

# **BUSH FIRE ATTACK LEVEL (BAL) CERTIFICATE**

**Determined in accordance with Planning for Bushfire Protection 2019** 

This Certificate has been issued by a person accredited by the Fire Protection Association of Australia under the Bushfire Planning and Design (BPAD) Accreditation Scheme (NSW); being a recognised consultant by the NSW Rural Fire Service (RFS). The certificate details the conclusions of the bushfire attack level assessment undertaken by the Accredited Practitioner. All enquires related to the information and conclusions presented in this report must be made to the BPAD Accredited Practitioner.

Property Description				
Address Details	Street No	Street Name	Lot /DP	
	2-	Allen Avenue	20 / DP11978 &	
	2a	Alleli Avellue	Lot A DP379490	
	Suburb	State	Postcode	
	Bilgola Beach	NSW	2380	
Local Government Area	Northern Beaches Council			
Fire Danger Index	100 1a Infill Development			
Main BCA Class of building				
Description of the building or works				

# **Determined Bushfire Attack Level**

**BAL-12.5** 

The BAL for the proposed development has been determined as **BAL-12.5** in accordance with Table A1.12.5 contained in Planning for Bushfire Protection 2019. The determination was based on the bushfire hazard assessment finding the nearest bushfire hazard being greater than 50m north-west from the subject site.

This BAL Certificate is valid for 12 months from the date of this letter.

I hereby certify that I have undertaken the assessment of the above site and determined the Bushfire Attack Level Certificate stated above in accordance with the requirements of Planning for Bushfire Protection 2019.

Stuart Greville

Accredited Bushfire Practitioner

BPAD - 26202

Date of Issue: 9 August 2022





# 1. Proposed Development

Development consent is sought for the construction of multi storey Class 1a dwelling at 2A Allen Avenue, Bilgola Beach.

A full set of the drawings are contained in **Attachment A**.

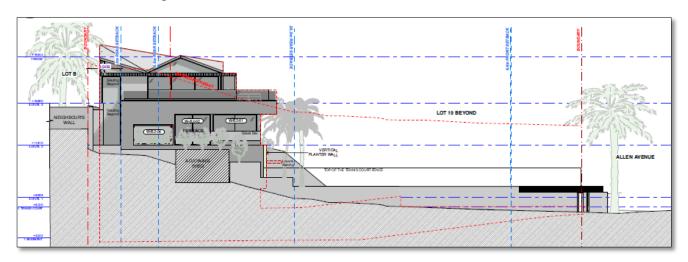


Figure 1: Proposed Dwelling - South elevation

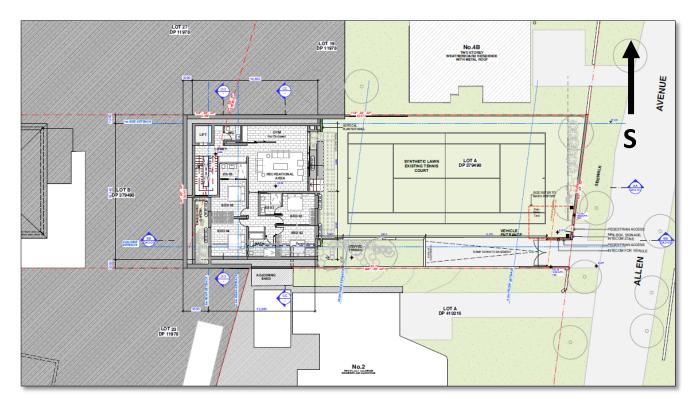


Figure 2: Proposed Site Plan - Level 1



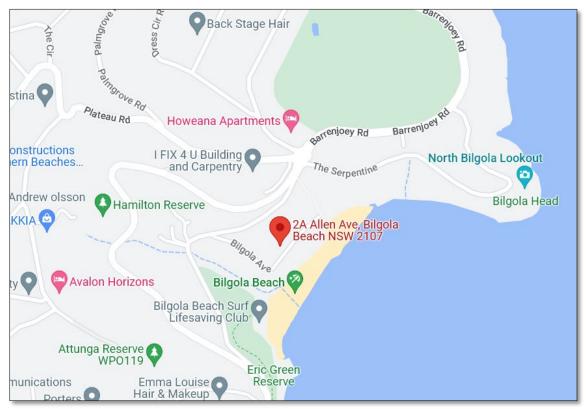


Figure 3: Site Location

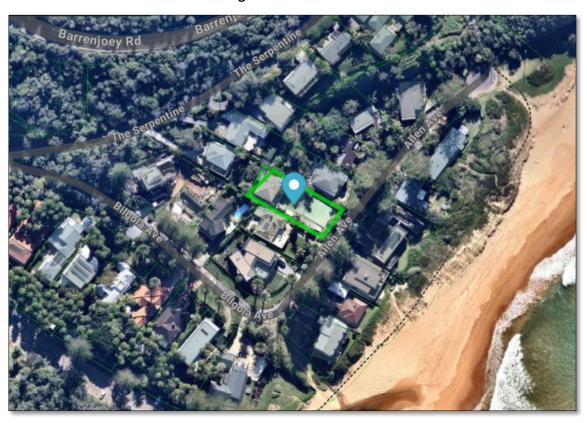


Figure 4: Subject Site - 2A Allen Avenue, Bilgola Beach (Mecone Mosaic/ Nearmap)





Figure 5: Bushfire Prone Land Map (Mecone Mosaic)



### 2. Site Assessment

In accordance with the Site Assessment Methodology outlined in Appendix 1 of Planning for Bushfire Protection 2019 (PBP 2019), the effective slope and vegetation was assessed within the site and up to 140m surrounding the site.

The site is currently mapped as mostly Vegetation Buffer bushfire prone land with exception of a small portion of the site, in the south-eastern corner, that is not mapped as bushfire prone land (**Figure 5**). Vegetation Buffer bushfire prone land surrounds the site in all directions except to the north-west being Vegetation Category 1 bushfire prone land.

The Slope and Vegetation Assessment identifies the site as managed land (**Figure 6**). Under PBP 2019, existing areas of managed gardens and lands within curtilage of buildings are deemed low-threat bushfire hazards and therefore excluded from this hazard assessment. All vegetation with the surrounding private properties has been assessed as low-threat. The primary bushfire hazard within 140m of the site is located to the north-west of the site; north of The Serpentine. The vegetation is mapped as a *Forest* (Northern Hinterland Wet Sclerophyll Forest) and is approximately 60m from the site. The effective slope underneath the nearest hazardous vegetation is upslope.



Project: Bilgola Beach Job No: 2267

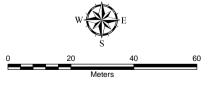
# Figure 6

# Slope & Vegetation **Assessment**





SOURCE:
Cadastral Boundary: NSW Department of Finance,
Services and Innovation 2022
NSW Vegetation Type: NSW Department of
Planning, Industry and Environment 2022 Modified by BPA 9/8/22
Aerial Photo: Nearmap 18/05/2022



A3 Scale: 1:1,200

File:2267-BilgolaBeach-Fig1-SlopeVeg-220809

The information shown on this plan may be insufficient for some types of design. GEOVIEW should be consulted as to the suitability of the information shown herein prior to the commencement of any works based on this plan.

This map is not guaranteed to be free from error or omission. GEOVIEW hereby disclaims liability for any act done or omission made on the basis of the information in this plan, and any consequences of such acts or omission









### 3. Asset Protection Zones

An APZ is an area surrounding a development that is managed to reduce the bushfire hazard to an acceptable level to mitigate the risk to life and property. The required width of the APZ varies with slope and the type of hazard. An APZ can consist of both an inner protection area (IPA) and an outer protection area (OPA). In this instance the entire site shall be managed as an IPA.

Table 1: Determination of APZ (PBP Table A1.12.2)

Transect	Vegetation Classification (PBP 2019)	Slope	<b>PBP 2019</b> (Table A1.12.2)	APZ Provided
North/ North-west	Forest (Northern Hinterland WSF)	Upslope	24m	>60m

## 4. Bushfire Attack Level

The determinations of the appropriate bushfire attack level (BAL) are based on the maximum potential radiant heat exposure. BALs are based upon parameters such as weather modelling, fire-line intensity, flame length calculations, as well as vegetation and fuel load analysis.

The greatest bushfire hazard was found to the north/ north-west of the site being a *forest* with an effective slope of *upslope*.

The BAR found that the proposed dwelling shall be constructed in accordance with Section 3 and 5 of AS3959-2018; being **BAL-12.5**.

Table 2: Determination of BAL (PBP Table A1.12.5)

Transect	Vegetation Classification (PBP 2019)	Slope	APZ	Distance from Hazard	Bushfire Attack Level (BAL)
				0m-<18m	BAL-FZ
North/	Forest			18m-<24m	BAL-40
North-	(Northern Hinterland	Upslope	24m	24m-<33m	BAL-29
west	WSF)			33m-<46m	BAL-19
				46m-<100m	BAL-12.5



Table 3 Performance Criteria and Acceptable Solutions bush fire protection measures for Infill Development (Chapter 7 PBP 2019)

	Performance Criteria		Acceptable Solutions	Complies	Comment
As	set Protection Zones:				
•	APZs are provided commensurate with the construction of the building.  A defendable space is provided.  APZs are managed and maintained to prevent the spread of a fire towards the building.  The APZ is provided in perpetuity.  APZ maintenance is practical, soil stability is not compromised and the potential for crown fires is minimised.	>	An APZ is provided in accordance with Table A1.12.2 or A.12.3 in Appendix 1.  APZs are managed in accordance with the requirements of Appendix 4 of PBP.  APZs are wholly within the boundaries of the development site.  APZs are located on lands with a slope less than 18 degrees.	<b>√</b>	All vegetation within the site will be managed in accordance with the requirements of an Inner Protection Area; per Appendix 4 of PBP 2019. There are no APZs required within the site.
Ac	cess Requirements	>	Property access roads are two-		
•	Firefighting vehicles are provided with safe, all-weather access to structures and hazard vegetation.  The capacity of access roads is adequate fire firefighting vehicles.  There is appropriate access to water supply.  Firefighting vehicles can access the dwelling and exit safely.	*	wheel drive, all-weathers  The capacity of road surfaces and any bridges/ causeways is sufficient to carry fully loaded firefighting vehicles (up to 23 tonnes); bridge and causeways are to clearly indicate load ratings, and Hydrants are provided in accordance with AS2419:2005  There is suitable access for a category 1 fire appliance to within 4m of the static water supply where no reticulated supply is available  A minimum vertical clearance of 4m to any overhanging obstructions, including tree branches	<b>✓</b>	The proposed building is provided with a direct street frontage to a public, two-way, all weather road.
Wa	ater Supplies	>	Reticulated water is to be provided		
•	An adequate water supply is provided for firefighting purposes.  Water supplies are located at regular intervals.  The water supply is accessible and reliable for firefighting operations.  Flows and pressures are appropriate.	<b>&gt; &gt; &gt;</b>	to the development, where available  A static water supply is provided where no reticulated water is available  Fire hydrant spacing, design and sizing comply with AS2419.1:2005; and  Hydrants are not located within any road carriageway; and  Reticulated water supply to urban subdivisions uses a ring main	<b>✓</b>	The lot is connected to a compliant reticulated water supply.

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	Performance Criteria		Acceptable Solutions	Complies	Comment
•	The integrity of the water supply is maintained.		system for areas with perimeter roads		
•	A static water supply is provided for firefighting purposed in areas where		Fire hydrant flows and pressures comply with Table 2.2 and AS2419.1:2005.		
	reticulated water is not available.	>	All above ground water service pipes are metal, including and up to any taps.		
Ele	ectricity Services				
•	Location of electricity services limits the possibility of ignition of surrounding bush land or the fabric of buildings.	>	Where practicable; electrical transmission lines are underground.	<b>√</b>	The lot is connected to a compliant underground electrical supply.
Ga	Location and design of gas services will not lead to ignition of surrounding bushland or the fabric of buildings.	>	Reticulated or bottled gas is installed and maintained in accordance with AS/NZS 1596:2014 and the requirements of relevant authorities, and metal piping is used.	<b>✓</b>	The lot is connected to a compliant gas supply.
Co	onstruction Standards		BAL is determined in accordance		
•	The proposed building can withstand bush fire attack in the form of embers, radiant heat and flame contact.  Proposed fences and gates are designed to minimise the spread of bush fire.	>	with Tables A1.12.5 to A1.12.7.  Construction provided in accordance with the NCC as modified by section 7.5.  Fencing and gates are constructed in accordance with section 7.6.	✓	The BAL for the dwelling has been determined as <b>BAL-12.5</b> .
•	Proposed Class 10a buildings are designed to minimise the spread of bush fire	>	Class 10a buildings are constructed in accordance with section 8.3.2.		
La	ndscaping  Landscaping is designed and  managed to minimise flame		Compliance with the NSW RFS 'Asset protection zone standards' (see Appendix 4)		
	contact and radiant heat to buildings, and the potential for wind-driven embers to cause ignitions.	>	A clear area of low-cut lawn or pavement is maintained adjacent to the house		
		>	Fencing and retaining walls are constructed in accordance with Section 7.6	Able to	All landscaping is the responsibility
		>	Trees and shrubs are planted such that:	comply	of the landowner.
			The branches will not overhang the roof		
		0	The tree canopy is not continuous		
		0	If proposed, a windbreak, is located on the elevation from which fires are likely to approach.		

# **DEVELOPMENT APPLICATION**

**PROJECT** 

**NEW DWELLING** 

WIMBLEDON HOUSE 2A ALLEN AVENUE BILGOLA BEACH 2107



SUBSET	ID	DRAWING TITLE
A0 PROJECT INFO		
	DA0-00	Cover Sheet
	DA0-01	Site Analysis
DA1 PLANS		
	DA1-02	Demolition Plan
	DA1-03	Basement Plan
	DA1-04	Level 1 Plan
	DA1-05	Level 2 Plan
	DA1-06	Level 3 Plan
	DA1-07	Roof Plan
DA2 ELEVATIONS		
	DA2-01	North & South Elevations
	DA2-02	East & West Elevations
A3 SECTIONS		
	DA3-00	Section AA & BB
	DA3-02	Section CC
DA4 SUPPORTING INFOR	RMATION	
	DA4-00	Existing Landscape Area Calculation
	DA4-01	Landscape Area Calculations
	DA4-02	View Comparison
	DA4-03	8m Height Plane
	DA4-04	Excavation Calculation
	DA4-05	External Finishes Schedule
DA5 Shadow Diagrams		
	DA5-00	Existing 9am, 21st June
	DA5-01	Proposed 9am, 21st June
	DA5-02	Existing 12pm, 21st June
	DA5-03	Proposed 12pm, 21st June
	DA5-04	Existing 3pm, 21st June
	DA5-05	Proposed 3pm, 21st June
DA6 Visualisation		

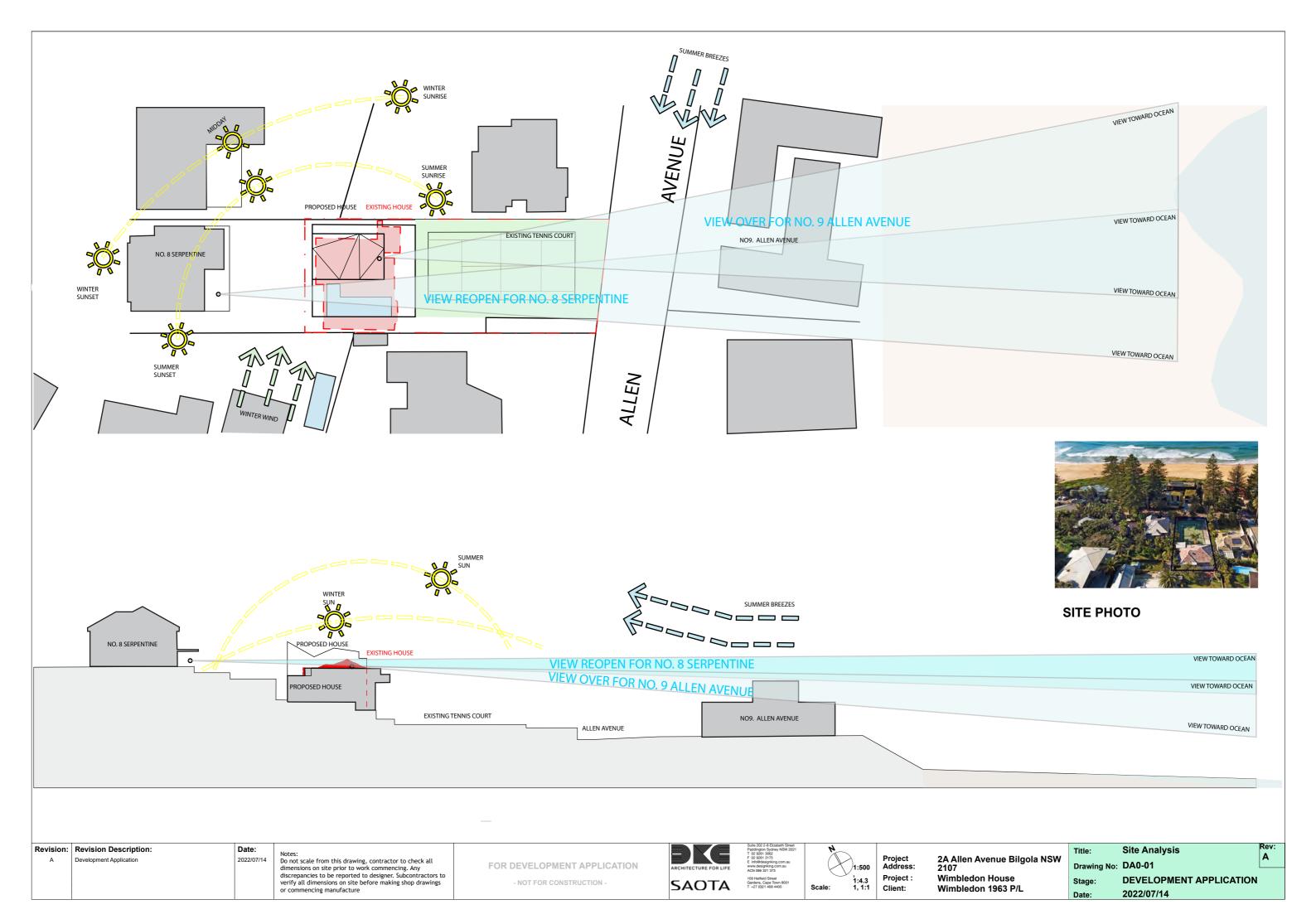


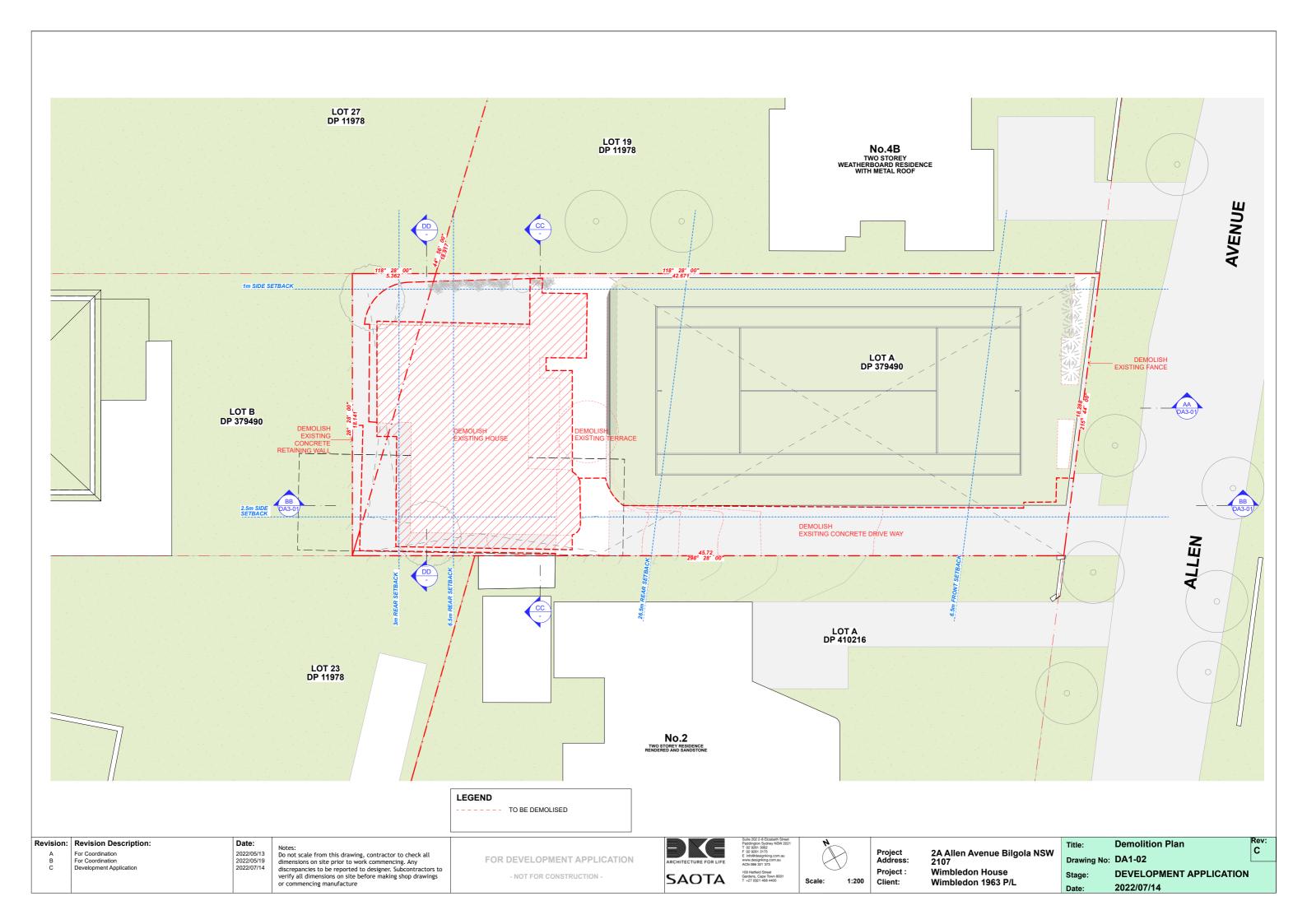


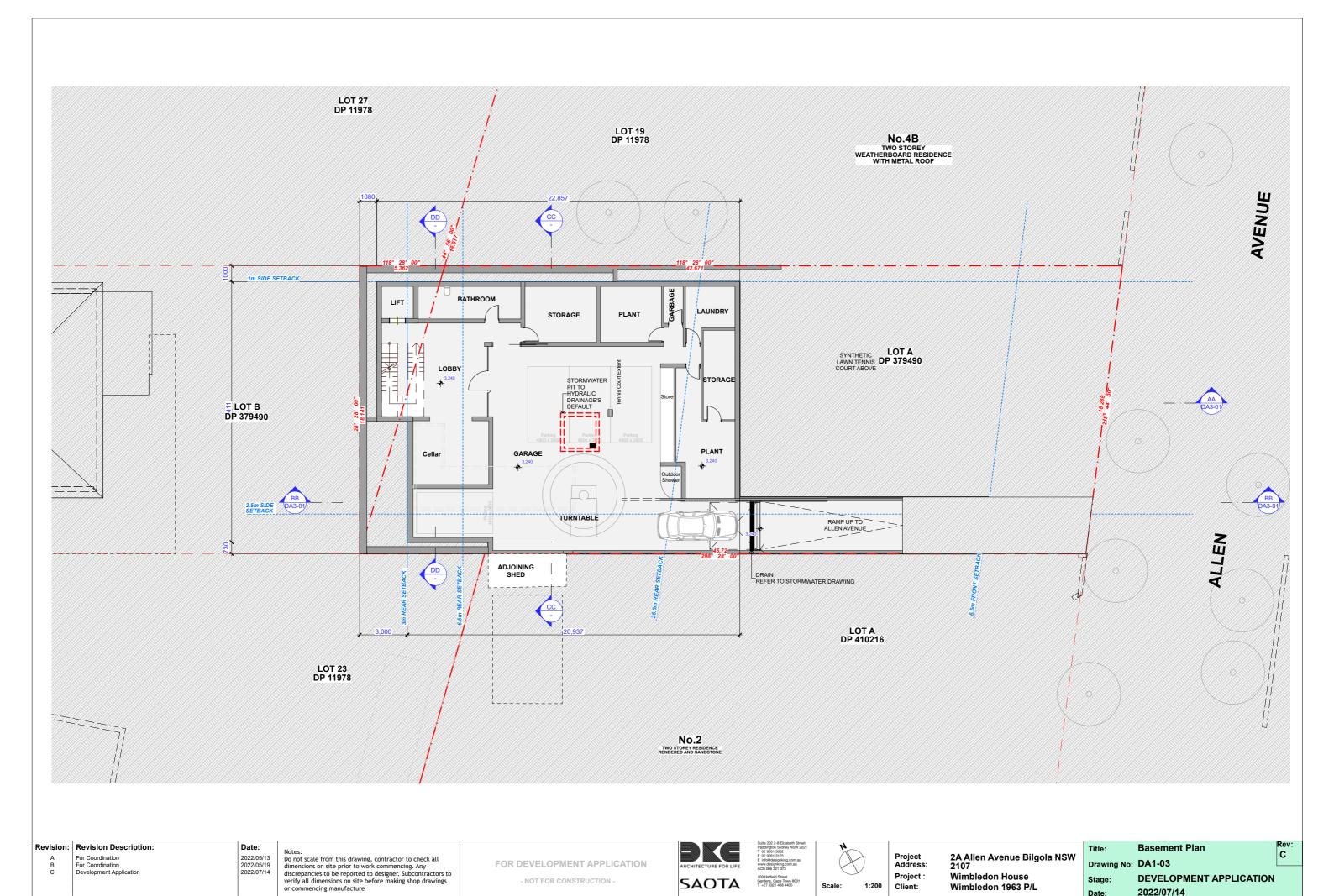


Wimbledon 1963 P/L

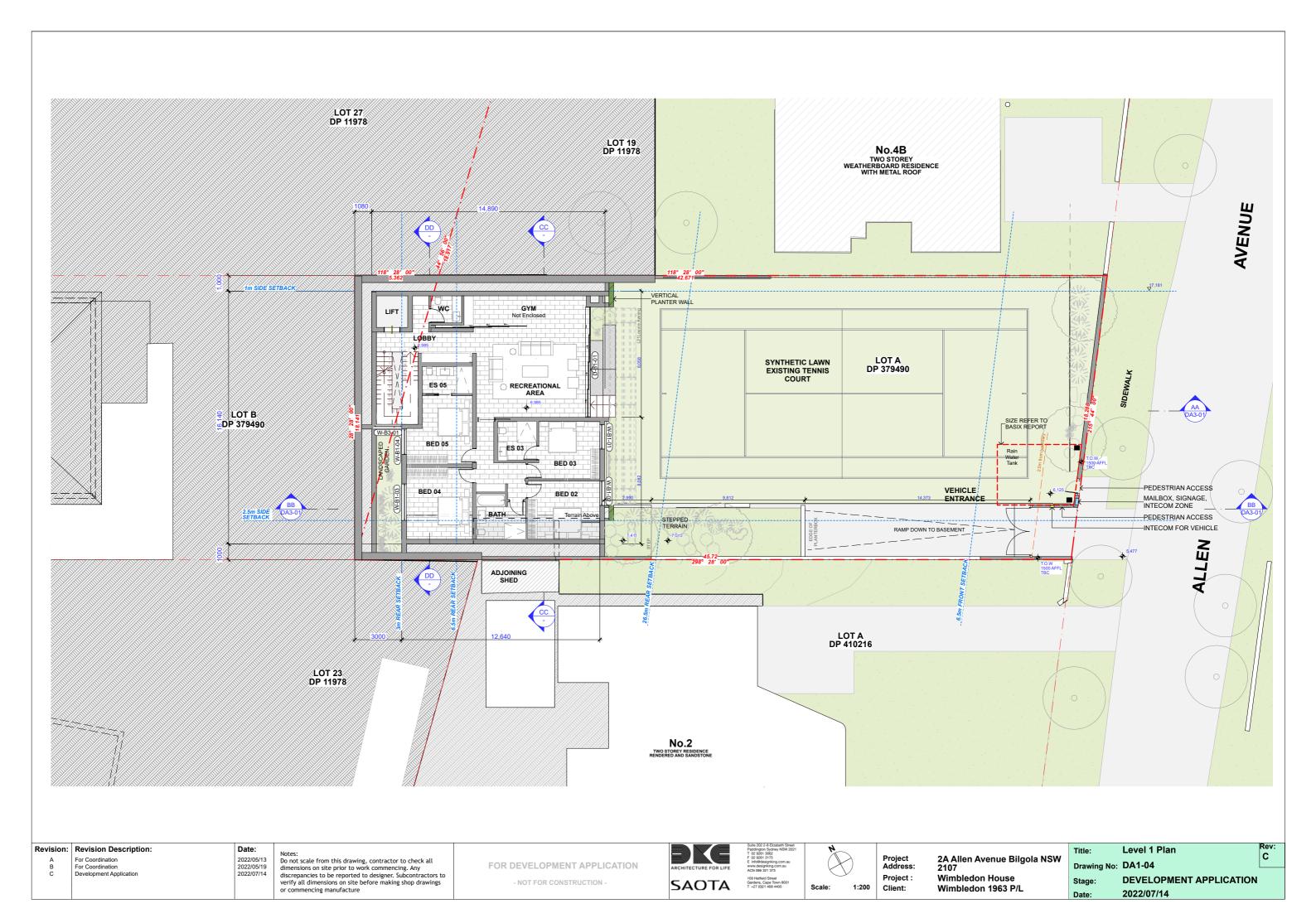
DEVELOPMENT APPLICATION
Date: 2022/07/14

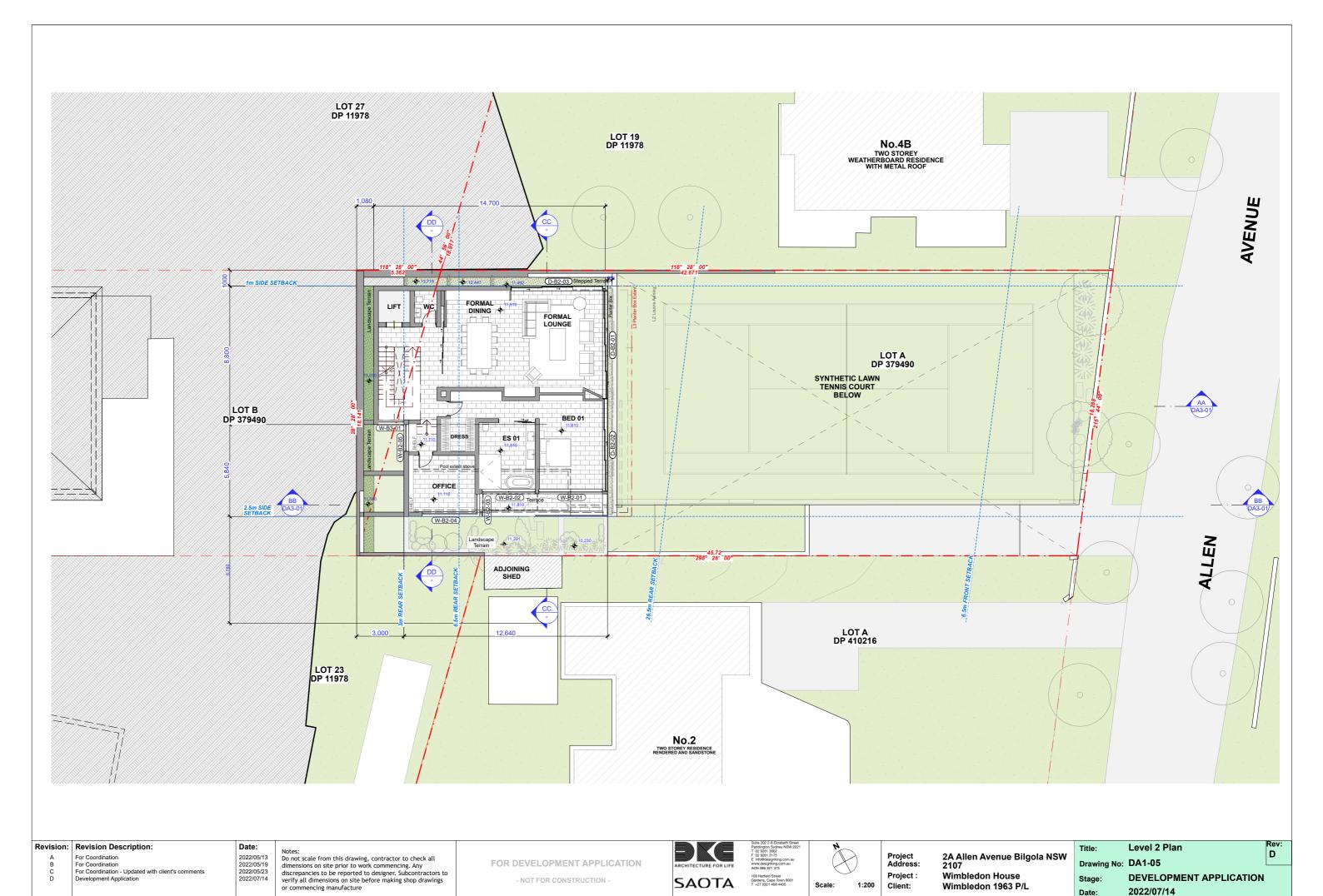


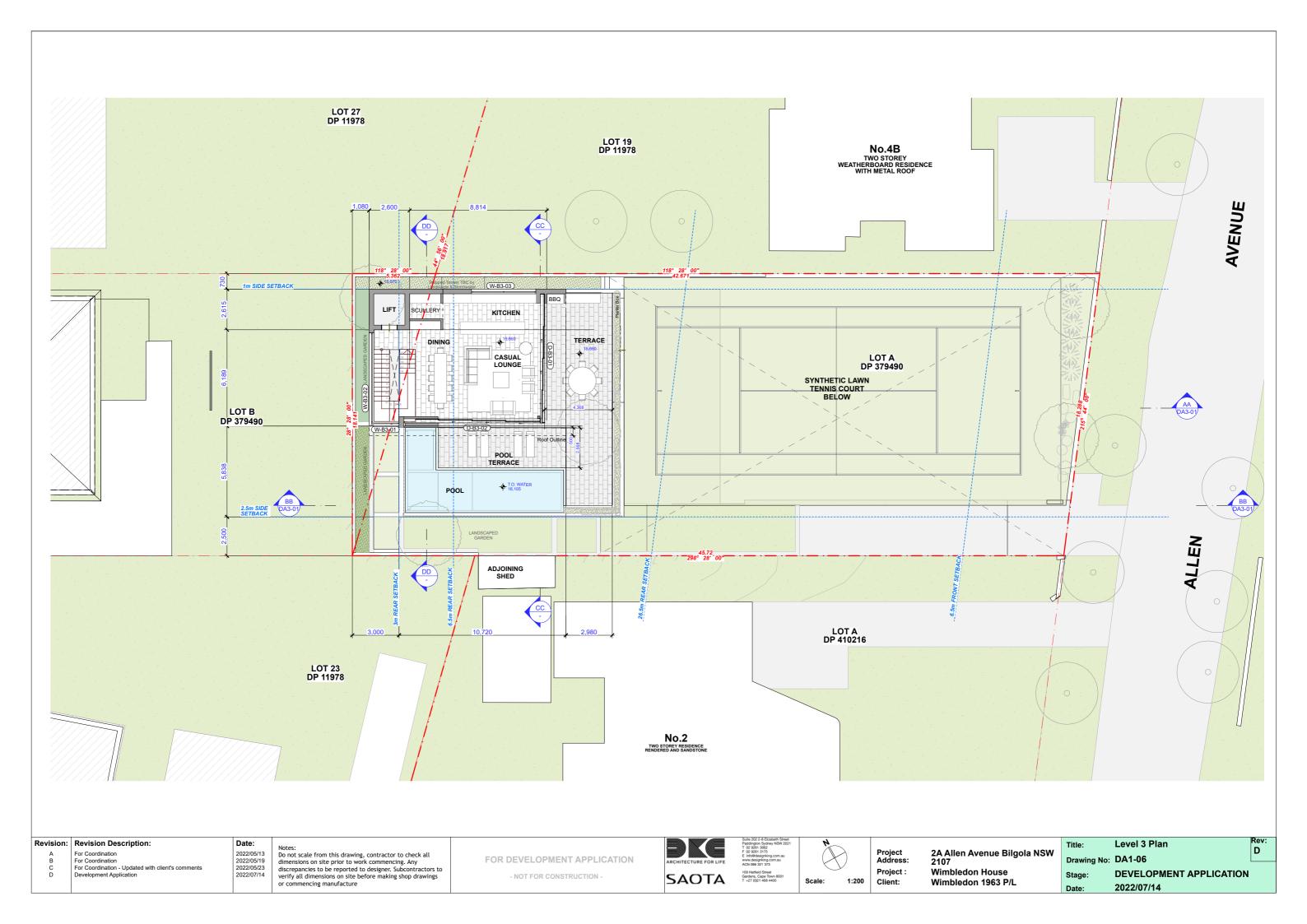


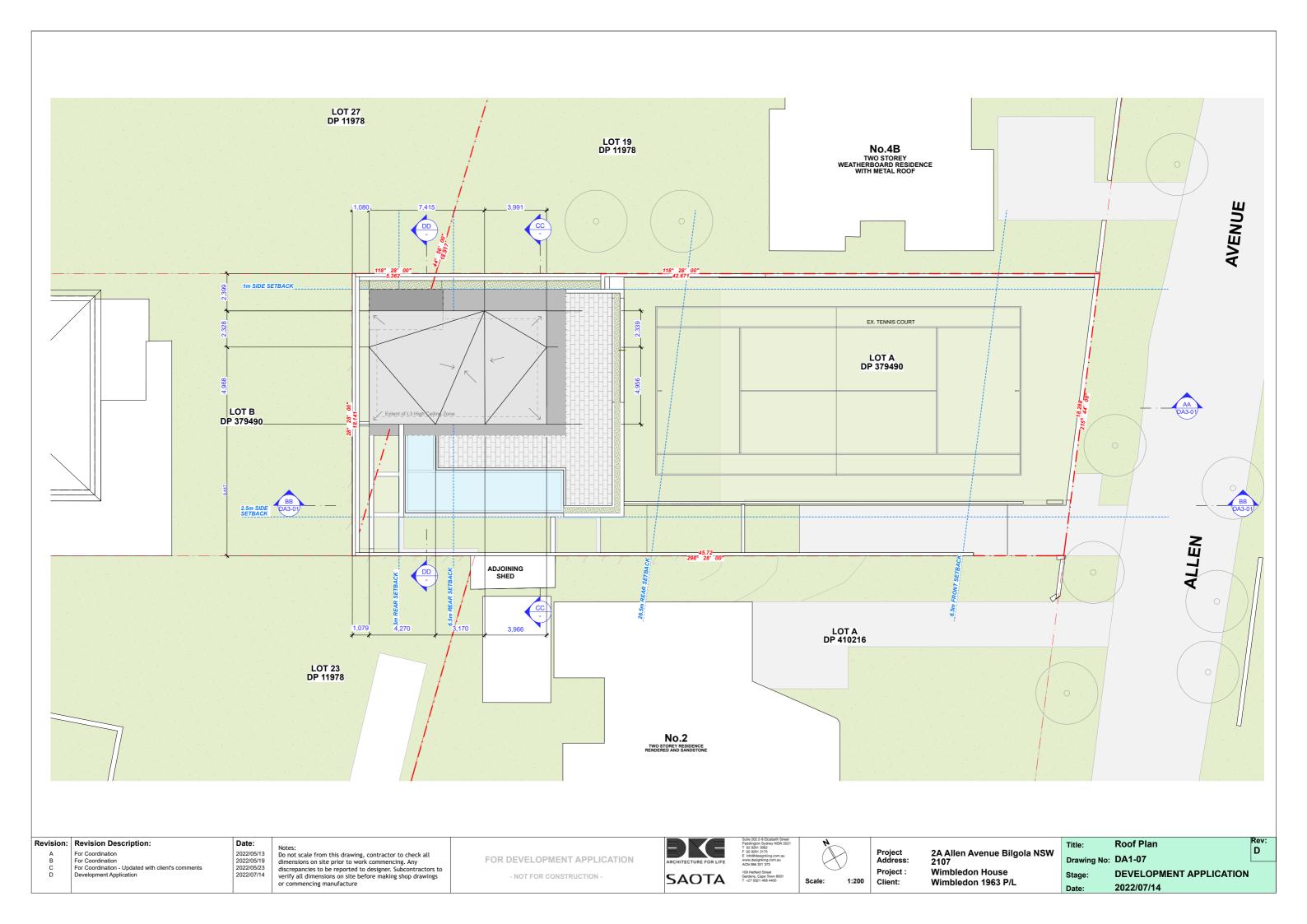


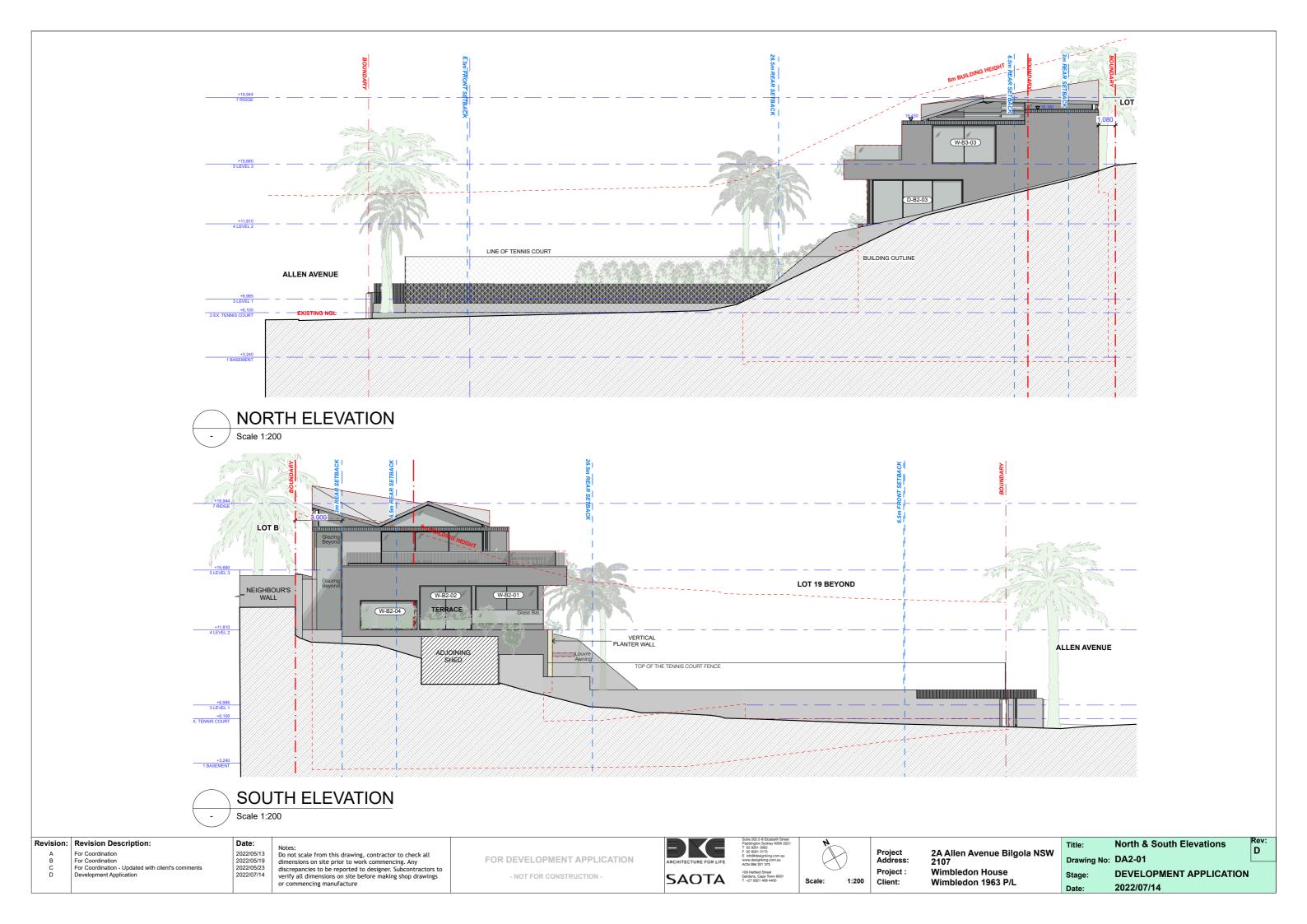
2022/07/14





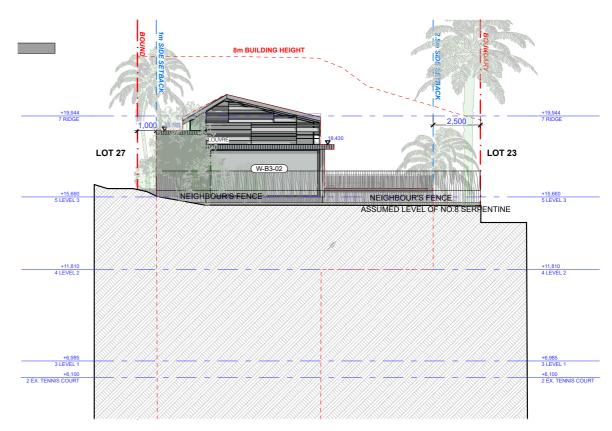












WEST ELEVATION Scale 1:200

Revision:	Revision Description:
Α	For Coordination

For Coordination
For Coordination
For Coordination - Updated with client's comments
Development Application

2022/05/13 2022/05/19 2022/05/23 2022/07/14

Date:

Notes:
Do not scale from this drawing, contractor to check all dimensions on site prior to work commencing. Any discrepancies to be reported to designer. Subcontractors to verify all dimensions on site before making shop drawings or commencing manufacture







Project Address: Project: Client:

2A Allen Avenue Bilgola NSW 2107 Wimbledon House

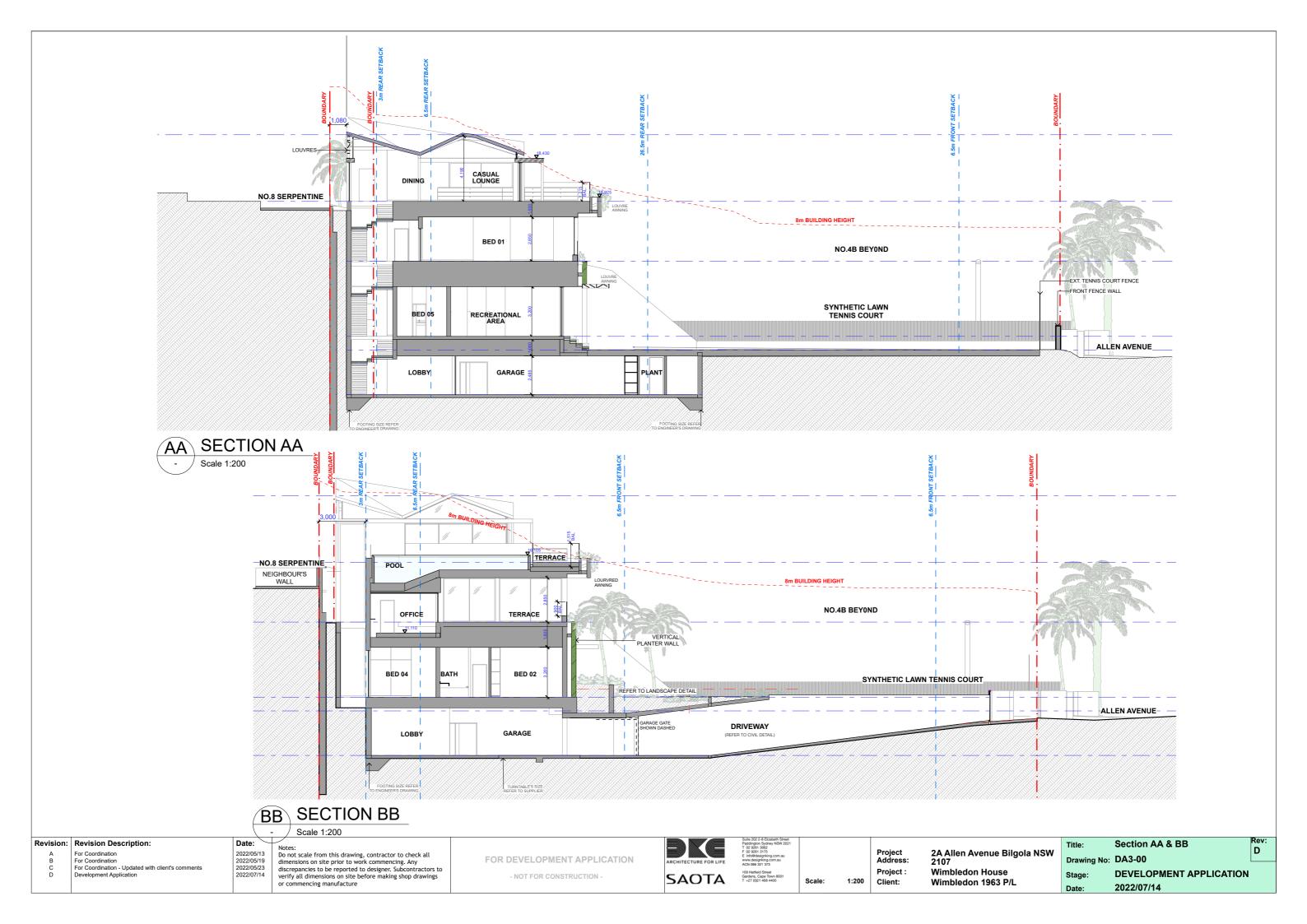
Wimbledon 1963 P/L

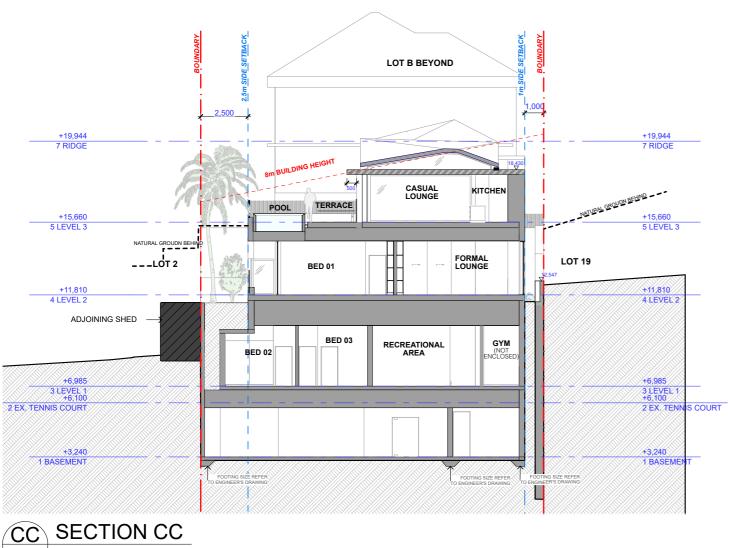
**East & West Elevations** Title: Drawing No: DA2-02

**DEVELOPMENT APPLICATION** 2022/07/14

Rev:

FOR DEVELOPMENT APPLICATION





Scale 1:200

Date:

2022/07/14

Revision: Revision Description: Development Application

Notes:
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FOR DEVELOPMENT APPLICATION - NOT FOR CONSTRUCTION -







Project Address: Project: Client:

2A Allen Avenue Bilgola NSW 2107 Wimbledon House Wimbledon 1963 P/L

Section CC Title: Drawing No: DA3-02

**DEVELOPMENT APPLICATION** Stage: 2022/07/14

Rev: