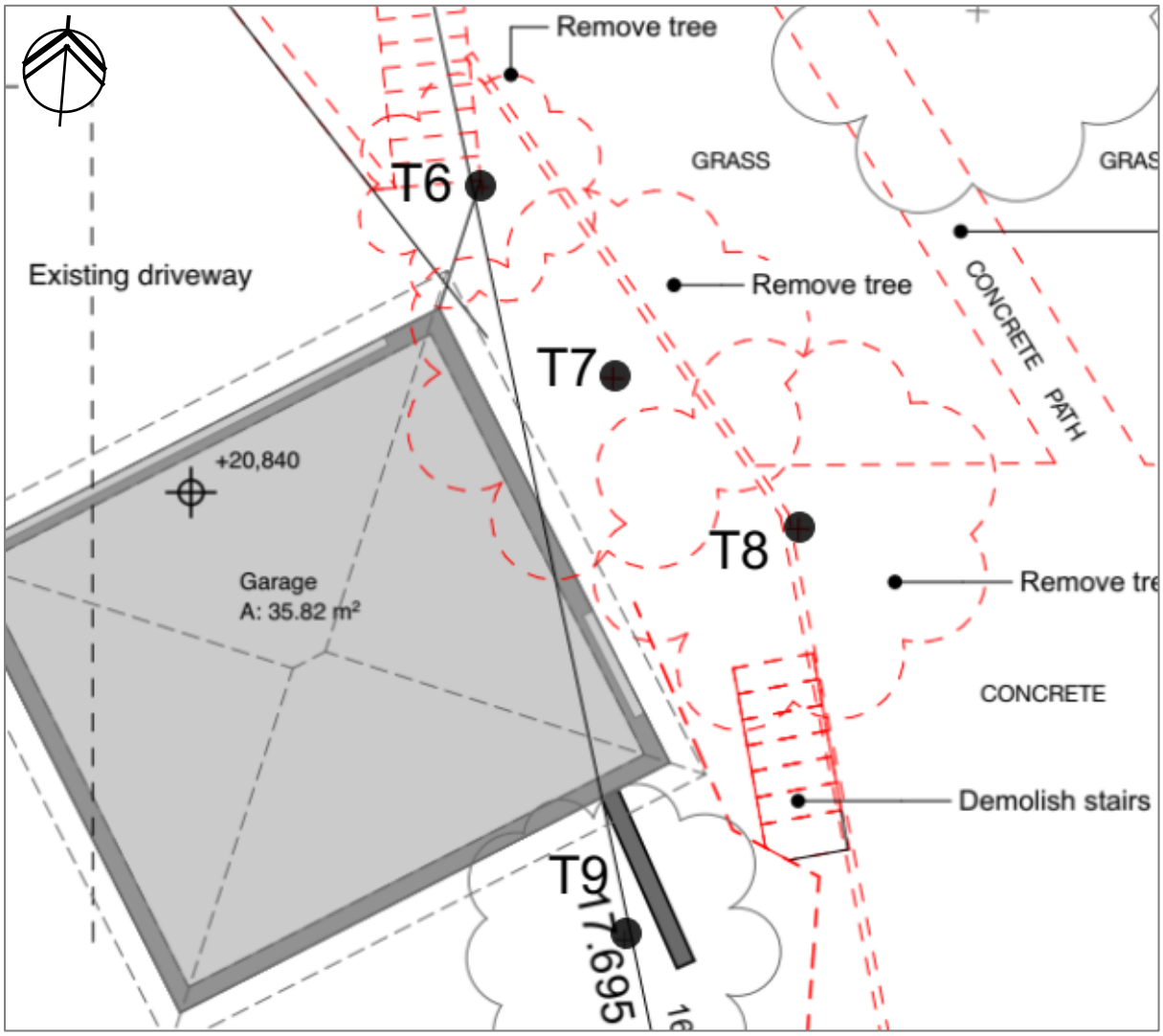

Figure 2 – Tree 9 Incursion – Mark up of Demolition – Garage Level Plan, dwg no. 2205.6.6, 7/7/23 authored by Antonio Caminiti Architect. Note retaining wall beside Tree 9 to be retained and protected. Tree numbering marked up by Treeism. NOT TO SCALE.

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3.2.8 **Tree 11** Golden Honey Myrtle - located on neighbouring property.

Structural Root Zone impacts:

- All works fall outside the SRZ of this specimen.

Tree Protection Zone impacts:

- All works fall outside the calculated TPZ.

Pruning impacts:

- No pruning is foreseen to be required to accommodate the works.

3.2.9 **Tree 12** Cheese Tree - located on neighbouring property.

Structural Root Zone impacts:

- All works fall outside the SRZ of this specimen.

Tree Protection Zone impacts:

- All works fall outside the calculated TPZ.

Pruning impacts:

- No pruning is foreseen to be required to accommodate the works.

4 Conclusions

4.1.1 A total of twelve trees (12) are included in this Arboricultural Impact Assessment.

4.1.2 No assessed tree has been identified as endangered or threatened under State or Federal Government legislation.

4.1.3 Three (3) assessed trees (Trees 1, 3 & 6) are exempt/non- prescribed under the North Sydney Development Control Plan (NSDCP) and can be removed irrespective of the development proposed onsite.

4.1.4 Three (3) trees (Tree 7, 8 and 10) would require removal to accommodate the proposal, Tree 7 and 8 are non-native and Tree 8 has ascribed a low RV, whilst Tree 7 and 10 have been ascribed medium RV.

4.1.5 Six (6) trees (Tree 2, 4, 5, 9, 11 and 12) will incur no encroachment into the calculated TPZ, impacts to tree health and condition are not foreseen.

4.1.6 Provided the recommendations of this report are adhered to (aka proposed Landscaping does not raise soil levels or build structures in SRZ/TPZ), all trees proposed for retention shall remain viable.

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5 Recommendations

5.1 Trees Proposed for removal

5.1.1 Tree removal is to be undertaken in accordance with the NSW WorkCover Code of Practice for the Amenity Tree Industry (1998) and Safe Work Guide to Managing Risks of Tree Trimming and Removal Work 2016.

5.1.2 Tree pruning shall be in accordance with the Work Health and Safety Act 2011 and the Work Health and Safety (WHS) Regulations 2017.

5.1.3 Tree removal is subject to permit from the relevant consent authority.

5.2 Project Arboriculturist

5.2.1 A Project Arboriculturist (PA) could be engaged prior to works commencing on the site to ensure tree protection during demolition works.

5.2.2 A specific Tree Protection Plan, once Councils Conditions of Consent are issued, shall be established to ensure compliance with the relevant Notice of Determination.

5.2.3 The PA must have a minimum Australian Qualification Framework Level 5 (AQF5) or above in Arboriculture.

5.2.4 Duties of the PA shall include, but not be limited to:

- Liaising with the Project Manager/Head Contractor/Site Manager to confirm the tree protection and other specific tree protection requirements prior to site works commencing.
- Inspection of Tree Protection Devices and supervision of works as recommended in this report or as specified in any Conditions of Consent associated with an approved development application.
- Provision of Compliance Certification if, and when required.

5.3 General arboricultural advice

5.3.1 Tree and Root Pruning

- Any pruning required is to be assessed and approved by the Council/PA, prior to undertaking any of this type of work.
- Pruning shall not be undertaken by unqualified site personnel at any time.
- Pruning of branches must be undertaken by a minimum AQF Level 3 arborist in accordance with the Australian Standard AS4373-2007 *Pruning of amenity trees*,
- Unless otherwise approved by the Conditions of Development Consent, or by separate application and approval by the consent authority, pruning is to be limited to cutting of limbs less than 80mm diameters, and no more than 10% total live material removed.

5.3.2 Stockpiling and location of site sheds

- The project arboriculturist must be consulted prior to placing any items within a tree's TPZ.
- Where stockpiling must be located within the TPZ offset of trees to be retained, the existing/undisturbed natural ground must be covered with thick, coarse mulch to a minimum 75-100mm thickness.
- Large, or bulky materials (non-contaminating) can be stacked on wooden pallets or boards placed over the mulch.

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- Tarpaulins (or similar) placed on boards or pallets on top of mulch shall be used to prevent loose or potentially contaminating materials from moving into the soil profile within the TPZ of trees or within 10m upslope of trees.
- Where site sheds must be located within the TPZ offset of a tree/s, the shed must be fully elevated on all sides with a minimum 300m between existing ground and the floor/floor bearers. Isolated pad footings must be carefully dug by hand and not damage or sever any roots greater than 20mm diameters.
- Any conflict between footing locations and larger roots (i.e. 20mm Ø plus) must be brought to the attention of the project arboriculturist who is to provide practical alternatives that do not include unnecessary tree root removal.

5.3.3 Fill Material

- Placement of fill material within the TPZ of trees to be retained should be avoided where possible. Where placement of fill cannot be avoided, the material should be a coarse, gap graded material such as 20 — 50mm crushed basalt or equivalent to provide some aeration to the root zone. Note that roadbase or crushed sandstone or other material containing a high percentage of fines is unacceptable for this purpose.
- The fill material should be consolidated with a non-vibrating roller to minimise compaction of the underlying soil.
- Permeable geotextile may be used beneath the sub-base to prevent migration of the stone into the sub-grade. No fill material shall be placed in direct contact with the trunk.

5.3.4 Pavements

- Pavements should be avoided within the TPZ of trees to be retained where possible.
- Proposed paved areas within the TPZ of trees to be retained is to be placed above grade to minimise excavations within the root zone, avoiding root severance and damage.

5.3.5 Fencing and walls within the SRZ and TPZ of retained trees.

- Where fencing and/or masonry walls are to be constructed along site boundaries, they must provide for the presence of any living woody tree roots greater than 50mm diameter.
- Hand digging must occur within the SRZ of trees to be retained.
- For masonry walls/fences it may be acceptable to delete continuous concrete strip footings and replace with suspended in-fill panels (e.g. steel or timber pickets, lattice etc) fixed to pillars.

5.3.6 Landscaping within tree root zones.

- The level of introduced planting media into any proposed landscaped areas within the TPZ is not to be greater than 75mm depth, and be of a coarse, sandy material to avoid development of soil layers that may impede water infiltration.
- Appropriate container size of proposed plants within the SRZ of trees should be determined prior to purchase of plants. Otherwise, any proposed landscaping within the SRZ must consist of tubestock only. This is required to ensure that damage to tree roots is avoided.
- Mattocks and similar digging instruments must not be used within the TPZ of the trees. Planting holes should be dug carefully by hand with a garden trowel, or similar small tool.
- Where possible, do not plant canopy trees beneath, or within 6 - 8m of overhead lines.

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5.3.7 Other

- No washing or rinsing of tools or other equipment, preparation of any mortars, cement mixing, or brick cutting is to occur within 8m upslope of any palms or trees to be retained.
- Regular monitoring of the trees during development works for unforeseen changes or decline will help maintain the trees in a healthy state.

6 References

6.1.1 Barrell, J (1995) Pre-development Tree Assessment from Trees and Building Sites, Eds. Watson & Neely, International Society of Arboriculture, Illinois.

Hadlington, P. & Johnston, J. (1988) Australian Trees: Their Care & Repair. University of NSW Press, Kensington.

Mattheck, C. & Breloer, H. (1994) The Body Language of Trees: A handbook for failure analysis. Research for Amenity Trees No. 4, The Stationery Office, London.

Standards Australia AS4373-2007: Pruning of Amenity Trees, Standards Australia, Sydney.

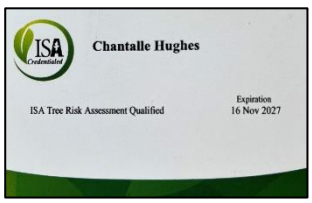
Standards Australia AS4970-2009 Protection of trees on development sites, Standards Australia, Sydney.

www.treetec.net.au/tpz_srz_dbh_calculator - accessed 3/5/2023.

7 Acknowledgements

7.1.1 Credit to Urban Forestry Australia Pty Ltd for some areas of text.

Report prepared by Chantalle Hughes – May-July 2023



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8 Appendices

Appendix 1 – Terms and Definitions

Age classes

Y Young refers to an established but juvenile tree.
SM Semi-mature refers to a tree at growth stages between immaturity and full size.
EM Early-mature refers to a tree close to full sized still actively growing.
M Mature refers to a full sized tree with some capacity for further growth.
LM Late-Mature refers to a full sized tree with little capacity for growth that is not yet about to enter decline.
OM Over-Mature refers to a full sized tree with little capacity for growth that is entering or has entered decline.

Co-dominant: refers to stems or branches equal in size and relative importance.

Condition/Structure: refers to the tree's form and growth habit, as modified by its environment (aspect, suppression by other trees, soils) and the state of the scaffold (i.e. trunk and major branches), including structural defects such as cavities, crooked trunks or weak trunk/branch junctions. These are not directly connected with health and it is possible for a tree to be healthy but in poor condition/structure.

Deadwood: refers to any whole limb that no longer contains living tissues (e.g. live leaves and/or bark). Some dead wood is common in a number of tree species.

Diameter at Breast Height (DBH): Refers to the tree trunk diameter at breast height (1.4 metres above ground level).

Epicormic growth: adventitious branches that are considered to be a weak attachment in the short term due to minimal wood formation. There are generally formed following storm-related branch breakage or poor pruning practices. Should sufficient holding wood form in the long-term this growth is less of an issue.

Hazard: refers to anything with the potential to harm health, life or property.

Health: Refers to the tree's vigour as exhibited by the crown density, leaf colour, presence of epicormic shoots, ability to withstand disease invasion, and the degree of dieback.

Secondary Stem: refers to stems or branches with one of unequal size and relative importance.

SRZ: refers to the Structural Root Zone of the tree, this is the area required for tree stability.

TPZ: refers to the Tree Protection Zone of the tree, this is the primary method of protecting trees, it is a combination of the root area and the canopy and the SRZ is located within it.

Visual Tree Assessment (VTA): a procedure of defect analysis developed by Mattheck and Breloer (1994) that uses the growth response and form of trees to detect defects.

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Appendix 2 – STARS – Significance of a Tree Assessment Rating System (IACA 2010)©

Estimated Life Expectancy

STARS refers to an estimated life expectancy of a tree, Treeism utilises the ULE categories to clarify how this was obtained/decided.

ULE categories (after Barrell 1996, Updated 01/04/01)

The five categories and their sub-groups are as follows:

1. Long ULE - tree appeared retainable at the time of assessment for over 40 years with an acceptable degree of risk, assuming reasonable maintenance:
    a) Structurally sound trees located in positions that can accommodate future growth
    b) Trees which could be made suitable for long term retention by remedial care
    c) Trees of special significance which would warrant extraordinary efforts to secure their long term retention

2. Medium ULE - tree appeared to be retainable at the time of assessment for 15 to 40 years with an acceptable degree of risk, assuming reasonable maintenance:
    a) Trees which may only live from 15 to 40 years
    b) Trees which may live for more than 40 years but would be removed for safety or nuisance reasons
    c) Trees which may live for more than 40 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting
    d) Trees which could be made suitable for retention in the medium term by remedial care

3. Short ULE - tree appeared to be retainable at the time of assessment for 5 to 15 years with an acceptable degree of risk, assuming reasonable maintenance:
    a) Trees which may only live from 5 to 15 years
    b) Trees which may live for more than 15 years but would be removed for safety or nuisance reasons
    c) Trees which may live for more than 15 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting
    d) Trees which require substantial remediation and are only suitable for retention in the short term.

4. Removal - trees which should be removed within the next 5 years:
    a) Dead, dying, suppressed or declining trees because of disease or inhospitable conditions
    b) dangerous trees through instability or recent loss of adjacent trees
    c) Dangerous trees because of structural defects including cavities, decay, included bark, wounds or poor form
    d) Damaged trees that are clearly not safe to retain
    e) Trees which may live for more than 5 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting
    f) Trees which are damaging or may cause damage to existing structures within the next 5 years
    g) Trees that will become dangerous after removal of other trees for the reasons given in (a) to (f)
    h) Trees in categories (a) to (g) that have a high wildlife habitat value and, with appropriate treatment, could be retained subject to regular review

5. Small, young or regularly pruned - Trees that can be reliably moved or replaced:
    a) small trees less than 5m in height
    b) young trees less than 15 years old but over 5m in height
    c) formal hedges and trees intended for regular pruning to artificially control growth

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Landscape Significance

The landscape significance of a tree is an essential criterion for establishing the importance that a particular tree may have on a site. However, rating the significance of a tree becomes subjective and difficult to ascertain in a consistent and repetitive fashion due to assessor bias. It is therefore necessary to have a rating system utilising structured qualitative criteria to assist in determining the retention value for a tree.
This rating system will assist in the planning processes for proposed works, above and below ground where trees are to be retained on or adjacent a development site. The system uses a scale of *High*, *Medium* and *Low* significance in the landscape. Once the landscape significance and estimated life expectancy *(utilising Useful Life Expectancy)* of an individual tree has been defined, the retention value can be determined.

Tree Significance - Assessment Criteria

1. High Significance in landscape.

- The tree is in good condition and good vigour;
- The tree has a form typical for the species;
- The tree is a remnant or is a planted locally indigenous specimen and/or is rare or uncommon in the local area or of botanical interest or of substantial age;
- The tree is listed as a Heritage Item, Threatened Species or part of an Endangered ecological community or listed on Councils significant Tree Register;
- The tree is visually prominent and visible from a considerable distance when viewed from most directions within the landscape due to its size and scale and makes a positive contribution to the local amenity;
- The tree supports social and cultural sentiments or spiritual associations, reflected by the broader population or community group or has commemorative values;
- The tree's growth is unrestricted by above and below ground influences, supporting its ability to reach dimensions typical for the taxa *in situ* - tree is appropriate to the site conditions.

2. Medium Significance in landscape.

- The tree is in fair-good condition and good or low vigour;
- The tree has form typical or atypical of the species;
- The tree is a planted locally indigenous or a common species with its taxa commonly planted in the local area;
- The tree is visible from surrounding properties, although not visually prominent as partially obstructed by other vegetation or buildings when viewed from the street;
- The tree provides a fair contribution to the visual character and amenity of the local area;
- The tree's growth is moderately restricted by above or below ground influences, reducing its ability to reach dimensions typical for the taxa *in situ*.

3. Low Significance in landscape.

- The tree is in fair-poor condition and good or low vigour;
- The tree has form atypical of the species;
- The tree is not visible or is partly visible from surrounding properties as obstructed by other vegetation or buildings;
- The tree provides a minor contribution or has a negative impact on the visual character and amenity of the local area;
- The tree is a young specimen which may or may not have reached dimension to be protected by local Tree Preservation orders or similar protection mechanisms and can easily be replaced with a suitable specimen;
- The tree's growth is severely restricted by above or below ground influences, unlikely to reach dimensions typical for the taxa *in situ* - tree is inappropriate to the site conditions;
- The tree is listed as exempt under the provisions of the local Council Tree Preservation Order or similar protection mechanisms;
- The tree has a wound or defect that has potential to become structurally unsound.

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Environmental Pest / Noxious Weed Species:

- The tree is an Environmental Pest Species due to its invasiveness or poisonous/ allergenic properties;
- The tree is a declared noxious weed by legislation.

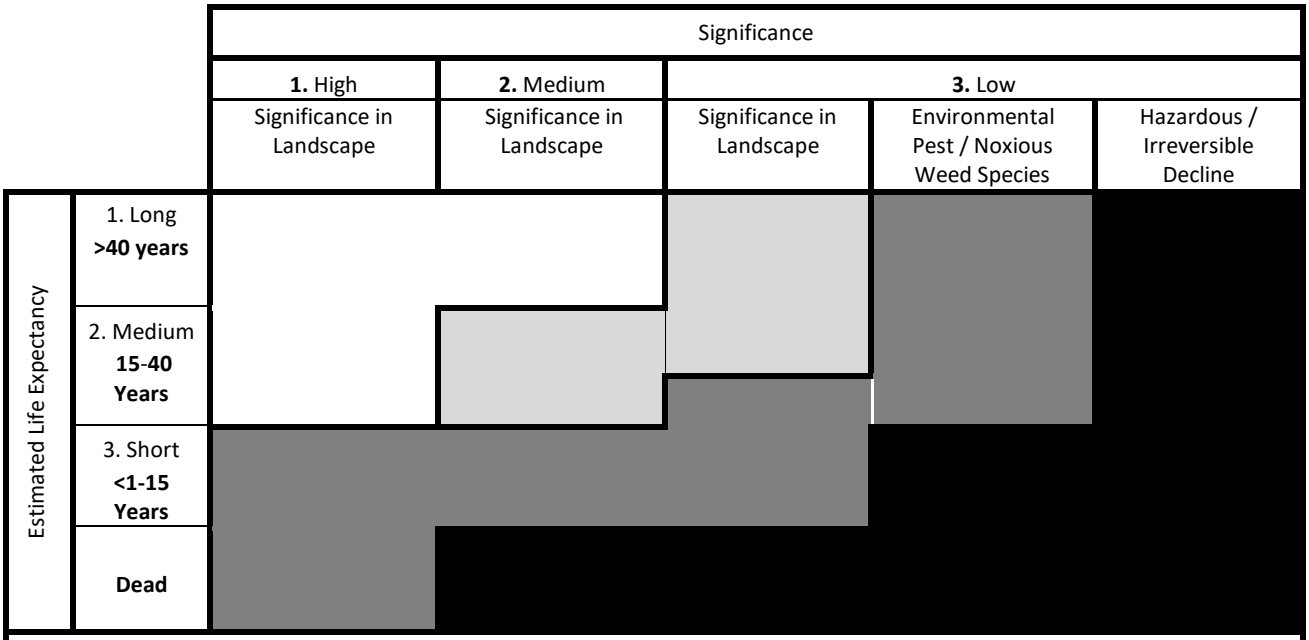
Hazardous/Irreversible Decline:

- The tree is structurally unsound and/or unstable and is considered potentially dangerous;
- The tree is dead, or is in irreversible decline, or has the potential to fail or collapse in full or part in the immediate to short term.

The tree is to have a minimum of three (3) criteria in a category to be classified in that group.

Note: The assessment criteria are designed for individual trees only but can be applied to a monocultural stand in its entirety e.g. hedge.

In the development of this document IACA acknowledges the contribution and original concept of the Footprint Green Tree Significance & Retention Value Matrix, developed by Footprint Green Pty Ltd and Andrew Morton in June 2001.



Legend for Matrix Assessment

	Priority for Retention (High) -These trees are considered important for retention and should be retained and protected. Design modification or re-location of building/s should be considered to accommodate the setbacks as prescribed by the Australian Standard AS4970 *Protection of trees on development sites*. Tree sensitive construction measures must be implemented e.g. pier and beam etc if works are to proceed within the Tree Protection Zone.
	Consider for Retention (Medium) -These trees may be retained and protected. These are considered less critical; however their retention should remain priority with removal considered only if adversely affecting the proposed building/works and all other alternatives have been considered and exhausted.
	Consider for Removal (Low) -These trees are not considered important for retention, nor require special works or design modification to be implemented for their retention.
	Priority for Removal -These trees are considered hazardous, or in irreversible decline, or weeds and should be removed irrespective of development.

Table 1 - Tree Retention Value - Priority Matrix.

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

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Appendix 3 – Schedule of Assessed Trees – Site inspection 26/4/2023, 184 Kurraba Road, Kurraba Point.

Tree No.	*Genus & species* **Common Name**	Ht (m)	Sp (m)	DBH (mm)	AB (mm)	Age	V	C	Comments	ULE	TSR	RV	SRZ (m)	TPZ (m)	TPZ (area)
1	*Bougainvillea glabra* **Bouganvillea**	3.5	12	200/ 80/ 80/ 100	250	-	-	-	Located on subject site. Introduced exotic species. Attached with twine to house, stem **not self-supporting** thus exempt under NSDCP.	5A	L	**L**	-	-	-
2	*Murraya paniculata* **Orange Jessamine**	4	6	60/60/ 40/80 (123)	200	M	G-F	G-F	Located on subject site. Introduced exotic species. Lopped specimen.	5A	L	**L**	1.7	2.0	13
3	*Camellia japonica* **Camellia**	3	3	85/80 (117)	140	-	-	-	Located on subject site. Introduced exotic species. Exempt dimensions under NSDCP.	5A	L	**L**	-	-	-
4	*Gleditsia triacanthos* **Honey Locust**	12	10	*275 @ 1m AGL	*315	M	G	G-F	Located on neighbouring property. Introduced exotic species. Heavily pruned, in raised bed.	2A	M	**M**	2.0	3.3	34
5	*Acer palmatum* **Japanese Maple**	6	8	*250	*275	M	G	G	Located on subject site. Introduced exotic species. Base of stem to 2m covered in Bromeliads limiting assessment. Low and broadly spreading branches.	2A	M	**M**	1.9	3.0	28
6	*Schefflera arboricola* **Hawaiian Elf Schefflera**	3	-	-	-	-	-	-	Located on subject site. Introduced exotic species. Exempt genus under NSDCP.	5A	L	**L**	-	-	-
7	*Lagerstroemia indica* **Crepe Myrtle**	5	14	150/ 100/ 150/ 100/ 100/ 80 (285)	285	M	G	G	Located on subject site. Introduced exotic species. Multiple stems from ground level. Broad canopy2.0.	2A	M	**M**	2.0	3.4	37

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Tree No.	*Genus & species* **Common Name**	Ht (m)	Sp (m)	DBH (mm)	AB (mm)	Age	V	C	Comments	ULE	TSR	RV	SRZ (m)	TPZ (m)	TPZ (area)
8	*Cupressocyparis leylandii* **Leyland Cypress**	4.5	4	170	210	M	F	F-P	Located on subject site. Introduced exotic species. Heavily pruned poorly over clothesline and topped.	5A	L	**L**	1.7	2.0	13
9	*Camellia japonica* **Camellia**	5	6	*250	*300	M	G	G-F	Located on neighbouring property. Introduced exotic species. Limited assessment as no access. Stem behind wall so visual estimate restricted.	2A	L	**L**	2.0	3.0	28
10	*Dicksonia antarctica* **Soft Tree Fern**	3	4	360	450	M	G	G	Located on subject site. Locally native species.	2A	M	**M**	N/A	5.0	80
11	*Melaleuca bracteata* 'Revolution Gold' **Golden Honey Myrtle**	4	5	*100	*125	M	G-F	F-P	Located on neighbouring property. Introduced native species. Lopped, covered in sooty mould, limited assessment.	2D	L	**L**	1.5	2.0	13
12	*Glochidion ferdinandi* **Cheese Tree**	14	16	*200/ 125 (236)	*280	M	G	G	Located on neighbouring property. Locally native species. Limited assessment.	2A	H	**H**	1.9	2.8	25

KEY

Trees to be retained.

Dead/non-prescribed tree or palm on site that may be removed or retained without Development Consent or Tree Management Permit.

Trees proposed for removal.

Trees proposed for relocation.

L Low Retention Value-These trees are not considered important for retention.

M Medium Retention Value-These trees may be retained & protected.

H High Retention Value -These trees are considered important for retention and should be retained and protected.

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* DBH is visually estimated (usually adjoining trees or those that are hard to access). AB – above *buttress roots*. AGL - above ground level.

Figures in brackets indicates the determined DBH and TPZ for a multi-stemmed tree based on the formula shown in Appendix A of AS4970-2009.

NOTE: According to AS4970, the TPZ of palms, other monocots, cycads, and tree ferns should not be less than 1m outside the crown projection. The AS4970 formula for calculating the SRZ of a tree does not apply to palms, other monocots, cycads, and tree ferns.

H refers to the approximate height of a tree in metres, from base of stem to top of tree crown.

Sp refers to the approximate and average spread in metres of branches/canopy (the 'crown') of a tree.

DBH refers to the approximate diameter of tree stem at breast height i.e. 1.4 metres above ground (unless otherwise noted) and expressed in metres. Figures in brackets indicate the minimum TPZ allowable as per Section 3.2 Determining the TPZ with AS4970-2009.

Age refer to Appendix 1 -Terms and Definitions for more detail.

V refers to the tree's vigour (health) Refer to Appendix 1 -Terms and Definitions for more detail.

C refers to the tree's structural condition. Refer to Appendix 1 -Terms and Definitions for more detail.

ULE refers to the estimated *Useful Life Expectancy* of a tree. Refer to Appendix 2 for details.

TSR The *Tree Significance Rating* considers the importance of the tree because of its prominence in the landscape and its amenity value, from the point of view of public benefit. Refer to Appendix 2 – Significance of a Tree Assessment Rating for more detail.

RV Refers to the retention value of a tree, based on the tree's ULE *and* Tree Significance. Refer to Appendix 2 – Significance of a Tree Assessment Rating for more detail.

SRZ Structural Root Zone (SRZ) refers to the critical area required to maintain stability of the tree. Refer to Appendix 1 -Terms and Definitions for more detail. This is not calculated/does not apply for palms, cycads, tree ferns or monocot species.

TPZ Tree Protection Zone (TPZ) refers to the *tree protection zones* for trees to be retained. Refer to Appendix 1 -Terms and Definitions for more detail. For palms, cycads, tree ferns or monocot species it is calculated to be no less than 1m outside the crown projection

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Appendix 4 – Tree Protection Devices

Figure 1 – Tree Protection Zone Fencing Key

1. 1.8m high chain wire mesh panels with appropriate feet such as concrete or water filled base blocks.
2. Inside TPZ fencing , 75-100mm deep layer of suitable, organic mulch is to be installed. No excavation, grade change, construction activity or material storage is permitted.
3. Alternate fencing option of 1.8m plywood/wooden panels can also be used, (with above ground bracing) to ensure prevention of soil build up/building materials entering TPZ.
4. Appropriate Tree Protection Zone signage must be displayed – see Figure 2.

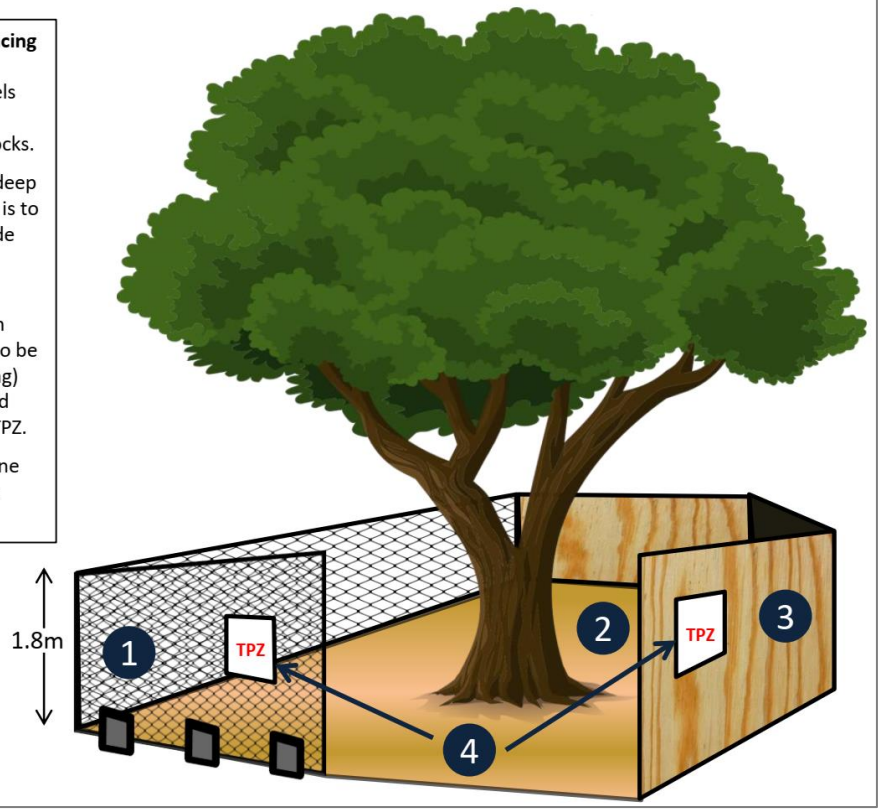

Figure 2
Suitable Tree Protection Zone Signage

Figures 1 & 2 – Tree Protection Fencing and appropriate signage.

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Figure 3 - Stem, Branch & Ground protection measures

Key

1. Padding (such as geotextile membrane, natural hessian, rubber, or carpet to protect bark).
2. Battens/boards for branch/stem protection, strapped together NOT nailed into bark/tree. Minimum 2m in height on stem where feasible.
3. Ground protection base 75-100mm of fit for purpose mulch.
4. If machinery is required to move within the TPZ then steel rumble boards (4a) or wide, timber sheeting/boards thrashed together (4b) is to be placed over mulch layer (preferably with geotextile base layer), this to spread the weight and minimise soil compaction

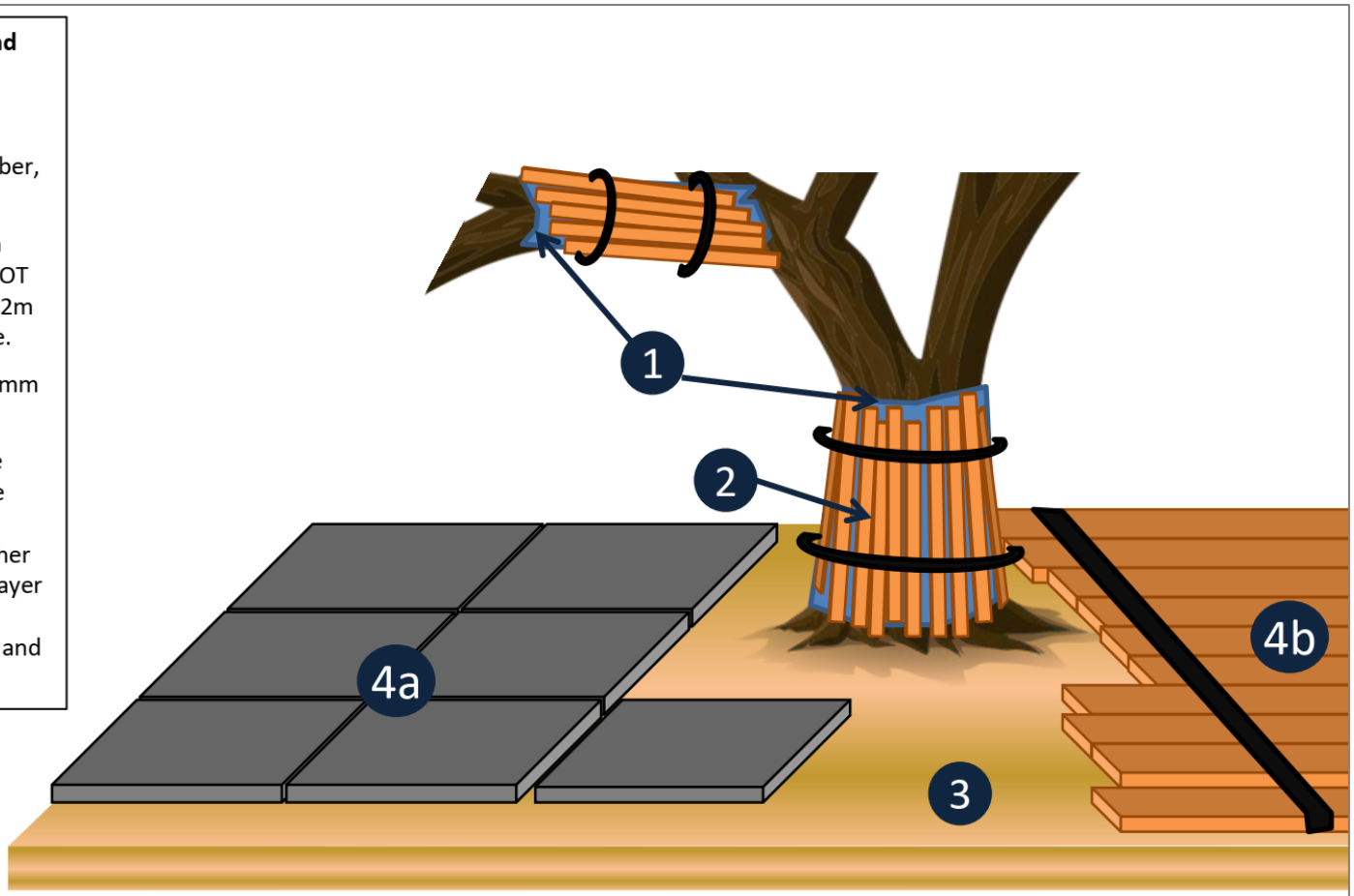

Figure 3 – Stem and ground protection measures.

Appendix 5 – Photographs

Plate 1 – Tree 1 – This tree is exempt under NSDCP as it cannot support itself and thus does not meet the definition of a tree.
INSET – this notes T1 attached/supported to current dwelling.

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Plate 2 – Tree 4 – Tree noted with arrow. Tree is on a neighbouring property, it will not incur impact from the proposed works.

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Plate 3 – Tree 5 – Arrow/numbering notes tree, this tree is proposed for retention, Bromeliads on stem obscured assessment.

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Plate 4 – Tree 7 is proposed for removal. Located in narrow garden bed currently, these retaining walls are to be removed.

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Plate 5 – Tree 10 – Proposed for removal, within footprint.

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Plate 6 – Tree 8 – This tree is proposed for removal, the retaining wall is to be demolished that tree is located behind. Not excessive pruning has damaged tree form.

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Plate 7 – Tree 9 – This tree is to be retained, the retaining wall the tree is behind is proposed for retention.

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Plate 8 – Tree 11 – Located on neighbouring this tree is in fairly poor health and condition, lopped and covered in sooty mould.

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Plate 9 – Tree 12– Tree is located on neighbouring property, it will remain unaffected by works.

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Appendix 6 – Tree Location Plan

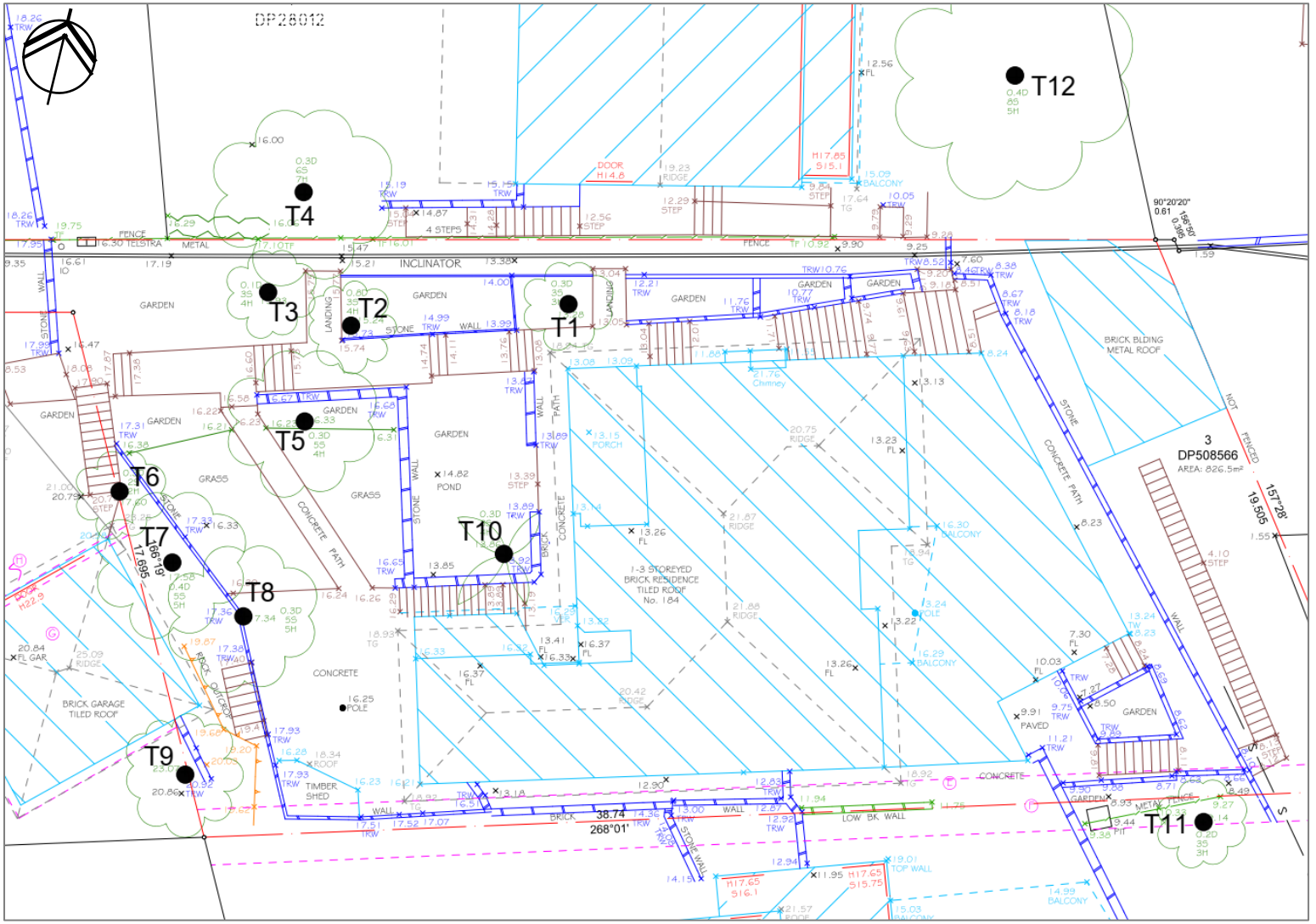

Figure 4 –Excerpt of Survey Plan, Dwg no. 4523/21, dated 25/11/2021, authored by ESA Survey Consultants. Marked up by C Hughes (NOT TO SCALE).

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