ATTACHMENTS

LOCAL PLANNING PANEL MEETING

Wednesday 28 June 2023
at 4:00pm

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LOCAL PLANNING PANEL

1	**LPP21/23**	**DA/188/2023 - Construction of a Secondary Dwelling - 3 The Boulevard, Cheltenham**	
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ITEM 1

ATTACHMENT/S

REPORT NO. LPP21/23

ITEM 1

1. LOCALITY PLAN

2. ARCHITECTURAL PLANS

3. LANDSCAPE PLAN

4. ARBORIST REPORT

5. HERITAGE IMPACT STATEMENT

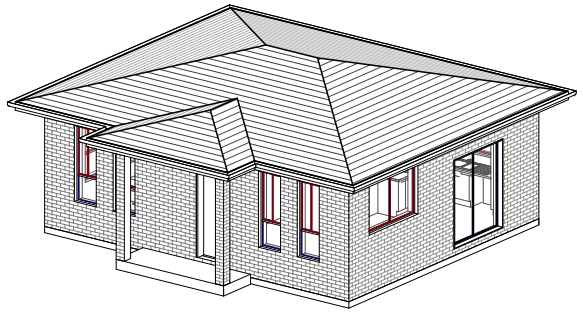
ATTACHMENT 1 - ITEM 1

LOCALITY PLAN

DA/188/2023

No. 3 The Boulevard, Cheltenham

IN HOUSE Granny Flats



CLIENT:

PENGFEI HAN
ZHEN LI

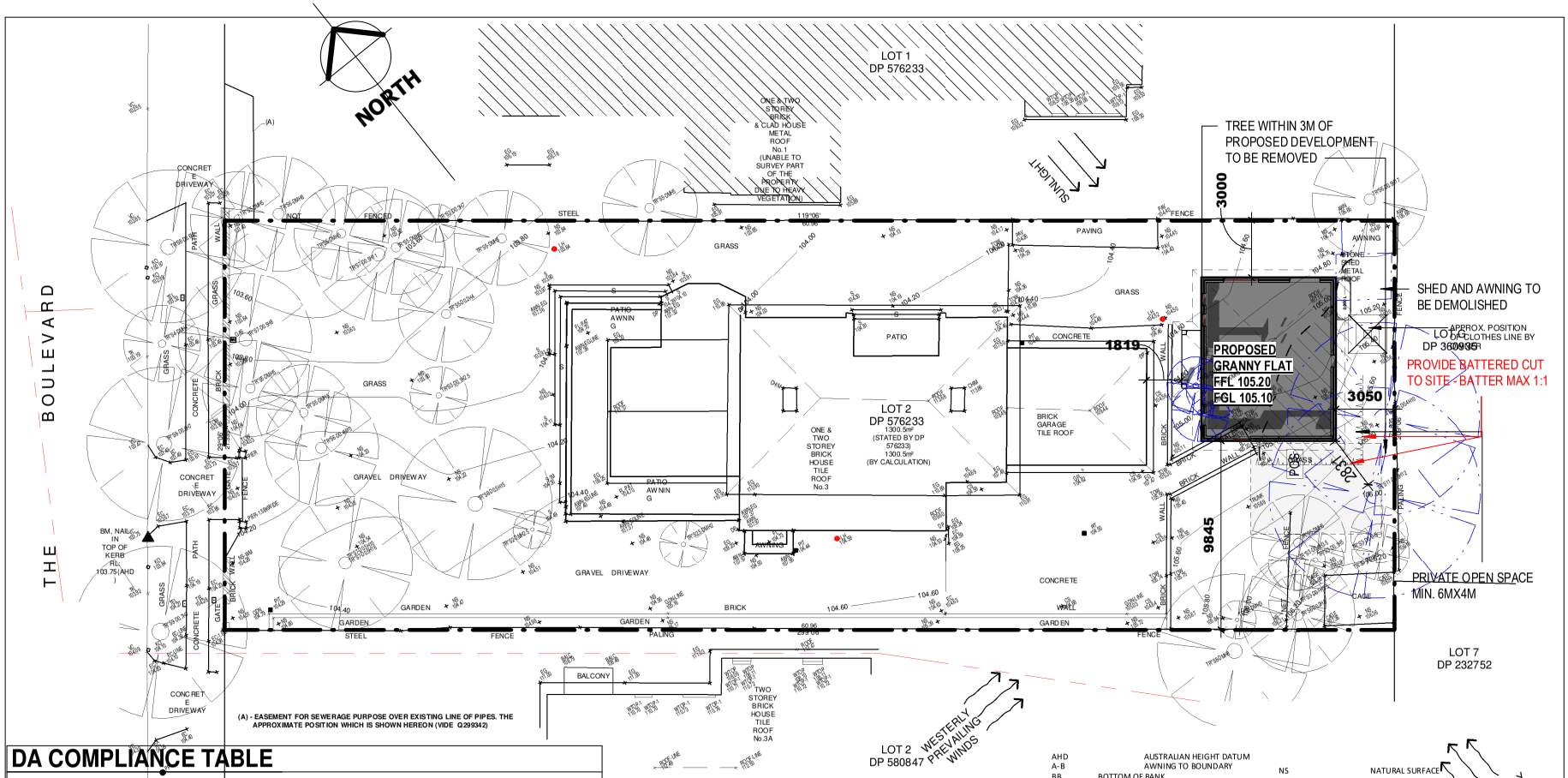
PROJECT:

LOT 2 DP 576233
3 THE BOULEVARD,
CHELTENHAM

RKN DESIGNS
info@rkndesigns.com.au
0492 462 503

BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

ATTACHMENT 2 - ITEM 1



DA COMPLIANCE TABLE

SITE AREA:	1300.5m²			
FRONTAGE	21.33m			
	REQUIRED	EXISTING	PROPOSED	COMPLIES
FLOOR SPACE RATIO	430 sq.m	(232.86+125.19)sq.m	417.95sq.m	YES
SITE COVERAGE	40%	22.44% or 291.92sqm	28.43% or 369.82sqm	YES
GRANNY FLAT			59.9 sq.m	YES
TOTAL BLDG. HEIGHT	8.5m		4.48m	YES
PORCH			3sq.m	
SIDE SETBACK	0.9m & 0.9m		3.0m(LHS) & 9.84m(RHS)	YES
REAR SETBACK	3.0m		3.05 m	YES
LANDSCAPE AREA	40% OR 520.2 sq.m	49.57% OR 644.77 sq.m	44.11% OR 573.69sq.m	YES
PRIVATE OPEN SPACE	24 sq.m		24 sq.m	YES

AHD	AUSTRALIAN HEIGHT DATUM	NS	NATURAL SURFACE
A-B	AWNING TO BOUNDARY	PAV	PAVERS
BB	BOTTOM OF BANK	PP	POWER POLE
BM	BENCH MARK	RL	REDUCED LEVEL
BOW	BOTTOM OF WALL	S	STEPS
BRW	BOTTOM OF RETAINING WALL	S-B	SHED TO BOUNDARY
CL	CENTER LINE	SL	SURFACE LEVEL
CONC	CONCRETE	SILL	WINDOW SILL
CS	CONCRETE SURFACE	SMH	SEWER MAN HOLE
D/H/S	DIAMETER/HEIGHT/SPREAD	SV	STOP VALE
D	DOOR	TB	TOP OF BANK
EC	EDGE OF CONCRETE	TEL	TELSTRA PIT
EG	EAVE & GUTTER	TK	TOP OF KERB
FL	FLOOR LEVEL	TOW/TW	TOP OF WALL
GDN	GARDEN	TRW	TOP OF RETAINING WALL
HYD	HYDRANT	VC	VEHICLE CROSSING
INV	INVERT LEVEL	W-B	WALL TO BOUNDARY
KO	KERB OUTLET	WM	WATER METER
LH	LAMP HOLE	WTOP	TOP OF WINDOW

1 : 200

01 SITE (SECONDARY DWELLING)

IN HOUSE Granny Flats

SECONDARY DWELLING

Client : PENGFEI HAN
ZHEN LI

Job Address : LOT 2 DP 576233
3 THE BOULEVARD, CHELTENHAM

17/05/2023 10:23:04 AM

DA APPLICATION:

SECONDARY DWELLING

Project Details

DRAWN BY:	DATE:	JOB NO:
RB	03.05.2023	

SHEET TITLE: SITE & SITE ANALYSIS PLAN

SCALE: 1 : 200 | FINAL PLAN ISSUE: 5

DRAWN BY

RKN DESIGNS

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SHEET NO: 01

GENERAL NOTES
Do not scale drawings.Use figured dimensions only.Check & verify dimension & levels prior to the commencement of any work. All discrepancies to be reported to the RKN Designs.

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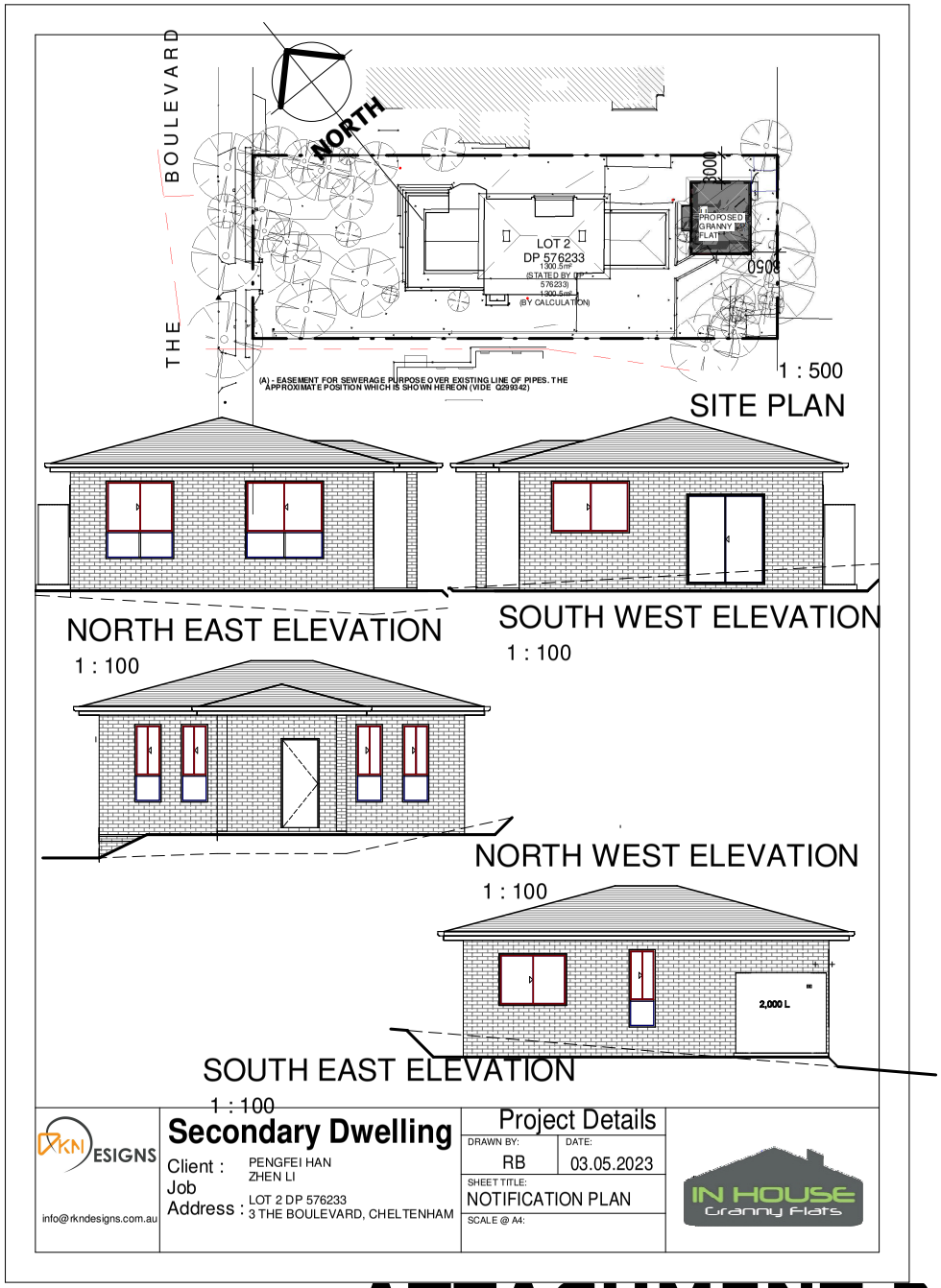
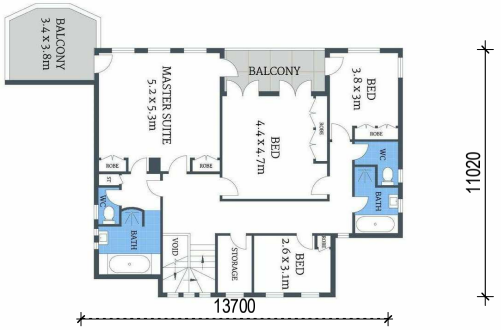


ATTACHMENT 2 - ITEM 1

1 : 200

EX. DWELLING- GROUND FLOOR PLAN



1 : 200

EX. DWELLING- FIRST FLOOR PLAN

IN HOUSE Granny Flats

SECONDARY DWELLING

Client : PENGFEI HAN
ZHEN LI

Job Address : LOT 2 DP 576233
3 THE BOULEVARD, CHELTENHAM

17/05/2023 10:23:05 AM

DA APPLICATION:

SECONDARY DWELLING

Project Details

DRAWN BY:	DATE:	JOB NO:
RB	03.05.2023	

SHEET TITLE: EXISTING HOUSE FLOOR PLAN

SCALE:	FINAL PLAN ISSUE:
1 : 200	5

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GENERAL NOTES

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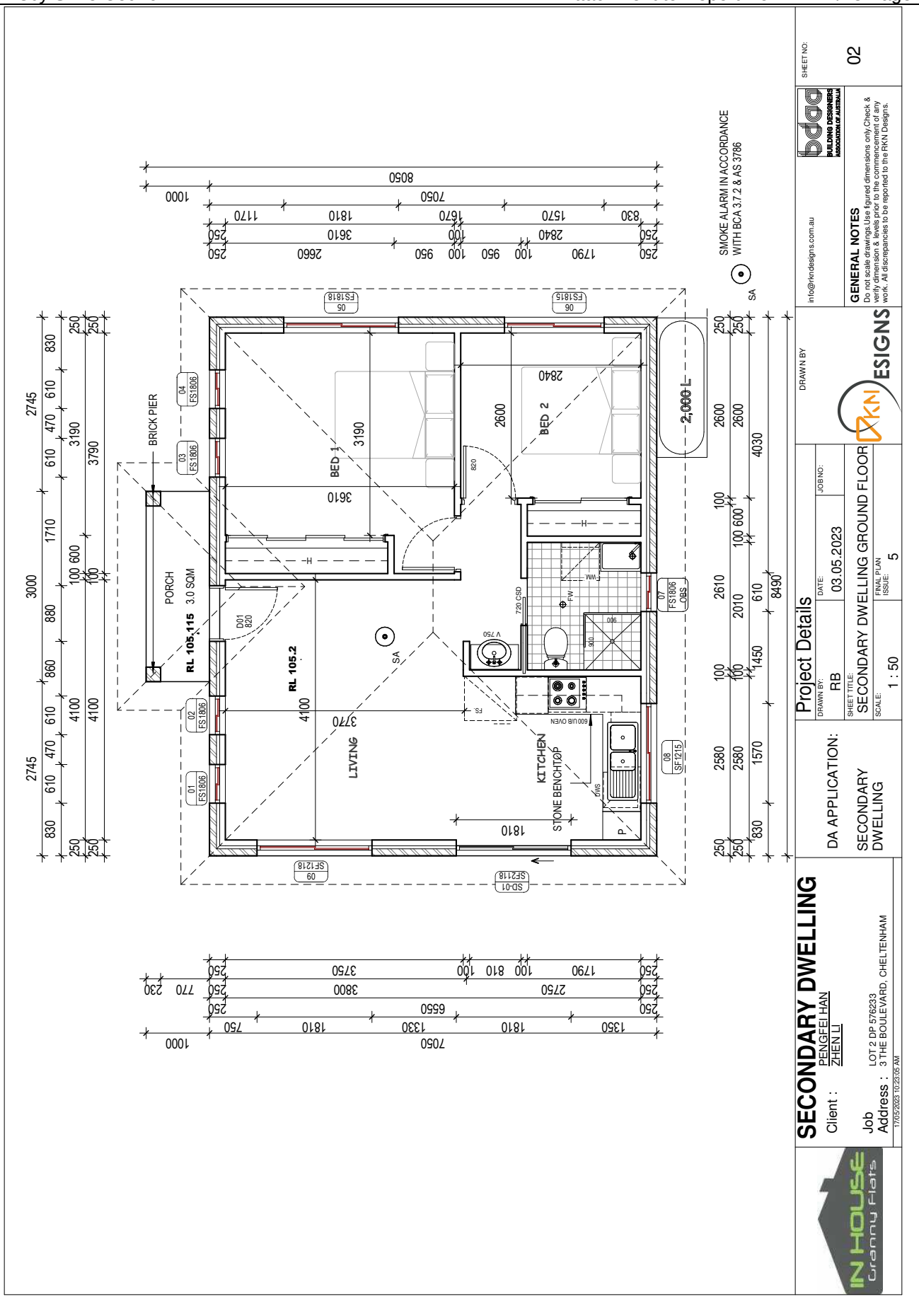
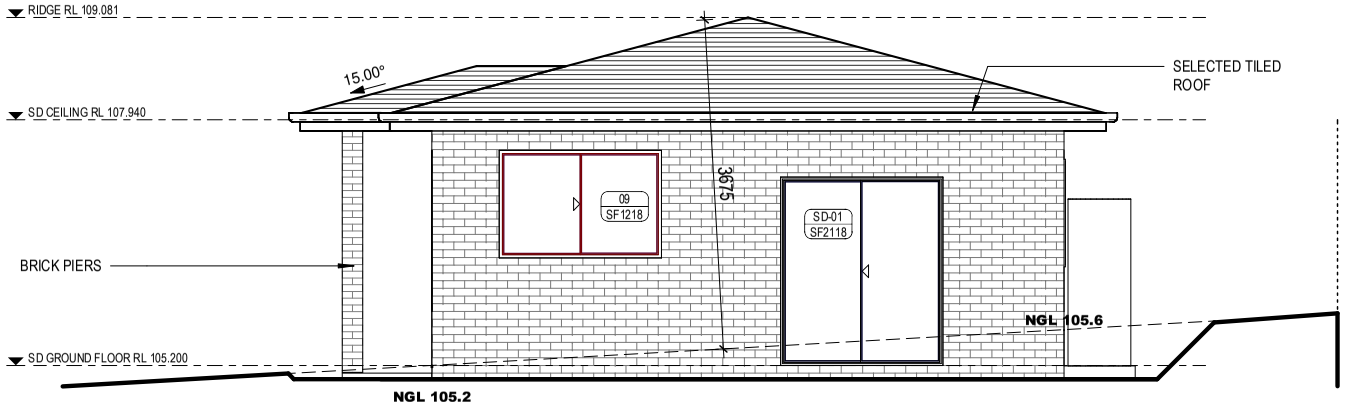
ATTACHMENT 2 - ITEM 1

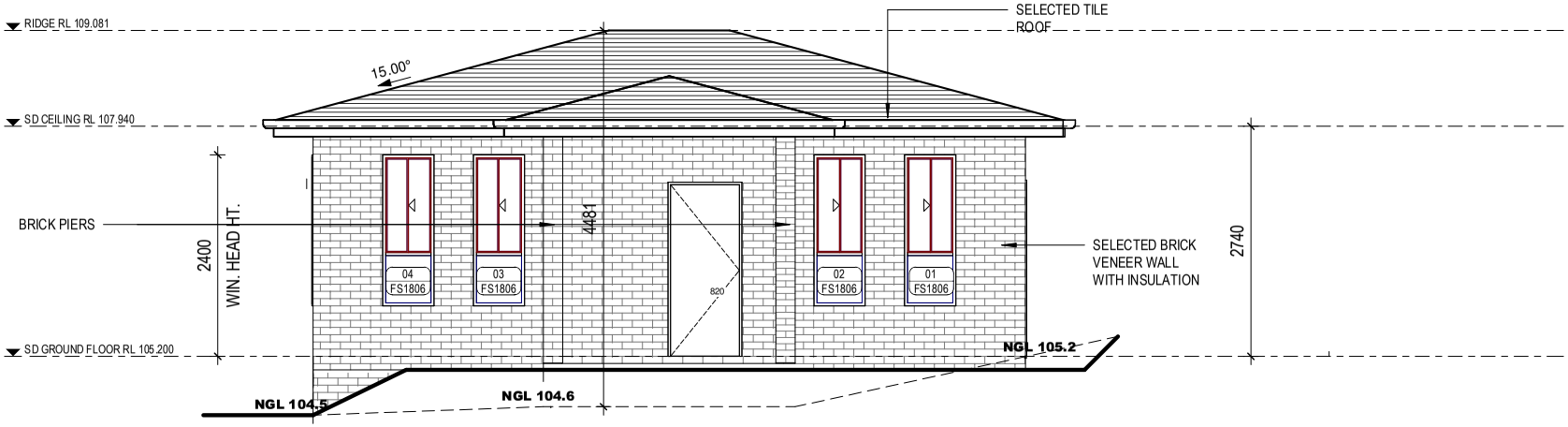
ATTACHMENT 2 - ITEM 1





SOUTH WEST ELEVATION

1 : 50



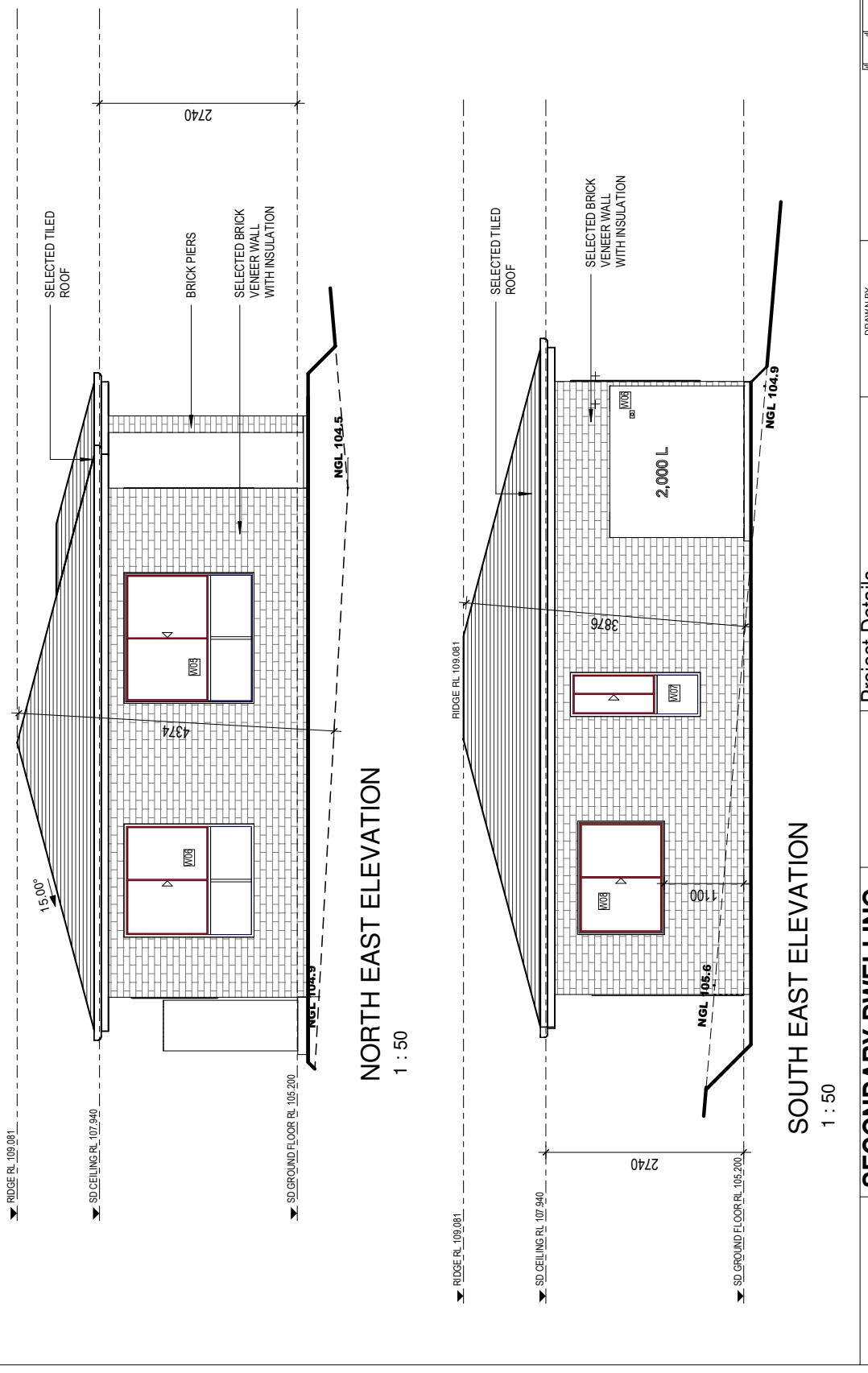
NORTH WEST ELEVATION

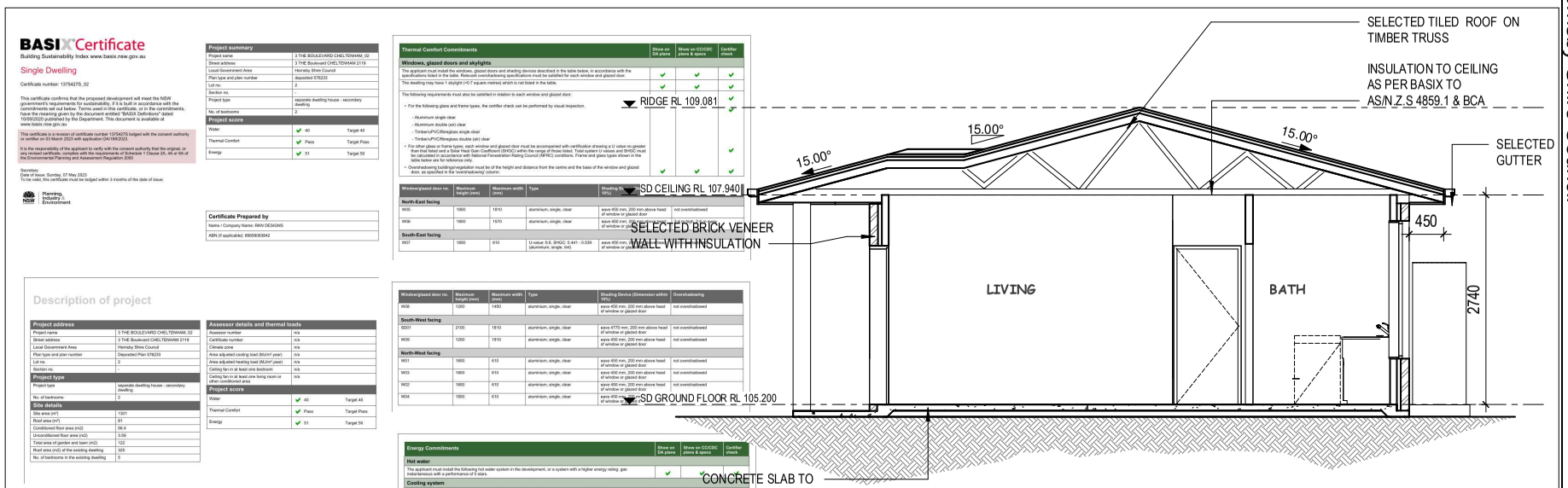
1 : 50

IN HOUSE Granny Flats	**SECONDARY DWELLING** Client : PENGFEI HAN ZHEN LI Job Address : LOT 2 DP 576233 3 THE BOULEVARD, CHELTENHAM 17/05/2023 10:23:06 AM	DA APPLICATION: SECONDARY DWELLING	Project Details DRAWN BY: RB DATE: 03.05.2023 JOB NO: SHEET TITLE: SECONDARY DWELLING ELEVATIONS SCALE: 1 : 50 FINAL PLAN ISSUE: 5	DRAWN BY RKN DESIGNS	info@rkndesigns.com.au bdaa BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA **GENERAL NOTES** Do not scale drawings.Use figured dimensions only.Check & verify dimension & levels prior to the commencement of any work. All discrepancies to be reported to the RKN Designs.	SHEET NO: 03

ATTACHMENT 2 - ITEM 1

ATTACHMENT 2 - ITEM 1





1 Section A-A

1 : 50

WINDOW & SLIDING DOOR Schedule

Window No.	Model	Height	Width	Window Style	Glazing
01	FS1806	1800	610	SLIDING WINDOW	CLEAR
02	FS1806	1800	610	SLIDING WINDOW	CLEAR
03	FS1806	1800	610	SLIDING WINDOW	CLEAR
04	FS1806	1800	610	SLIDING WINDOW	CLEAR
05	FS1818	1800	1810	SLIDING WINDOW	CLEAR
06	FS1815	1800	1570	SLIDING WINDOW	CLEAR
07	FS1806 OBS	1800	610	SLIDING WINDOW	OBSCURE
08	SF1215	1200	1570	SLIDING WINDOW	CLEAR
09	SF1218	1200	1810	SLIDING WINDOW	CLEAR
SD-01	SF2118	2100	1810	SLIDING DOOR	CLEAR

SECONDARY DWELLING

Client : PENGFEI HAN
ZHEN LI

Job Address : LOT 2 DP 576233
3 THE BOULEVARD, CHELTENHAM

17/05/2023 10:23:07 AM

DA APPLICATION:

SECONDARY DWELLING

Project Details

DRAWN BY: RB
DATE: 03.05.2023
JOB NO:
SHEET TITLE: SECONDARY DWELLING SECTION & BASIX
SCALE: 1 : 50
FINAL PLAN ISSUE: 5

DRAWN BY

RKN DESIGNS

info@rkndesigns.com.au

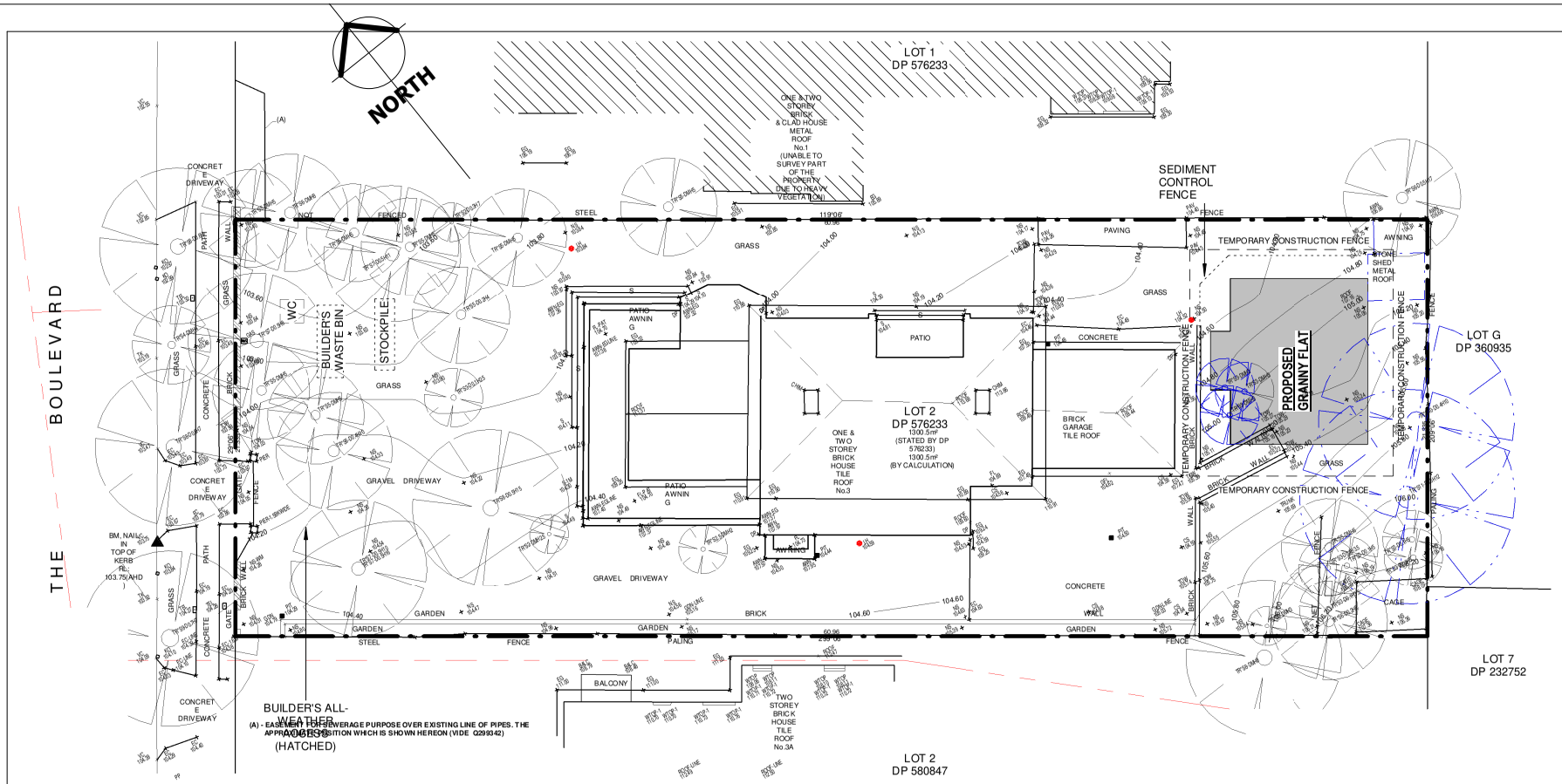
BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

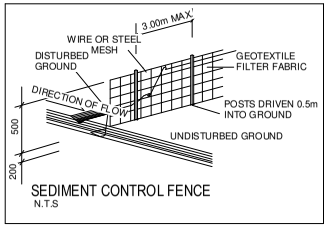
SHEET NO: 05

GENERAL NOTES

Do not scale drawings.Use figured dimensions only.Check & verify dimension & levels prior to the commencement of any work. All discrepancies to be reported to the RKN Designs.

ATTACHMENT 2 - ITEM 1





SEDIMENT NOTE:

1. NO STOCKPILING OF MATERIALS IS PERMITTED ON THE VERGE BETWEEN KERB & PROPERTY BOUNDARY.
2. NO VEHICLE CROSSING OR STOCKPILING OF MATERIAL ON VEGETATION BUFFER.
3. ALL SEDIMENT RETAINING STRUCTURES TO BE CLEANED ON REACHING 50% STORAGE CAPACITY.
4. ALL EXISTING VEGETATION WILL BE RETAINED OUTSIDE THE CONSTRUCTION SITE.
5. ROOF DRAINAGE IS TO BE CONNECTED TO THE STORMWATER SYSTEM AS SOON AS PRACTICLE.
6. DEPRESSIONS LEFT IN THE FOOTPATH BY HEAVY TRUCKS ARE TO BE FILLED AS SOON AS POSSIBLE.
7. ONLY ONE EXIT POINT SHOULD BE USED & SHOULD BE CONSTRUCTED SO AS TO PREVENT SOIL REACHING THE ROAD & TO STOP BOGGING.
8. DRAINAGE DITCHES ABOVE & BELOW CUT & FILLED AREAS ARE TO REDUCE EROSION FROM DISTURBED GROUND.

1 : 200

SEDIMENT CONTROL PLAN

IN HOUSE Granny Flats

SECONDARY DWELLING

Client : PENGFEI HAN
ZHEN LI

Job Address : LOT 2 DP 576233
3 THE BOULEVARD, CHELTENHAM

17/05/2023 10:23:08 AM

DA APPLICATION:

SECONDARY DWELLING

Project Details

DRAWN BY:	DATE:	JOB NO:
RB	03.05.2023	

SHEET TITLE: SEDIMENT CONTROL PLAN

SCALE: 1 : 200

FINAL PLAN ISSUE: 5

DRAWN BY

RKN DESIGNS

info@rkndesigns.com.au

bdaa BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

GENERAL NOTES

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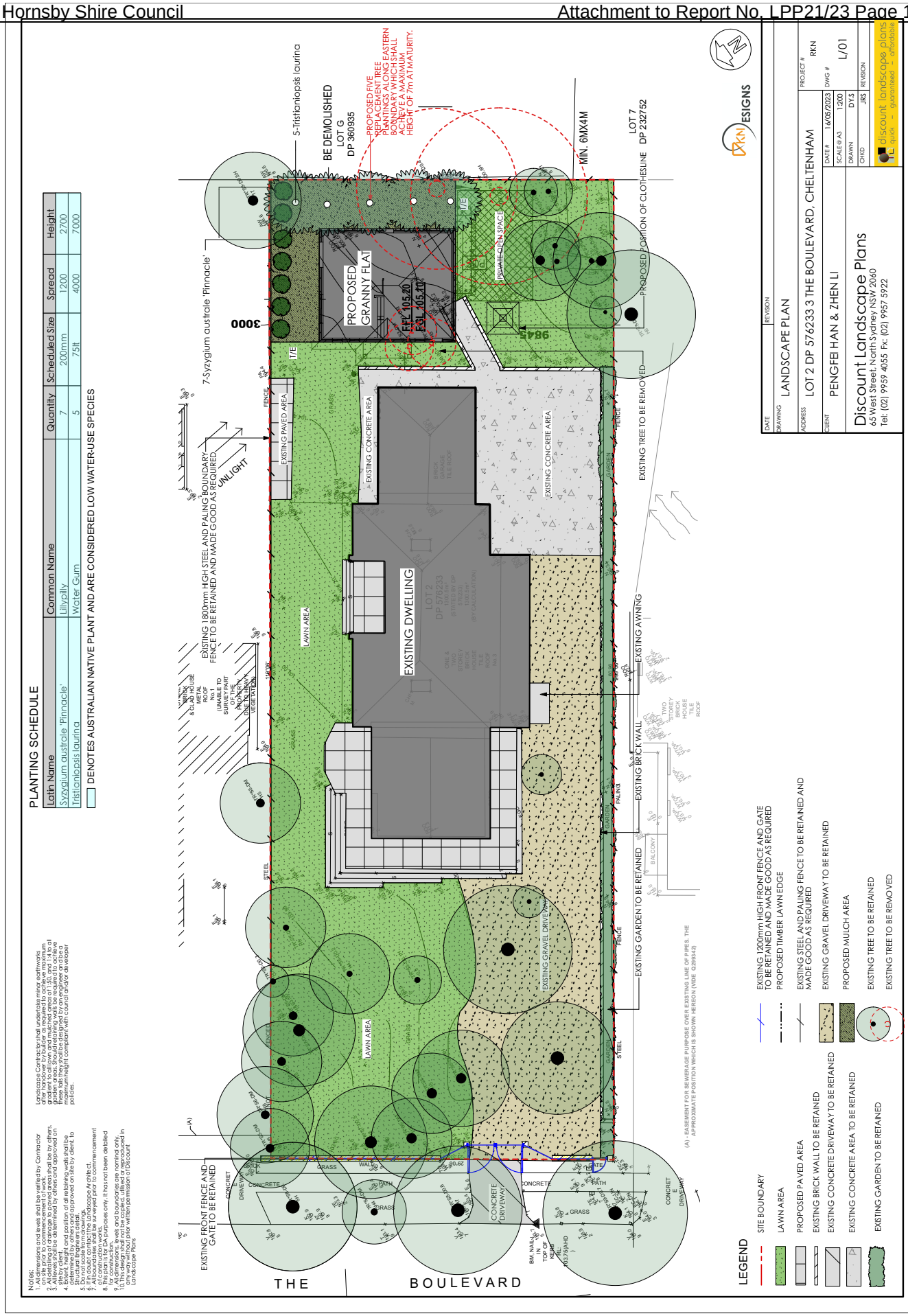
SHEET NO: 06

ATTACHMENT 2 - ITEM 1

ATTACHMENT 3 - ITEM 1



OUTLINE LANDSCAPE SPECIFICATION

Preparation by Builder: Builder shall remove all existing concrete pathways, fences, footings, walls etc. not notated to be retained and complete all necessary excavation work prior to commencement on site by Landscape Contractor (Contractor). Builder shall also install new retaining walls, kerbs, layback kerb, crossover, pathways etc. and make good all existing kerbs, gutters etc. as necessary and to approval of Council. Builder shall ensure that a minimum 450mm of topsoil in garden areas and a minimum 150mm of topsoil in lawn areas exists. Should required depths not exist Builder shall contact Landscape Architect and ask for instructions prior to completion of excavation works.
Excavate as necessary, then fill with approved site topsoil to allow for minimum 500mm soil depth in garden areas and 150mm soil depth in lawn areas and to gain required shapes & levels. Ensure all garden and lawn areas drain satisfactorily. All levels & surface drainage shall be determined by others & approved on site by Head Contractor. Note: Approved imported topsoil mix may be utilised if there is insufficient site topsoil available. State in Tender a m3 rate for additional imported topsoil and the quantities of both site topsoil and imported topsoil allowed for in Tender.
Initial Preparation: Verify all dimensions & levels on site prior to commencement. Do not scale from drawings. Locate all underground & above ground services & ensure no damage occurs to them throughout contract. Spray approved weedicide to all proposed lawn & garden areas to manufacturer's directions. Remove existing concrete pathways, footings, walls etc. not notated to be retained & weeds from site. Levels indicated on Plan are nominal only and are derived from Architectural Plans & Drawings by others. Final structural integrity of all items shall be the sole responsibility of Landscape Contractor.
Tree Protection: Trees to be retained shall be protected during site works and construction by the erection of solid barricades to the specification of Council. Storage of machinery or materials beneath canopy of trees to be retained shall not be permitted. Changes to soil level and cultivation of soil beneath canopy of trees to be retained shall not be permitted unless under direct supervision of Landscape Architect. Existing trees shall be pruned to Landscape Architects onsite instructions.
Soil Preparation: Cultivate to depth of 300mm all proposed lawn & garden areas incorporating minimum 100mm depth of organic clay breaker into existing site soil. Do not cultivate beneath existing trees to be retained. In areas where fill is required gain required shapes & levels using a premium grade soil mix. In areas where excavation is required (if in clay) over excavate as required to to allow for installation of 500mm depth of premium grade topsoil mix to garden areas and 300mm depth of premium grade topsoil mix to lawn areas. Undertake all required action to ensure that no rootballs of proposed plants sit in clay wells and that all garden areas and lawn areas drain satisfactorily. Note it is intended that wherever possible existing levels shall not be altered through garden and lawn areas. It is the Contractors responsibility to ensure that the end result of the project is that all lawn and garden areas drain sufficiently (both surface & subsurface), are at required finished levels and have sufficient soil depths to enable lawn and plants to thrive and grow. Should alternative works to those specified be required to achieve the above result, Contractor shall inform Builder at time of Tender and request instructions.
Lawn Edging and Stepping Stones:(i) 125 x 25mm approved tanalith impregnated pine edging shall be installed, to lines as indicated on plan and staked with approved stakes at maximum 1500mm centres at ends and changes of direction; stakes shall be nailed to edging with approved galvanised steel nails. Top of edging shall finish flush with surrounding surfaces. Top of stakes shall finish 25mm below top of edging.**(ii)**Contractor shall install approved bricks on edge on a minimum 100mm deep x 90mm wide concrete footing with brick tor set in, to lines nominated on plan as brick edging. Bricks shall be laid with a nominal 10mm wide approved coloured mortar joint. Bricks needing to be cut shall be done so with clean sharp cuts. Top of edging shall finish flush with surrounding finished surfaces. Approved sandstone stepping stones shall be positioned as indicated on plan on a 25mm river sand bed. Approved sandstone stepping stones shall be positioned as indicated on plan on a 25mm river sand bed.
Retaining Walls: Positions, detail and heights of retaining walls shall be by others.
Planting: Purchase plants from an approved nursery. Plants to be healthy & true to type & species. Set out plants to positions indicated on plan. Following approval, plant holes shall be dug approximately twice width and to 100mm deeper than plant rootballs that they are to receive. Base and sides of hole shall be further loosened. Fertiliser, followed by 100mm depth of topsoil mix shall then be placed into base of hole and lightly consolidated. Base of hole shall then be watered. Remove plant container and install plant into hole. Rootball shall be backfilled with surrounding topsoil and topsoil firmed into place. An approved shallow dish shall be formed to contain water around base of stem. Base of stem of plant shall finish flush with finished soil level. Once installed plant shall be thoroughly watered and maintained for the duration of the Contract.
Staking: All trees shall be staked using 2 x 38mm x 38mm x 2000mm long hardwood stakes per plant and with hessian webbing ties installed to Landscape Architect's on site instructions.
Mulching: Install 75mm depth of 25mm diameter hardwood mulch to all garden areas, coving mulch down around all plant stems & to finish flush with adjacent surfaces.
Turfing: Prepare for, level & lay cultivated Palmetto Buffulo turves to all areas nominated on plan as being lawn. Roll, water, fertilise, mow & maintain lawns as necessary until completion of maintenance period. At same time make good all existing lawn areas using same lawn type. Lawns in shade shall be over sown with an approved seed mix. Allow to retrim and returf councils nature strip as required.
Fencing: Retain all existing fences unless advised otherwise by builder. Install timber paling fences to heights indicated on Plan.
Paving: Areas to be paved shall be excavated or filled to allow for installation of bedding materials. Levels and falls shall be as per Plan. Surface drainage on paving shall be towards grated drains with all drains connected to stormwater system and installed by Builder.
Irrigation: Contractor shall supply and install an approved fully automatic, vandal resistant, computerised irrigation system to all garden and lawn areas, excluding council nature strip. Entire system shall be to approval of Water Board and shall utilise pop-up sprinklers and electronic controllers. Contractor shall be responsible to ensure that system is able to satisfactorily operate on available water pressure. Power supply for use by irrigation system shall be provided to an approved location near southwest corner of residence by others and shall consist of an approved weatherproof G.P.O. The irrigation system controller shall be housed in an approved waterproof cabinet mounted to external wall of residence.
Clotheslines: Contractor shall allow for all necessary labour and materials and shall install clotheslines to positions as indicated on plan to manufacturer's instructions to approval of Landscape Architect. Clothesline type shall be equal to 'Hills Foldaline'.
Completion: Prior to practical completion remove from site all unwanted debris occurring from work. Satisfy Council that all landscaping work has been undertaken in strict accordance with Councils landscape codes & guidelines.

Maintenance Period: A twelve month maintenance period shall be undertaken by owner or owners representative as set out herein. Owner shall have care and maintenance of all work specified under this Contract and shall rectify any defective work for a period of 52 weeks following Practical Completion of Landscape Works. This period shall be herein known as the Maintenance Period. Work shall also include for the care and maintenance of all existing vegetation to be retained and proposed vegetation. Site shall be attended at least weekly and as otherwise required. The following works shall be undertaken during the Maintenance Period.
(a) Recurrent works Undertake recurrent works throughout the Maintenance Period. These works shall include but are not limited to watering, weeding, fertilising, pest and disease control, returfing, staking and tying, replanting, cultivation, pruning, aerating, renovating, top dressing and the like.
(b) Watering Regularly water all plants and lawn areas to maintain optimal growing conditions. Contractor shall adjust the water quantity utilised with regard to climatic conditions prevalent at the time.
(c) Replacements Immediately replace plants which die or fail to thrive (at discretion of Landscape Architect) with plants of same species or variety and of same size and quality unless otherwise specified. Plant replacement shall be at Contractors expense, unless replacement is required due to vandalism or theft, which shall be determined by Landscape Architect. Required replacement of plants due to vandalism or theft shall be undertaken by Contractor and shall be paid for by Client at an agreed predetermined rate.
(d) Mulched surfaces Maintain mulched surfaces in clean, tidy, weed-free condition and shall reinstate mulch as necessary to maintain specified depths.
(e) Stakes & ties Adjust and/or replace stakes and ties as required. Remove stakes and ties at end of Maintenance Period if directed by Landscape Architect.
(f) Lawn areas Lawn areas shall be mown at regular intervals to ensure non heading of lawn with a fine-cutting mulching mower and clippings left on lawn to mulch and self-fertilise lawn areas. Primary cut after laying of lawn by others shall be determined on site taking into consideration season, watering and growth rate of lawn. Following the primary cut all lawns shall be regularly mown as required to ensure a healthy lawn and a neat appearance. Care shall always be taken to ensure that no clippings are left on surrounding roads or garden areas after mowing. Replace lawn areas that fail to thrive at discretion of Landscape Architect. All new and made good lawn areas shall be barricaded off from pedestrian traffic by use of star pickets and brightly coloured plastic safety mesh until establishment of lawn. Barricades shall be removed upon establishment of lawn area.
(g) Weeding Remove by hand, or by carefully supervised use of weedicide, any weed growth that may occur throughout Maintenance Period. This work shall be executed at weekly intervals so that all lawn and garden areas may be observed in a weed-free condition.
(h) Pruning Prune new and existing plants (excluding existing trees) as necessary to maintain dense foliage conditions. Any rogue branches, or branches overhanging or obstructing pathways, roads, doorways, etc., shall be removed by approved horticultural methods.
(i) Spraying Spraying for insect, fungal and disease attack shall be undertaken as required and in accordance with spray manufacturers recommendations at intervals taking into account the season of year during which landscape works are to be implemented.
(j) Tree Care Should any existing trees be damaged during construction works immediately engage an experienced arboriculturist and then undertake any rectification work recommended by arboriculturist.

Notes:
1. All dimensions and levels shall be verified by Contractor on site prior to commencement of work.
2. All detailing of drainage to paved areas shall be by others.
3. All levels shall be determined by others and approved on site by client.
4. Extent, height and position of all retaining walls shall be determined by others and approved on site by client.
5. Do not scale from drawings.
6. If in doubt contact the Landscape Architect.
7. All boundaries shall be surveyed prior to commencement of construction works.
8. This plan is for DA purposes only. It has not been detailed for construction.
9. All dimensions, levels and boundaries are nominal only.
10. This design shall not be copied, utilised or reproduced in any way without prior written permission of Discount Landscape Plans.

DATE	REVISION
DRAWING: LANDSCAPE SPECIFICATION	
ADDRESS: LOT 2 DP 576233 3 THE BOULEVARD, CHELTENHAM	PROJECT # RKN
CLIENT: PENGFEI HAN & ZHEN LI	DATE # 16/05/2023
	SCALE @ A3 NTS
	DRAWN DY.S
	CHKD JRS
	DWG # L/02
	REVISION

Discount Landscape Plans
65 West Street, North Sydney NSW 2060
Tel: (02) 9959 4055 Fx: (02) 9957 5922

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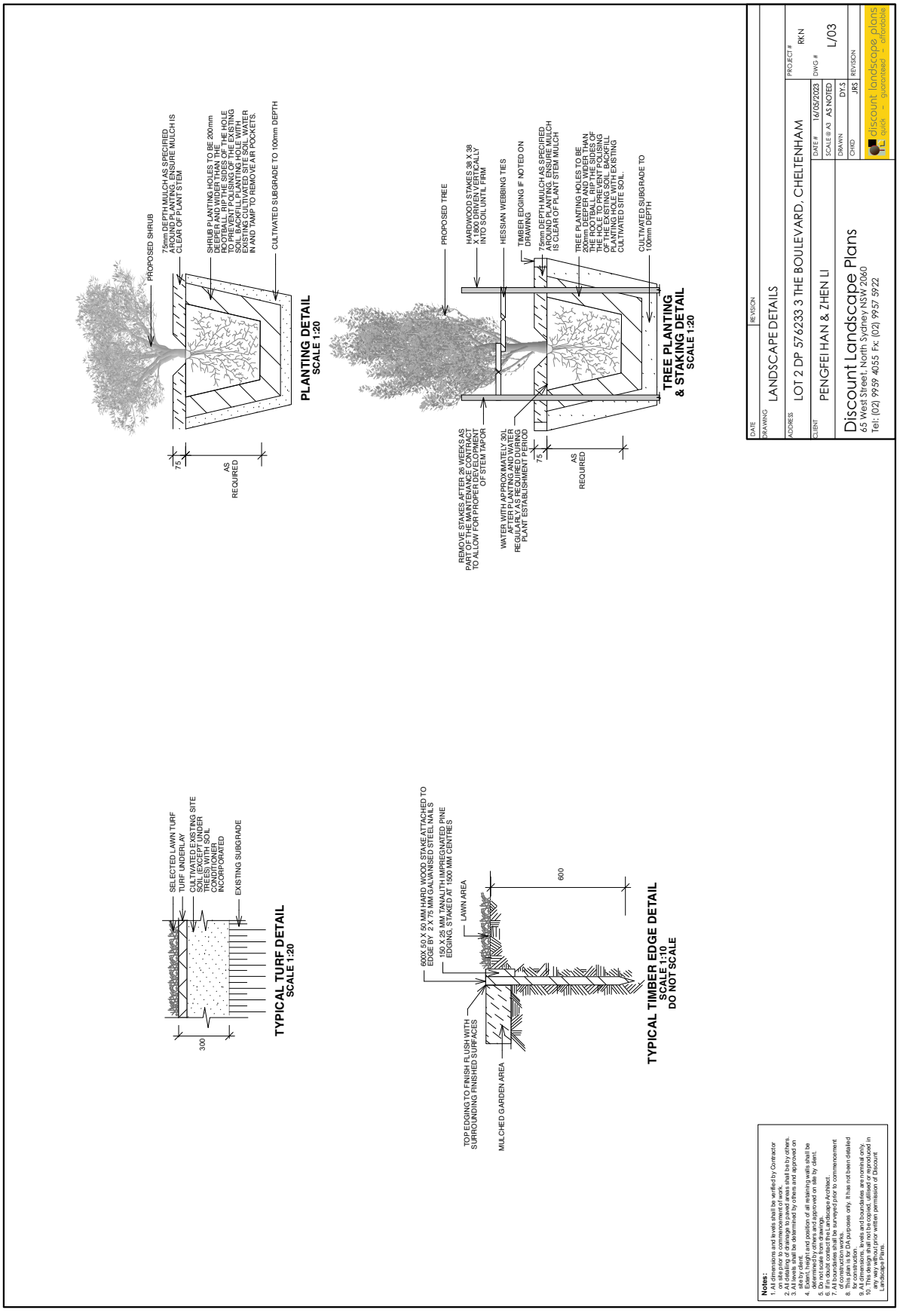
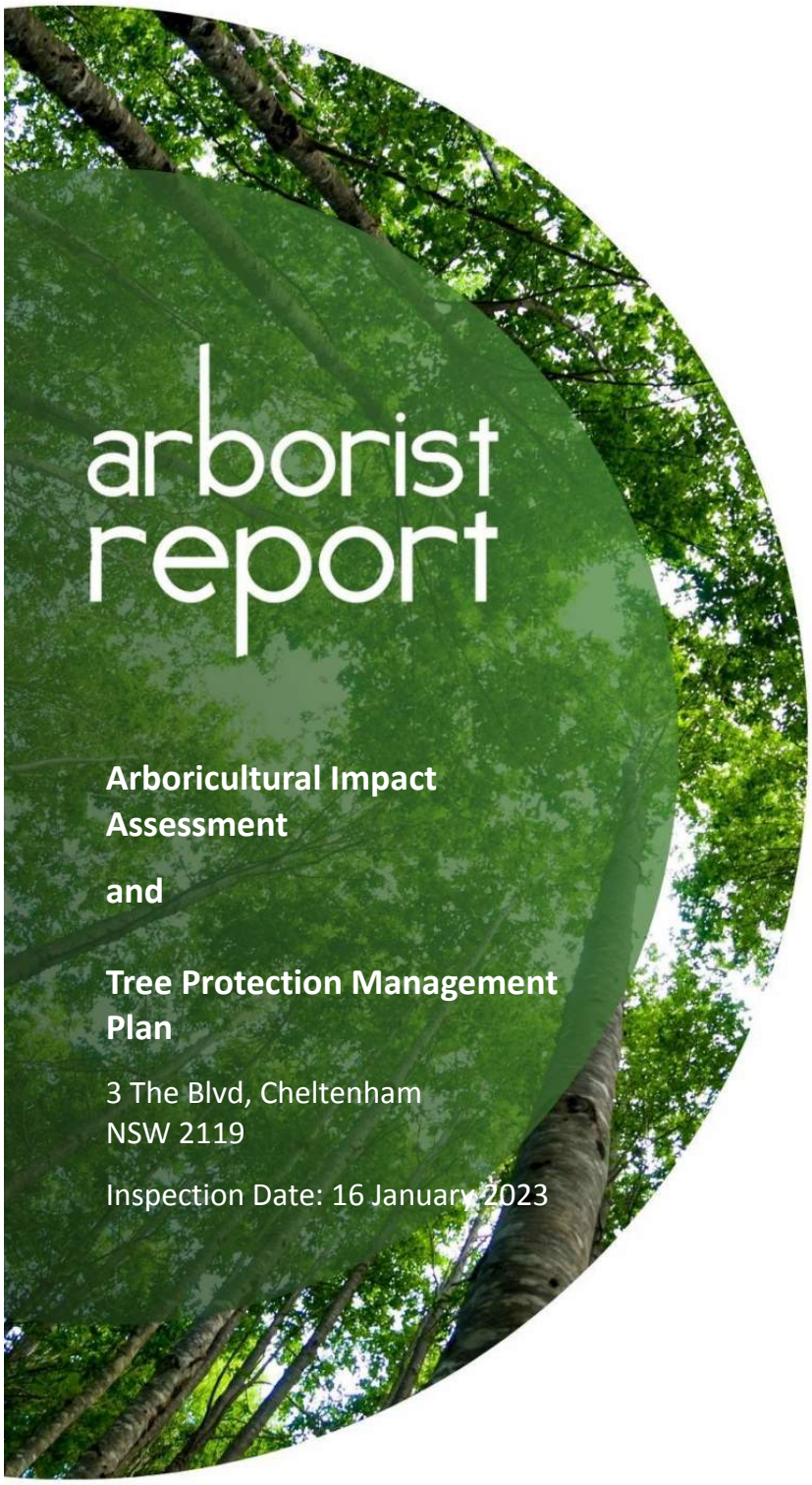
quick – guaranteed – affordable

ATTACHMENT 3 - ITEM 1

ATTACHMENT 3 - ITEM 1





canopy consulting

arborist report

Arboricultural Impact Assessment

and

Tree Protection Management Plan

3 The Blvd, Cheltenham
NSW 2119

Inspection Date: 16 January 2023

PREPARED FOR:

Jennifer Zhen Li
3 The Blvd,
Cheltenham NSW 2119

Canopy Consulting
PO Box 902
Five Dock NSW 2046

Document Information

This document must be reproduced in colour

Project Name:	**Secondary Dwelling**
Reference #:	**E-001694-23**
Client:	**Jennifer Zhen Li**
Site:	**3 The Blvd, Cheltenham NSW 2119**
Prepared by:	**Kane Hollstein** Senior Consulting Arborist Dip. Arb., AQF Level 5 ISA TRAQ | QTRA | VALID | IACA Accredited Member
Contact Details:	**Canopy Consulting** Ph: 0432 633 402 E: info@canopyconsulting.com.au

Document Status

Status	Date	Revision type
Version 1	6 February 2023	

Report Assumptions and Limitations

1. Any description or information provided to the consultant by the client or third party is assumed to be correct.
2. All information has been sourced with care and verified to the best of the consultant's knowledge. Any opinions not duly researched are based upon the consultant's experience and observations.
3. The consultant shall not be required to give testimony or attend court by reason of this report unless under a contractual agreement, including payment of additional fees and charges for such services.
4. Modification or extraction of key contextual components invalidates the entire report.
5. There is no warranty, explicit or implicit, that the problems and deficiencies associated with the site or vegetation may not arise in future.
6. Unless stated otherwise, the information contained within the report will address the items outlined in the project brief or that were examined during any site assessment and reflect the condition of those items at the time of inspection.
7. Unless otherwise specified, the inspection is limited to ground-based inspection of accessible areas without dissection, excavation or probing.
8. This report and its recommendations reflect an impartial assessment of the tree and its condition based on the available evidence and projected outcomes.

Executive Summary

The following report examines the potential arboricultural impacts of the proposed development within 3 The Blvd, Cheltenham NSW 2119. The client proposes to construct a secondary dwelling.

An inspection was undertaken by Kane Hollstein on 16 January 2023. This was undertaken to derive tree retention values within the landscape, based on any heritage, environmental and arboricultural principles.

This report is designed to provide information about the relative retention values of all trees that may be affected by the project, assess the impacts of the project and provide recommendations for alteration to design or construction methods where necessary to minimise negative impacts. The report also provides recommended tree protection measures to ensure the viable, long-term retention of trees to be retained where appropriate.

The report has applied the Australian Standard AS4970-2009 *Protection of trees on development site*s which provides radial offsets to ensure the viability of trees where they are to be retained. These offsets are known as the Tree Protection Zone (TPZ) and Structural Root Zone (SRZ). An encroachment of less than 10% of the entire TPZ is considered minor provided it is outside the SRZ, and the area lost is compensated for elsewhere and contiguous to the TPZ. A major TPZ encroachment is considered to be greater than 10% of the entire TPZ area or within the SRZ.

The trees have been allocated a significance rating and retention value as determined by using the Tree Significance - Assessment Criteria of the IACA Significance of a Tree, Assessment Rating System (STARS)© (IACA, 2010). An explanation of the attributes required to achieve each category can be found in Appendix A. The encroachment type relative to tree retention value and recommendation is summarised in Table 1.

Table 1: Impact Assessment Summary

		Retention Value			
Impact Assessment Recommendation	***Encroachment Type***	**High - Priority for Retention**	**Medium - Consider for Retention**	**Low - Consider for Removal**	**Grand Total**
Remove - project impacts	**Major**			4	4
Remove - project impacts Total				4	4
Retain - generic	**Minor**		1		1
	Nil		2		2
Retain - generic Total			3		3
Retain - generic plus	**Major**	1			1
Retain - generic plus Total		1			1
Grand Total		**1**	**3**	**4**	**8**

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A total of 7 trees (T2, 3, 7 and 8) combined under 4 tree numbers have major, unmitigable encroachments into their TPZ and SRZ for the proposed secondary dwelling and grading (cut) and require removal to facilitate the proposed development. All are of low retention value.

Tree 1, located on the adjoining property, will also suffer a major TPZ encroachment into the SRZ due to proposed fill activities. This is a high retention value tree, and efforts should be made to retain it. If the development is to proceed, the entire footprint will need to be moved south by 1m. This would result in a TPZ encroachment of 13.1% and be outside the SRZ. As the tree is in good health and condition and will be largely subject to fill activities rather than root severance, this tree will be viable for retention.

All remaining trees have a nil or minor TPZ encroachment and can be retained provided tree protection measures are installed and maintained for the duration of the project.

The proposed development would therefore see the removal of a total of 7 trees (3 individual trees and one group of 4) and the retention of 4 (Trees 1, 4, 5 and 6).

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1. Background

1.1. Introduction

Jennifer Zhen Li (the client) proposes to undertake an Arboricultural Impact Assessment and Tree Protection Management Plan at 3 The Blvd, Cheltenham NSW 2119.

The client has engaged Canopy Consulting to investigate trees adjacent to the proposed works where they may be adversely affected by the project.

The purpose of this report is to:

- identify trees within the study area
- assign retention values of all trees that may be affected within the site and those on adjoining properties
- to assess the impacts of the project
- provide recommendations for alteration to design or construction methods where necessary to minimise negative impacts
- make recommendations in accordance with Australian Standard 4970–2009: *Protection of Trees on Development Sites* to ensure the viable, long-term retention of trees to be retained where appropriate

1.2. Project Location

The proposal applies to the rear of 3 The Blvd, Cheltenham NSW 2119, more formally described as Lot 2 in DP576233 (subject site).

Existing attributes of the subject site are noted as follows:

- The total area of the subject site is 1300.5m^2
- The proposed development footprint is approximately 103.2m^2
- Vehicular access to the subject site is currently facilitated via an existing vehicle crossover and driveway, which extends from the west, along the southern boundary.
- The site is largely occupied by an existing two-storey dwelling.
- An existing terraced area was located to the east of the site where the development is proposed.
- The R.L in the proposed development footprint varies from 104.6 along the northern boundary to 106 in the southeastern corner.

Table 2: Site Information

Allotment Type	Commercial
Address	3 The Blvd, Cheltenham NSW 2119
Local Government Area (LGA)	The Council of the Shire of Hornsby
Lot & DP Number	2/-/DP576233
Zoning and Local Environment Plan (LEP)	R2 - Low-Density Residential under the Hornsby Local Environmental Plan 2013
Site/Study Area	1300.5m^2

1.3.

1.3. Project Area

The project area comprises the overall potential area of direct disturbance or impact by the project.

This may be temporary for construction or permanent for operational infrastructure and extend below the ground surface.

Note that proposed laydown areas have not been formally provided, and their impacts have not been assessed.

1.4. Reviewed Plans and Documents

This report has relied on the following plans and documents:

Table 3: Reviewed Plans and Documents

Title	Author	Dwg. No.	Revision	Date
SITE & SITE ANALYSIS PLAN	IN HOUSE GRANNY FLATS	01	3	12.12.2022
SECONDARY DWELLING GROUND FLOOR	IN HOUSE GRANNY FLATS	02	3	12.12.2022
SECONDARY DWELLING ELEVATIONS	IN HOUSE GRANNY FLATS	03	3	12.12.2022
SECONDARY DWELLING ELEVATIONS	IN HOUSE GRANNY FLATS	04	3	12.12.2022
SECONDARY DWELLING SECTION & BASIX	IN HOUSE GRANNY FLATS	05	3	12.12.2022
SEDIMENT CONTROL PLAN	IN HOUSE GRANNY FLATS	06	3	12.12.2022
CONCEPT LANDSCAPE PLAN	IN HOUSE GRANNY FLATS	07	3	12.12.2022

Title	Author	Dwg. No.	Revision	Date
DETAIL SURVEY OF LOT 2 IN DP 576233, LOCATED AT No. 3, THE BOULEVARD , CHELTENHAM.	C&A SURVEYORS	23567-22 DET	V1	21.11.2022

1.5. Development/Project Description

The proposal involves the construction of a single-storey secondary dwelling which is anticipated to include:

- Site preparation works, including tree clearing
- Earthworks (to achieve an FFL of RL 105.3 and FGL of 105.2)
- Infrastructure comprising civil works and utilities servicing
- Complementary landscaping and offset planting

The layout of the proposal is shown in Figure 1.

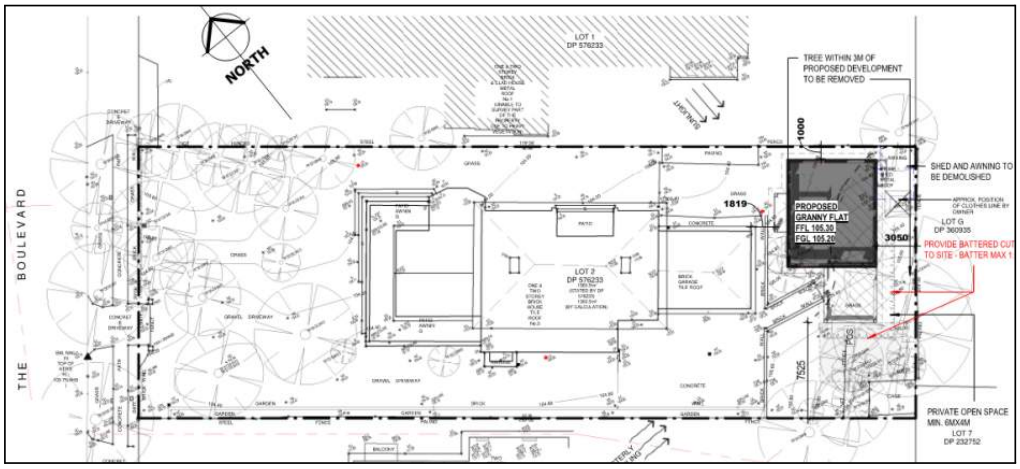

Figure 1: Site Location.

1.6. Legislative Context

The Commonwealth of Australia manages nationally significant ecological communities and heritage items regulated under the Commonwealth Environmental Protection & Biodiversity Conservation Act 1999 (EPBC Act).

The EPBC Act delegates to the NSW Biodiversity Conservation Act 2016 (BC Act), allowing state and local authorities to manage ecological and heritage matters of state or regional significance. The BC Act repealed the NSW Threatened Species Conservation Act 1995 but still has some transitional arrangements. The BC Act may require Species Impact Statement and Biodiversity Banking and Offset Scheme agreements determined by the Biodiversity Assessment Method (BAM).

NSW state planning legislation is regulated under the NSW Environmental Planning and Assessment Act 1979 (EP&A Act), which manages significant development and infrastructure in NSW. The EP&A Act utilises Environmental Planning Instruments (EPI). These instruments include State Environment Planning Policies (SEPP) that deal with matters of state or regional environmental planning significance and Local Environmental Plans (LEP) and Development Control Plans (DCP) that provide local Councils with a framework for land usage.

1.7. Planning Controls

The report has considered the provisions of the The Council of the Shire of Hornsby Local Environmental Plan 2013 (HLEP) and the The Council of the Shire of Hornsby Development Control Plan 2013 (HDCP).

1.8. Tree Management Controls

Prescribed trees within the The Council of the Shire of Hornsby are protected under Section 1B.6 of the HDCP made pursuant to Chapter 2 of the State Environmental Planning Policy (Biodiversity and Conservation) 2021 (the BCSEPP). The HDCP generally protects all trees and palms that meet the following:

- trees except exempt tree species in Hornsby Shire, as listed in Table 1B.6 (a) or subject to the Biodiversity Offset Scheme,
- all trees on land within a heritage conservation area described within the HLEP, and
- all trees on land comprising heritage items listed within the HLEP.
- A tree is defined as a long lived woody perennial plant with one or relatively few main stems with the potential to grow to a height greater than 3 metres.

1.9. Additional Legislative Protections

The following relevant Government environmental and heritage mapping and overlays have been reviewed (SEED - NSW Government, 2023). Table 4 indicates the presence of the items on site.

Table 4: Mapping Overlays

NSW OEH	Present on Site	Relevance
Threatened Ecological Communities (TEC) Greater Sydney	☐	
State Heritage Register	☐	
Biodiversity Values	☐	
DCP/LEP		
Heritage	☑	The site is within the Beecroft, Cheltenham Heritage Conservation Area. As such, all trees are protected, and no exemptions apply.
Terrestrial Biodiversity	☐	
Environmentally Sensitive Land	☐	

The site is within the Beecroft, Cheltenham Heritage Conservation Area.

The site is not mapped to contain any vegetation of heightened environmental significance.

The 10/50 Vegetation Clearing Scheme was introduced following the 2013 bushfires in which more than 200 properties were destroyed. The entitlement allows landowners within a designated 10/50 vegetation clearing entitlement area to clear trees if any part of the trunk that measures more than 30 centimetres in circumference (around the trunk) at the height of 1.3 metres above the ground, is within 10 metres of the external wall of a building (NSW Rural Fire Service, 2020). This also applies to multi-stemmed trees.

The site is not within a designated 10/50 vegetation clearing entitlement area.

The site and associated planning overlays are shown in Figure 2.

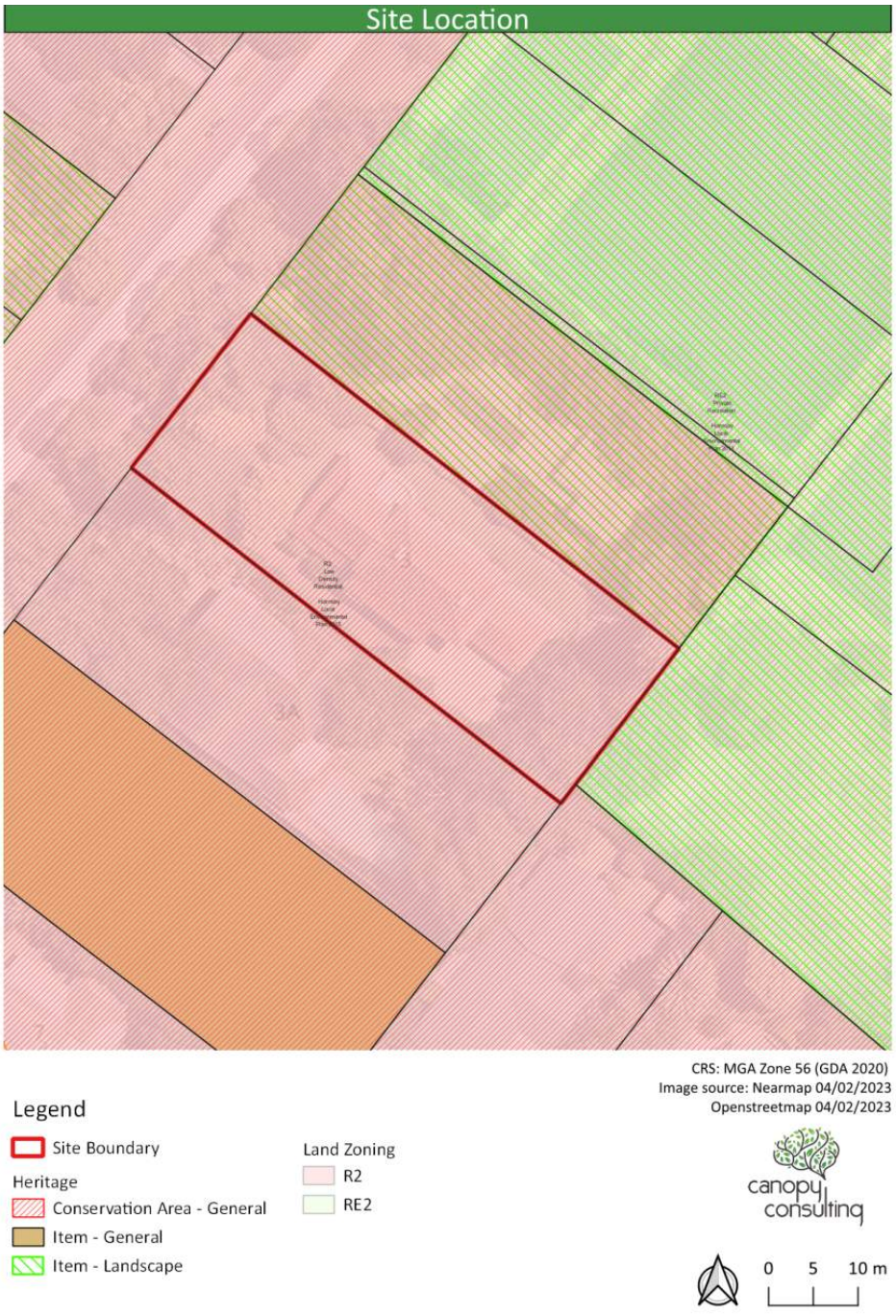

Figure 2: Site location with associated planning overlays.

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2. Scope

Detail the health and condition of site trees and those on adjoining properties that may be affected by the proposed works. This will be undertaken to derive tree retention values within the landscape based on any heritage, environmental and arboricultural principles.

Provide as an outcome of the assessment, the following:

- a description of the trees
- observations made
- retention values
- discussion of the effects the location of the proposed works may have on the trees
- make recommendations required for remedial or other works to the trees, if and where appropriate
- provide a description of the works or measures required to ameliorate the impact upon the trees to be retained; by the proposed building works or future impacts the trees may have upon the new building works if and where appropriate;
- or discuss the possible benefits of removal and replacement, if appropriate, for the medium to the long-term amenity of the site.

3. Method

3.1. Data Collection

To record the above-ground health and condition of each tree, a Visual Tree Assessment (VTA), adapted from (Lonsdale, 1999), was undertaken from ground level on 16 January 2023 by Kane Hollstein.

This involved an inspection of

- Tree health and structural condition; both long and short term
- Site conditions
- Amenity value
- Heritage value
- Habitat value
- Environmental value

All diameter measurements were taken with a diameter tape or forestry callipers. All height and canopy spread values were estimated. Any offset measurements were measured with a tape measure.

Data was collected using GIS software linked to a Trimble Catalyst DA-2 GPS antenna with 1cm-2cm accuracy in optimal GPS conditions. Where trees were located on the survey plan, the locations were corrected using the following parameters:

- Locations were corrected to the dwg survey plan where present.
- Where absent from the survey, the GPS location was used. Using this method; locations may be +- 1m due to tree canopies and GPS interference.

Proposed plans were georeferenced to the survey plan and impacts were assessed in GIS software. Some discrepancies may exist between surveyed boundaries and those provided by the NSW cadastre.

3.2. Useful Life Expectancy

Estimated remaining Useful Life Expectancy (ULE) has been derived using a modified version of the TreeAZ SULE method (Barrell, 2009). An explanation of attributes required to achieve each category can be found in Appendix A.

3.3. Retention Value

The trees have been allocated a significance rating determined using the Tree Significance - Assessment Criteria of the IACA Significance of a Tree, Assessment Rating System (STARS)©. An explanation of attributes required to achieve each category can be found in Appendix A.

Tree retention value has been assessed using the Retention Value - Priority Matrix of the IACA Significance of a Tree, Assessment Rating System (STARS) © which is a matrix assessment of landscape significance and estimated Useful Life Expectancy. An explanation of attributes required to achieve each category can be found in Appendix A.

3.4. Tree Protection Zone and Structural Root Zone

The Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) methods have been derived from the Australian Standard 4970–2009: Protection of Trees on Development Sites (Standards Australia Limited, 2009). The radius of the TPZ is calculated for each tree by multiplying its Diameter at Breast Height (DBH) by 12.

$$\text{TPZ radius} = \text{DBH} \times 12$$

In the event the crown spread of the tree extends beyond this offset; the TPZ may be adjusted to the outer extent of the crown spread.

The SRZ is the area around the base of a tree required for the tree's stability in the ground. The SRZ is nominally circular with the trunk at its centre and is expressed by its radius in metres.

$$\text{SRZ radius} = (D \times 50)^{0.42} \times 0.64$$

4. Observations

4.1. Site Soils

Site soils may deviate from their natural state due to past urban development. The site is located on the Gymea Erosional soil landscape which is described as 'undulating to rolling rises and low hills on Hawkesbury Sandstone. Local relief 20-80 m, slopes 10-25%. Rock outcrop <25%. Broad convex crests, moderately inclined sideslopes with wide benches, localised rock outcrop on low broken scarps. Extensively cleared open-forest (dry sclerophyll forest) and eucalypt woodland.' (Department of Planning, Industry and Environment, 2020)

Soils of the Gymea Erosional landscape are characterised by 'shallow to moderately deep (30-100 cm) Yellow Earths (Gn2.24) and Earthy Sands (Uc5.11, Uc5.23) on crests and inside of benches; shallow (<20 cm) Siliceous Sands (Uc1.21) on leading edges of benches; localised Gleyed Podzolic Soils (Dg4.21) and Yellow Podzolic Soils (Dy4.11, Dy5.11, Dy5.41) on shale lenses; shallow to moderately deep (<100 cm) Siliceous Sands (Uc1.21) and Leached Sands (Uc2.21) along drainage lines.' (Department of Planning, Industry and Environment, 2020)

Vegetation of this soil landscape is described as 'The original dry sclerophyll woodland and open-forest have been extensively cleared. Low, dry sclerophyll open-woodland dominates ridges and upper slopes. Common species include red bloodwood *Eucalyptus gummifera*, yellow bloodwood *E. eximia*, scribbly gum *E. haemastoma*, brown stringybark *E. capitellata* and old man banksia *Banksia serrata*. On the more sheltered slopes, black ash *E. sieberi*, Sydney peppermint *E. piperita* and smooth-barked apple *Angophora costata* are common tree species. The dry sclerophyll understorey consists of shrubs from the families Epacridaceae, Myrtaceae, Fabaceae and Proteaceae.' (Department of Planning, Industry and Environment, 2020)

4.2. Summary of Tree Observations

Complete tree attributes and observations can be found in Appendix B - Tree Assessment Schedule. A total of 11 trees were assessed under 8 tree numbers. Where trees were similar in size, species, and location and were of lower significance in the landscape, they were grouped together.

Tree 1 was located within the adjoining property to the north and was a large mature example of *Araucaria columnaris* (Cook Pine).

Trees 2 and 3 were located along the eastern boundary and were both mature *Ulmus parvifolia* (Chinese Elm). The trees exhibited a spreading habitat with elongated branches and a history of failure. Tree 3 possessed a large fractured branch in the northern crown. Given the age of the trees and developing trend of failure, both were allocated a short remaining useful life expectancy of 5-15 years.

Photos and a subset of observations can be accessed using this link.

Table 5 summarises the mix of species and origin.

Table 5: Tree Species and Origin Summary

Botanical Name	Exotic	Native	Grand Total
Araucaria columnaris		1	1
Ficus benjamina		1	1
Howea forsteriana		3	3
Rhaphiolepis indica	1		1
Ulmus parvifolia	2		2
Grand Total	**3**	**5**	**8**

Table 6 summarises the trees' legislated protection status under the HDCP. This assessment considers the size of the tree or exemption due to their species.

Table 6: Tree Legislated Protection Status

DCP Status	No. of trees	Tree Numbers
Protected	8	1 2 3 4 5 6 7 8
Exempt	0	
N/A	0	
Total	**8**	

4.3. Tree Significance

Determined using the Tree Significance - Assessment Criteria of the IACA Significance of a Tree, Assessment Rating System (STARS)© (IACA, 2010); tree 1 was determined to possess a High Landscape Significance Rating due to it being:

- in good condition and good vigour;
- having a form typical for the species;
- 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;
- 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;

Table 7: Landscape Significance Rating

Landscape Value	No. of trees	Tree Numbers
1 (High)	1	1
2 (Medium)	2	2 3
3 (Low)	5	4 5 6 7 8
4 (Environmental Pest / Noxious Weed)	0	
5 (Hazardous / Irreversible Decline)	0	
Total	**8**	

4.4. Retention Value

Determined using the Retention Value - Priority Matrix of the *IACA Significance of a Tree, Assessment Rating System* (STARS) © (IACA, 2010), which is a matrix assessment of landscape significance and estimated Useful Life Expectancy. Tree retention values are summarised in Table 8.

Table 8: Retention Value

Retention Value	No. of trees	Tree Numbers
High - Priority for Retention	4	1 6 5 4
Medium - Consider for Retention	1	8
Low - Consider for Removal	3	2 3 7
Priority for Removal	0	
Total	**8**	

4.5. High Retention Value (HRV) Trees

These trees are considered important for retention and should be retained and protected. Design modification or re-location of buildings should be considered to accommodate the setbacks as prescribed by the Australian Standard AS4970-2009 *Protection of trees on development sites*. Tree-sensitive construction must be implemented, e.g. pier and beam, etc, if works are to proceed within the Tree Protection Zone

4.6. Medium Retention Value (MRV) Trees

These trees may be retained and protected. These are considered less critical; however, their retention should remain a priority, with removal only if adversely affecting the proposed building/works and all other alternatives have been exhausted.

4.7. Low Retention Value (LRV) Trees

These trees are not important for retention, nor require special works or design modifications to be implemented for their retention.

4.8. Priority for Removal (PFR) Trees

These trees are considered hazardous, or in irreversible decline, or weeds and should be removed irrespective of development.

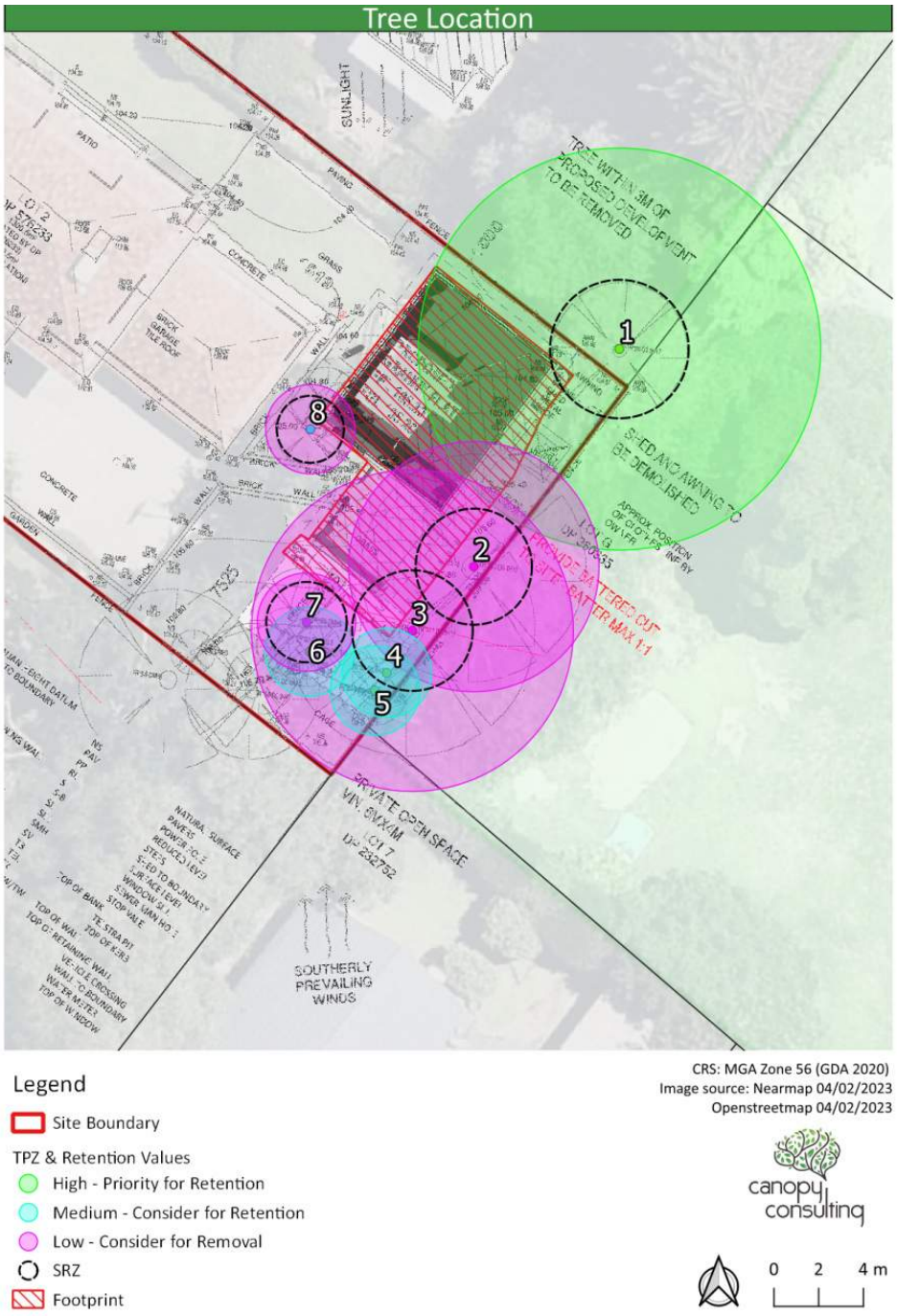

Figure 3: Map showing retention values, tree protection zones, and structural root zones, and overlaid plans.

5. Discussion

5.1. Tree Protection Zone (TPZ)

The Tree Protection Zone (TPZ) is a radial distance measured from the centre of the trunk. Application of the TPZ is intended to ensure the protection of the root system and canopy from potential damage incurred from construction works and ensure the long-term health, stability and landscape viability of each tree to be retained.

Incursions into the TPZ may occur due to excavation, modification of existing ground levels, trenching or inverting the soil profile. Such works may damage part or all of the root system or affect soil structure and growing conditions required for long-term growth.

5.2. Structural Root Zone (SRZ)

The Structural Root Zone (SRZ) is the area required for mechanical support and anchorage of a tree. The woody root growth and soil cohesion in this area are required to hold a tree upright.

Incursions into the SRZ are not recommended as they are likely to result in loss or damage to woody roots which may significantly affect stability. However, fully elevated, pier and beam type construction or hand-dug services are possible within the SRZ.

5.3. Acceptable Encroachments into the TPZ

An encroachment of less than 10% of the entire TPZ is considered minor provided it is outside the SRZ and the area lost is compensated for elsewhere and contiguous to the TPZ.

A major encroachment is considered to be greater than 10% of the entire TPZ area. Where unavoidable, exploratory excavation using non-destructive methods such as pneumatic, hydraulic or hand digging may be required to evaluate the extent of potential damage to the root system and determine whether the tree(s) will remain viable. The area lost to encroachment should be compensated for elsewhere and contiguous to the TPZ.

Additional encroachments within the TPZ are acceptable, provided the arborist can demonstrate the tree(s) will remain viable.

5.4. Impact Mitigation Measures

TPZ encroachments should be offset and mitigated using a range of possible measures to ensure impacts are minimised and, therefore, trees remain viable post construction. Mitigation measures should be increased relative to the level of encroachment within the TPZ.

AS 4970-2009 outlines the types of TPZ encroachment and mitigation measures required to ensure long-term viability, which are summarised in Table 9. These measures are only required if a tree is to be retained.

Table 9: Mitigation Measures

Encroachment Type	Mitigation Measures
Nil	• Where indirect or inadvertent encroachments may occur due to haul routes or machinery movement, tree protection should be installed.
Minor	• The area lost to encroachment must be offset elsewhere and contiguous to the TPZ. • Detailed root investigations should not be required. • Tree protection must be installed and maintained.
Major	• The Project Arborist must demonstrate the tree(s) will remain viable. • Root investigations using non-destructive methods may be required to clarify or confirm the impacts on trees to be retained. • The area lost to encroachment must be offset elsewhere and contiguous to the TPZ. • All works and excavations within the TPZ must be supervised by the Project Arborist. • Tree protection must be installed and maintained for the duration of the project. • Additional measures such as mulching or temporary irrigation may be required.

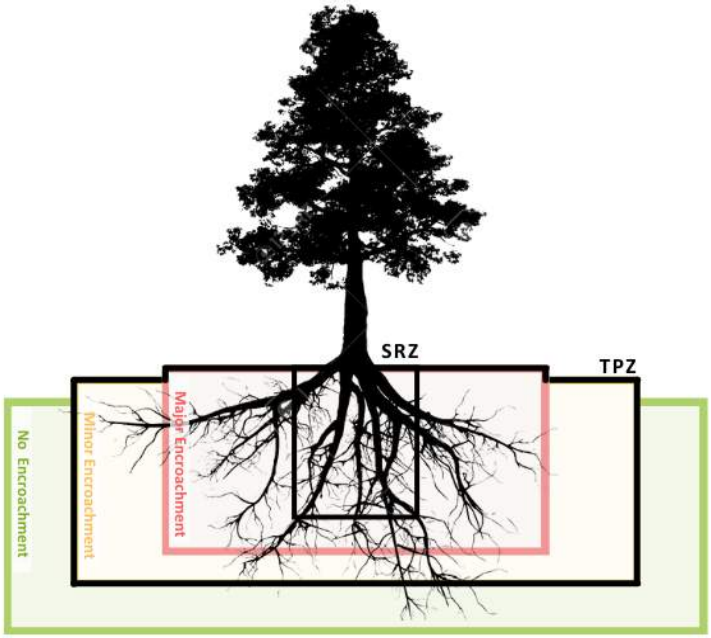

Figure 4: Indicative zones of TPZ and SRZ encroachment.

5.5. Impact Assessment

The following criteria have been considered to determine the impact on site trees that may occur due to the proposed development:

- Existing ground levels (R.L)
- Footprint of the proposed development, temporary structures, and laydown areas.
- Extent of the TPZ/SRZ
- Incursion into the TPZ, including any cut, fill, benching and shoring activities beyond the development footprint.
- Incursions to the tree canopy from the building or temporary structures (scaffolding)
- Existing site and soil conditions

The impacts of the proposed development are summarised in Table 10[1].

Table 10: Impact Assessment Summary

		Retention Value			
Impact Assessment Recommendation	*Encroachment Type*	High - Priority for Retention	Medium - Consider for Retention	Low - Consider for Removal	Grand Total
Remove - project impacts	Major			4	4
Remove - project impacts Total				4	4
Retain - generic	Minor		1		1
	Nil		2		2
Retain - generic Total			3		3
Retain - generic plus	Major	1			1
Retain - generic plus Total		1			1
Grand Total		**1**	**3**	**4**	**8**

A total of 7 trees (T2, 3, 7 and 8) combined under 4 tree numbers have major, unmitigable encroachments into their TPZ and SRZ for the proposed secondary dwelling and grading (cut) and require removal to facilitate the proposed development. All are of low retention value.

[1] No tree protection measures may be recommended as the tree(s) are outside the expected area of construction.
Generic tree protection measures include tree protection fencing, trunk and/or branch protection and restriction of activities within the TPZ.
Genric plus protection measures include generic tree protection measures plus supervision of works within the TPZ and may include, in combination:

- The use of root sensitive construction techniques
- Design revision
- Routing services outside the TPZ
- Root mapping

Tree 1, located on the adjoining property, will also suffer a major TPZ encroachment into the SRZ due to proposed fill activities. This is a HRV tree and efforts should be made to retain it. If the development is to proceed, the entire footprint will need to be moved south by 1m. This would result in a TPZ encroachment of 13.1% and be outside the SRZ. As the tree is in good health and condition and will be largely subject to fill activities rather than root severance, this tree will be viable for retention.

All remaining trees have a nil or minor TPZ encroachment and can be retained provided tree protection measures are installed and maintained for the duration of the project.

The proposed development would therefore see the removal of a total of 7 trees (3 individual trees and one group of 4) and the retention of 4.

Table 11: Impact Assessment Schedule

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Impact Assessment Recommendation	Additional Tree Protection Measures
1	High - Priority for Retention	TPZ encroachment for footprint, level changes (fill) and/or grading (16.00%) which enters the SRZ	Major	As the encroachment will enter the SRZ, the tree will not remain viable. However, if the entire construction is moved to the south, the encroachment will marginally exceed 10% and be outside the SRZ. Given the good health of the tree and species characteristics, this will be acceptable	Retain - generic plus	Move entire built form to the south, outside the SRZ providing a buffer of at least 1m
2	Low - Consider for Removal	TPZ encroachment for footprint, level changes and/or grading (37.00%) which enters the SRZ	Major	The tree will become destabilised due to the type and level of encroachment and is therefore not viable for retention	Remove - project impacts	
3	Low - Consider for Removal	TPZ encroachment for footprint, level changes and/or grading (24.00%) which enters the SRZ	Major	The tree will become destabilised due to the type and level of encroachment and is therefore not viable for retention	Remove - project impacts	
4	Medium - Consider for Retention	TPZ encroachment for footprint, level changes and/or grading (1.00%)	Minor	No significant impact expected provided tree protection measures are installed and maintained	Retain - generic	
5	Medium - Consider for Retention	No direct encroachment	Nil	No significant impact expected provided tree protection measures are installed and maintained	Retain - generic	
6	Medium - Consider for Retention	No direct encroachment	Nil	No significant impact expected provided tree protection measures are installed and maintained	Retain - generic	
7	Low - Consider for Removal	TPZ encroachment for footprint, level changes and/or grading (5.00%) which enters the SRZ	Major	The tree will become destabilised due to the type and level of encroachment and is therefore not viable for retention	Remove - project impacts	

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Impact Assessment Recommendation	Additional Tree Protection Measures
8	Low - Consider for Removal	TPZ encroachment for footprint, level changes and/or grading (18.00%) which enters the SRZ	Major	Trees are within the footprint of the proposed design and are therefore not viable for retention	Remove - project impacts	

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ATTACHMENT 4 - ITEM 1

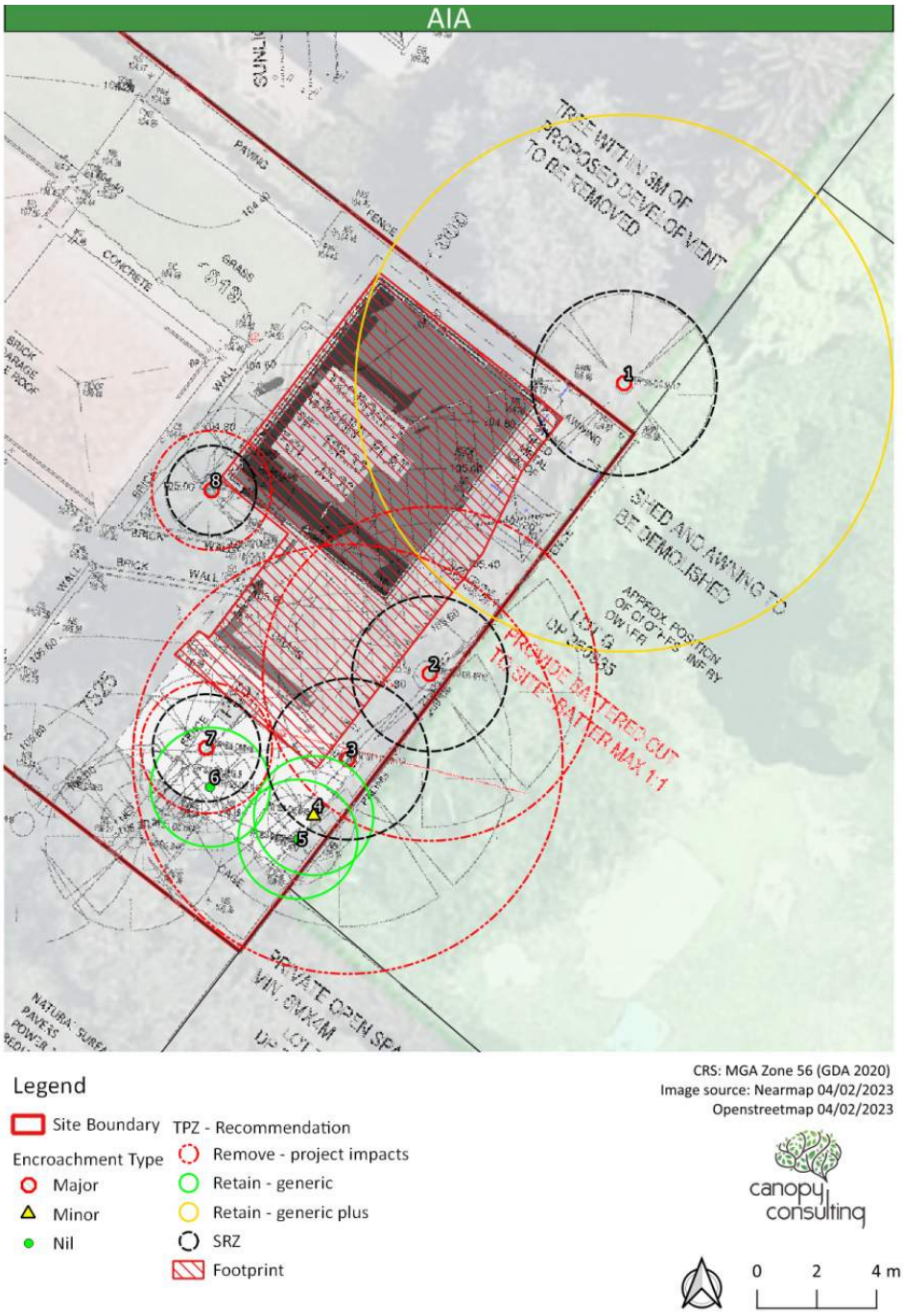

Figure 5: Impact Assessment

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6. Recommendations

6.1. Project Arborist

An official "Project Arborist" must be commissioned to oversee the tree protection, and any works within the TPZs and complete regular monitoring compliance certification.

The project arborist must have a minimum of five (5) years of industry experience in arboriculture, horticulture with relevant demonstrated experience in tree management on construction sites, and Diploma level qualifications in arboriculture – AQF Level 5.

6.2. Tree Retention and Removal

The recommendations of this report do not constitute consent to remove trees subject to this report. The council or consent authority should be contacted prior to undertaking works as consent may be required to remove and/or prune the tree(s).

Table 12 summarises tree removal and retention and is shown in Appendix C - Tree Protection Management Plan. The proposed development would therefore see the removal of a total of 7 trees (3 individual trees and one group of 4) and the retention of 4.

Table 12: Tree Retention and Removal

Recommendation	No. of tree	Tree Numbers
Remove - project impacts	4	2 3 7 8
Remove - irrespective	0	
Retain - generic	3	4 5 6
Retain - generic plus	1	1
Total	**8**	

Trees marked for removal are to be physically marked with paint prior to site establishment as per the approved TPMP. Before removal, the Project Arborist must confirm that all marked trees correspond with those shown in Appendix B - Tree Assessment Schedule and Appendix C – Tree Protection Management Plan.

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Tree removal is to be carried out prior to the erection of protection fencing. Under no circumstances are trees marked for retention within protection areas to be damaged. Vehicles and heavy machinery used by contractors are also to be kept clear of these protection areas.

Stumps to be removed from within protection areas are to be removed in a manner that avoids damaging or disturbing roots of trees to be retained. This may include stump grinding or careful 'picking' of the stumps with machinery. Both methods are to be approved by the Project Arborist.

6.3. Generic Tree Protection

Generic tree protection measures are recommended to restrict construction activities within the TPZ which may adversely affect the health and condition of a tree to be retained. In order of precedence, the following is required for trees to be retained and is shown in Appendix C - Tree Protection Management Plan

1. Install TPZ fencing and signage. Where impractical;
2. Install trunk and ground protection where machine access is required.

Notes:

- All activities within the fenced TPZ are to be supervised by the project arborist.
- TPZ fencing is not to be moved.

6.4. Specific Tree Protection Measures

The following specific tree protection measures are required if tree 1 is to be retained. These measures are to be read in conjunction with Appendix C – Tree Protection Management Plan (TPMP). The TPMP indicates the position of tree protection devices and other measures to ensure the protection of trees within the site to be retained as part of the proposed development.

Tree 1, located on the adjoining property, will suffer a major TPZ encroachment into the SRZ due to proposed fill activities. If the development is to proceed, the entire footprint will need to be moved south by 1m. This would result in a TPZ encroachment of 13.1% and be outside the SRZ. As the tree is in good health and condition and will be largely subject to fill activities rather than root severance, this tree will be viable for retention.

6.5. Tree Pruning

No tree pruning is anticipated. In the event pruning is required, consent from council will be required. In addition:

- Trees are to be pruned in accordance with AS 4373-2007: *Pruning of Amenity Trees* (Standards Australia, 2007).
- Trees are to be dismantled and/or removed in such a manner as to avoid damage to adjacent or understory vegetation and structures.

- All pruning works should be completed by a minimum AQF Level 3 Arborist or under direct supervision thereof.

6.6. Compliance Inspection and Reporting

Compliance inspections are recommended to be completed on a **quarterly** basis through the construction stage.

Following each inspection, the project arborist shall prepare a document detailing the condition of the trees. These documents should certify whether the works have been completed in compliance with the approved consent conditions relating to tree protection. These reports should contain photographic evidence where necessary.

Inspections are to be conducted by the project arborist at several key points during the construction in order to ensure that protection measures are being adhered to during the construction stages and decline in tree health or additional remediation measures can be identified.

Any works within tree protection zones are to be monitored and supervised by the Project Arborist.

6.7. Compliance and Certification Reporting – Hold Points

The following project milestones are recommended to be carried out by the project arborist. These inspections are summarised below and expanded upon in the following sections.

Table 13: Compliance and Certification Table

Construction Stage	Task	Responsibility	Certification	Timing of Inspection
Pre-construction	Indicate clearly (with spray paint or tape on trunks) trees approved for removal only	Principal Contractor	Project Arborist	Prior to site establishment
	Install tree protection measures			
	Induct construction staff into Tree Protection Management Plan			
During Construction	Supervise all excavation works proposed within the TPZ of trees to be retained			As required prior to the works proceeding adjacent to trees to be retained
	Inspection of trees by Project Arborist			Quarterly during construction period
Post-construction	Final Inspection of trees by Project Arborist			Following practical completion of works

6.8. Exploratory Root Investigation

Where trees are intended to be retained, and potential works areas may enter the TPZ or SRZ, determining root location and, therefore the impact on the trees is an important process. This will apply to any services which are proposed to be excavated within the TPZ of trees to be retained.

Exploratory root excavation should be undertaken in a manner that causes the least amount of damage to root material in the process. This may include the use of air excavation (air-spade) or hydro or dry-vac excavation. Root investigations should be undertaken at pre-agreed locations that will most effectively guide the design.

Findings of the root investigation should be compiled into a report which identifies significant roots that should be retained and less significant roots that may be appropriate for severance. The size and volume of roots which may be cut must be assessed by an arborist and consider tree physiology, existing site and soil conditions and species traits and tolerance of root pruning.

6.9. Demolition of Existing Hard Stand Areas

Demolition of existing hard stand areas within the TPZ of trees to be retained may be undertaken using machinery but must be under the supervision of the Project Arborist. Demolition of the ground surfaces must be undertaken from existing hard stand areas or ground protection and should commence at the outer extent of the existing surface material and move away from trees to be retained.

6.10. Fill within Tree Protection Zones

Where unavoidable, fill placed within TPZ of trees to be retained shall be well-drained material equivalent or finer in texture than the existing site topsoil material and should comply with AS 4419:2003 *Soils for Landscaping and Garden Use*.

The fill can be lightly consolidated but not to engineering standards. If fill is to be placed by machinery, this must be done from outside the TPZ or from existing hard stand areas. Alternatively, ground, trunk and branch protection may be used to facilitate machine access.

6.11. Offset Planting

Any tree approved to be removed from a site should be replaced with a tree of like habit and indigenous to the LGA where possible, planted as near as practicable to the location of the removed tree, grown to maturity and replaced if the planting fails to survive and thrive.

Trees should be sourced from a reputable nursery with stock grown to NATSPEC and Australian Standard AS 2303:2018 *Tree Stock for Landscape Use* criteria.

Trees should be a minimum of 75L pot size at the time of planting.

The trees should be planted and mulched with suitably composted, natural, hardwood mulch as per Figure 6.

Figure 6: Recommended tree planting process. (Arbor Day Foundation, 2020)

6.12. Landscaping Works within Tree Protection Zones

The landscape plan is to be checked for compliance with the TPMP. Staged removal of tree protection methods may be required to facilitate landscaping works.

Any landscaping works within the TPZ of trees to be retained are to be under the direct supervision of the Project Arborist. These may include but are not limited to; retaining walls, irrigation and lighting systems, topdressing, planting and paving.

Any landscaping works requiring excavation for drainage or the like is to be undertaken using non-destructive methods previously described.

6.13. Trenching for Installation of Underground Services

All underground services should be routed outside the TPZ of trees to be retained. Where unavoidable, services may be installed via alternative methods which may include tree sensitive

excavation or Horizontal Directional Drilling (HDD). Where HDD is used, entry and exit pits are to be located outside the TPZ of trees to be retained.

Where excavation or trenching is required to facilitate the installation of underground services within the TPZs of any site trees arborist supervision is required. Works should be undertaken using techniques that are sensitive to tree roots to avoid unnecessary damage. Such techniques include

- Excavation by hand
- Excavation using a high-pressure water jet and vacuum truck
- Excavation using an Air Spade with a vacuum truck.

Machine excavation is prohibited within the TPZs of retained trees unless undertaken at the direct consent from the project arborist and/or the responsible authority.

Where a situation occurs that a significant root (root greater than >50 mm diameter) requires pruning or removal, the root is to be severed with a sharp saw implement by or under the instruction of the Project Arborist.

7. Tree Protection – Pre-Construction

7.1. Site Establishment

The Project Arborist is to be provided a copy of the Construction Management Plan (CMP) to check for compliance with the TPMP. The CMP should ensure that site sheds, haul roads, laydown areas and sediment control are located outside the TPZ of trees to be retained.

At the completion of site establishment, the Project Arborist is to certify that tree protection measures comply with the TPMP.

7.2. Tree Protection Zone Fencing

Protective fencing is to be installed as per Appendix C – Tree Protection Management Plan. Fencing is to comply with Australian Standard AS 4687-2007 Temporary fencing and hoardings (Standards Australia, 2007).

Once erected, protective fencing must not be removed or altered without approval from the project arborist. The TPZ fencing should be secured to restrict access.

TPZ fencing is to be a minimum of 1.8m high and mesh or wire between posts must be highly visible. Fence posts and supports should have a diameter greater than 20mm and should ideally be freestanding, otherwise be located clear of the roots.

Tree protection fencing must remain intact throughout all proposed construction works and must only be dismantled after their conclusion. The temporary dismantling of tree protection fencing must only be done with the authorisation of the Project Arborist and/or the responsible authority.

An example of tree protection fencing is shown in Figure 7.

Any works to be undertaken within the Tree Protection Zone fencing are to be monitored and certified by the project arborist.

Legend:

1. Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.
2. Alternative plywood or wooden paling fence panels. The fencing material also prevents building materials or soil entering the TPZ.
3. Mulch installation across the surface of TPZ (at the discretion of the project arborist). No excavation, construction activity, grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ.
4. Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

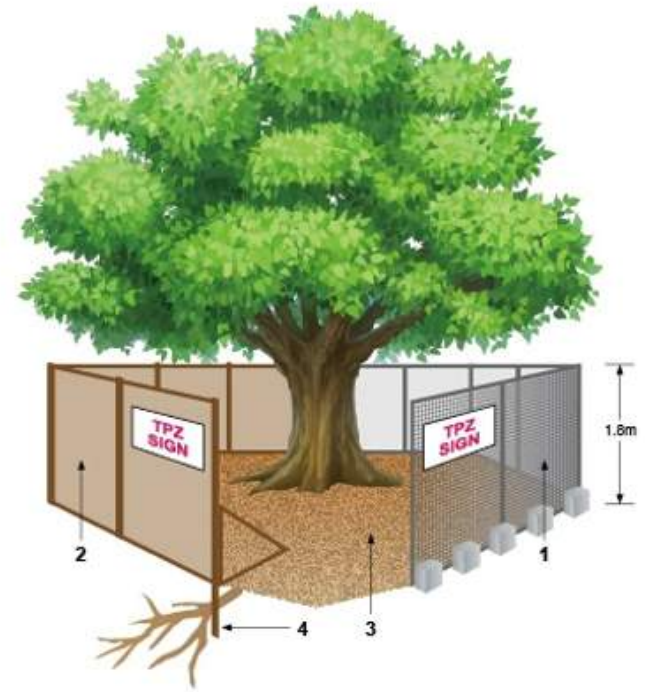

Figure 7: Recommended tree protection fencing measures. (Standards Australia, 2009)

7.3. Prohibited Activities within the TPZ

Activities generally excluded from the TPZ included but are not limited to-

a) Machine excavation including trenching;
b) Excavation for silt fencing;
c) cultivation;
d) storage;
e) preparation of chemicals, including preparation of cement products;
f) parking of vehicles and plant;
g) refuelling;
h) dumping of waste;
i) wash down and cleaning of equipment;
j) placement of fill;
k) lighting of fires;
l) soil level changes;
m) temporary or permanent installation of utilities and signs, and

n) physical damage to the tree.

7.4. Tree Protection Signs

Signs identifying the TPZ are to be installed on the tree protection fencing in 10m intervals. An example is shown below in Figure 8.

Figure 8: Example of tree protection signage. (Standards Australia, 2009)

7.5. Sediment Control

Sediment control within tree protection zones is to be installed to avoid below ground excavation as this may damage roots. Coir logs installed above grade that are pinned to avoid roots are an acceptable method.

7.6. Ground, Trunk and Branch Protection

If temporary access for machinery is required within the TPZ of trees to be retained, ground protection measures will be required. The purpose of ground protection is to prevent root damage and soil compaction. Measures may include a permeable membrane such as geotextile fabric beneath a 100mm thick layer of mulch or crushed rock below rumble boards, or steel plates or track mats as per Figure 9.

Tree trunk/s and/or major branches located within close proximity to works must be wrapped with protective hessian or similar acceptable material to prevent tree injury. Major branches would typically be considered to be of a diameter greater than 100mm diameter.

Timber battens (50 mm x 100 mm x 2000mm or similar) must be placed around tree trunks with battens spaced at 100 mm intervals and fixed against the trunk using metal or durable plastic strapping with connections appropriately finished or covered to protect pedestrians from snagging injury. The hessian and timber battens must not be fixed to the tree. Tree trunk and major branch protection are to remain in place for the duration of works and must be removed at the completion of the project.

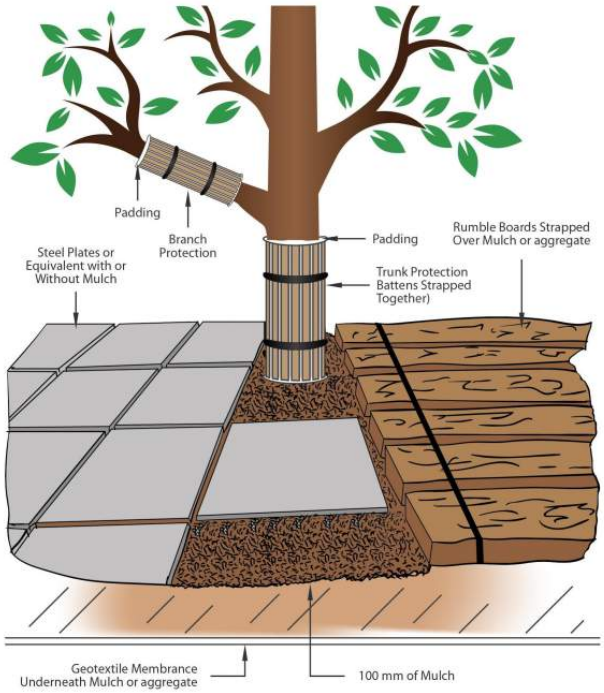

Figure 9: Details of trunk, branch and ground protection. (Standards Australia, 2009)

7.7. Scaffolding

Where scaffolding is required it should be erected outside the TPZ. Where it is essential for scaffolding to be erected within the TPZ, branch removal should be minimised. This can be achieved by designing scaffolding to avoid branches or tying back branches. Where pruning is unavoidable it must be specified by the project arborist in accordance with AS 4373-2007 Pruning of Amenity Trees. NOTE: Pruning works will require approval by determining authority.

The ground below the scaffolding should be protected by boarding (e.g. scaffold board or plywood sheeting) as shown in Figure 10. Where access is required, a boardwalk or other surface material should be installed to minimise soil compaction. Boarding should be placed over a layer of mulch and impervious sheeting to prevent soil contamination. The boarding should be left in place until the scaffolding is removed.

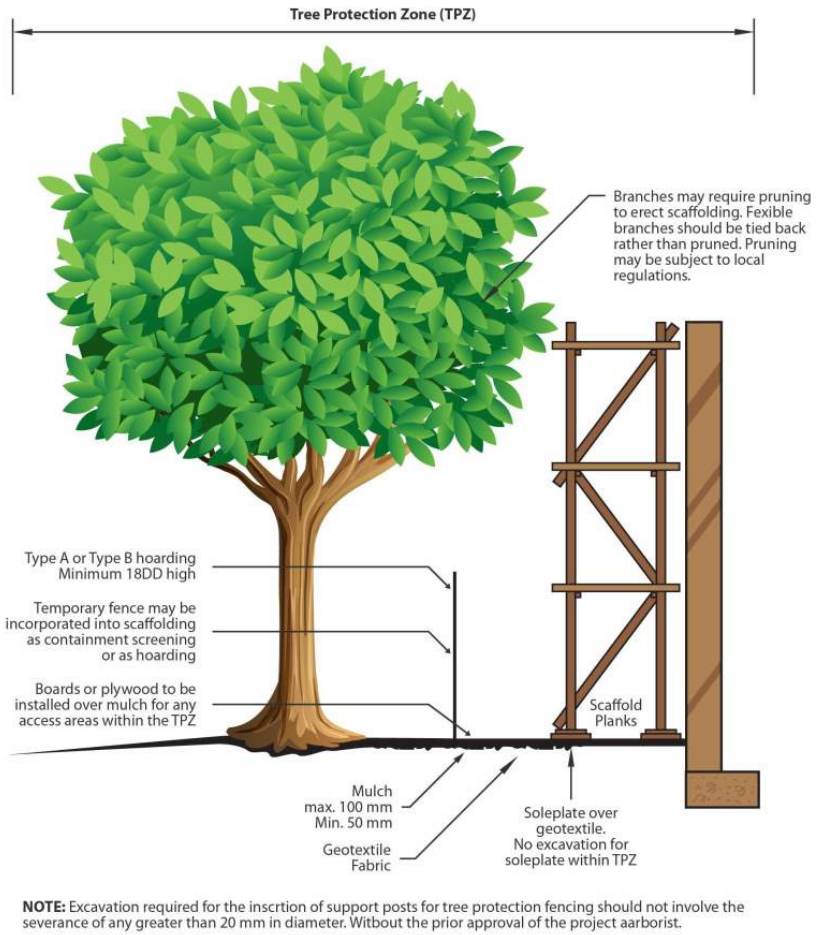

Figure 10: Details of scaffold installation. (Standards Australia, 2009)

8. Tree Protection Methodology – Construction Stage

8.1. Excavations Within Tree Protection Zones

The Project Arborist is to monitor the impacts of demolition, bulk earthworks, and installation of temporary infrastructure including building, sediment control and drainage works.

Where the extent of encroachment is less than 10% of the TPZ, including any excavations for benching and shoring, excavation may be undertaken using conventional construction methods. 10% of the TPZ is equivalent to one-third of the TPZ radius on one side as shown in Figure 11.

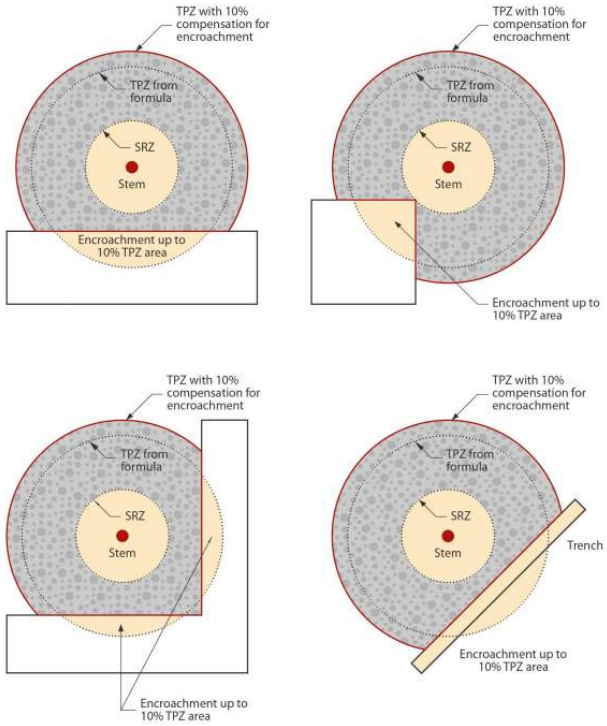

Figure 11: Example of permissible encroachment into the TPZ. (Standards Australia, 2009)

Where the encroachment is to be greater than 10% of the TPZ and prior to any mechanical excavations for building foundations, shoring, retaining wall or pavement subgrade within the TPZ of trees to be retained; exploratory excavation using non-destructive methodology shall be undertaken at the perimeter of the structure, excavation required for shoring, retaining wall or pavement subgrade within the TPZ.

Such techniques include:

- Excavation by hand
- Excavation using a high-pressure water jet and vacuum truck
- Excavation using an Air Spade with a vacuum truck.

The non-destructive excavation shall be undertaken at the outer limits of the structure to the depth of the foundation or excavation, or to a maximum of 800mm below existing surface levels. All care must be taken to prevent the damage or severance of roots greater than 50mm in diameter. Any roots encountered that are less than 50mm in diameter may be cleanly severed with a sharp pruning implement at the interface of the excavation nearest the tree. The exposed root zone is to be kept moist by way of geotextile or hessian placed along the open interface of the excavation nearest the tree.

Where roots greater than 50mm in diameter are encountered during exploratory excavation, advice from the Project Arborist shall be sought.

8.2. Tree Damage

Care is to be taken when operating cranes, piling rigs or similar near trees to avoid damage to tree canopies. Under no circumstances are branches to be torn off by construction equipment.

9. Tree Protection – Post-construction

9.1. Defects Liability Period

Completion of outstanding building or landscaping works following the construction period must not injure trees.

9.2. Final Certification

The final inspection by the Project arborist should detail the health and condition of the trees and their growing environment and provide recommendations for any necessary remedial actions. These actions may include pruning in accordance with AS 4373-2007 *Pruning of amenity trees* and/or soil remediation to repair the growing environment.

On project completion, the project arborist shall certify in writing to the Certifying Authority that the conditions of consent relating to tree protection, tree removal, pruning and planting of new trees have been complied with or, if the conditions have been contravened, detail the extent and nature of the departure from the conditions and their impacts on trees.

10. References

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11. Appendix A - IACA Significance of a Tree, Assessment Rating System (STARS) ©

Tree Landscape Significance - Assessment Criteria

1. High Significance in landscape	2. Medium Significance in landscape	3. Low 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.	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*.	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. **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 for individual trees only, however, can be applied to a monocultural stand in its entirety e.g. hedge.

Estimated Life Expectancy

1. Long	2. Medium	3. Short	4. Remove
Trees that appear to be retainable with an acceptable level of risk for more than 40 years. Structurally sound trees located in positions that can accommodate future growth. Storm damaged or defective trees that could be made suitable for retention in the long term by remedial tree surgery. Trees of special significance for historical, commemorative, or rarity reasons that would warrant extraordinary efforts to secure their long-term retention.	Trees that appear to be retainable with an acceptable level of risk for 15-40 years. Trees that may only live between 15 and 40 more years. Trees that may live for more than 40 years but would be removed to allow the safe development of more suitable individuals. Trees that may live for more than 40 years but would be removed during the course of normal management for safety or nuisance reasons. Storm damaged or defective trees that require substantial remedial work to make safe and are only suitable for retention in the short term.	Trees that appear to be retainable with an acceptable level of risk for 5-15 years. Trees that may only live between 5 and 15 more years. Trees that may live for more than 15 years but would be removed to allow the safe development of more suitable individuals. Trees that may live for more than 15 years but would be removed during the course of normal management for safety or nuisance reasons. Storm damaged or defective trees that require substantial remedial work to make safe and are only suitable for retention in the short term.	Trees with a high level of risk that would need removing within the next 5 years. Dead trees. Trees that should be removed within the next 5 years. Dying or suppressed or declining trees through disease or inhospitable conditions. Dangerous trees through instability or recent loss of adjacent trees. Dangerous trees through structural defects, including cavities, decay, included bark, wounds, or poor form. Damaged trees that are considered unsafe to retain. Trees that could live for more than 5 years but may be removed to prevent interference with more suitable individuals or to provide space for new planting. Trees that will become dangerous after removal of trees for other reasons.

Tree Retention Value – Priority Matrix

		Landscape Significance Rating				
		1 (High)	2 (Medium)	3 (Low)	4 (Environmental Pest / Noxious Weed)	5 (Hazardous / Irreversible Decline)
Estimated Life Expectancy	Long (>40)	High - Priority for Retention	High - Priority for Retention	Medium - Consider for Retention	Low - Consider for Removal	Priority for Removal
	Medium (15-40)	High - Priority for Retention	Medium - Consider for Retention	Medium - Consider for Retention / Low - Consider for Removal	Low - Consider for Removal	Priority for Removal
	Short (5-15)	Low - Consider for Removal	Low - Consider for Removal	Low - Consider for Removal	Priority for Removal	Priority for Removal
	Dead Or Hazardous (0-5)	Low - Consider for Removal	Priority for Removal	Priority for Removal	Priority for Removal	Priority for Removal

Legend for Matrix Assessment

High - Priority for Retention	These trees are considered important for retention and should be retained and protected. Design modification or re-location of buildings should be considered to accommodate the setbacks as prescribed by the Australian Standard AS4979 *Protection of trees on development sites*. Tree-sensitive construction must be implemented, e.g. pier and beam, etc if works are to proceed within the Tree Protection Zone
Medium - Consider for Retention	These trees may be retained and protected. These are considered less critical; however, their retention should remain a priority with removal considered only if adversely affecting the proposed building/works and all other alternatives have been considered exhausted.
Low - Consider for Removal	These trees are not 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.

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12. Appendix B - Tree Assessment Schedule

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Tree no.	Botanical Name	Common Name	Trees in group	DBH Total (cm)	DRB (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Vigour	Structural Condition	Age Class	ULE (Yrs.)	Observations	Comments	DCP Status	Origin	STARS Significance Rating	Retention Value	Impact Assessment Recommendation	Additional Tree Protection Measures
1	*Araucaria columnaris*	Cook Pine	1	75	87	9.0	254.5	3.1	23	6	Good	Good	Mature	Long (>40)	Deadwood minor (<3cm diameter)	Located in adjoining property to north. DRB estimated due to access.	Protected	Native	1 (High)	High - Priority for Retention	Retain - generic plus	Move entire built form to the south, outside the SRZ providing a buffer of at least 1m
2	*Ulmus parvifolia*	Chinese Elm	1	47	57	5.6	99.9	2.6	10	10	Good	Fair	Mature	Short (5-15)	Deadwood moderate (3-10cm diameter), Epicormic shoots, Hanger(s), Over-extended branch(es), Poor pruning, Previous failure(s), Wound(s)	Crown skewed to north due to tree 3. Hanging branches located in the eastern crown over grass. Tree within 0.5m on timber fence. Tree showing early signs of branch shedding with elongated branches and largest sized previous failure.	Protected	Exotic	2 (Medium)	Low - Consider for Removal	Remove - project impacts	
3	*Ulmus parvifolia*	Chinese Elm	1	60	63	7.2	162.9	2.7	10	11	Good	Poor	Mature	Short (5-15)	Crack or split, Crossing/rubbing branches, Deadwood moderate (3-10cm diameter), Epicormic shoots, Over-extended branch(es), Poor pruning, Previous failure(s), Wound(s)	Crown skewed to west due to tree 2. Large cracked branch in western crown at 7m over path. Tree within 0.5m on timber fence. Tree showing early signs of branch shedding with elongated branches and largest sized previous failure and currently fractured branch.	Protected	Exotic	2 (Medium)	Low - Consider for Removal	Remove - project impacts	
4	*Howea fosteriana*	Kentia Palm	1	15	0	2.0	12.6		5	4	Good	Good	Semi-mature	Long (>40)			Protected	Native	3 (Low)	Medium - Consider for Retention	Retain - generic	
5	*Howea fosteriana*	Kentia Palm	1	15	0	2.0	12.6		6	4	Good	Good	Semi-mature	Long (>40)			Protected	Native	3 (Low)	Medium - Consider for Retention	Retain - generic	
6	*Howea fosteriana*	Kentia Palm	1	13	0	2.0	12.6		7	4	Good	Good	Semi-mature	Long (>40)			Protected	Native	3 (Low)	Medium - Consider for Retention	Retain - generic	
7	*Ficus benjamina*	Weeping Fig	1	18.36	24	2.2	15.2	1.8	7	5	Good	Good	Juvenile	Short (5-15)		Tree of very large size potential that should be considered for removal whilst young. Variegated cultivar.	Protected	Native	3 (Low)	Low - Consider for Removal	Remove - project impacts	
8	*Rhaphiolepis indica*	Indian Hawthorn	4	6.4	13	2.0	12.6	1.5	3	2	Good	Good	Mature	Medium (15-40)	Co-dominant stems	Group of 4 small trees in garden bed.	Protected	Exotic	3 (Low)	Low - Consider for Removal	Remove - project impacts	

ATTACHMENT 4 - ITEM 1

13. Appendix C – Tree Protection Management Plan

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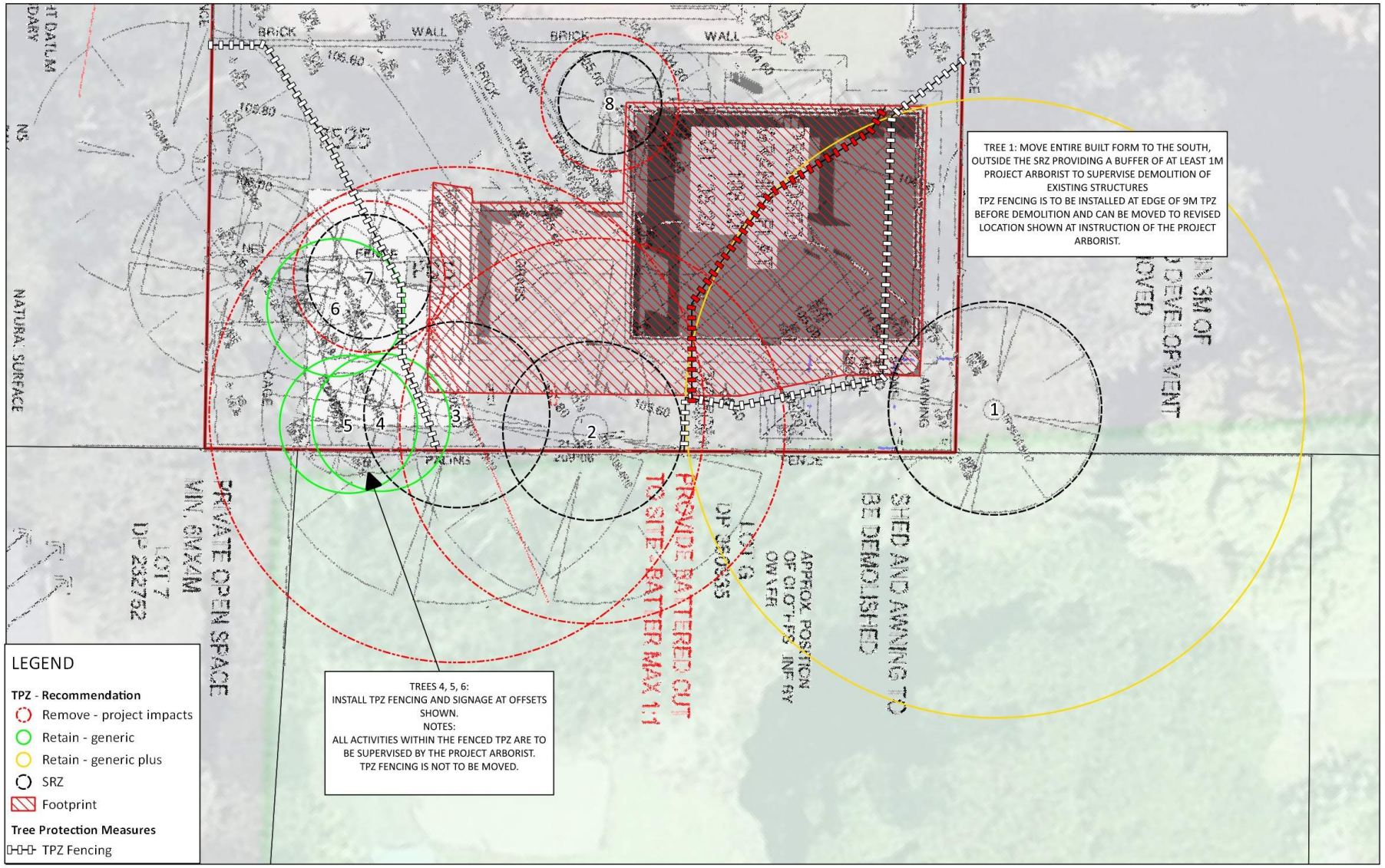


ATTACHMENT 4 - ITEM 1

TREE PROTECTION MANAGEMENT PLAN
3 THE BLVD, CHELTENHAM NSW 2119

GENERAL

PROJECT ARBORIST

AN OFFICIAL "PROJECT ARBORIST" MUST BE COMMISSIONED TO OVERSEE THE TREE PROTECTION, ANY WORKS WITHIN THE TPZ'S AND COMPLETE REGULAR MONITORING COMPLIANCE CERTIFICATION.
THE PROJECT ARBORIST MUST HAVE MINIMUM FIVE (5) YEARS INDUSTRY EXPERIENCE IN THE FIELD OF ARBORICULTURE, HORTICULTURE WITH RELEVANT DEMONSTRATED EXPERIENCE IN TREE MANAGEMENT ON CONSTRUCTION SITES, AND DIPLOMA LEVEL QUALIFICATIONS IN ARBORICULTURE – AQF LEVEL 5.

GENERIC TREE PROTECTION

GENERIC TREE PROTECTION MEASURES ARE RECOMMENDED TO RESTRICT CONSTRUCTION ACTIVITIES WITHIN THE TPZ WHICH MAY ADVERSELY AFFECT THE HEALTH AND CONDITION OF A TREE TO BE RETAINED. IN ORDER OF PRECEDENCE, THE FOLLOWING IS REQUIRED FOR ALL TREES.
INSTALL TPZ FENCING AND SIGNAGE PER THE TPMP. WHERE IMPRACTICAL;
INSTALL TRUNK AND GROUND PROTECTION WHERE MACHINE ACCESS IS REQUIRED.
NOTES:
ALL ACTIVITIES WITHIN THE FENCED TPZ ARE TO BE SUPERVISED BY THE PROJECT ARBORIST.
TPZ FENCING IS NOT TO BE MOVED.

COMPLIANCE INSPECTION AND REPORTING

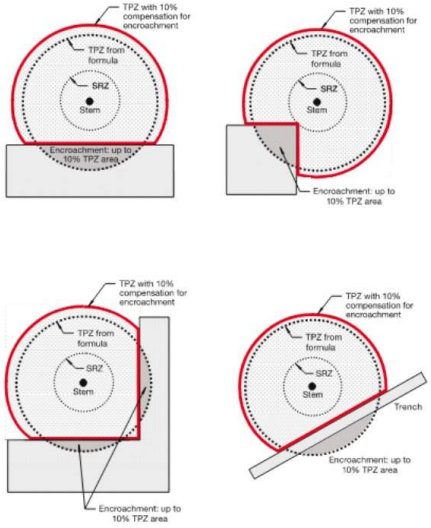
COMPLIANCE INSPECTIONS ARE RECOMMENDED TO BE COMPLETED ON A MONTHLY BASIS THROUGH THE CONSTRUCTION STAGE.
FOLLOWING EACH INSPECTION, THE PROJECT ARBORIST SHALL PREPARE A DOCUMENT DETAILING THE CONDITION OF THE TREES. THESE DOCUMENTS SHOULD CERTIFY WHETHER THE WORKS HAVE BEEN COMPLETED IN COMPLIANCE WITH THE APPROVED CONSENT CONDITIONS RELATING TO TREE PROTECTION. THESE REPORTS SHOULD CONTAIN PHOTOGRAPHIC EVIDENCE WHERE NECESSARY.
INSPECTIONS ARE TO BE CONDUCTED BY THE PROJECT ARBORIST AT SEVERAL KEY POINTS DURING THE CONSTRUCTION IN ORDER TO ENSURE THAT PROTECTION MEASURES ARE BEING ADHERED TO DURING CONSTRUCTION STAGES AND DECLINE IN TREE HEALTH OR ADDITIONAL REMEDIATION MEASURES CAN BE IDENTIFIED.
ANY WORKS WITHIN TREE PROTECTION ZONES ARE TO BE MONITORED AND SUPERVISED BY THE PROJECT ARBORIST.

HOLD POINTS

Construction Stage	Task	Responsibility	Certification	Timing of Inspection
Pre-construction	Indicate clearly (with spray paint or tape on trunks) trees approved for removal only	Principal Contractor	Project Arborist	Prior to site establishment
	Install tree protection measures			
	Induct construction staff into Tree Protection Management Plan			
During Construction	Supervise all excavation works proposed within the TPZ of trees to be retained			As required prior to the works proceeding adjacent to trees to be retained
	Inspection of trees by Project Arborist			Quarterly during construction period
Post-construction	Final Inspection of trees by Project Arborist			Following practical completion of works

EXPLORATORY ROOT INVESTIGATION

WHERE TREES ARE INTENDED TO BE RETAINED, AND POTENTIAL WORKS AREAS MAY ENTER THE TPZ OR SRZ, DETERMINING ROOT LOCATION AND, THEREFORE THE IMPACT ON THE TREES IS AN IMPORTANT PROCESS.
EXPLORATORY ROOT EXCAVATION SHOULD BE UNDERTAKEN IN A MANNER THAT CAUSES THE LEAST AMOUNT OF DAMAGE TO ROOT MATERIAL IN THE PROCESS. THIS MAY INCLUDE THE USE OF AIR EXCAVATION (AIR-SPADE) OR HYDRO OR DRY-VAC EXCAVATION. ROOT INVESTIGATIONS SHOULD BE UNDERTAKEN AT PRE-AGREED LOCATIONS THAT WILL MOST EFFECTIVELY GUIDE THE DESIGN.
FINDINGS OF THE ROOT INVESTIGATION SHOULD BE COMPILED INTO A REPORT WHICH IDENTIFIES SIGNIFICANT ROOTS THAT SHOULD BE RETAINED AND LESS SIGNIFICANT ROOTS THAT MAY BE APPROPRIATE FOR SEVERANCE. THE SIZE AND VOLUME OF ROOTS WHICH MAY BE CUT MUST BE ASSESSED BY AN ARBORIST AND CONSIDER TREE PHYSIOLOGY, EXISTING SITE AND SOIL CONDITIONS AND SPECIES TRAITS AND TOLERANCE OF ROOT PRUNING.



NOTE: Less than 10% TPZ area and outside SRZ. Any loss of TPZ compensated for elsewhere.

PERMISSIBLE TPZ ENCROACHMENTS

REV	DESCRIPTION	DATE
A	DA	06/02/2023

TREE PROTECTION MANAGEMENT PLAN

SECONDARY DWELLING
CLIENT: JENNIFER ZHEN LI
SITE: 3 THE BLVD, CHELTENHAM NSW 2119

JOB No. E-001694-23
DWG No. TPMP.02
DRAWN KH

canopy consulting
PO Box 902
Five Dock NSW 2046

ATTACHMENT 4 - ITEM 1

TREE PROTECTION MANAGEMENT PLAN
3 THE BLVD, CHELTENHAM NSW 2119

DEMOLITION / PRE-CONSTRUCTION

SITE ESTABLISHMENT

THE PROJECT ARBORIST IS TO BE PROVIDED A COPY OF THE CONSTRUCTION MANAGEMENT PLAN (CMP) TO CHECK FOR COMPLIANCE WITH THE TPMP. THE CMP SHOULD ENSURE THAT SITE SHEDS, HAUL ROADS, LAYDOWN AREAS AND SEDIMENT CONTROL ARE LOCATED OUTSIDE THE TPZ OF TREES TO BE RETAINED.
AT THE COMPLETION OF SITE ESTABLISHMENT, THE PROJECT ARBORIST IS TO CERTIFY THAT TREE PROTECTION MEASURES COMPLY WITH THE TPMP.

TPZ FENCING

PROTECTIVE FENCING IS TO BE INSTALLED AS PER TREE PROTECTION MANAGEMENT PLAN. FENCING IS TO COMPLY WITH AUSTRALIAN STANDARD AS 4687-2007 TEMPORARY FENCING AND HOARDINGS.
ONCE ERECTED, PROTECTIVE FENCING MUST NOT BE REMOVED OR ALTERED WITHOUT APPROVAL FROM THE PROJECT ARBORIST. THE TPZ FENCING SHOULD BE SECURED TO RESTRICT ACCESS.
TPZ FENCING IS TO BE A MINIMUM OF 1.8M HIGH AND MESH OR WIRE BETWEEN POSTS MUST BE HIGHLY VISIBLE. FENCE POSTS AND SUPPORTS SHOULD HAVE A DIAMETER GREATER THAN 20MM AND SHOULD IDEALLY BE FREESTANDING, OTHERWISE BE LOCATED CLEAR OF THE ROOTS.
TREE PROTECTION FENCING MUST REMAIN INTACT THROUGHOUT ALL PROPOSED CONSTRUCTION WORKS AND MUST ONLY BE DISMANTLED AFTER THEIR CONCLUSION. THE TEMPORARY DISMANTLING OF TREE PROTECTION FENCING MUST ONLY BE DONE WITH THE AUTHORISATION OF THE PROJECT ARBORIST AND/OR THE RESPONSIBLE AUTHORITY.
ANY WORKS TO BE UNDERTAKEN WITHIN THE TREE PROTECTION ZONE FENCING ARE TO BE MONITORED AND CERTIFIED BY THE PROJECT ARBORIST.

PROHIBITED ACTIVITIES WITHIN THE TPZ

ACTIVITIES GENERALLY EXCLUDED FROM THE TPZ INCLUDED BUT ARE NOT LIMITED TO-
MACHINE EXCAVATION INCLUDING TRENCHING;
EXCAVATION FOR SILT FENCING;
CULTIVATION;
STORAGE;
PREPARATION OF CHEMICALS, INCLUDING PREPARATION OF CEMENT PRODUCTS;
PARKING OF VEHICLES AND PLANT;
REFUELLING;
DUMPING OF WASTE;
WASH DOWN AND CLEANING OF EQUIPMENT;
PLACEMENT OF FILL;
LIGHTING OF FIRES;
SOIL LEVEL CHANGES;
TEMPORARY OR PERMANENT INSTALLATION OF UTILITIES AND SIGNS, AND
PHYSICAL DAMAGE TO THE TREE.

TREE PROTECTION SIGNS

SIGNS IDENTIFYING THE TPZ ARE TO BE INSTALLED ON THE TREE PROTECTION FENCING IN 10M INTERVALS.

TRUNK BRANCH AND GROUND PROTECTION

GROUND PROTECTION IS TO BE INSTALLED AS SHOWN IN THE TPMP PLAN. THE PURPOSE OF GROUND PROTECTION IS TO PREVENT ROOT DAMAGE AND SOIL COMPACTION. MEASURES MAY INCLUDE A PERMEABLE MEMBRANE SUCH AS GEOTEXTILE FABRIC BENEATH A 100MM THICK LAYER OF MULCH OR CRUSHED ROCK BELOW RUMBLE BOARDS, OR STEEL PLATES OR TRACK MATS.
TREE TRUNK/S AND/OR MAJOR BRANCHES LOCATED WITHIN CLOSE PROXIMITY TO WORKS, MUST BE WRAPPED WITH PROTECTIVE HESSIAN OR SIMILAR ACCEPTABLE MATERIAL TO PREVENT TREE INJURY. MAJOR BRANCHES WOULD TYPICALLY BE CONSIDERED TO BE OF A DIAMETER GREATER THAN 100MM DIAMETER.
TIMBER BATTENS (50 MM X 100 MM X 2000MM OR SIMILAR) MUST BE PLACED AROUND TREE TRUNKS WITH BATTENS SPACED AT 100 MM INTERVALS AND FIXED AGAINST THE TRUNK USING METAL OR DURABLE PLASTIC STRAPPING WITH CONNECTIONS APPROPRIATELY FINISHED OR COVERED TO PROTECT PEDESTRIANS FROM SNAGGING INJURY. THE HESSIAN AND TIMBER BATTENS MUST NOT BE FIXED TO THE TREE. TREE TRUNK AND MAJOR BRANCH PROTECTION ARE TO REMAIN IN PLACE FOR THE DURATION OF WORKS AND MUST BE REMOVED AT THE COMPLETION OF THE PROJECT.

SCAFFOLDING

WHERE SCAFFOLDING IS REQUIRED IT SHOULD BE ERECTED OUTSIDE THE TPZ. WHERE IT IS ESSENTIAL FOR SCAFFOLDING TO BE ERECTED WITHIN THE TPZ, BRANCH REMOVAL SHOULD BE MINIMIZED. THIS CAN BE ACHIEVED BY DESIGNING SCAFFOLDING TO AVOID BRANCHES OR TYING BACK BRANCHES. WHERE PRUNING IS UNAVOIDABLE IT MUST BE SPECIFIED BY THE PROJECT ARBORIST IN ACCORDANCE WITH AS 4373-2007 PRUNING OF AMENITY TREES. NOTE: PRUNING WORKS WILL REQUIRE APPROVAL BY DETERMINING AUTHORITY.
GROUND BELOW THE SCAFFOLDING SHOULD BE PROTECTED BY BOARDING (E.G. SCAFFOLD BOARD OR PLYWOOD SHEETING). WHERE ACCESS IS REQUIRED, A BOARD WALK OR OTHER SURFACE MATERIAL SHOULD BE INSTALLED TO MINIMIZE SOIL COMPACTION. BOARDING SHOULD BE PLACED OVER A LAYER OF MULCH AND IMPERVIOUS SHEETING TO PREVENT SOIL CONTAMINATION. THE BOARDING SHOULD BE LEFT IN PLACE UNTIL THE SCAFFOLDING IS REMOVED.

DEMOLITION OF HARDSTAND AREAS

DEMOLITION OF EXISTING HARD STAND AREAS WITHIN THE TPZ OF TREES TO BE RETAINED MAY BE UNDERTAKEN USING MACHINERY BUT MUST BE UNDER THE SUPERVISION OF THE PROJECT ARBORIST. DEMOLITION OF THE GROUND SURFACES MUST BE UNDERTAKEN FROM EXISTING HARD STAND AREAS OR GROUND PROTECTION AND SHOULD COMMENCE AT THE OUTER EXTENT OF THE EXISTING SURFACE MATERIAL AND MOVE AWAY FROM TREES TO BE RETAINED.

SEDIMENT CONTROL

SEDIMENT CONTROL WITHIN TREE PROTECTION ZONES IS TO BE INSTALLED TO AVOID BELOW GROUND EXCAVATION AS THIS MAY DAMAGE ROOTS. COIR LOGS INSTALLED ABOVE GRADE THAT ARE PINNED TO AVOID ROOTS ARE AN ACCEPTABLE METHOD.

EXAMPLE TPZ SIGNAGE

REV	DESCRIPTION	DATE
A	DA	06/02/2023

TREE PROTECTION MANAGEMENT PLAN

SECONDARY DWELLING
CLIENT: JENNIFER ZHEN LI
SITE: 3 THE BLVD, CHELTENHAM NSW 2119

JOB No. E-001694-23
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ATTACHMENT 4 - ITEM 1

TREE PROTECTION MANAGEMENT PLAN
3 THE BLVD, CHELTENHAM NSW 2119

DURING CONSTRUCTION

EXCAVATIONS WITHIN TREE PROTECTION ZONES

THE PROJECT ARBORIST IS TO MONITOR THE IMPACTS OF DEMOLITION, BULK EARTHWORKS, AND INSTALLATION OF TEMPORARY INFRASTRUCTURE INCLUDING BUILDING, SEDIMENT CONTROL AND DRAINAGE WORKS.
WHERE THE EXTENT OF ENCROACHMENT IS LESS THAN 10% OF THE TPZ, INCLUDING ANY EXCAVATIONS FOR BENCHING AND SHORING, EXCAVATION MAY BE UNDERTAKEN USING CONVENTIONAL CONSTRUCTION METHODS. 10% OF THE TPZ IS EQUIVALENT TO ONE-THIRD OF THE TPZ RADIUS ON ONE SIDE.
WHERE THE ENCROACHMENT IS TO BE GREATER THAN 10% OF THE TPZ AND PRIOR TO ANY MECHANICAL EXCAVATIONS FOR BUILDING FOUNDATIONS, SHORING, RETAINING WALL OR PAVEMENT SUBGRADE WITHIN THE TPZ OF TREES TO BE RETAINED; EXPLORATORY EXCAVATION USING NON-DESTRUCTIVE METHODOLOGY SHALL BE UNDERTAKEN AT THE PERIMETER OF THE STRUCTURE, EXCAVATION REQUIRED FOR SHORING, RETAINING WALL OR PAVEMENT SUBGRADE WITHIN THE TPZ.
SUCH TECHNIQUES INCLUDE:
EXCAVATION BY HAND
EXCAVATION USING A HIGH-PRESSURE WATER JET AND VACUUM TRUCK
EXCAVATION USING AN AIR SPADE WITH A VACUUM TRUCK.
THE NON-DESTRUCTIVE EXCAVATION SHALL BE UNDERTAKEN AT THE OUTER LIMITS OF THE STRUCTURE TO THE DEPTH OF THE FOUNDATION OR EXCAVATION, OR TO A MAXIMUM OF 800MM BELOW EXISTING SURFACE LEVELS. ALL CARE MUST BE TAKEN TO PREVENT THE DAMAGE OR SEVERANCE OF ROOTS GREATER THAN 50MM IN DIAMETER. ANY ROOTS ENCOUNTERED THAT ARE LESS THAN 50MM IN DIAMETER MAY BE CLEANLY SEVERED WITH A SHARP PRUNING IMPLEMENT AT THE INTERFACE OF THE EXCAVATION NEAREST THE TREE. THE EXPOSED ROOT ZONE IS TO BE KEPT MOIST BY WAY OF GEOTEXTILE OR HESSIAN PLACED ALONG THE OPEN INTERFACE OF THE EXCAVATION NEAREST THE TREE.
WHERE ROOTS GREATER THAN 50MM IN DIAMETER ARE ENCOUNTERED DURING EXPLORATORY EXCAVATION, ADVICE FROM THE PROJECT ARBORIST SHALL BE SOUGHT.

PAVEMENTS WITHIN TREE PROTECTION ZONES

ANY PAVEMENTS OR FOOTPATHS WITHIN TPZ OF TREES TO BE RETAINED SHOULD BE INSTALLED AT OR ABOVE EXISTING GRADE TO MINIMISE THE NEED FOR EXCAVATION TO AVOID DAMAGE OR SEVERANCE OF PRIMARY WOODY ROOTS. THE PAVEMENT SUB-BASE SHALL BE A COARSE, GAP-GRADED MATERIAL WITH NO FINES IN ORDER TO ALLOW SOME AERATION AND MOISTURE INFILTRATION TO THE ROOT ZONE. THE USE OF PERMEABLE PAVEMENTS, BONDED AGGREGATE OR CELLULAR CONFINEMENT SYSTEMS SHOULD BE INVESTIGATED AS ALTERNATIVE CONSTRUCTION METHODS.

UNDERGROUND SERVICES WITHIN TREE PROTECTION ZONES

ALL UNDERGROUND SERVICES SHOULD BE ROUTED OUTSIDE THE TPZ OF TREES TO BE RETAINED. WHERE UNAVOIDABLE, SERVICES MAY BE INSTALLED VIA ALTERNATIVE METHODS WHICH MAY INCLUDE TREE SENSITIVE EXCAVATION OR HORIZONTAL DIRECTIONAL DRILLING (HDD). WHERE HDD IS USED, ENTRY AND EXIT PITS ARE TO BE LOCATED OUTSIDE THE TPZ OF TREES TO BE RETAINED.
WHERE EXCAVATION OR TRENCHING IS REQUIRED TO FACILITATE INSTALLATION OF UNDERGROUND SERVICES WITHIN THE TPZS OF ANY SITE TREES ARBORIST SUPERVISION IS REQUIRED. WORKS SHOULD BE UNDERTAKEN USING TECHNIQUES THAT ARE SENSITIVE TO TREE ROOTS TO AVOID UNNECESSARY DAMAGE. SUCH TECHNIQUES INCLUDE:
EXCAVATION BY HAND
EXCAVATION USING A HIGH-PRESSURE WATER JET AND VACUUM TRUCK
EXCAVATION USING AN AIR SPADE WITH VACUUM TRUCK.
MACHINE EXCAVATION IS PROHIBITED WITHIN THE TPZS OF RETAINED TREES UNLESS UNDERTAKEN AT THE DIRECT CONSENT FROM THE PROJECT ARBORIST AND/OR THE RESPONSIBLE AUTHORITY.
WHERE A SITUATION OCCURS THAT A SIGNIFICANT ROOT (ROOT GREATER THAN >50 MM DIAMETER) REQUIRES PRUNING OR REMOVAL, THE ROOT IS TO BE SEVERED WITH A SHARP SAW IMPLEMENT BY OR UNDER INSTRUCTION OF THE PROJECT ARBORIST.

FILL WITHIN TREE PROTECTION ZONES

WHERE UNAVOIDABLE, FILL PLACED WITHIN TPZ OF TREES TO BE RETAINED SHALL BE WELL-DRAINED MATERIAL EQUIVALENT OR FINER IN TEXTURE THAN THE EXISTING SITE TOPSOIL MATERIAL AND SHOULD COMPLY WITH AS 4419:2003 (SOILS FOR LANDSCAPING AND GARDEN USE).
THE FILL CAN BE LIGHTLY CONSOLIDATED BUT NOT TO ENGINEERING STANDARDS. IF FILL IS TO BE PLACED BY MACHINERY, THIS MUST BE DONE FROM OUTSIDE THE TPZ OF FROM EXISTING HARD STAND AREAS. ALTERNATIVELY, GROUND PROTECTION MAY BE USED TO FACILITATE MACHINE ACCESS.

LANDSCAPING WORKS WITHIN TREE PROTECTION ZONES

THE LANDSCAPE PLAN IS TO BE CHECKED FOR COMPLIANCE WITH THE TPMP. STAGED REMOVAL OF TREE PROTECTION METHODS MAY BE REQUIRED TO FACILITATE LANDSCAPING WORKS.
ANY LANDSCAPING WORKS WITHIN THE TPZ OF TREES TO BE RETAINED IS TO BE UNDER THE DIRECT SUPERVISION OF THE PROJECT ARBORIST. THESE MAY INCLUDE BUT ARE NOT LIMITED TO; RETAINING WALLS, IRRIGATION AND LIGHTING SYSTEMS, TOPDRESSING, PLANTING AND PAVING.
ANY LANDSCAPING WORKS REQUIRING EXCAVATION FOR DRAINAGE OR THE LIKE IS TO BE UNDERTAKEN USING NON-DESTRUCTIVE METHODS PREVIOUSLY DESCRIBED.

POST CONSTRUCTION

DEFECTS LIABILITY PERIOD

COMPLETION OF OUTSTANDING BUILDING OR LANDSCAPING WORKS FOLLOWING THE CONSTRUCTION PERIOD MUST NOT INJURE TREES.

FINAL CERTIFICATION

THE FINAL INSPECTION BY THE PROJECT ARBORIST SHOULD DETAIL THE HEALTH AND CONDITION OF THE TREES AND THEIR GROWING ENVIRONMENT AND PROVIDE RECOMMENDATIONS FOR ANY NECESSARY REMEDIAL ACTIONS. THESE ACTIONS MAY INCLUDE PRUNING IN ACCORDANCE WITH AS4373-2007 PRUNING OF AMENITY TREES AND/OR SOIL REMEDIATION TO REPAIR THE GROWING ENVIRONMENT.
ON PROJECT COMPLETION, THE PROJECT ARBORIST SHALL CERTIFY IN WRITING TO THE CERTIFYING AUTHORITY THAT THE CONDITIONS OF CONSENT RELATING TO TREE PROTECTION, TREE REMOVAL, PRUNING AND PLANTING OF NEW TREES HAVE BEEN COMPLIED WITH OR, IF THE CONDITIONS HAVE BEEN CONTRAVENED, DETAIL THE EXTENT AND NATURE OF THE DEPARTURE FROM THE CONDITIONS AND THEIR IMPACTS ON TREES.

REV	DESCRIPTION	DATE
A	DA	06/02/2023

TREE PROTECTION MANAGEMENT PLAN

SECONDARY DWELLING
CLIENT: JENNIFER ZHEN LI
SITE: 3 THE BLVD, CHELTENHAM NSW 2119

JOB No. E-001694-23
DWG No. TPMP.04
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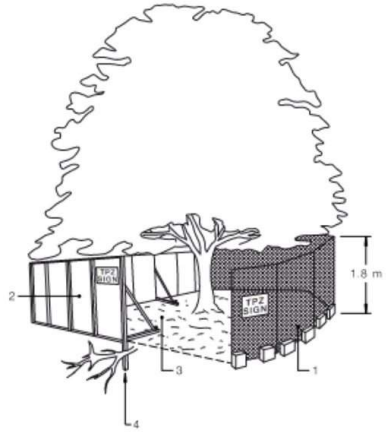
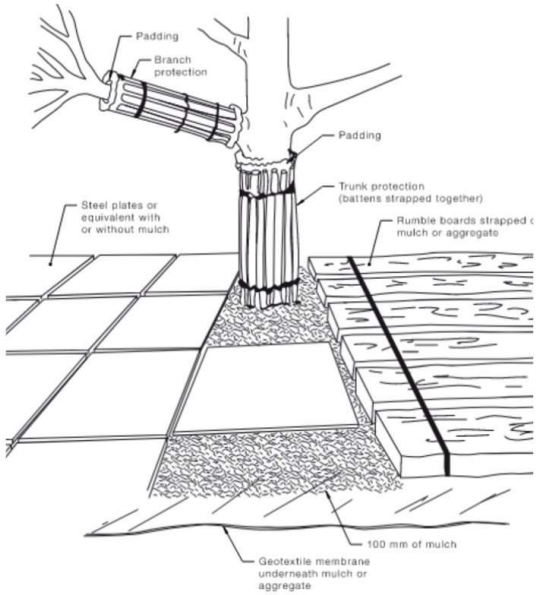
ATTACHMENT 4 - ITEM 1

TREE PROTECTION MANAGEMENT PLAN
3 THE BLVD, CHELTENHAM NSW 2119

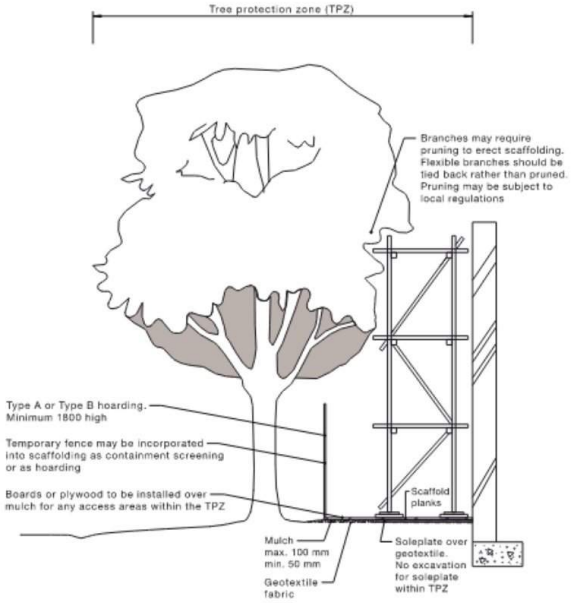


LEGEND:
1 Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.
2 Alternative plywood or wooden paling fence panels. This fencing material also prevents building materials or soil entering the TPZ.
3 Mulch installation across surface of TPZ (at the discretion of the project arborist). No excavation, construction activity, grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ.
4 Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

TPZ FENCING DETAIL - ABOVE



TRUNK BRANCH AND GROUND PROTECTION DETAIL



NOTE: Excavation required for the insertion of support posts for tree protection fencing should not involve the severance of any roots greater than 20 mm in diameter, without the prior approval of the project arborist.

SCAFFOLDING DETAIL

REV	DESCRIPTION	DATE
A	DA	06/02/2023

TREE PROTECTION MANAGEMENT PLAN

SECONDARY DWELLING
CLIENT: JENNIFER ZHEN LI
SITE: 3 THE BLVD, CHELTENHAM NSW 2119

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ATTACHMENT 4 - ITEM 1

ATTACHMENT 5 - ITEM 1

PLANSIGHT PTY LTD
Town Planners

Heritage Impact Statement
3 The Boulevarde Cheltenham

Proposed secondary dwelling

Prepared for
Zhen Li

ATTACHMENT 5 - ITEM 1

HERITAGE IMPACT STATEMENT

Proposed detached secondary dwelling.

No. 3 The Boulevarde Cheltenham
Lot C DP 576233

Prepared for
Zhen Li

C.F. Blyth RP, Director

PLANSIGHT PTY LTD
Town Planners

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February 2023
Docs/3 The BouevardeHISV1

CONTENTS

1.0 INTRODUCTION

2.0 HERITAGE VALUES

2.1 Statement of Significance Beecroft Cheltenham Conservation Area
2.2 Site Contribution

3.0 HERTAGE ASSESSMENT

4.0 CONCLUSION

ANNEXURE 1 Reduced architectural drawings

1.0 INTRODUCTION

This submission accompanies a development application for a proposed detached secondary dwelling to be located at the rear of the subject site.

Surrounding development consists mainly of original early twentieth century style single and two storey houses with numerous examples of later twentieth century infill development including the subject site itself, neighbouring No.1 to the north (the trees of which are noted as a heritage item 280) and the neighbouring house to the south No.3A.

The grounds of the Cheltenham Recreation abut to the east also noted as a heritage item (296). The street is part of the Beecroft-Cheltenham Conservation Area (the HCA).

Clause 5.10(2)(e)(i) of Hornsby LEP 2013, requires consent for amongst other things;

(2) Requirement for consent Development consent is required for any of the following—
(e) erecting a building on land—
(i) on which a heritage item is located or that is within a heritage conservation area, or
Clause 5.10(4) requires the consent authority consider the following:

(4) Effect of proposed development on heritage significance. The consent authority must, before granting consent under this clause in respect of a heritage item or heritage conservation area, consider the effect of the proposed development on the heritage significance of the item or area concerned. This subclause applies regardless of whether a heritage management document is prepared under subclause (5) or a heritage conservation management plan is submitted under subclause (6).

Clause 5.10(5) requires that the consent authority may require:

(5) Heritage assessment
The consent authority may, before granting consent to any development—
(a) on land on which a heritage item is located, or
(b) on land that is within a heritage conservation area, or
(c) on land that is within the vicinity of land referred to in paragraph (a) or (b),
require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.

Given the site is within the HCA and abuts two heritage items, 280 and 296 the provisions of Cl.5.10 are relevant.

2.0 HERITAGE VALUES

2.1 Statement of Significance of Precinct 1, Beecroft/Cheltenham Plateau within the Beecroft-Cheltenham Heritage Conservation Area

The significance of the Precinct 1 of the HCA is described in section 8 of the Hornsby DCP in the following terms:

9.3.6 Beecroft—Cheltenham Heritage Conservation Area—Character Statement

The location of the Beecroft-Cheltenham Heritage Conservation Area and the Precinct boundaries is depicted in Figure 9.3(e).

History

a. The Beecroft-Cheltenham Heritage Conservation Area comprises the Field of Mars Common, a Crown subdivision released over a number of years from 1887. The area's development followed completion of the Main North railway line to Hornsby in 1886.

Description

a. The topography has been a dominant influence on the area's development, determining the location of the railway line, influencing the road layout and restricting development into the deep gullies.

b. Subdivision and infill development have been part of the pattern of development. The area retains its predominant character as an area of single dwellings.

Beecroft-Cheltenham Plateau Precinct

c. The Beecroft-Cheltenham plateau extends either side of the railway line and Beecroft Road. The plateau incorporates the early release subdivisions of the Field of Mars which saw development extend in a spine on the more level and accessible land along the transport corridors.

d. The early development occurred near Beecroft Station from the late 1880s, comprising villas with modest and large domestic gardens that have become characteristic of the area's streetscape. Development around Cheltenham Station commenced in the 1920s on later subdivisions.

e. Victorian villas are among the earliest remaining buildings in Beecroft and Cheltenham. The main building periods are Federation, Edwardian and Interwar, with infill development from later periods also present in most areas.

f. Buildings are predominantly single storey in scale, and are well articulated in the manner characteristic of the period.

g. Stone foundations, face brick with rendered detailing of small areas and terracotta or slate tiled roofs are typical.

h. Mature trees, including remnant forest trees, combine to create a landscaped character. The gardens and private domain plantings contribute to this character.

Statement of Significance

a. The Beecroft-Cheltenham Heritage Conservation Area is significant as an example of a government subdivision that was used to fund the development of a railway line. The area developed from 1893 as a township due to its proximity to Beecroft Station.

b. The Heritage Conservation Area demonstrates a multi-layered history of suburban subdivision, re-subdivision and development from the initial boom period of the Victorian crown land subdivision of 1887 to the 1960s, and less noticeably into the present day.

c. The area contains a fine collection of buildings from the Victorian, Federation, Arts and Crafts, Inter-War and Post-War eras. There have been comparatively few demolitions to interrupt the "development diary", resulting in generally intact early residential fabric and streetscapes.

d. The Beecroft Village Precinct contains an important public reserve and community buildings including the Beecroft School of Arts and the Beecroft War Memorial that represent the aspiration of a growing suburb. The continuing

focus in the Beecroft village for day to day activities and community interaction, together with the community buildings, clubs and activities show an enduring sense of community cohesiveness.

2.1 Site Contribution to Conservation Area

The street presents an essentially cohesive streetscape of detached dwelling hoses of single and two storey scale. As noted in (c) above original buildings in the street are Victorian, Federation Arts & Crafts etc but houses from later decades of the 20th century are present including Nos. 1,3, and 3a The Boulevard. Many original buildings have had sympathetic second level additions.

The subject site is contributory to the character of the conservation area through being a detached house in a heavily landscaped garden setting, noting that the house cannot be easily viewed from the street due to the amount of front yard vegetation present. This is a common trait to many house in the street including also to No.1 and No.5 The Boulevard (Heritage item 281). The house is representative of its era retaining many original fittings and features however is not listed as a heritage item.

Fig 1. No.3 Street elevation, note lack of visibility of house

Fig 2. Relationship with No.1 to left of photo

The significance of the house relates to its landscaped street presentation and its consistency with housing found on other lots in the vicinity in relation to form, height and setbacks and location.

3.0 HERITAGE ASSESSMENT

3.1 Proposed Development:

1. Secondary Dwelling

- *Detached 2 bedroom secondary dwelling to be located in the north eastern corner of the site;*
- *2m setback to the north and 3.05m to the east (rear)*

2. Elevations & Materials

- *Select brickwork to match existing house;*
- *Select tile roofing to match existing house;*
- *Powder coated aluminium windows;*

3.2 Conservation Area Effects

Positive Impacts

The work proposed is single level only and located well removed from the streetscape at the rear of the site behind the attached garage. As is evident from the enclosed photographs the site of the development would if at all, only be disclosed by very limited and narrow glimpses from The Boulevard with the front wall of the proposed building being approximately 50m from the street frontage of the property.

The proposed dwelling has a sympathetic rectangular floor plan and will be articulated by an al fresco area, fenestration and front porch.

The proposal is supportive of conservation values and will enable the property to maintain its positive contribution to the Conservation area.

An arborist report has been obtained in relation to tree and vegetation impact noting the proximity of the proposed building to heritage items 280 (trees), No.1 The Boulevard and 296 (grounds), Cheltenham Recreation Club. The primary recommendation of the arborist report relates to tree on No.1 The Boulevard noted as an Araucaria columnaris (Cook Pine). The report has recommended an increase in setback to assist retention. The setback has been increased from 1m as reviewed to 2m as recommended and as reflected on the DA pans.

Four trees located on the site supported for removal are 2 X Chinese Elms which present with fractures and a history of failure along with a weeping fig (7m) and an Indian Hawthorn (four tree grouping 3m). These trees are all assessed as having low retention value.

Additionally three Kentia Palms are recommended for retention and are located outside the building footprint.

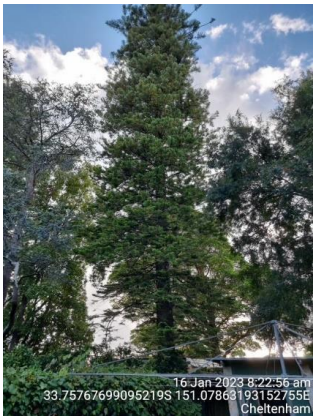


Fig 3. Cook Pine located on No.1 The Boulevard (source: Canopy Consulting6 February 2023)

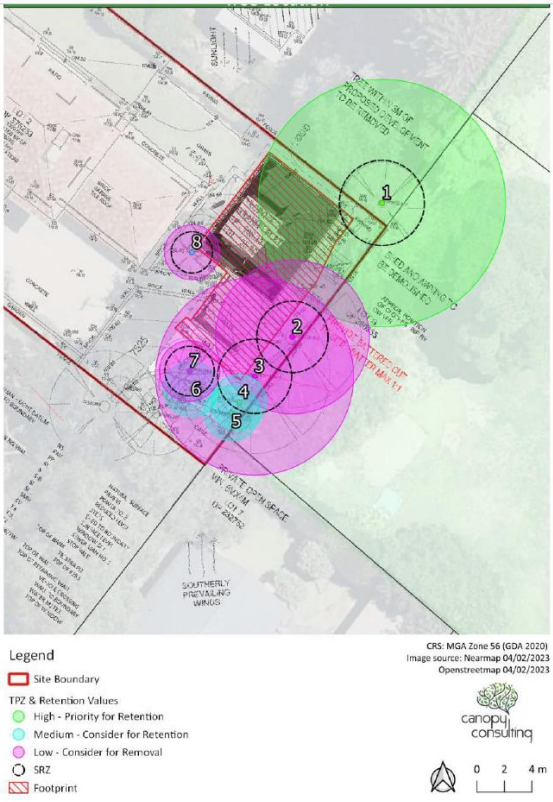


Figure 3: Map showing retention values, tree protection zones, and structural root zones, and overlaid plans.

Fig 4. Tree Location plan reproduced from Arborist report (source: Canopy Consulting6 February 2023)

With respect to the Cheltenham Recreation Club, the proposed building being single storey with a low pitched roof and located 3.05m off the eastern boundary will not pose any negative visual of other effects on the grounds of the club. It will present as visually unobtrusive akin to an outbuilding. The adjacent area is also not a heavily used part of the site and is well removed from the streetscapes.

Negative Impacts

There are no negative impacts related to the proposed development. The works proposed and the manner in which they have been designed are such as to avoid negative impacts and so maintain the contribution of the property to the heritage streetscape, conservation area and to respect and control impacts on the two adjacent heritage items.

The recommendations of the arborist report have been adopted in the location of the building whilst the construction recommendations will be adhered to and can form conditions of consent.

Whilst it might be argued that any tree removal is a negative impact, those site species to be removed do not possess high retention value and are not prominent either in a streetscape sense or from neighbouring properties.

4.0 CONCLUSION

The proposed is located at the rear of the dwelling behind the existing house and thus will not be visible from the conservation area streetscape. As such the proposed development will enable the site to contribute to the HCA in manner it currently does. Materials of construction will match those used in the existing dwelling on the site.

Relocation of the building footprint to be 2.0m from the northern boundary will ensure minimisation of the impact on the Cook Pine located on No.1 The Boulevard acknowledging the heritage listing of the trees on this property.

The proposal, its form, location and materials are appropriate within and contextual to the Beecroft-Cheltenham Conservation Area. The development will have no material adverse effects on the identified conservation values associated with the Conservation Area nor any abutting heritage item and is supported on heritage grounds.

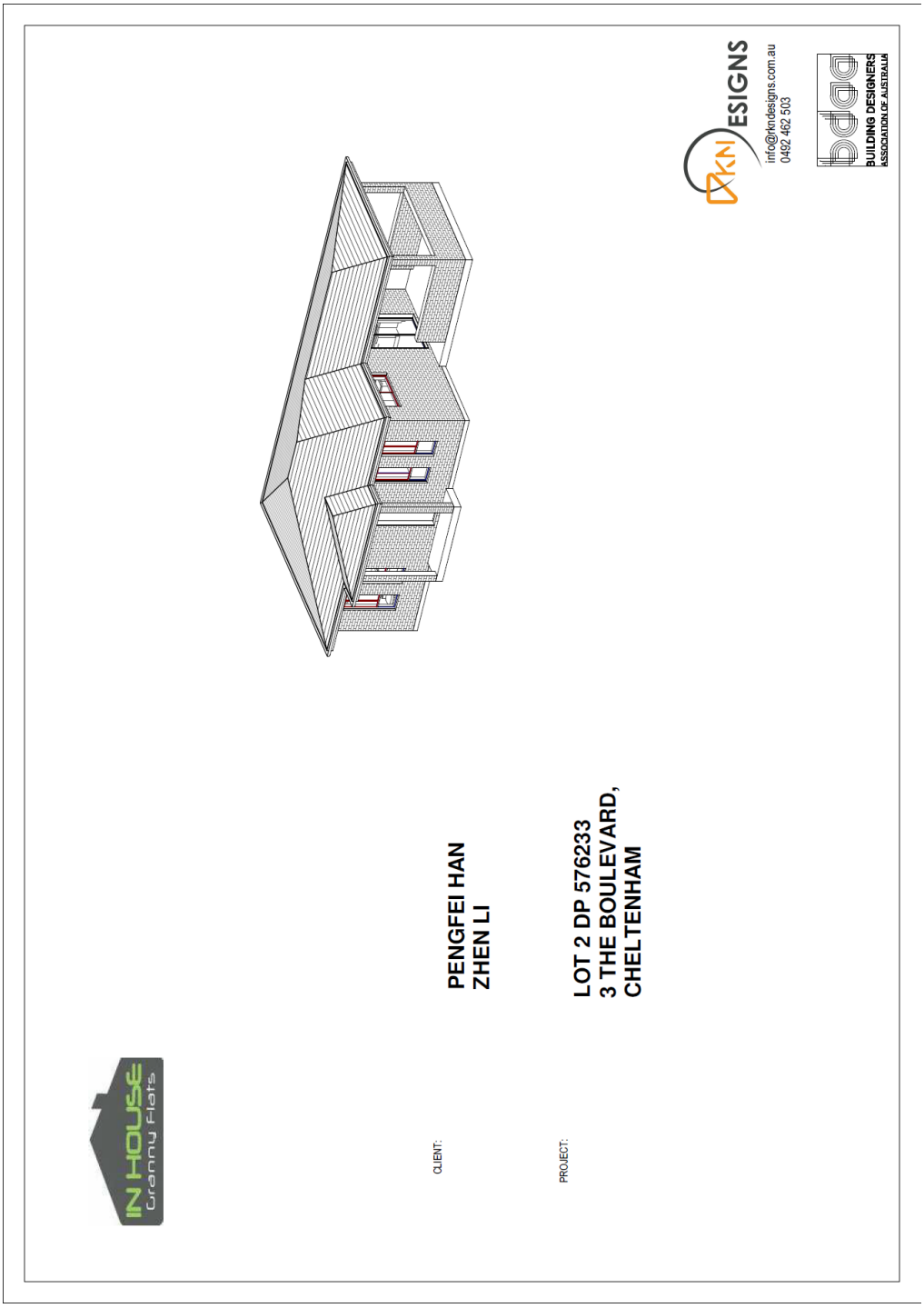
The proposal is assessed as appropriate and in conformity with the heritage provisions and objectives of Hornsby Local Environmental Plan 2013 and Hornsby Development Control Plan having regard to the nature and characteristics of the proposed work.

C.F. Blyth RPIA Director
Plansight Pty Ltd
Docs/3TheBoulevardHISV1

ATTACHMENT 5 - ITEM 1

Annexure 1

ATTACHMENT 5 - ITEM 1



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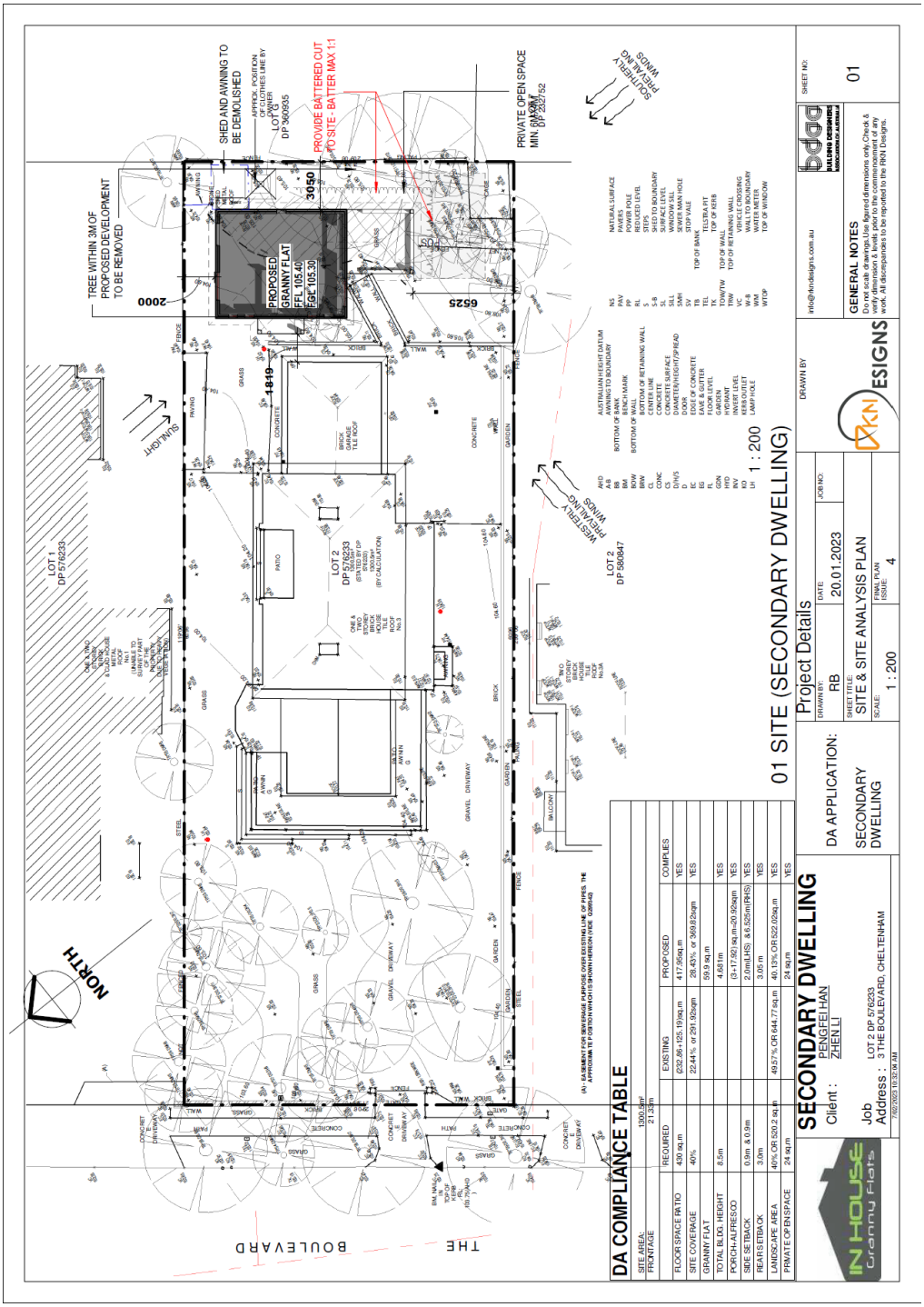
ATTACHMENT 5 - ITEM 1



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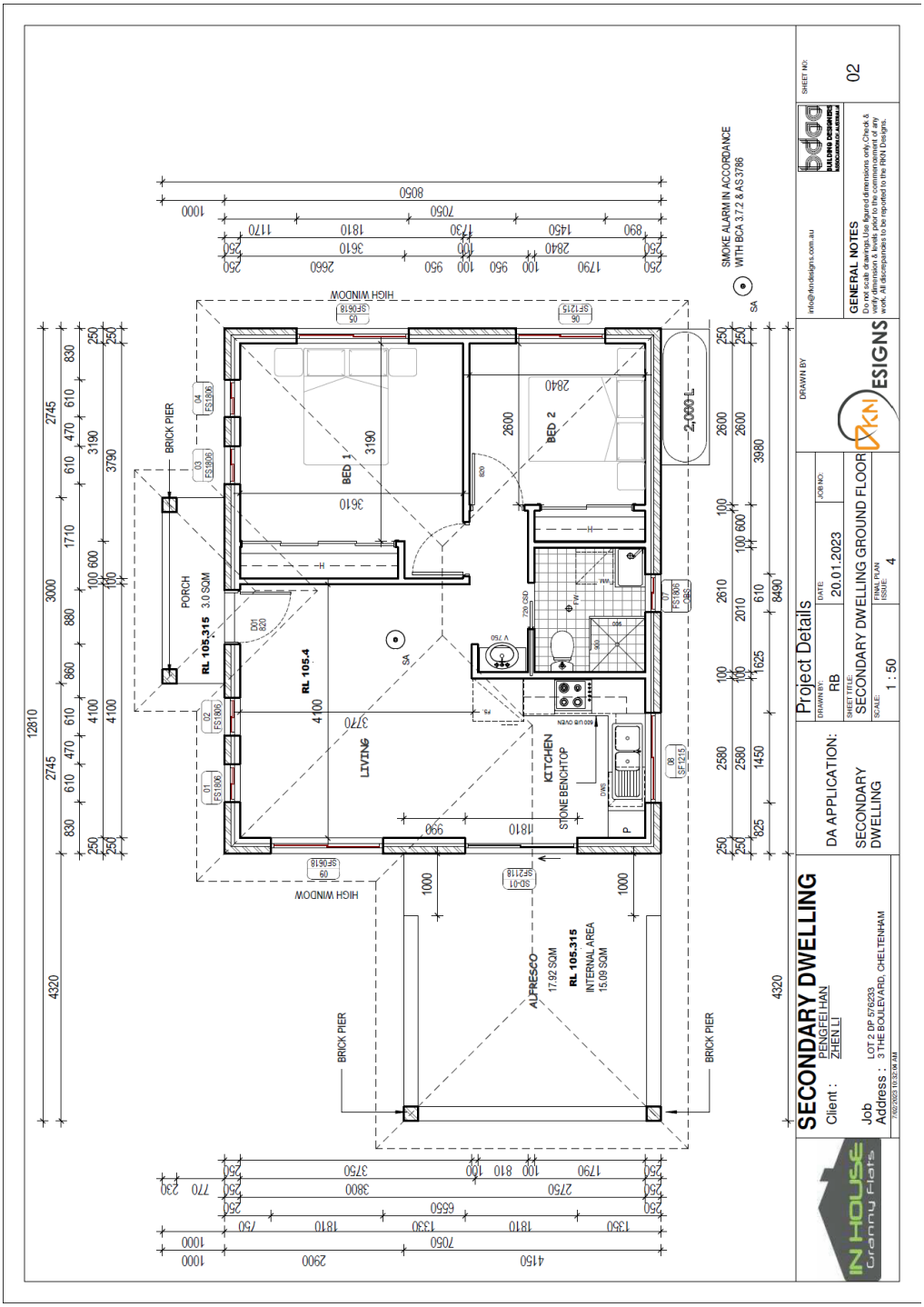

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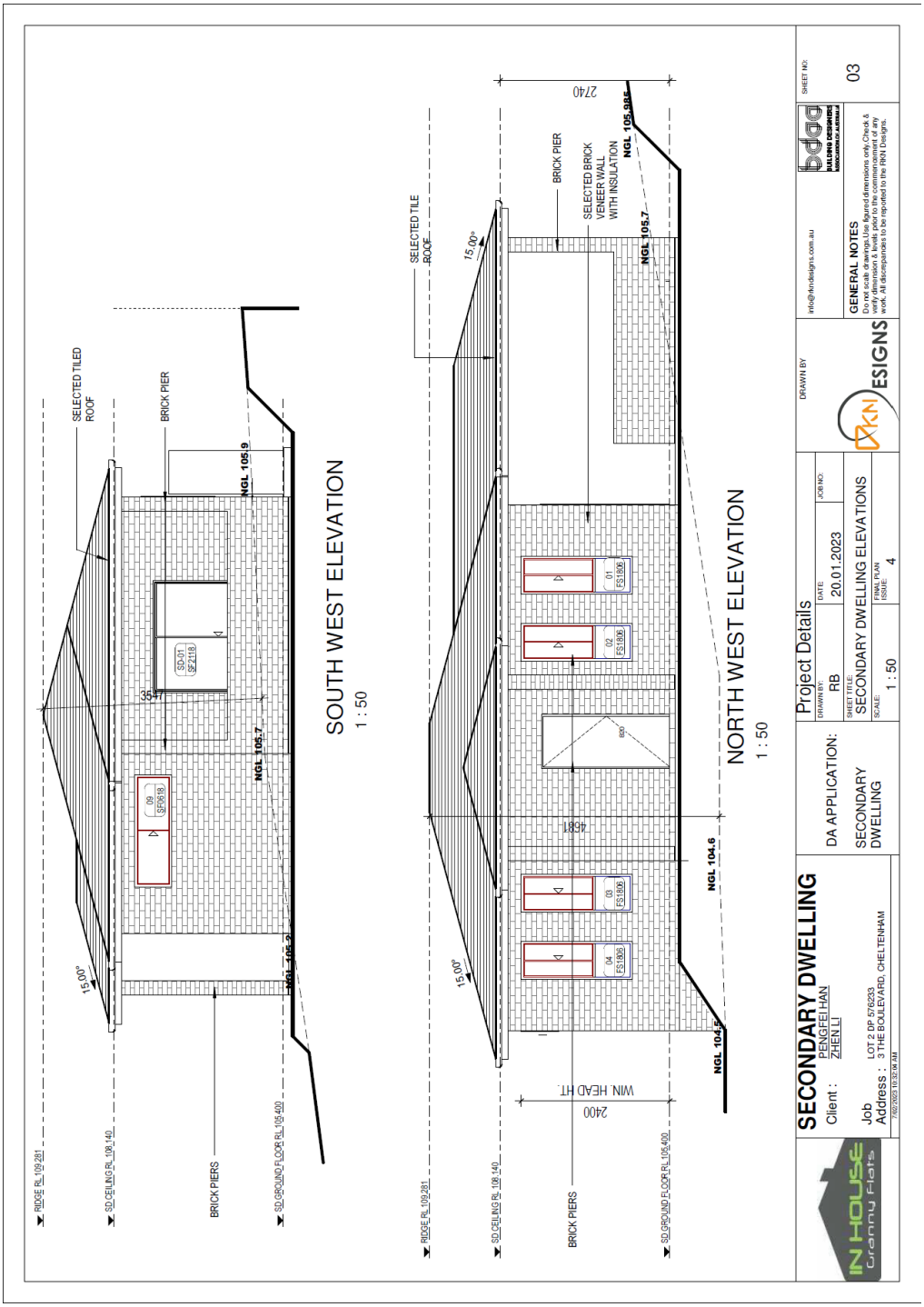

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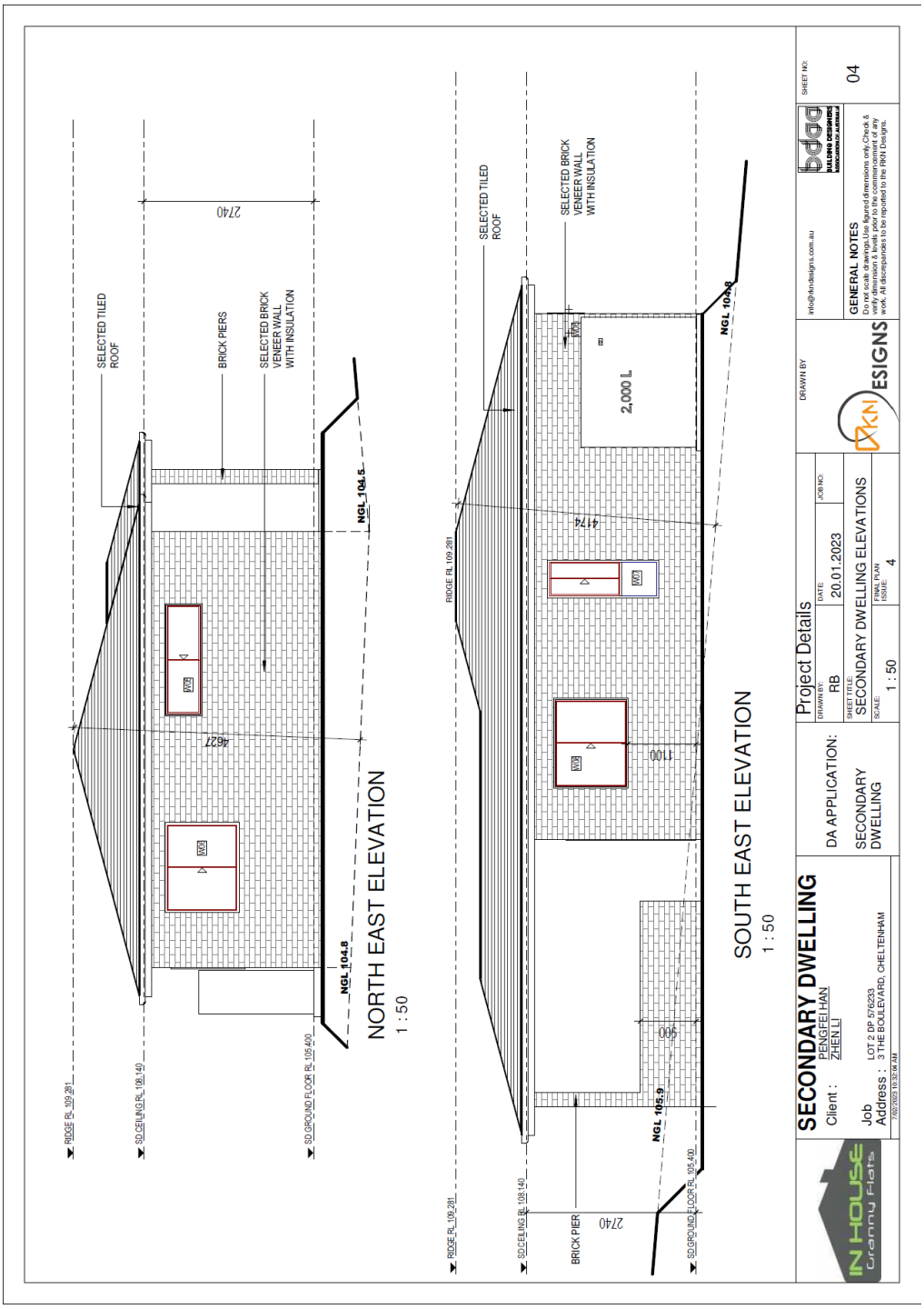

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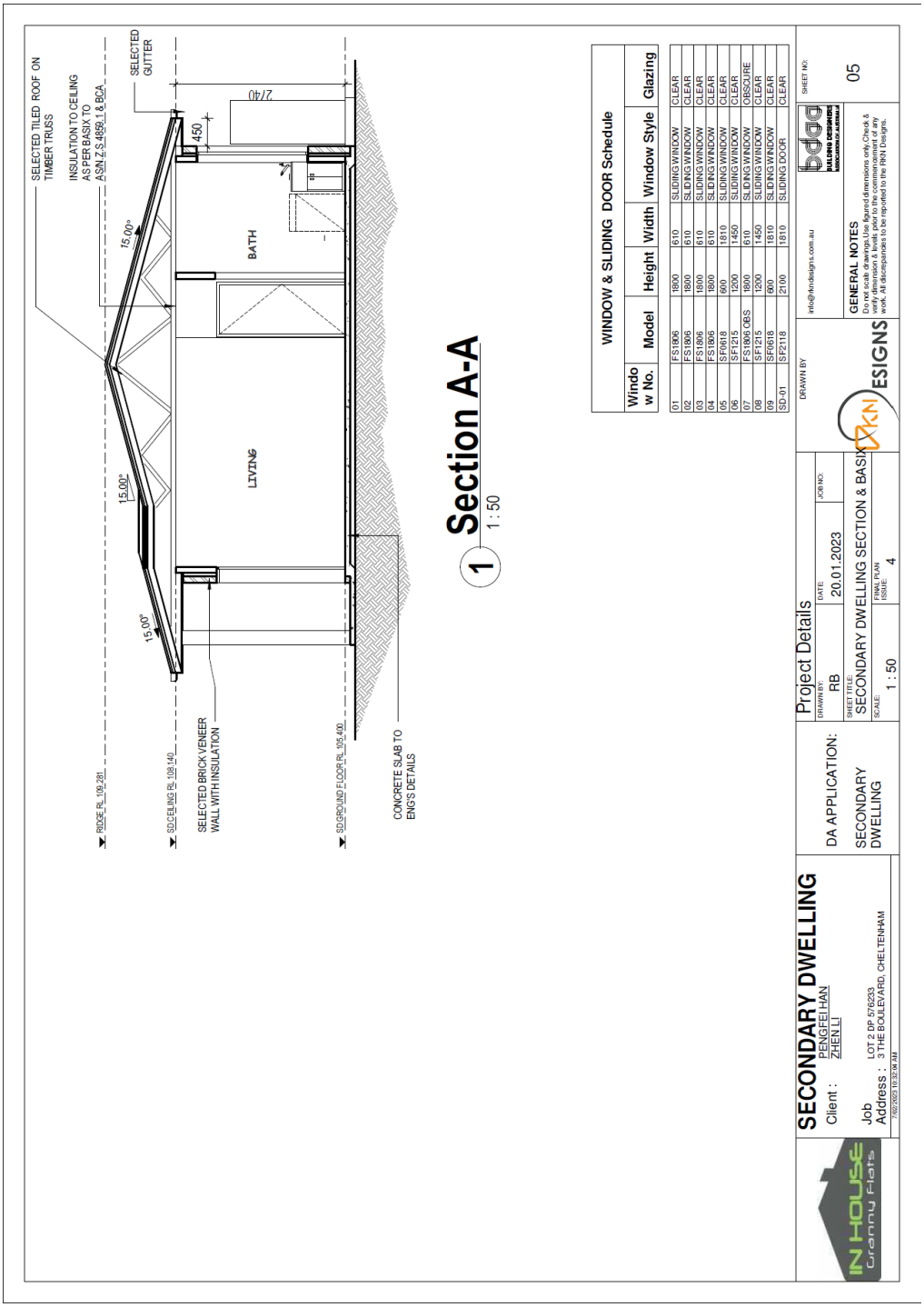

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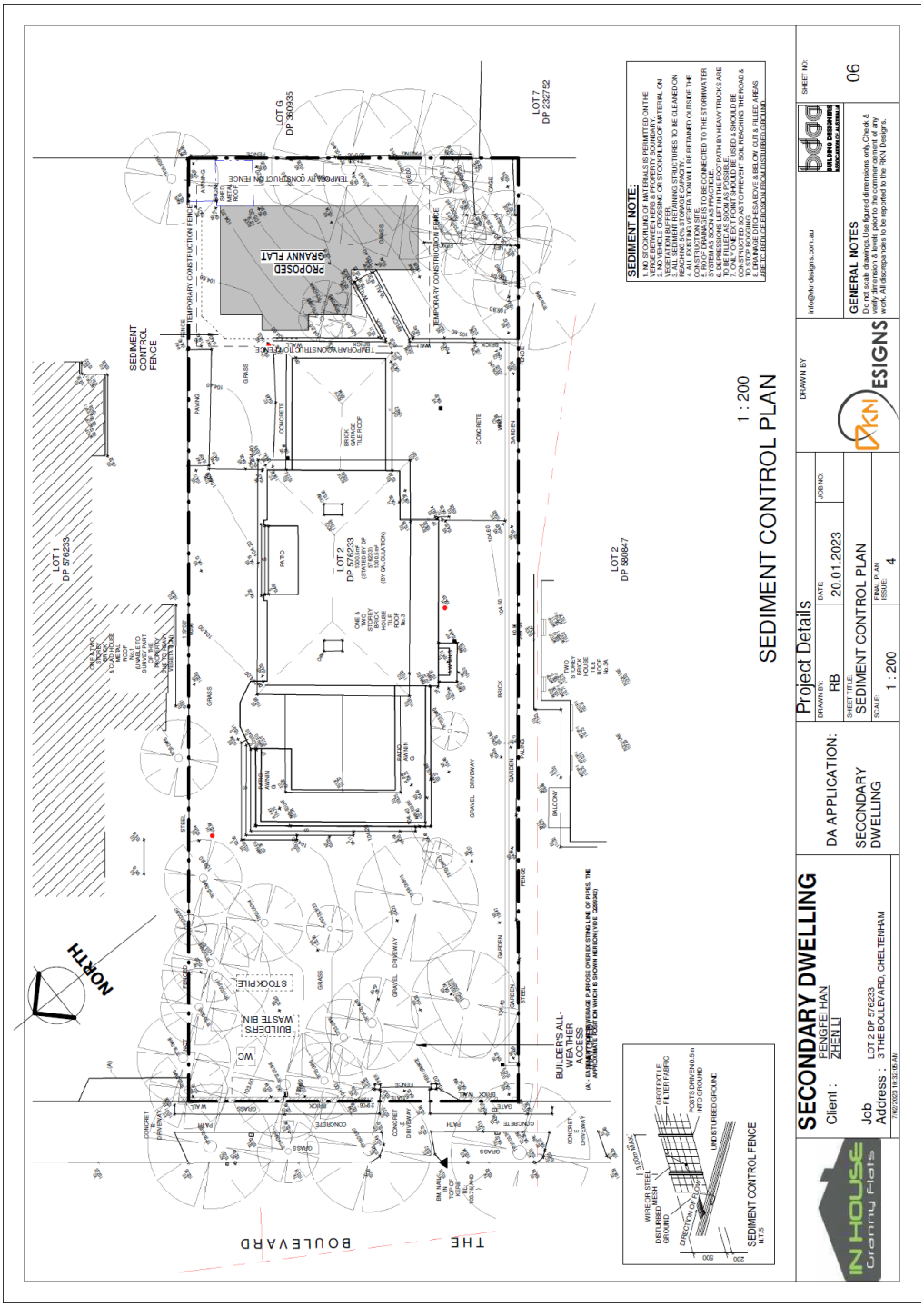

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