



SSDA Report – Structural Engineering

250527 - Edmondson Park Block 20a

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Document Summary

Project Number: 250527
Project Name: Edmondson Park Block 20a
Prepared For: Landcom
Date Prepared: 27/03/2026
XK Project Director: Nathaniel Ko

Status	Issue	Date	Prepared By	Approved By
SSDA	1	06/03/26	NC	NLK
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1 Introduction

1.1 EXECUTIVE SUMMARY

This SSDA Structural Engineering Report has been prepared by Xavier Knight to accompany an application for a State Significant Development (SSD-99909708) for infill Affordable Housing at part Lot 40 DP12861651, Edmondson Park also known as Block 20a. Block 20a is subject to development approval (DA-421/2025) which will subdivide Lot 40 into several smaller allotments. The development will be constructed on Lot 401 and relies on Lot 402 which is dedicated to becoming a future laneway.

1.2 Project Overview

As the NSW Government's land and property development organisation, Landcom has a mandate to take a lead role in improving the supply, diversity, and affordability of new housing in NSW.

Landcom aims to create innovative and productive places that demonstrate global standards of liveability, resilience, inclusion, affordability, and environmental quality, and uses its sites and close working relationships with the private sector to deliver quality, socially inclusive community places, where people can grow and thrive regardless of income levels and stages of life. In response to the NSW Government's commitment to increasing the supply of Affordable Housing under the National Housing Accord, Landcom has committed to delivering 1,800 affordable rental housing dwellings by 2029. As part of this commitment, Block 20a at Edmondson Park has been earmarked as a suitable site for infill affordable housing.

1.3 Project Objectives

Landcom's objectives for the project are:

- Delivery of sustainable high quality affordable accommodation.
- Provide a sense of place within the development to ensure good high-quality accommodation.
- The use of robust materials that allow for long service life of the building.
- Create a building that meets the needs of the community and serves the requirements of the area.
- To establish seamless integration of cultural and sustainable objectives that align to Landcom's key principles.

1.4 Proposed Development

Landcom is seeking development consent to construct an infill affordable housing development. Development consent is sought for:

- Site preparation works;
- Earthworks and associated site works;
- Construction of:
 - One (1) level of basement car parking comprising of 59 car parking spaces, bicycle parking, storage and associated services;
 - Three (3) inter-connected buildings across the site comprising:
 - One, fifteen (15) storey building located along the north-eastern corner of the site;
 - One, nine (9) storey building located along the eastern side of the site;
 - Four, two-storey attached terraces.
 - Ground floor includes five (5) at grade parking spaces including three (3) dedicated car share spaces and two (2) retail car parking spaces;
 - Two main lobby areas which are designed to be adaptable and cater for co-working;
 - A retail unit;
 - A landscaped plaza along the eastern side of the site;
 - Small office space for a Community Housing Provider;
 - Communal room for residents on the second floor;
 - Large area of communal open space located on Level 2;
 - Associated amenities for services and waste
 - Rear laneway for access
- A total of 172 affordable housing units are to be delivered.

The proposed development has an estimated development cost that exceeds \$30million and 100% of the gross floor area of the development will be used for the purposes of affordable housing. Accordingly, the proposal is SSD for the purposes of the State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP).

1.5 Reference Documents

Document	Organisation	Reference
Architectural drawings – SSDA set	FUSE Architects	Issued 07/03/2026.
Geotechnical Investigation Report	Geotechnique Pty Ltd	“Block 20A, Edmondson Park Geotechnical Engineering Consultant Report” dated 3/2/2026

Table 1 - Reference Documents

2 Site Information

2.1 SITE LOCATION

The proposed development site is in the Liverpool Local Government Area within the Town Centre North precinct of Edmondson Park South. Edmondson Park South is identified in the Western City District Plan as a Local Centre in recognition of its proximity to the Southwest Rail Line and the Edmondson Park Railway Station. It borders the motorway intersection of the M31, M5 and M7 with Camden Valley Way, providing excellent road access to a large extent of the Greater Sydney Metropolitan Area. The proposed development site is a 3,385 sqm parcel of land currently known as Block 20a, including 321 sqm for the rear laneway, and part of Lot 40 in DP12861651, Croatia Avenue, Edmondson Park (Figure 1)



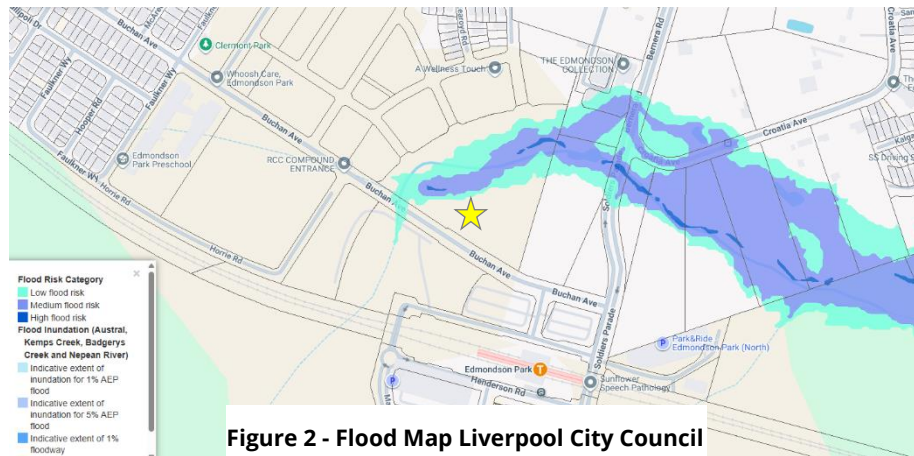
Figure 1 – Subject Site aerial view.

2.2 SUBJECT SITE

Previous earthworks have leveled the area and formed batters from Buchan Road that extend into the site boundaries. The site slopes towards Maxwell Creek to the northeast, however the site will not drain to this water way. The proposed road on the

northern site boundary will provide the stormwater property connection to the precinct stormwater network. This road and stormwater network is to be provided by others in a separate application.

From Liverpool City Council's flood map online service, the site is not at risk of flooding. (Figure 2)



3 Geotechnical Conditions

Xavier Knight's understanding of the site-specific geotechnical conditions is based on the Geotechnical Investigation Report (GIR) referenced in Table 1.

Based on the boreholes carried out at the site and documented in the GIR, the sub-surface ground profile is expected to consist of topsoil and fill materials overlying natural alluvial and residual clay, underlain by shale/siltstone bedrock.

The RL at the top surface of bedrock varies from 51.7m at the western end of the site to 49.8m at the eastern end. The proposed basement is to have a finished floor level of 53.30m; as such, foundations are anticipated to be reinforced concrete bored piles. From the GIR, "the recorded groundwater levels indicate that groundwater occurs within the shale bedrock and ranges between RL 49.8m and 49.9m AHD during the monitoring period".

The GIR states the soil is moderately reactive and susceptible to shrink-swell movements. Classification to AS 2870 is still required of the geotechnical engineer.

The GIR notes presence of acid sulfate soils as low permeability and an appropriate Exposure Classification of A2 in accordance with AS 2870.

3.1 IN-GROUND STRUCTURES

3.1.1 Excavation Retention System

The retention system is envisaged to consist of a reinforced concrete soldier pile wall and a continuous capping beam extending for the full length of the wall, over the piles. Lateral restraint of the wall will be provided by temporary ground anchors extending into the site and past the adjacent boundaries.

In the permanent condition, the top of the wall will be laterally restrained at the capping beam by the proposed Ground floor slab. Once construction is sufficiently progressed, the temporary ground anchors will be destressed and will no longer provide any structural restraint to the retention wall. The retention system will be required to carry vertical load from the above ground structure as several perimeter tower columns land on the capping beam.

Design responsibility for the permanent conditions of the wall will reside with Xavier Knight. The contractor will be responsible for locating and protecting adjacent services and structures, and any temporary support of the wall.

The GIR advises that the basement can be designed for a drained condition, experiencing no hydrostatic uplift pressure.

3.1.2 Retaining Walls

The structural design will be focused on minimising retaining walls for the project. Systems available for areas that require retaining walls, beyond the main site excavation retention, will be:

- Cantilevered reinforced concrete or blockwork L-shaped retaining wall on high-level reinforced concrete strip footings.
- Propped (by floor plates) reinforced concrete or blockwork retaining walls on high-level reinforced concrete strip footings.

Retaining walls will be designed in accordance with the geotechnical engineers' advice, provided in the GIR and further investigations. The structural design will consider active:

- Suitable horizontal deflection limits for flexible retaining walls.
- Active, at-rest and passive earth pressures, as appropriate.
- Additional imposed live or superimposed dead load surcharges due to construction plant, traffic, pedestrians, berms or stockpiles, retained water and any other loads as necessary.

3.1.3 Foundations

The primary structural foundations for vertical structural elements (columns, lift and stair core walls) shall be reinforced concrete bored piles or pad footings into medium or greater strength bedrock depending on the results found from the geotechnical investigation.

Foundations that may be located within the zone of influence of any excavation retention, shall be continued below the zone of influence to ensure that no adverse effects are experienced as a result of the excavation retention.

Foundations shall be founded at and within similar depths and materials to avoid the potential for differential settlement.

Where minor structures may be required, such as retaining walls, these may be designed with shallow strip, pad or cantilevered foundations bearing directly on the natural soils.

3.2 GRAVITY LOAD RESISTING STRUCTURE

All structural elements for the primary building structure are to be constructed from reinforced and post-tensioned concrete.

3.2.1 Column Grid

The reinforced concrete columns transmit loads from the post-tensioned slabs to the foundations. The column grid has been developed with the project architect and strategically set out to accommodate the change in use between the Basement level and upper levels, achieving vertical continuity, eliminating almost all need for transfer columns, and not compromising the parking layout. The column grid is configured to optimise the structural efficiency of the slab spans, reducing material usage and building mass, thereby simultaneously reducing demand on the lateral load resisting system

3.2.2 At-grade Floor Plates

In the absence of further geotechnical advice regarding the soil reactivity classification to AS 2870, the at-grade basement slab is currently assumed to follow typical concrete slab on ground design and construction. This construction allows for flexibility in the slab and employs dowelled construction joints allowing a degree of movement and shrinkage, and sawcut joints to control cracking. This type of slab is independent of the main load-bearing structure.

If further geotechnical investigation concludes that the soil conditions are reactive, the Basement floor slab will be required to accommodate ground movements associated with a reactive classifications under AS 2870. Reactive soils are subject to volume changes due to moisture variations, which can lead to differential movement and structural distress if not adequately managed. To address this, the foundation will be constructed using a stiffened raft slab system, which incorporates edge beams and internal stiffening beams to enhance load distribution and overall slab rigidity, mitigating differential settlement, reducing stress concentrations and minimising the potential for cracking or excessive movement.

Void formers will be incorporated beneath the slab to create a separation between the slab and the underlying reactive soil, allowing for vertical soil movement without directly impacting the structure. As the soil expands and contracts with moisture variations, the void space accommodates these changes, preventing uplift pressures on the slab. This significantly reduces the risk of heaving forces causing structural damage.

3.2.3 Suspended Floor Plates

Suspended floors are typically comprised of post-tensioned (PT) flat plate slabs designed to efficiently support gravity loads. The PT slabs are directly supported by reinforced concrete columns, eliminating the need for beams and allowing for a more flexible and efficient structural layout. The use of post-tensioning enhances slab performance by reducing deflections and material usage, while the reinforced concrete columns provide robust vertical support, ensuring overall structural integrity and durability. Most reinforced concrete columns continue through to the Basement floor, eliminating the need for a transfer slab at Ground level. The perimeter of the Ground floor slab will be vertically supported by the capping beam of the excavation retention wall along the boundary.

This design approach enhances structural efficiency by providing a direct load path to the foundations, reducing construction cost and complexity. The absence of a transfer slab also improves floor-to-floor height efficiency, minimises differential movement, and enhances long-term structural performance.

3.2.4 Roof Structure

The post-tensioned roof slab will be exposed to weather conditions and designed to accommodate drainage falls, which will be formed within the slab itself. These falls will be coordinated with the hydraulic design to ensure efficient water runoff and prevent ponding. Given its exposure, the slab will also have enhanced durability requirements, namely increased concrete cover, to protect against long-term environmental effects and maintain structural integrity over time. Appropriate waterproofing systems shall be specified by the project architect and waterproofing consultant.

3.3 LATERAL LOAD RESISTING STRUCTURE

The primary lateral stability system consists of in-situ reinforced concrete stair and lift cores, which are designed to resist wind and seismic actions in each tower structure. These cores provide lateral stiffness significantly greater than that of the columns, ensuring the structure can effectively withstand horizontal loads.

In conventional building design, cores act as shear walls that distribute lateral forces to the foundations while minimising horizontal drift and deformation. By concentrating lateral resistance within the cores, the structure benefits from a simplified and efficient stability mechanism to resist overturning, reducing the demand for additional lateral stability elements.

The cores in the tower structures are positioned relatively concentric relative to the floor plate, resulting in some offset between the centre of mass and the centre of rotation. This eccentricity introduces torsional effects, which increase lateral displacements and internal forces within the structural system. The torsional effects must be carefully considered to ensure the structure remains stable under dynamic loading conditions. The core configuration requires a robust structural design approach to balance the distribution of lateral forces and mitigate excessive twisting under wind and seismic actions.

A detailed lateral stability analysis will be conducted using finite element software to quantify the effects of wind and seismic loads on the lateral system. This analysis will evaluate horizontal deformations, inter-storey drift, and torsional response to refine the structural design and detailing.

4 Loading

4.1 VERTICAL LOADS

The structure will be designed for the following imposed loads as per AS/NZS1170.1.

Area	SDL - Finishes/Fit-Out/Services (kPa)*	Live Load (kPa)**	Point Live Load (kN)
Residential Areas	1.5	1.5	1.8
Balconies	2.0	2.0	1.8
Toilets (as drawn)	2.0	2.0	1.8

Communal Areas	1.0	4.0	4.5
Lobbies/Corridors	1.0	4.0	4.5
Fire Stairs	0.0	4.0	4.5
Terraces	2.0	4.0	4.5
External Lower Ground Floor Areas	5.0***	15.0	42.0
Accessible Roof Areas	1.0	4.0	4.5
Non-Accessible Roof Areas – Concrete Framed	2.5	3.0	4.5
Car Parking	0.5	2.5	13.0
Plant Rooms	2.5	5.0	4.5
Waste Rooms	1.5	5.0	4.5
Bicycle Storage	1.0	3.0	4.5
300 Deep Soil	6.0	4.0	4.5
600 Deep Soil	12.0	4.0	4.5
900 Deep Soil	17.0	4.0	4.5
1200 Deep Soil	22.0	4.0	4.5

Notes:

* Additional loading for floor finishes to be agreed.

** Live load reduction to be accounted for in design as allowable to AS/NZS1170.1

*** Additional loading to be agreed once development of these areas progressed

Refer to Section 4.5 for façade loads acting on slabs.

4.2 LATERAL LOADS

All horizontal imposed loads are to be in accordance with AS/NZS 1170.1. The following categories must be addressed individually:

- Handrails (generally) – 0.75 kN/m
- Handrails subject to crowd loading – 3.0 kN/m
- Carpark parapets, walls, barriers – 1.5kN/m.

Walls and barriers acting as car barriers in the carpark areas to be designed for a load of:

- 30kN (Based on clause 3.8 of AS/NZS1170.1) at a height of 0.5m above floor level typically;
- 240kN (Based on clause 3.8 of AS/NZS1170.1) at a height of 0.5m above floor level at end of ramps exceeding 20m in length.

4.3 IMPOSED MOVEMENTS

The effect of imposed movements on the structure will be considered in the calculations. These include the following types of movement:

Settlement	either absolute or differential
Temperature range	either absolute or differential
Shrinkage	when restrained between stiff elements
Foundation movement	include shrink/swell under slab on grade

4.4 SOIL LOADING

Earth retaining structures to be designed in accordance with the recommendations of the Geotechnical Engineers report.

4.5 FAÇADE

- Glazed façade – 0.75 kPa per metre height on elevation. Applied as a vertical load to the slab.

4.6 ROBUSTNESS

The structure shall be detailed in accordance with the requirements of AS1170.0 (Structural Design Actions – General Principles) and AS3600 (Concrete Structures); structural components shall be adequately tied together in the horizontal and vertical planes such that the structure can withstand an event without being damaged to an extent disproportionate to that event.

The design of the structure shall provide load paths to the foundations for forces generated by all types of actions from all parts of the structure.

The structure shall have a minimum lateral resistance equivalent to 2.5% of $(G + \psi_c Q)$ for each level, applied simultaneously at each level for a given direction.

All parts of the structure shall be interconnected. Connections shall be capable of transmitting 5% of the value of $(G + \psi_c Q)$ for the connection under consideration.

4.7 BLAST RESISTANCE

At this stage of the design, there is no consideration of blast loads. This is inherently addressed by the robustness requirements outlined in 4.6. The assessment of blast loading should form part of a larger security assessment of the building if required.

4.8 WIND

Wind loading is in accordance with AS/NZS 1170.2 – Structural Design Actions – Wind Actions, with the following parameters:

Parameter	Value
Structure Importance Level	2
Return Period (SLS)	1 in 25 years
Return Period (ULS)	1 in 500 years
Location	Sydney
Region	A2
Terrain Category	2.5
ULS Wind Speed, V_{500}	45 m/s

SLS Wind Speed, V_{25} | 37 m/s

Table 2 – Wind parameters

4.9 EARTHQUAKE

Earthquake loading applied to the structural elements and detailing of the seismic stability system will be in accordance with AS 1170.4 – Structural Design Actions – Earthquake Actions for Australia, with the following parameters:

Parameter	Value
Importance Level	2 (to be confirmed by Certifier)
Annual probability of exceedance	1:500
Probability factor, k_p	1.0
Hazard factor for site location, Z	0.08
Site Sub-Soil Class	Ce
Earthquake Design Category	II
Dynamic Analysis	Yes
Structural System	Limited Ductile
Ductility factor, μ	2
Structural performance factor, S_p	0.77
S_p/μ	0.38
μ/S_p	2.6

Table 3 - Seismic parameters

5 Design Information

5.1 DESIGN STANDARDS

The structural design shall be in accordance with the latest issue of all relevant structural Australian Standards, relevant structural sections of the NCC and other statutory requirements.

In particular, the structural design will included, but may not be limited to, the following relevant Australian Standards:

Standard	Year	Title
AS/NZS 1170.0	2002	Structural Design Actions Part 0 General Principles
AS/NZS 1170.1	2002	Structural Design Actions Part 1 Permanent, Imposed and Other Actions
AS/NZS 1170.2	2021	Structural Design Actions Part 2 Wind Loads
AS 1170.4	2024	Structural Design Actions Part 4 Earthquake Actions in Australia
AS 3600	2018	Concrete Structures
AS 3700	2011	Masonry Code
AS 4100	2020	Steel Structures

Standard	Year	Title
AS 2159	2009	Piling – Design and Installation
AS 4678	2002	Earth Retaining Structures
AS 2670.1	2001	Evaluation of Human Exposure to Whole-Body Vibration – General Requirements
AS ISO 2631.2	2014	Mechanical Vibration and Shock – Evaluation of Human Exposure to Whole-Body Vibration –Vibration in Buildings (1 to 80Hz)
NCC	2022	Volume 1, Class 2 to 9 Buildings, Section B - Structure

5.2 DESIGN LIFE

The NCC and Standards Australia material standards will be used as the basis for the durability specification for the structure. The structural elements of the buildings shall be designed to provide adequate performance for a minimum period of 50 years.

5.3 DEFLECTION LIMITS & MOVEMENTS

5.3.1 Vertical

Maximum vertical deflections shall be in accordance with minimum requirements of Table 2.3.2 of AS 3600 – 2018 and as specified in Table 4.

Refer to Section 5.4 for more detailed information regarding façade movements.

Type of member	Deflection to be considered	Deflection limit for spans	Deflection limit for cantilevers
All members	Incremental deflection Total deflection	1/500 (20mm max.) 1/250 (25mm max.)	1/250 (10mm max.) 1/125 (15mm max.)
Members supporting masonry partitions	Deflection that occurs after the addition or attachment of the partitions	1/500 where provision is made to minimize the effect of movement, otherwise 1/1000	1/250 where provision is made to minimize the effect of movement, otherwise 1/500
Members supporting other brittle finishes	Deflection that occurs after the addition or attachment of the finish	Manufacturer's specification but not more than 1/500	Manufacturer's specification but not more than 1/250
Members subjected to vehicular or pedestrian traffic	Imposed action (live load and dynamic impact) deflection	1/800	1/400
Transfer members	Total deflection	1/500 where provision is made to minimize the effect of deflection of the transfer member on the supported structure, otherwise 1/1000	1/250

Table 4 – Vertical deflection limits for slabs and beams

5.3.2 Lateral

The lateral drift of the building will be limited to the following:

- Under Serviceability Wind Actions – Height/500
- Under Earthquake Actions (AS 1170.4 clause 7.5) – Height/67 or 1.5% storey height

5.3.3 Foundation Settlement

The loads supported by the building foundations shall not exceed the values of the ultimate and allowable shaft adhesion and bearing pressures provided by the geotechnical engineer in the GIR. The foundations shall be designed using the allowable parameters under working loads. The GIR notes:

- Ultimate parameters may result in displacements up to 10% of the pile diameters or minimum footing width as the ultimate capacity is only mobilised at large displacements.
- Allowable parameters are limited to the loading bearing capacities which will yield anticipated displacements of 1% of the pile diameter or minimum footing width.
- Differential settlements are estimated at half of the anticipated total foundation settlement.

Foundations shall be founded at and within similar depths and materials to avoid the potential for differential settlement.

5.4 VERTICAL STRUCTURAL MOVEMENTS FOR FAÇADE

The structure is expected to deform and deflect under load within the bounds of the relevant Australian Standards. The façade should be detailed to accommodate the movement of the structure. The following sections outline sources of vertical structural movement that should be accounted for in the design and preliminary estimates of these movements.

5.4.1 Column Axial Shortening

Reinforced concrete columns will shorten due to the natural shrinkage and creep effects. A minimum of 0mm and a maximum of 1mm of axial shortening per vertical metre length of column/wall should be accounted for.

5.4.2 Floor Plate Deflection

The typical 200mm thick suspended flat plate will deflect due to internal prestress, under initial loading and over time due to long-term effects of creep and shrinkage.

Long-term movements due to creep and shrinkage are approximate only and can vary by up to $\pm 30\%$ (refer to AS3600-2018 Section 3.1.7.2).

Table 5 outlines the maximum structural deflections to allow for, which shall be investigated in detail during the structural floor plate analysis:

Location	Max. hogging deflection [mm]	Max. sagging deflection [mm]
Slab edge directly adjacent to a column	10mm	20mm
Slab edge between two columns	10mm	25mm
Slab on grade	0mm	25mm

Table 5 - Floor plate deflection for facade elements

The figures provided are approximate and are dependent on several factors:

- The final design loading for floors and facade.
- The post-tensioned floor plate design.
- The time of first loading and magnitude of loading during construction.
- The time to installation of the façade.
- The sequence of loading.

The post-tensioning contractor will confirm the final floor plate deflections following finalisation of the floor plate design. The effects of variability in loading and materials should be considered in the calculation of the deflections.

No allowance for construction tolerance or fabrication tolerance has been included in the figure provided.

5.5 FLOOR VIBRATIONS

Footfall-induced vibrations in building floors can affect occupant comfort and the performance of sensitive equipment. Specific maximum footfall frequencies for different building areas are not explicitly defined in Australian standards

Acceptance criteria for human comfort are difficult to define and quantify because of the complexities involved in the human response to vibration. Influencing factors include; the vibration characteristics of the source (frequency content, vertical or horizontal, duration, continuous or intermittent), the individual's expectations (private residence, office or workshop) and the type of activity taking place, whether a person is seated or standing, temperature and acoustic noise, all of which may impact individual perception (AS2670.1-2001).

The design of the floor structure will ensure that vibration due to footfall excitation shall be within conventional engineering design practice limits and best practice.

These limits will be based on the recommendations of AS 2670.2 adjusted for the intended occupancy and approximate duration of vibration. The vibration design parameters for the project will be as follows:

Area	Damping	Maximum Footfall Frequency (Hz)	Response Factor; continuous or intermittent vibration	Response Factor; transient vibration*
Residential	2.5%	2.1Hz	8.0	30 to 90
Corridors	2.5%	2.5Hz	8.0	60 to 128
Car Parks	Not Considered			
Plantrooms and External Areas	Not Considered			

* for transient vibration with several occurrences per day

Table 6 - Vibration criteria

All equipment which may be a possible source of vibration shall be isolated from the structure through the provision of isolation mounts. The design of the floor structure will ensure that vibration due to footfall excitation is kept within acceptable limits. These limits will be based on the recommendations of ISO 2631-2 (2001) adjusted for the intended occupancy and approximate duration of vibration

5.6 FIRE RESISTANCE LEVELS FOR STRUCTURAL ELEMENTS

Fire resistance levels for structural elements will be in accordance with the structural requirements of the NCC 2022 Volume one and will be developed with the project BCA and Fire Engineering consultants. Design of individual structural elements to achieve the required FRL will be in accordance with the appropriate materials design code.

5.7 COMPUTER SOFTWARE

The following programs will be used in the design, analysis and documentation of the structure

Program	Function
Revit	A Building Information Model will be used as the basis for documenting the building. All structural documentation will be generated from an Autodesk Revit model
Spacegass	General structural analysis
RAPT	Reinforced and post-tensioned concrete design
Excel	Spreadsheets
Word	Word processing

Program	Function
ETABS	Whole-building and lateral stability analysis
RCB	General structural analysis
Ram Concept	Floor plate analysis package

6 Materials

The following structural materials are proposed to be used in the works. Typical values for the properties of these materials are listed. These values are to be adjusted where appropriate.

6.1 CONCRETE

6.1.1 Properties

Co-efficient of thermal expansion	12x10 ⁻⁶ per °C
Basic shrinkage strain	In accordance with AS 3600 Clause 3.1.7
Basic creep factor	In accordance with AS 3600 Clause 3.1.8
Poisson's ratio	0.2
Density	24 kN/m ³

6.1.2 Proposed Concrete Grades

Footings	32 to 40MPa
Shotcrete panels	32MPa
Capping beams	40MPa
Suspended slabs and beams	40 to 50MPa
Columns	40 to 50MPa
Walls	40 to 50MPa
Other areas (UNO)	40MPa

6.2 REINFORCEMENT

Plain bars (R)	$f_{sy} = 250\text{MPa}$
Deformed bars (N)	$f_{sy} = 500\text{MPa}$
Welded wire fabric (L)	$f_{sy} = 500\text{MPa}$
Young's modulus	200 x 10 ³ MPa

6.3 STRUCTURAL STEEL

Grade (UNO)	300MPa
Steelwork density:	7850 kg/m ³
Young's modulus:	2.05 x 10 ⁵ MPa
Poisson's ratio:	0.3
Coefficient of thermal expansion:	12 x 10 ⁻⁶

Note: provided for information only. No structural steel is currently specified for the project.

6.4 BLOCKWORK

Characteristic Strength	15MPa.
Mortar mix (cement:lime:sand)	1 : 1 : 6 Unreinforced Blockwork 1 :0.5: 4.5 Reinforced Blockwork
Core fill grout	20MPa

7 Conclusions

During the pre-SSDA design development, Xavier Knight provided structural input and guidance to the architectural design by preparing preliminary structural scheme sketches, marking up architectural plans to allow for the development and progression of the overall design.

This report was completed For and on behalf of Xavier Knight Pty. Ltd.

Kind regards,



Nathaniel Ko

Director

BE (Hons I) MIEAust CPEng NER APEC Engineer IntPE (Aus) DEP PRE

APPENDIX A

XK Structural Markup

Notes:
Reference to be made to geotechnical report: "Block 20A, Edmondson Park Geotechnical Engineering Consultant Report" prepared by Geotechnique Pty Ltd dated 3/2/2026

Slabs on ground - 150 RC typical. TBC pending geotechnical advice. If soil is reactive, then this may need to be designed as a suspended slab.

Car ramps - 250 min. RC typical.
Suspended slabs - 220 PT typical U.N.O.
External & plant slabs - 250 PT typical U.N.O.
Roof - 250 min. PT typical. Max. 100mm falls.

Notes:
- Balconies 220 unless required otherwise for falls & cast-ins. Note required input on falls, cast-ins, steps & drainage solution.
- Lightweight facade & balustrades have been assumed around the building perimeter (max. 75kg/m2 facade weight) U.N.O.
- Drop panels required where columns rotate on plan relative to supporting column under.

Wet areas:
Assumed 30-40mm set down (fall to outlet & finishes). Allow for folds.

Columns BLD A:
- Basement: 350 x 1000
- GF-L4: 300 x length varies
- L5-L9: 250 x length varies
- L10-R: 200 x length varies - allow 250 spatially.

Columns BLD B:
- Basement & Podium: 300 x 1000
- GF-L2: 300 x 1000
- L3-L5: 250 x length varies
- L6-R: 200 x length varies - allow 250 spatially.

Note - column sizes are indicative at this stage and may be changed following detailed analysis.

Lift & stair walls - Allow 300 thick.
Note - wall thicknesses subject to lateral stability analysis.

Footings - All footings to be piles with pilecaps
Lift Cores - Allow for 10 no. 750 - 900 dia piles (TBC further detailed design, tension forces not confirmed, length not confirmed). 1000 deep pilecap (TBC further detailed design)
Stair Cores - Allow for 8 no. 750 - 900 dia piles (TBC further detailed design, tension forces not confirmed, length not confirmed). 1000 deep pilecap (TBC further detailed design)

Shear Walls - Allow for 750 - 900 dia piles at 2m centres (TBC further detailed design, tension forces not confirmed, length not confirmed). 800 deep pilecap (TBC further detailed design)

Building A columns (West tower) - Allow for 2no. 750 dia. piles per column, typically socketed 5m into Class III Shale (TBC further detailed design). Allow for 800 deep pilecap

Building B columns (East tower) - Allow for 1no. 600 dia. pile per column, typically socketed into Class III Shale (TBC further detailed design). Allow for 600 deep pilecap

Shoring - varies refer comments on plan.
- Soldier pile retaining wall: allow for 600 dia. piles at 1800 centres and 850 shoring zone, excl. drainage.
- Concrete retaining wall: allow for a 350 zone. Assumes temporary batters for extent of wall.
- Drained basement assumed, as per geotechnical report advice.

X XAVIER KNIGHT

Job Name: EDMONDSON PARK BLOCK 20A
Sketch Name: STRUCTURAL SCHEME

Date: 19/03/2026
By: NC
Job Number: 250527
Sketch Numb 04 ST-SK-001[F]



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LEGEND	
	ACCESSIBLE CARSPACE
	SHARED ZONE
	MOTORCYCLE PARKING SPACE

BLOCK 20B

REVISION ID	AMENDMENT	DATE
C	ISSUE FOR COORDINATION	19/9/2025
D	ISSUE FOR COORDINATION	13/11/2025
P1	ISSUE FOR COORDINATION	18/12/2025
A-WIP	ISSUE FOR SSDA	14/1/2026
A	ISSUE FOR SSDA	22/1/2026

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ABN 81 612 048 643
NOMINATED ARCHITECT RACHID ANDARY NSW ARB 8627

CLIENT
LANDCOM
1400 Station St E
Parramatta NSW 2150

PRELIMINARY



SITE ADDRESS
CNR BUCHAN AVENUE & MCDONALD ROAD,
EDMONDSON PARK, NSW, 2174

JOB NO
2518
CHECKED
CH
DATE CREATED
JUL 2025
PROJECT STATUS
STATE SIGNIFICANT DEVELOPMENT APPLICATION
DRAWING TITLE
BASEMENT 01 PLAN

SHEET NO
SSDA 101
REVISION
A

- Soldier pile retaining wall: allow for 600 dia. piles at 1800 centres and 8 shoring zone, excl. drainage.
- Concrete retaining wall: allow for a 350 zone. Assumes temporary batters for extent of wall.
- Drained basement assumed, as per geotechnical report advice.

Date: 19/03/2026
By: NC
Job Number: 250527
Sketch Numb 04 ST-SK-001|F

Double height column

SHEET NO.	REVISION.
SSDA 102	A

Notes:
Reference to be made to geotechnical report: "Block 20A, Edmondson Park Geotechnical Engineering Consultant Report" prepared by Geotechnique Pty Ltd dated 3/2/2026

Slabs on ground - 150 RC typical. TBC pending geotechnical advice. If soil is reactive, then this may need to be designed as a suspended slab.

Car ramps - 250 min. RC typical.
Suspended slabs - 220 PT typical U.N.O.
External & plant slabs - 250 PT typical U.N.O.
Roof - 250 min. PT typical. Max. 100mm falls.

Notes:
- Balconies 220 unless required otherwise for falls & cast-ins. Note required input on falls, cast-ins, steps & drainage solution.
- Lightweight facade & balustrades have been assumed around the building perimeter (max. 75kg/m2 facade weight) U.N.O.
- Drop panels required where columns rotate on plan relative to supporting column under.

Wet areas:
Assumed 30-40mm set down (fall to outlet & finishes). Allow for folds.

Columns BLD A:
- Basement: 350 x 1000
- GF-L4: 300 x length varies
- L5-L9: 250 x length varies
- L10-R: 200 x length varies - allow 250 spatially.

Columns BLD B:
- Basement & Podium: 300 x 1000
- GF-L2: 300 x 1000
- L3-L5: 250 x length varies
- L6-R: 200 x length varies - allow 250 spatially.

Note - column sizes are indicative at this stage and may be changed following detailed analysis.

Lift & stair walls - Allow 300 thick.

Note - wall thicknesses subject to lateral stability analysis.

Footings - All footings to be piles with pilecaps

Lift Cores - Allow for 10 no. 750 - 900 dia piles (TBC further detailed design, tension forces not confirmed, length not confirmed). 1000 deep pilecap (TBC further detailed design)
Stair Cores - Allow for 8 no. 750 - 900 dia piles (TBC further detailed design, tension forces not confirmed, length not confirmed). 1000 deep pilecap (TBC further detailed design)

Shear Walls - Allow for 750 - 900 dia piles at 2m centres (TBC further detailed design, tension forces not confirmed, length not confirmed). 800 deep pilecap (TBC further detailed design)

Building A columns (West tower) - Allow for 2no. 750 dia. piles per column, typically socketed 5m into Class III Shale (TBC further detailed design). Allow for 800 deep pilecap

Building B columns (East tower) - Allow for 1no. 600 dia. pile per column, typically socketed 5m into Class III Shale (TBC further detailed design). Allow for 600 deep pilecap

Shoring - varies refer comments on plan.

- Soldier pile retaining wall: allow for 600 dia. piles at 1800 centres and 850 shoring zone, excl. drainage.
- Concrete retaining wall: allow for a 350 zone. Assumes temporary batters for extent of wall.
- Drained basement assumed, as per geotechnical report advice.

X XAVIER KNIGHT

Job Name: EDMONDSON PARK BLOCK 20A

Sketch Name:
STRUCTURAL SCHEME

Date: 19/03/2026

By: NC

Job Number: 250527

Sketch Numb 04 ST-SK-001[F]

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LEGEND

- 1 BED APARTMENT
2 BED APARTMENT
3 BED APARTMENT
ADAPTABLE APARTMENT

REVISION ID	AMENDMENT	DATE
C	ISSUE FOR COORDINATION	19/09/2025
D	ISSUE FOR COORDINATION	13/11/2025
P1	ISSUE FOR COORDINATION	18/12/2025
A-WIP	ISSUE FOR SSDA	14/01/2026
A	ISSUE FOR SSDA	22/01/2026

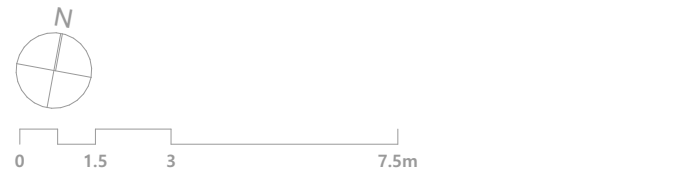
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CLIENT
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14/03 Station St E
Parramatta NSW 2150

PRELIMINARY



SITE ADDRESS
CNR BUCHAN AVENUE & MCDONALD ROAD,
EDMONDSON PARK, NSW, 2174

JOB NO
2518
CHECKED
CH
DATE CREATED
JUL 2025
PROJECT STATUS
STATE SIGNIFICANT DEVELOPMENT APPLICATION
DRAWING TITLE
LEVEL 01 PLAN
DRAWN
BC,SL
SCALE
1:150 @ A1 A3@50%
SHEET NO
SSDA 103
REVISION
A

Notes:
Reference to be made to geotechnical report: "Block 20A, Edmondson Park Geotechnical Engineering Consultant Report" prepared by Geotechnique Pty Ltd dated 3/2/2026

Slabs on ground - 150 RC typical. TBC pending geotechnical advice. If soil is reactive, then this may need to be designed as a suspended slab.

Car ramps - 250 min. RC typical.
Suspended slabs - 220 PT typical U.N.O.
External & plant slabs - 250 PT typical U.N.O.
Roof - 250 min. PT typical. Max. 100mm falls.

Notes:
- Balconies 220 unless required otherwise for falls & cast-ins. Note required input on falls, cast-ins, steps & drainage solution.
- Lightweight facade & balustrades have been assumed around the building perimeter (max. 75kg/m2 facade weight) U.N.O.
- Drop panels required where columns rotate on plan relative to supporting column under.

Wet areas:
Assumed 30-40mm set down (fall to outlet & finishes). Allow for folds.

Columns BLD A:
- Basement: 350 x 1000
- GF-L4: 300 x length varies
- L5-L9: 250 x length varies
- L10-R: 200 x length varies - allow 250 spatially.

Columns BLD B:
- Basement & Podium: 300 x 1000
- GF-L2: 300 x 1000
- L3-L5: 250 x length varies
- L6-R: 200 x length varies - allow 250 spatially.

Note - column sizes are indicative at this stage and may be changed following detailed analysis.

Lift & stair walls - Allow 300 thick.
Note - wall thicknesses subject to lateral stability analysis.

Footings - All footings to be piles with pilecaps
Lift Cores - Allow for 10 no. 750 - 900 dia piles (TBC further detailed design, tension forces not confirmed, length not confirmed), 1000 deep pilecap (TBC further detailed design)
Stair Cores - Allow for 8 no. 750 - 900 dia piles (TBC further detailed design, tension forces not confirmed, length not confirmed), 1000 deep pilecap (TBC further detailed design)

Shear Walls - Allow for 750 - 900 dia piles at 2m centres (TBC further detailed design, tension forces not confirmed, length not confirmed), 800 deep pilecap (TBC further detailed design)

Building A columns (West tower) - Allow for 2no. 750 dia. piles per column, typically socketed 5m into Class III Shale (TBC further detailed design). Allow for 800 deep pilecap

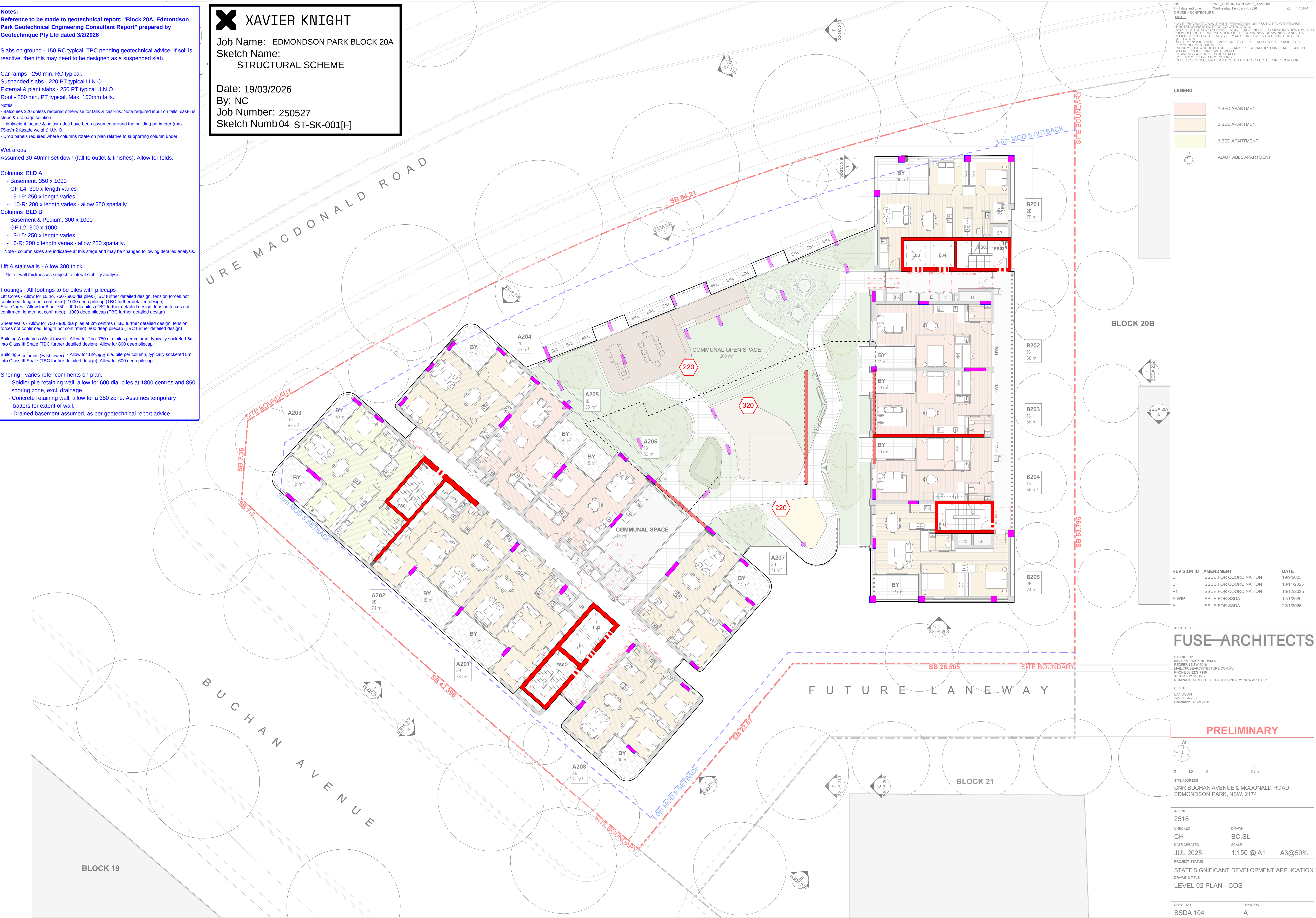
Building B columns (East tower) - Allow for 1no. 600 dia. pile per column, typically socketed 5m into Class III Shale (TBC further detailed design). Allow for 600 deep pilecap

Shoring - varies refer comments on plan.
- Soldier pile retaining wall: allow for 600 dia. piles at 1800 centres and 850 shoring zone, excl. drainage.
- Concrete retaining wall: allow for a 350 zone. Assumes temporary batters for extent of wall.
- Drained basement assumed, as per geotechnical report advice.

X XAVIER KNIGHT

Job Name: EDMONDSON PARK BLOCK 20A
Sketch Name:
STRUCTURAL SCHEME

Date: 19/03/2026
By: NC
Job Number: 250527
Sketch Numb 04 ST-SK-001[F]



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LEGEND
1 BED APARTMENT
2 BED APARTMENT
3 BED APARTMENT
ADAPTABLE APARTMENT

REVISION ID	AMENDMENT	DATE
C	ISSUE FOR COORDINATION	19/9/2025
D	ISSUE FOR COORDINATION	13/11/2025
P1	ISSUE FOR COORDINATION	18/12/2025
A-WIP	ISSUE FOR SSDA	14/1/2026
A	ISSUE FOR SSDA	22/1/2026

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NOMINATED ARCHITECT RACHID ANDARY NSW ARB 8627

CLIENT
LANDCOM
14/02 Station St E
Parramatta NSW 2150

PRELIMINARY

N
0 1.5 3 7.5m

SITE ADDRESS
CNR BUCHAN AVENUE & MCDONALD ROAD,
EDMONDSON PARK, NSW, 2174

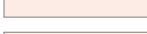
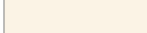
JOB NO
2518
CHECKED
CH
DATE CREATED
JUL 2025
PROJECT STATUS
STATE SIGNIFICANT DEVELOPMENT APPLICATION
DRAWING TITLE
LEVEL 02 PLAN - COS

SHEET NO
SSDA 104
REVISION
A

- Soldier pile retaining wall: allow for 600 dia. piles at 1800 centres and 8 shoring zone, excl. drainage.
- Concrete retaining wall: allow for a 350 zone. Assumes temporary batters for extent of wall.
- Drained basement assumed, as per geotechnical report advice.

Date: 19/03/2026
By: NC
Job Number: 250527
Sketch Numb04 ST-SK-001[F

LEGEND

	1 BED APARTMENT
	2 BED APARTMENT
	3 BED APARTMENT
	ADAPTABLE APARTMENT

BLOCK 20B

REVISION ID	AMENDMENT	DATE
C	ISSUE FOR COORDINATION	19/9/2025
D	ISSUE FOR COORDINATION	13/11/2025
P1	ISSUE FOR COORDINATION	18/12/2025
A-WIP	ISSUE FOR SSDA	14/1/2026
A	ISSUE FOR SSDA	22/1/2026

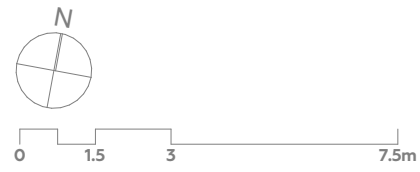
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Parramatta NSW 2150

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SITE ADDRESS
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JOB NO		
2518		
CHECKED	DRAWN	
CH	BC,SL	
DATE CREATED	SCALE	
JUL 2025	1:150 @ A1	A3@50%
PROJECT STATUS		
STATE SIGNIFICANT DEVELOPMENT APPLICATION		
DRAWING TITLE		
LEVEL 03-08 PLAN TYPICAL BLD A & B		

SHEET NO.	REVISION.
SSDA 105	A

BLOCK 19

Notes:
Reference to be made to geotechnical report: "Block 20A, Edmondson Park Geotechnical Engineering Consultant Report" prepared by Geotechnique Pty Ltd dated 3/2/2026

Slabs on ground - 150 RC typical. TBC pending geotechnical advice. If soil is reactive, then this may need to be designed as a suspended slab.

Car ramps - 250 min. RC typical.
Suspended slabs - 220 PT typical U.N.O.
External & plant slabs - 250 PT typical U.N.O.
Roof - 250 min. PT typical. Max. 100mm falls.
Notes:
- Balconies 220 unless required otherwise for falls & cast-ins. Note required input on falls, cast-ins, steps & drainage solution.
- Lightweight facade & balustrades have been assumed around the building perimeter (max. 75kg/m2 facade weight) U.N.O.
- Drop panels required where columns rotate on plan relative to supporting column under.

Wet areas:
Assumed 30-40mm set down (fall to outlet & finishes). Allow for folds.

Columns BLD A:
- Basement: 350 x 1000
- GF-L4: 300 x length varies
- L5-L9: 250 x length varies
- L10-R: 200 x length varies - allow 250 spatially.
Columns BLD B:
- Basement & Podium: 300 x 1000
- GF-L2: 300 x 1000
- L3-L5: 250 x length varies
- L6-R: 200 x length varies - allow 250 spatially.
Note - column sizes are indicative at this stage and may be changed following detailed analysis.

Lift & stair walls - Allow 300 thick.
Note - wall thicknesses subject to lateral stability analysis.

Footings - All footings to be piles with pilecaps
Lift Cores - Allow for 10 no. 750 - 900 dia piles (TBC further detailed design, tension forces not confirmed, length not confirmed). 1000 deep pilecap (TBC further detailed design)
Stair Cores - Allow for 8 no. 750 - 900 dia piles (TBC further detailed design, tension forces not confirmed, length not confirmed). 1000 deep pilecap (TBC further detailed design)
Shear Walls - Allow for 750 - 900 dia piles at 2m centres (TBC further detailed design, tension forces not confirmed, length not confirmed). 800 deep pilecap (TBC further detailed design)
Building A columns (West tower) - Allow for 2no. 750 dia. piles per column, typically socketed 5m into Class III Shale (TBC further detailed design). Allow for 800 deep pilecap
Building B columns (East tower) - Allow for 1no. 600 dia. pile per column, typically socketed 5m into Class III Shale (TBC further detailed design). Allow for 600 deep pilecap

Shoring - varies refer comments on plan.
- Soldier pile retaining wall: allow for 600 dia. piles at 1800 centres and 850 shoring zone, excl. drainage.
- Concrete retaining wall: allow for a 350 zone. Assumes temporary batters for extent of wall.
- Drained basement assumed, as per geotechnical report advice.

X

XAVIER KNIGHT

Job Name:

EDMONDSON PARK BLOCK 20A

Sketch Name:

STRUCTURAL SCHEME

Date:

19/03/2026

By:

NC

Job Number:

250527

Sketch Numb

04 ST-SK-001[F]

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LEGEND

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2 BED APARTMENT

3 BED APARTMENT

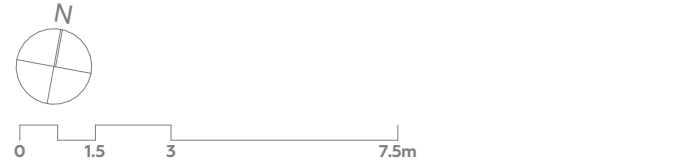
ADAPTABLE APARTMENT

REVISION ID	AMENDMENT	DATE
C	ISSUE FOR COORDINATION	19/9/2025
D	ISSUE FOR COORDINATION	13/11/2025
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Parramatta NSW 2150

PRELIMINARY



SITE ADDRESS
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EDMONDSON PARK, NSW, 2174

JOB NO
2518
CHECKED
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DATE CREATED
JUL 2025
PROJECT STATUS
STATE SIGNIFICANT DEVELOPMENT APPLICATION
DRAWING TITLE
LEVEL 09-14 PLAN TYPICAL BLD A

DRAWN
BC,SL
SCALE
1:150 @ A1 A3@50%
REVISION
A

SHEET NO
SSDA 106
REVISION
A

Notes:
Reference to be made to geotechnical report: "Block 20A, Edmondson Park Geotechnical Engineering Consultant Report" prepared by Geotechnique Pty Ltd dated 3/2/2026

Slabs on ground - 150 RC typical. TBC pending geotechnical advice. If soil is reactive, then this may need to be designed as a suspended slab.

Car ramps - 250 min. RC typical.
Suspended slabs - 220 PT typical U.N.O.
External & plant slabs - 250 PT typical U.N.O.
Roof - 250 min. PT typical. Max. 100mm falls.

Notes:
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- Drop panels required where columns rotate on plan relative to supporting column under.

Wet areas:
Assumed 30-40mm set down (fall to outlet & finishes). Allow for folds.

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- GF-L4: 300 x length varies
- L5-L9: 250 x length varies
- L10-R: 200 x length varies - allow 250 spatially.

Columns BLD B:
- Basement & Podium: 300 x 1000
- GF-L2: 300 x 1000
- L3-L5: 250 x length varies
- L6-R: 200 x length varies - allow 250 spatially.

Note - column sizes are indicative at this stage and may be changed following detailed analysis.

Lift & stair walls - Allow 300 thick.

Note - wall thicknesses subject to lateral stability analysis.

Footings - All footings to be piles with pilecaps

Lift Cores - Allow for 10 no. 750 - 900 dia piles (TBC further detailed design, tension forces not confirmed, length not confirmed). 1000 deep pilecap (TBC further detailed design)
Stair Cores - Allow for 8 no. 750 - 900 dia piles (TBC further detailed design, tension forces not confirmed, length not confirmed). 1000 deep pilecap (TBC further detailed design)

Shear Walls - Allow for 750 - 900 dia piles at 2m centres (TBC further detailed design, tension forces not confirmed, length not confirmed). 800 deep pilecap (TBC further detailed design)

Building A columns (West tower) - Allow for 2no. 750 dia. piles per column, typically socketed 5m into Class III Shale (TBC further detailed design). Allow for 800 deep pilecap

Building B columns (East tower) - Allow for 1no. 600 dia. pile per column, typically socketed 5m into Class III Shale (TBC further detailed design). Allow for 600 deep pilecap

Shoring - varies refer comments on plan.

- Soldier pile retaining wall: allow for 600 dia. piles at 1800 centres and 850 shoring zone, excl. drainage.
- Concrete retaining wall: allow for a 350 zone. Assumes temporary batters for extent of wall.
- Drained basement assumed, as per geotechnical report advice.

X XAVIER KNIGHT

Job Name: EDMONDSON PARK BLOCK 20A
Sketch Name:
STRUCTURAL SCHEME

Date: 19/03/2026

By: NC

Job Number: 250527

Sketch Numb 04 ST-SK-001[F]

File: 2518_EDMONDSON PARK_Block 20A
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- LEGEND
- 1 BED APARTMENT
 - 2 BED APARTMENT
 - 3 BED APARTMENT
 - ADAPTABLE APARTMENT

REVISION ID	AMENDMENT	DATE
C	ISSUE FOR COORDINATION	19/9/2025
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P1	ISSUE FOR COORDINATION	18/12/2025
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A	ISSUE FOR SSDA	22/1/2026

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PRELIMINARY

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0 1.5 3 7.5m

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EDMONDSON PARK, NSW, 2174

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STATE SIGNIFICANT DEVELOPMENT APPLICATION
DRAWING TITLE
ROOF PLAN

DRAWN
BC,SL
SCALE
1:150 @ A1 A3@50%
SHEET NO
SSDA 107
REVISION
A

Notes:
Reference to be made to geotechnical report: "Block 20A, Edmondson Park Geotechnical Engineering Consultant Report" prepared by Geotechnique Pty Ltd dated 3/2/2026

Slabs on ground - 150 RC typical. TBC pending geotechnical advice. If soil is reactive, then this may need to be designed as a suspended slab.

Car ramps - 250 min. RC typical.
Suspended slabs - 220 PT typical U.N.O.
External & plant slabs - 250 PT typical U.N.O.
Roof - 250 min. PT typical. Max. 100mm falls.

Notes:
- Balconies 220 unless required otherwise for falls & cast-ins. Note required input on falls, cast-ins, steps & drainage solution.
- Lightweight facade & balustrades have been assumed around the building perimeter (max. 75kg/m2 facade weight) U.N.O.
- Drop panels required where columns rotate on plan relative to supporting column under.

Wet areas:
Assumed 30-40mm set down (fall to outlet & finishes). Allow for folds.

Columns BLD A:
- Basement: 350 x 1000
- GF-L4: 300 x length varies
- L5-L9: 250 x length varies
- L10-R: 200 x length varies - allow 250 spatially.

Columns BLD B:
- Basement & Podium: 300 x 1000
- GF-L2: 300 x 1000
- L3-L5: 250 x length varies
- L6-R: 200 x length varies - allow 250 spatially.

Note - column sizes are indicative at this stage and may be changed following detailed analysis.

Lift & stair walls - Allow 300 thick.
Note - wall thicknesses subject to lateral stability analysis.

Footings - All footings to be piles with pilecaps
Lift Cores - Allow for 10 no. 750 - 900 dia piles (TBC further detailed design, tension forces not confirmed, length not confirmed). 1000 deep pilecap (TBC further detailed design)
Stair Cores - Allow for 8 no. 750 - 900 dia piles (TBC further detailed design, tension forces not confirmed, length not confirmed). 1000 deep pilecap (TBC further detailed design)

Shear Walls - Allow for 750 - 900 dia piles at 2m centres (TBC further detailed design, tension forces not confirmed, length not confirmed). 800 deep pilecap (TBC further detailed design)

Building A columns (West tower) - Allow for 2no. 750 dia. piles per column, typically socketed 5m into Class III Shale (TBC further detailed design). Allow for 800 deep pilecap

Building B columns (East tower) - Allow for 1no. 600 dia. pile per column, typically socketed 5m into Class III Shale (TBC further detailed design). Allow for 600 deep pilecap

Shoring - varies refer comments on plan.
- Soldier pile retaining wall: allow for 600 dia. piles at 1800 centres and 850 shoring zone, excl. drainage.
- Concrete retaining wall: allow for a 350 zone. Assumes temporary batters for extent of wall.
- Drained basement assumed, as per geotechnical report advice.

X

XAVIER KNIGHT

Job Name:

EDMONDSON PARK BLOCK 20A

Sketch Name:

STRUCTURAL SCHEME

Date:

19/03/2026

By:

NC

Job Number:

250527

Sketch Numb

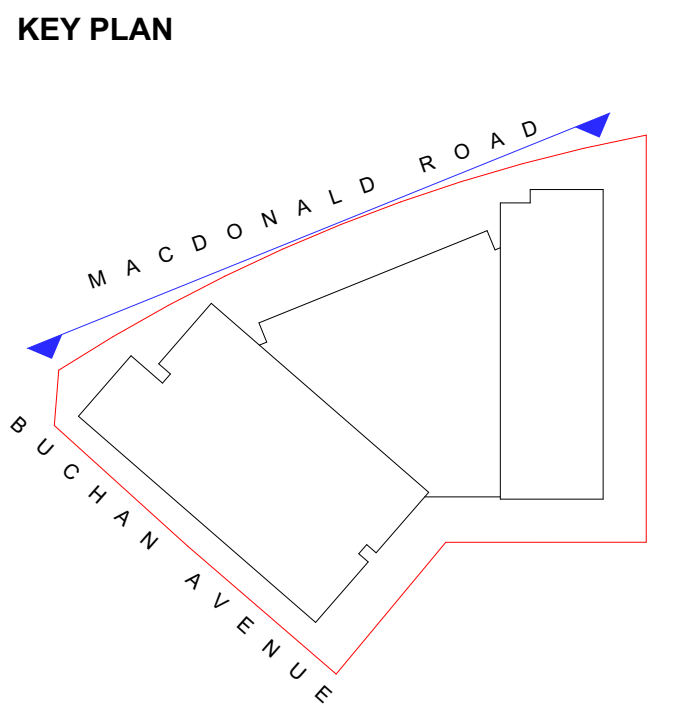
04_ST-SK-001[F]



File: 2518_EDMONDSON PARK_Block 20A
Print date and time: Wednesday, February 4, 2026 @ 1:47 PM
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BLOCK 19B
POTENTIAL FUTURE
BUILDING DEVELOPMENT
BEYOND

REVISION ID	AMENDMENT	DATE
D	ISSUE FOR COORDINATION	13/11/2025
P1	ISSUE FOR COORDINATION	18/12/2025
A-WIP	ISSUE FOR SSDA	14/1/2026
A	ISSUE FOR SSDA	22/1/2026

ARCHITECT

FUSE ARCHITECTS

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39 GREAT BUCKINGHAM ST
REDFERN NSW 2016
MAIL@FUSEARCHITECTURE.COM.AU
PHONE 02 8278 7156
ABN 81 612 046 643
NOMINATED ARCHITECT RACHID ANDARY NSW ARB 8627

CLIENT

LANDCOM
1460 Station St E
Parramatta NSW 2150

PRELIMINARY

0 1.5 3 7.5m

SITE ADDRESS
CNR BUCHAN AVENUE & MCDONALD ROAD,
EDMONDSON PARK, NSW, 2174

JOB NO
2518

CHECKED	DRAWN
CH	BC,SL,KB
DATE CREATED	SCALE
JUL 2025	1:150 @ A1 A3@50%

PROJECT STATUS
STATE SIGNIFICANT DEVELOPMENT APPLICATION

DRAWING TITLE
NORTH ELEVATION

SHEET NO.	REVISION
SSDA 201	A

Notes:
Reference to be made to geotechnical report: "Block 20A, Edmondson Park Geotechnical Engineering Consultant Report" prepared by Geotechnique Pty Ltd dated 3/2/2026

Slabs on ground - 150 RC typical. TBC pending geotechnical advice. If soil is reactive, then this may need to be designed as a suspended slab.

Car ramps - 250 min. RC typical.
Suspended slabs - 220 PT typical U.N.O.
External & plant slabs - 250 PT typical U.N.O.
Roof - 250 min. PT typical. Max. 100mm falls.

Notes:
- Balconies 220 unless required otherwise for falls & cast-ins. Note required input on falls, cast-ins, steps & drainage solution.
- Lightweight facade & balustrades have been assumed around the building perimeter (max. 75kg/m2 facade weight) U.N.O.
- Drop panels required where columns rotate on plan relative to supporting column under.

Wet areas:
Assumed 30-40mm set down (fall to outlet & finishes). Allow for folds.

Columns BLD A:
- Basement: 350 x 1000
- GF-L4: 300 x length varies
- L5-L9: 250 x length varies
- L10-R: 200 x length varies - allow 250 spatially.

Columns BLD B:
- Basement & Podium: 300 x 1000
- GF-L2: 300 x 1000
- L3-L5: 250 x length varies
- L6-R: 200 x length varies - allow 250 spatially.
Note - column sizes are indicative at this stage and may be changed following detailed analysis.

Lift & stair walls - Allow 300 thick.
Note - wall thicknesses subject to lateral stability analysis.

Footings - All footings to be piles with pilecaps
Lift Cores - Allow for 10 no. 750 - 900 dia piles (TBC further detailed design, tension forces not confirmed, length not confirmed). 1000 deep pilecap (TBC further detailed design)
Stair Cores - Allow for 8 no. 750 - 900 dia piles (TBC further detailed design, tension forces not confirmed, length not confirmed). 1000 deep pilecap (TBC further detailed design)
Shear Walls - Allow for 750 - 900 dia piles at 2m centres (TBC further detailed design, tension forces not confirmed, length not confirmed). 800 deep pilecap (TBC further detailed design)

Building A columns (West tower) - Allow for 2no. 750 dia. piles per column, typically socketed 5m into Class III Shale (TBC further detailed design). Allow for 800 deep pilecap

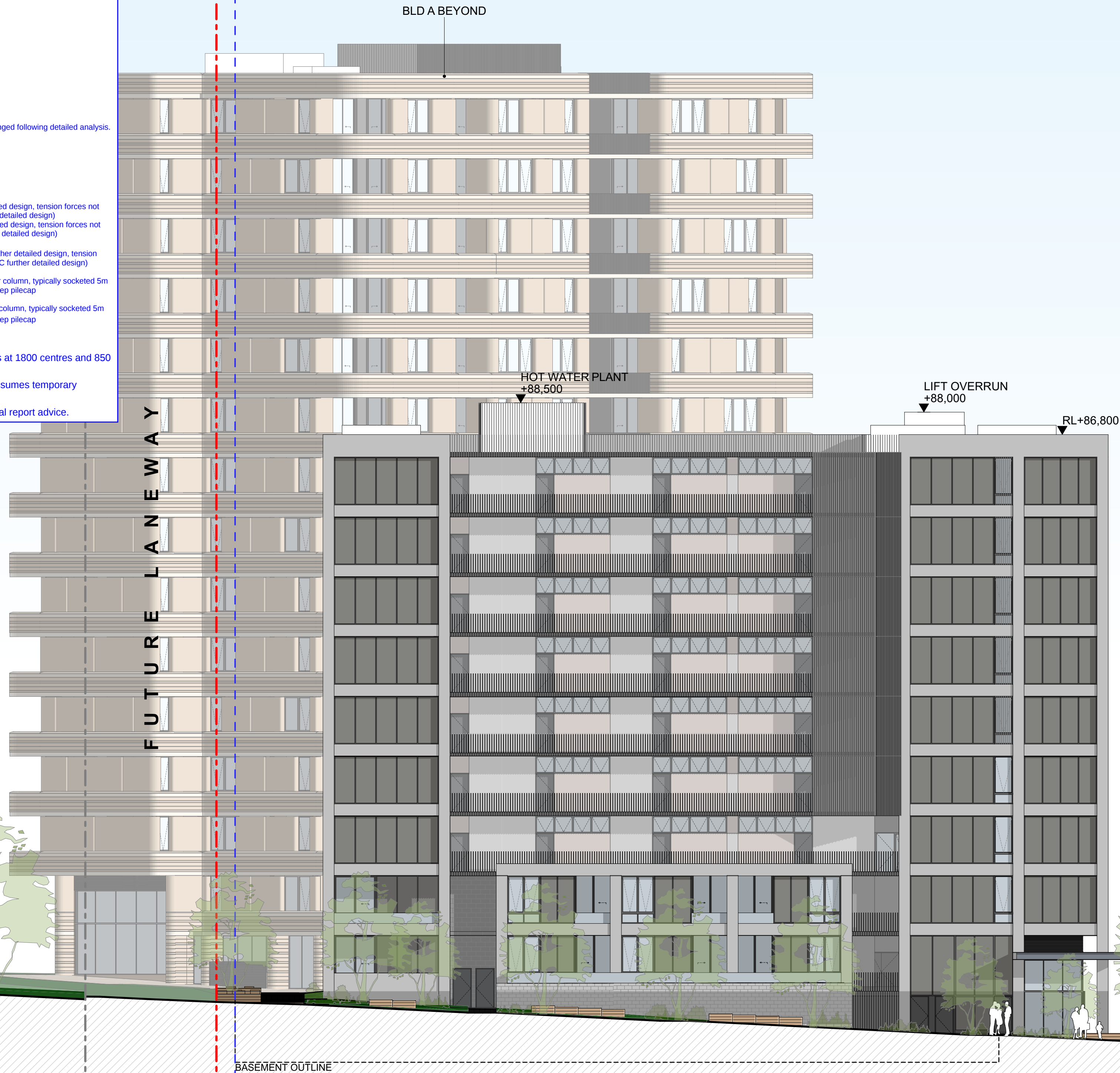
Building B columns (East tower) - Allow for 1no. 600 dia. pile per column, typically socketed 5m into Class III Shale (TBC further detailed design). Allow for 600 deep pilecap

Shoring - varies refer comments on plan.
- Soldier pile retaining wall: allow for 600 dia. piles at 1800 centres and 850 shoring zone, excl. drainage.
- Concrete retaining wall: allow for a 350 zone. Assumes temporary batters for extent of wall.
- Drained basement assumed, as per geotechnical report advice.

XAVIER KNIGHT

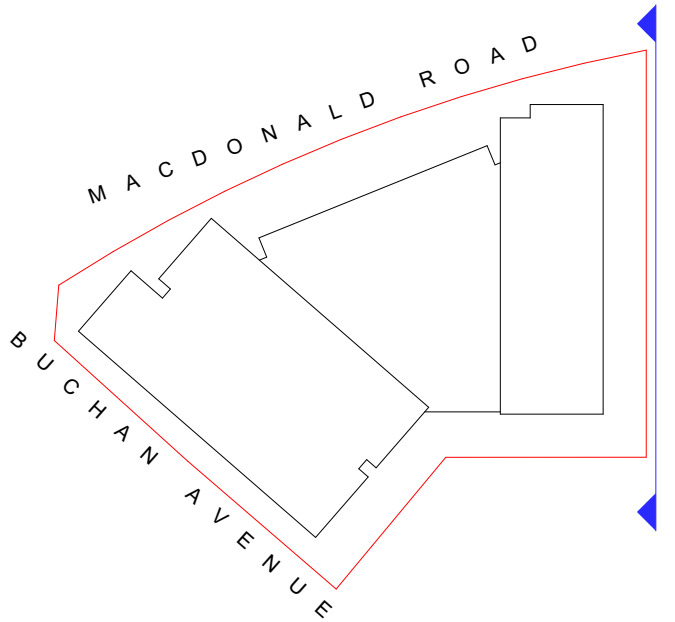
Job Name: EDMONDSON PARK BLOCK 20A
Sketch Name: STRUCTURAL SCHEME

Date: 19/03/2026
By: NC
Job Number: 250527
Sketch Numb 04 ST-SK-001[F]



File: 2518_EDMONDSON PARK_Block 20A
Print date and time: Wednesday, February 4, 2026 @ 1:46 PM
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- ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF WORK.
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- USE ONLY 1/8" DIMENSIONS.
- REFER TO CONSULTANT DOCUMENTATION FOR FURTHER INFORMATION.

KEY PLAN



REVISION ID	AMENDMENT	DATE
D	ISSUE FOR COORDINATION	13/11/2025
P1	ISSUE FOR COORDINATION	18/12/2025
A-WIP	ISSUE FOR SSDA	14/1/2026
A	ISSUE FOR SSDA	22/1/2026

ARCHITECT
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STUDIO 212
39 GREAT BUCKINGHAM ST
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MAIL@FUSEARCHITECTURE.COM.AU
PHONE 02 8278 7156
ABN 81 612 046 643
NOMINATED ARCHITECT RACHID ANDARY NSW ARB 8627
CLIENT
LANDCOM
1402 Station St E
Parramatta NSW 2150

PRELIMINARY

SITE ADDRESS
CNR BUCHAN AVENUE & MCDONALD ROAD,
EDMONDSON PARK, NSW, 2174

JOB NO
2518
CHECKED
CH
DATE CREATED
JUL 2025
PROJECT STATUS
STATE SIGNIFICANT DEVELOPMENT APPLICATION
DRAWING TITLE
EAST ELEVATION

SHEET NO
SSDA 202
REVISION
A

Notes:
Reference to be made to geotechnical report: "Block 20A, Edmondson Park Geotechnical Engineering Consultant Report" prepared by Geotechnique Pty Ltd dated 3/2/2026

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Wet areas:
Assumed 30-40mm set down (fall to outlet & finishes). Allow for folds.

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- L5-L9: 250 x length varies
- L10-R: 200 x length varies - allow 250 spatially.

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- Basement & Podium: 300 x 1000
- GF-L2: 300 x 1000
- L3-L5: 250 x length varies
- L6-R: 200 x length varies - allow 250 spatially.

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Note - wall thicknesses subject to lateral stability analysis.

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Stair Cores - Allow for 8 no. 750 - 900 dia piles (TBC further detailed design, tension forces not confirmed, length not confirmed). 1000 deep pilecap (TBC further detailed design)

Shear Walls - Allow for 750 - 900 dia piles at 2m centres (TBC further detailed design, tension forces not confirmed, length not confirmed). 800 deep pilecap (TBC further detailed design)

Building A columns (West tower) - Allow for 2no. 750 dia. piles per column, typically socketed 5m into Class III Shale (TBC further detailed design). Allow for 800 deep pilecap

Building B columns (East tower) - Allow for 1no. 600 dia. pile per column, typically socketed 5m into Class III Shale (TBC further detailed design). Allow for 600 deep pilecap

Shoring - varies refer comments on plan.
- Soldier pile retaining wall: allow for 600 dia. piles at 1800 centres and 850 shoring zone, excl. drainage.
- Concrete retaining wall: allow for a 350 zone. Assumes temporary batters for extent of wall.
- Drained basement assumed, as per geotechnical report advice.

X XAVIER KNIGHT

Job Name: EDMONDSON PARK BLOCK 20A
Sketch Name: STRUCTURAL SCHEME

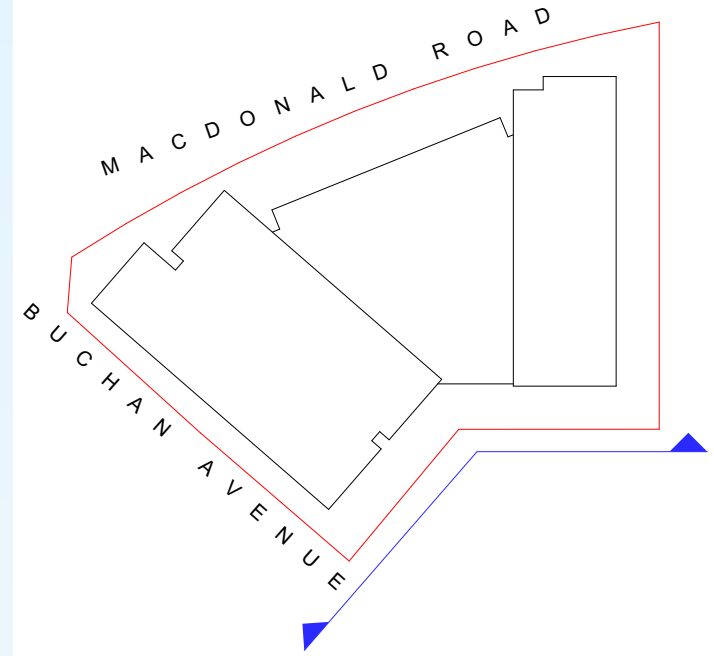
Date: 19/03/2026
By: NC
Job Number: 250527
Sketch Numb 04 ST-SK-001[F]

3.0m MOD SETBACK

FOLD IN ELEVATION

1.0m MOD SETBACK
SITE BOUNDARY

KEY PLAN



3,250	◆	ROOF	RL +105,050
3,200	◆	LEVEL 14	RL +101,800
3,200	◆	LEVEL 13	RL +98,600
3,200	◆	LEVEL 12	RL +95,400
3,200	◆	LEVEL 11	RL +92,200
3,200	◆	LEVEL 10	RL +89,000
3,200	◆	LEVEL 09	RL +85,800
3,200	◆	LEVEL 08	RL +82,600
3,200	◆	LEVEL 07	RL +79,400
3,200	◆	LEVEL 06	RL +76,200
3,200	◆	LEVEL 05	RL +73,000
3,200	◆	LEVEL 04	RL +69,800
3,200	◆	LEVEL 03	RL +66,600
3,200	◆	LEVEL 02 COS	RL +63,400
3,200	◆	LEVEL 01	RL +60,200
3,200	◆	GROUND	RL +57,000
3,800	◆	BASEMENT 01	RL +53,200

BLOCK 20B
POTENTIAL FUTURE
BUILDING
DEVELOPMENT

REVISION ID	AMENDMENT	DATE
D	ISSUE FOR COORDINATION	13/11/2025
P1	ISSUE FOR COORDINATION	18/12/2025
A-WIP	ISSUE FOR SSDA	14/1/2026
A	ISSUE FOR SSDA	22/1/2026

ARCHITECT
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REDFERN NSW 2016
MAIL@FUSEARCHITECTURE.COM.AU
PHONE 02 8278 7156
ABN 81 612 046 643
NOMINATED ARCHITECT RACHID ANDARY NSW ARB 8627

CLIENT
LANDCOM
14/62 Station St E
Parramatta NSW 2150

PRELIMINARY

0 1.5 3 7.5m
SITE ADDRESS
CNR BUCHAN AVENUE & MCDONALD ROAD,
EDMONDSON PARK, NSW, 2174

JOB NO
2518
CHECKED
CH
DATE CREATED
JUL 2025
PROJECT STATUS
STATE SIGNIFICANT DEVELOPMENT APPLICATION
DRAWING TITLE
SOUTH ELEVATION

SHEET NO
SSDA 203
REVISION
A

Notes:
Reference to be made to geotechnical report: "Block 20A, Edmondson Park Geotechnical Engineering Consultant Report" prepared by Geotechnique Pty Ltd dated 3/2/2026

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Building A columns (West tower) - Allow for 2no. 750 dia. piles per column, typically socketed 5m into Class III Shale (TBC further detailed design). Allow for 800 deep pilecap
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X

XAVIER KNIGHT

Job Name:

EDMONDSON PARK BLOCK 20A

Sketch Name:

STRUCTURAL SCHEME

Date:

19/03/2026

By:

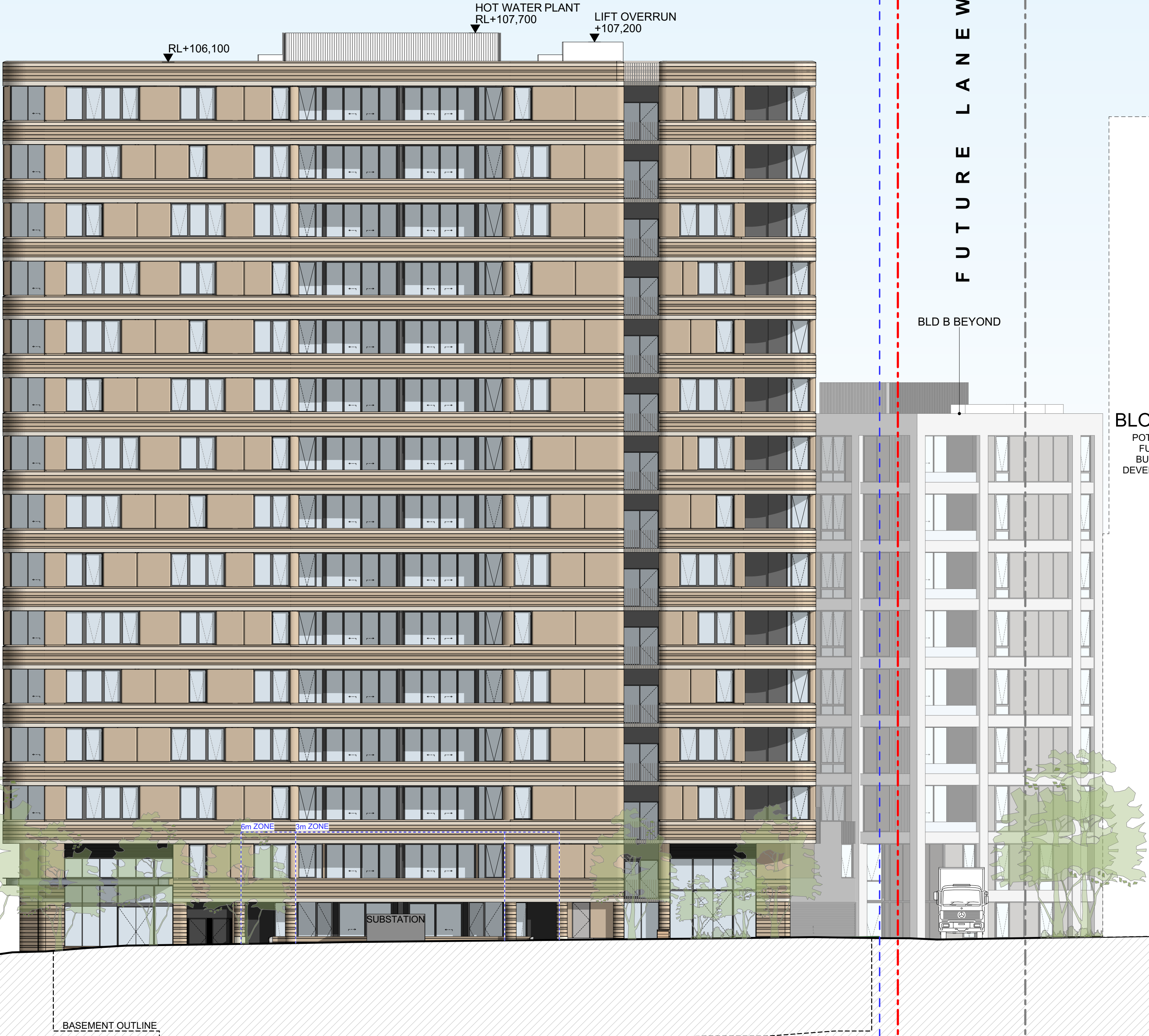
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Job Number:

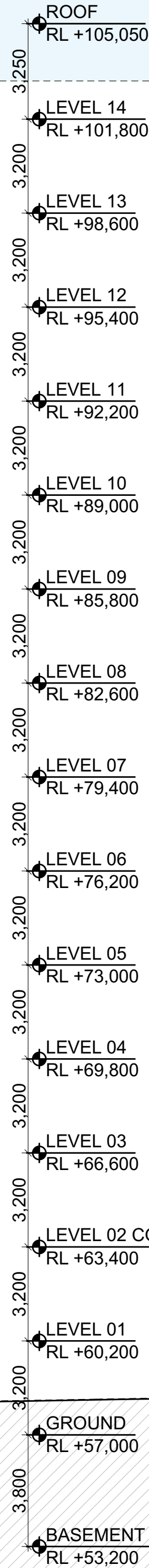
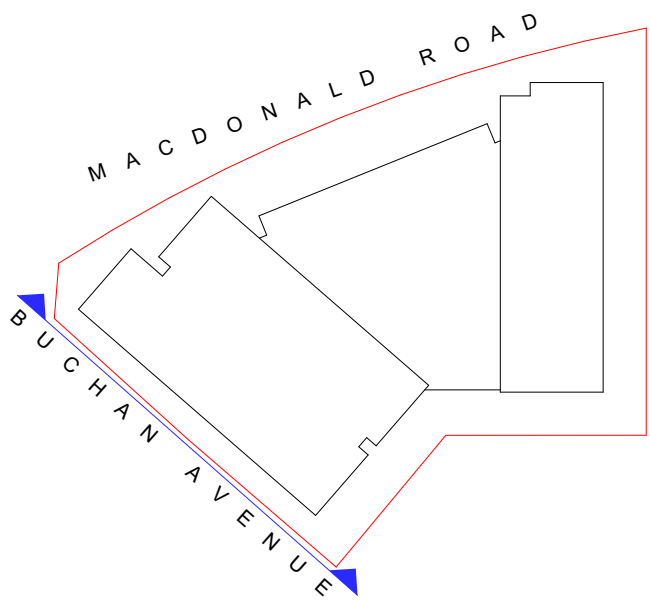
250527

Sketch Numb

04_ST-SK-001[F]



KEY PLAN



REVISION ID	AMENDMENT	DATE
D	ISSUE FOR COORDINATION	13/11/2025
P1	ISSUE FOR COORDINATION	18/12/2025
A-WIP	ISSUE FOR SSDA	14/1/2026
A	ISSUE FOR SSDA	22/1/2026

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NOMINATED ARCHITECT RACHID ANDARY NSW ARB 8627

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1460 Station St E
Parramatta NSW 2150

PRELIMINARY

SITE ADDRESS
CNR BUCHAN AVENUE & MCDONALD ROAD,
EDMONDSON PARK, NSW, 2174

JOB NO
2518
CHECKED
CH
DATE CREATED
JUL 2025
PROJECT STATUS
STATE SIGNIFICANT DEVELOPMENT APPLICATION
DRAWING TITLE
WEST ELEVATION

DRAWN
BC,SL,KB
SCALE
1:150 @ A1
A3@50%

SHEET NO
SSDA 204
REVISION
A