

CROWN GROUP

EASTLAKES TOWN CENTRE NORTH SITE - BUILDINGS 1 AND 1A BASIX REPORT

MAY 2019





EASTLAKES TOWN CENTRE NORTH SITE - BUILDINGS 1 AND 1A

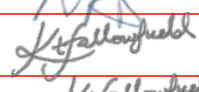
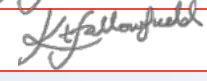
BASIX REPORT

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01	04/07/2017	Final for issue
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03	22/05/2019	Final issue - glazing updates

	NAME	DATE	SIGNATURE
Prepared by:	NJA	22/05/2019	
Reviewed by:	KWF	22/05/2019	
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EXECUTIVE SUMMARY

An ESD strategy has been developed for the proposed Buildings 1 and 1A in the Eastlakes Town Centre Development. This report demonstrates how the development meets the statutory requirements for single occupancy dwellings under Section J and BASIX.

BASIX requires the following benchmarks to be met:

- Water—Minimum target of 40% potable water use reduction compared to the NSW average
- Thermal comfort—Meeting a set of NatHERS modelled maximum heating and cooling loads determined by the BASIX tool according to the development type and climate zone. For this development, the thresholds are as follows:
 - Heating maximum 51 MJ/m² average across all units, maximum 66 MJ/m² for any individual unit
 - Cooling maximum 45 MJ/m² average across all units, maximum 59 MJ/m² for any individual unit
- Energy—Minimum required target of 20% energy consumption reduction compared to the NSW average

Water efficiency in the building has been achieved through the following:

- Water efficient fittings
- Native and low water use plant species have been selected for 70% of the landscaping in the site
- Supply of harvested rainwater (30kL rainwater tank) for use in irrigation.

NatHERS modelling has been conducted to demonstrate thermal comfort performance of the residential dwellings, and the results of this modelling demonstrate that the architectural design is able to manage thermal loads within the apartments to meet the minimum benchmark for this location.

Energy consumption in multi-unit residential buildings is heavily influenced by the utilisation and servicing of the common areas. HVAC and artificial lighting systems in the basement and lobbies has been carefully designed to reduce energy demands.

Simple energy efficiency measures, such as the provision of efficient fitting and fixtures will deliver energy consumption reductions in the dwellings. These include:

- Solar PV system
- Efficient DHW heating systems
- Lighting will consist of dedicated low energy light fittings with efficient controls to limit unnecessary usage
- High Energy Star-rated appliances will be installed in each apartment

1 INTRODUCTION

An ESD strategy has been developed for the proposed Buildings 1 and 1A in the Eastlakes Town Centre development. This report demonstrates how the development meets the statutory requirements for single occupancy dwellings under Section J and BASIX.

1.1 BASIX

BASIX is an online tool that is used to rate the energy and water efficiency and thermal comfort performance of residential dwellings in NSW. The tool sets minimum energy and water reduction targets which must be met through the design of the building and the selection of fixtures and fittings.

BASIX applies to all new dwellings including single dwellings, townhouses and low-rise, mid-rise and high-rise developments in NSW. BASIX also applies to all residential alterations and additions with a total cost of works of \$100,000 or more; and all residential developments with a total estimated cost of works of \$50,000 or more.

Design inputs including location, size, construction and glazing materials, water sources, equipment and fittings are used to determine the potential energy and water consumption of a new home or dwelling.

BASIX assesses three main categories:

1. Water;
2. Thermal Comfort;
3. Energy.

Thermal comfort is assessed by simulation in accordance with the Nationwide House Energy Rating Scheme (NatHERS) modelling protocol. This requires the modelling of each assessable dwelling by an accredited assessor, working with NatHERS accredited software.

NatHERS modelling assesses the potential of the dwelling to provide thermal comfort passively, thereby reducing energy requirements for heating and cooling. The annual heating and cooling loads calculated are entered into the BASIX tool to determine if the dwelling satisfies the maximum heating and cooling loads set for the dwelling in its climate zone.

The heating and cooling loads also affect the 'Energy' score, with more efficient dwellings contributing to an improved score in the 'Energy' section. The 'Energy' score is also affected by other inputs such as efficiency of appliances, heating and cooling system selection, hot water systems and factors such as use of renewable energy systems.

1.1.1 SOURCES OF INFORMATION

This BASIX assessment has relied on the following documentation for inputs and methodology

- Architectural drawings from FJMT

Table 1: Architectural drawings used

DRAWINGS	DATE	REVISION
General Arrangement Plans B03 – Basement 3	10/12/18	O
General Arrangement Plans B02 – Basement 2	10/12/18	Y
General Arrangement Plans B01 – Basement 1	10/12/18	Y
L00 - Ground Floor	10/12/18	ZF
L01 - Podium	10/12/18	Y
L02 – Level 2	10/12/18	T
L03 – Level 3	10/12/18	T
L04 – Level 4	10/12/18	T
L05 – Level 5	10/12/18	T
L06 – Level 6	10/12/18	R
L07 – Level 7	10/12/18	R
L08 – Level 8	10/12/18	R
L09 – Roof Plan	10/12/18	K
Elevations Building 1 – North, West	10/12/18	L
Elevations Building 1 –South, East, Circulation	10/12/18	K
Elevations Building 1A – West, East	10/12/18	L
Elevations Building 1A – North, South, Circulation	10/12/18	K
Elevations Building 1A – Circulation	10/12/18	J
Elevations – North and South Elevations	10/12/18	J

- Correspondence with FJMT
- Correspondence with Crown

- NatHERS Technical Note 1 – Principles for Ratings in Regulation Mode version 1.2 – 2014
- BASIX Thermal Comfort Protocol 01 December 2014 (Amendment No. 4: 01 February 2016)

1.1.2 ACCREDITED NATHERS SIMULATION SOFTWARE

FirstRate5 is provided by Sustainability Victoria and is accredited for simulating the thermal performance of dwellings in Australian climates under the NatHERS software accreditation protocol.

FirstRate5 version 5.2.9(3.13) has been used in the assessment of this project, in accordance with the NatHERS Technical Note and the BASIX Thermal Comfort Protocol.

Inputs including dwelling geometry, space uses, orientation, climate zone, building materials and shading from adjacencies and obstructions are used to calculate heating and cooling loads for the dwelling. Resulting loads that are within the heating and cooling thresholds set under the BASIX protocol will satisfy the thermal comfort targets of BASIX.

1.2 LIMITATIONS

The results from the NatHERS modelling shown within this report are limited in accuracy by factors including the following:

- Actual energy consumption will be affected by variations in the climate, installed equipment, occupants and their behaviour which modelling does not account for;
- Construction details being consistent with the design documentation provided;
- Orientation and apartment layout being as shown on the drawings.

1.3 APPLICATION OF SECTION J OF THE NATIONAL CONSTRUCTION CODE VOLUME 1

The thermal performance requirements for a building's envelope are addressed through the first three parts of Section J – Energy Efficiency of the National Construction Code (NCC):

- Part J1 – Building Fabric
- Part J2 – Glazing
- Part J3 – Building Sealing

The residential part of this project is regulated under BASIX for energy efficiency.

For each Sole Occupancy Unit (SOU) of a Class 2 building, BASIX satisfies Parts J1, J2 and J3.

The prescriptive provisions of Parts J1, J2 and J3 are therefore not directly applicable to each SOU. The relevant Performance Requirements have been stated as the maximum thermal comfort heating and cooling loads stipulated by BASIX.

The Class 2 parts of the building that are not SOUs must satisfy the prescriptive provisions of Parts J1, J2 and J3.

The architect must take responsibility for specifying the Performance Requirements of the building fabric, glazing and building sealing performance, as required under BASIX, including those non-SOU parts of the building.

The relevant consultant(s) must take responsibility for specifying the Performance Requirements of the mechanical and electrical services design, as required under the relevant parts of Section J.

2 BASIX

The purpose of the BASIX analysis is to benchmark the proposed development against average NSW residential performance parameters, including:

- Water
- Thermal comfort
- Energy

BASIX requires the following benchmarks to be met:

- Water—Minimum target of 40% potable water use reduction compared to the NSW average
- Thermal comfort—Meeting a set of NatHERS modelled maximum heating and cooling loads determined by the BASIX tool. For this development, they are as follows:
 - Heating maximum 51 MJ/m² average across all units, maximum 66 MJ/m² for any individual unit
 - Cooling maximum 45 MJ/m² average across all units, maximum 59 MJ/m² for any individual unit
- Energy—Minimum required target of 20% energy consumption reduction compared to the NSW average

The BASIX certificate(s) for the development are included in Appendix A below.

2.1 WATER

Water efficiency in the building has been achieved through the following:

- Water efficient fittings as shown in the table below:

Table 2: Water fixtures performance

FITTING	WELS RATING
Toilet	4 Star
Bathroom taps	5 Star
Kitchen taps	5 Star
Showers	3 Star, 6 - 7.5L / min flow rate
Dishwashers	4 Star
Washing machines	2 Star

- Native and low water use plant species have been selected for all landscaping in the building
- Harvested rainwater will provide water to irrigation.
- Harvested rainwater will supply two car washing bays
- 30kL rainwater tank

2.2 THERMAL COMFORT

Thermal comfort (NatHERS) modelling is employed in accordance with the BASIX protocol, to determine heating and cooling loads attributed to achieving acceptable thermal comfort in each dwelling. The results of NatHERS modelling demonstrate that the architectural design can manage thermal loads within the apartments to meet the minimum benchmark for this location.

The maximum allowable thermal loads for a development in this location are those applicable prior to July 1, 2017, consistent with the date of initial lodgement of the BASIX certificate, and are shown in Table 3. The average thermal comfort loads achieved in this development are shown in the same table for comparison.

Table 3: NatHERS thermal comfort performance

	HEATING	COOLING
Maximum individual load (set by BASIX)	66 MJ/m ²	59 MJ/m ²
Average maximum load (set by BASIX)	51 MJ/m ²	45 MJ/m ²
Average load achieved in Building 1	38.7 MJ/m ²	25.5 MJ/m ²
Average load achieved in Building 1A	36.1 MJ/m ²	27.5 MJ/m ²

2.2.1 MODELLING INPUTS

This section identifies the inputs for windows, shading and constructions used for the NatHERS modelling on all the dwellings.

GLAZING

Table 4 identifies the glazing properties (window total values only) used in the NatHERS models.

Table 4: Glazing properties

GLAZING OPERABILITY	U-VALUE (WHOLE WINDOW)	SHGC (WHOLE WINDOW)
Sliding doors and fixed windows	4.8	0.59
Awning windows	5.4	0.41

SHADING

Shading of the external building fabric alters the impact of solar loads on the internal conditions of each dwelling. NatHERS modelling accounts for sources of fixed shading that can impact each dwelling.

Note that models have accounted for the following:

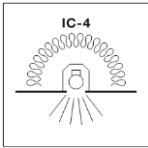
- The overhang of any balconies above each dwelling;
- Overshadowing from adjacent buildings; and
- Projecting balcony separator walls and other 'wing-wall'-type geometry between dwellings.

Holland blinds have been modelled as required by the NatHERS protocol, but are not required to be installed as part of the development.

CONSTRUCTIONS

Table 5 identifies the wall, floor, ceiling and roof construction properties used as part of the NatHERS models.

Table 5: Construction properties

ELEMENT	MATERIAL / PARAMETER
Construction and Insulation Details	
Ground floor	Minimum 400mm suspended concrete structural slab
Upper floors	200mm suspended concrete slabs
Exposed floors	Floors above open and/or non-conditioned space. R1.0 added insulation to soffit or within framed cavity (1-101, 1-102, 1-103, 1-105, 1-108, 1A-105, 1A-109, 1A-111) R2.0 added insulation to the soffit or within framed cavity for apartments 1-106, 1-107, 1A-511 (on exposed floor above Level 4 balcony)
External walls	Compressed Fibre Cement Cladding R2.0 added insulation
Party walls between apartments	Aerated autoclaved concrete block with cavity and plasterboard lining
Party walls between apartment and corridor	Aerated autoclaved concrete block with cavity and plasterboard lining R1.0 added insulation
Internal partition walls	Lightweight cavity stud, plasterboard lining
Ceilings/Roof	Concrete slab with cavity and plasterboard ceiling lining MEDIUM roof colour R3.0 added insulation R4.0 added insulation for apartments 1A-510, 1A-511
Floor coverings	•Bedrooms, Living/Dining, Study, Hall - carpet •Wet areas - tiles •Kitchen - tiles *Except when drawings indicate tiles for the entire apartment
Shading	All eaves, balconies, balustrades, wall extensions/wing walls, vertical shade louvres and window reveals as shown on plans and elevations.
Downlights	<u>No downlights.</u> Downlights if fitted are to be sealed, with approved non-ventilated downlight covers, allowing for continuous installation of insulation over the fitting without resultant penetrations in the insulation or air transfer to ceiling cavity. An IC-4 fitting rating should be sought in accordance with AS/NZS 60598.2.2 
Exhaust Fans	Provision for exhaust fans - 1 per kitchen, laundry, bathroom and ensuite. 150x150 opening, <u>sealed</u> .

2.2.2 MODELLING RESULTS

This section describes the results from NatHERS modelling. In summary, the preliminary dwelling design can achieve the minimum thermal comfort requirements of BASIX without amendments.

Area adjusted heating and cooling loads and star ratings for the development are identified in Appendix D below.

2.2.3 MODELLING CONCLUSION

The results of NatHERS modelling demonstrate the apartments can meet the minimum requirements of the Thermal Comfort section of BASIX.

The NatHERS group Universal certificate is included in Appendix B below.

Stamped drawings for submission in conjunction with the BASIX certificate are included in Appendix C below.

2.3 ENERGY

2.3.1 COMMON AREAS

Energy consumption in multi-unit residential buildings is heavily influenced by the utilisation and servicing of the common areas. HVAC and artificial lighting systems in car parks, and lobbies need to be carefully designed to reduce energy demands.

The common areas will use:

- Efficient mechanical ventilation systems with appropriate controls to avoid overuse
- Natural ventilation where possible
- High efficiency light fittings
- Lighting control systems in all spaces such as motion sensors or timeclock where appropriate
- Car park mechanical ventilation controlled by carbon monoxide sensors and VSD fans

Further details of the proposed energy strategy for the common areas of the residential portion of the building are summarised in Table 6.

Table 6: Energy strategies for the common areas

ENERGY ITEM	STRATEGY
Lift motors	Gearless traction with VVVF motors
Lighting	Basement— light emitting diode; Zoned switching with motion sensor Lifts—light emitting diode; Connected to lift call button Garbage rooms—fluorescent; Motion sensors Hallways— light emitting diode; Zoned switching with motion sensor
Ventilation	Basement —ventilation (exhaust only); carbon monoxide monitor + VSD fan Garbage rooms—ventilation exhaust only Hallways—air conditioning system
Solar PV	42.3 kW system

2.3.2 DWELLINGS

Domestic hot water (DHW), space heating and comfort cooling account for up to 60% of the energy use of an average residential dwelling. Targeting these systems as a priority will support the greatest energy consumption reductions.

Simple energy efficiency measures, such as the provision of efficient fittings and fixtures can deliver energy consumption reductions.

The dwellings will include the following initiatives:

- Efficient DHW heating systems
- Lighting will consist of dedicated low energy light fittings with efficient controls to limit unnecessary usage
- Clothes drying lines will be installed in each apartment
- High Energy Star-rated appliances will be installed in each apartment (see Table 7).

Table 7: Energy strategies for the dwellings

ENERGY ITEM	STRATEGY
Central DHW heating system	High efficiency, gas fired boiler plant
Central cooling system	High efficiency (COP > 4.5), chilled water fan coil units
Central heating system	High efficiency, fan coil + heated water

2.3.3 ENERGY FIXTURES

Energy efficiency in the building has been achieved through the following:

- Energy efficient appliances as shown in the table below:

Table 8: Energy fixture specifications

FITTING	RATING
Cooktop / oven	Gas cooktop and electric oven
Refrigerator	Not specified
Ventilated fridge space	Yes
Dishwasher	3.5 Star
Clothes washer	Not specified
Clothes dryer	2 Star

APPENDIX A

BASIX CERTIFICATE



Certificate number: 425799M_06

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 06/10/2017 published by the Department. This document is available at www.basix.nsw.gov.au

This certificate is a revision of certificate number 425799M_03 lodged with the consent authority or certifier on 03 June 2013 with application MP09-0146.

It is the responsibility of the applicant to verify with the consent authority that the original, or any revised certificate, complies with the requirements of Schedule 1 Clause 2A, 4A or 6A of the Environmental Planning and Assessment Regulation 2000

Secretary

Date of issue: Wednesday, 22 May 2019

To be valid, this certificate must be lodged within 3 months of the date of issue.

Project summary	
Project name	Eastlakes Town Centre (Bldg 1, 1B, 5_06
Street address	193 Gardeners Road Eastlakes 2018
Local Government Area	Botany Bay City Council
Plan type and plan number	deposited 248832
Lot no.	3
Section no.	-
No. of residential flat buildings	2
No. of units in residential flat buildings	107
No. of multi-dwelling houses	0
No. of single dwelling houses	0
Project score	
Water	 44 Target 40
Thermal Comfort	 Pass Target Pass
Energy	 37 Target 20

Certificate Prepared by

Name / Company Name: WSP Australia Pty Ltd

ABN (if applicable): 80078004798

Description of project

Project address	
Project name	Eastlakes Town Centre (Bldg 1, 1B, 5_06
Street address	193 Gardeners Road Eastlakes 2018
Local Government Area	Botany Bay City Council
Plan type and plan number	deposited 248832
Lot no.	3
Section no.	-
Project type	
No. of residential flat buildings	2
No. of units in residential flat buildings	107
No. of multi-dwelling houses	0
No. of single dwelling houses	0
Site details	
Site area (m²)	3385
Roof area (m²)	1889.3
Non-residential floor area (m²)	5149.6
Residential car spaces	128
Non-residential car spaces	130

Common area landscape	
Common area lawn (m²)	0.0
Common area garden (m²)	788.2
Area of indigenous or low water use species (m²)	0.0
Assessor details	
Assessor number	BDAV/16/1712
Certificate number	D2K1R5PEFA
Climate zone	56
Project score	
Water	✓ 44 Target 40
Thermal Comfort	✓ Pass Target Pass
Energy	✓ 37 Target 20

Description of project

The tables below describe the dwellings and common areas within the project

Residential flat buildings - Building 1, 44 dwellings, 6 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
101	2	65.0	4.5	0.0	0.0
105	1	55.0	0.0	0.0	0.0
201	2	65.0	4.5	0.0	0.0
205	1	56.0	0.0	0.0	0.0
301	2	65.0	4.5	0.0	0.0
305	1	55.0	0.0	0.0	0.0
401	2	65.0	4.5	0.0	0.0
405	1	55.0	0.0	0.0	0.0
501	2	65.0	4.5	0.0	0.0
505	1	55.0	0.0	0.0	0.0
601	3	102.0	4.8	0.0	0.0
102	2	65.0	4.5	0.0	0.0
106	1	56.0	0.0	0.0	0.0
202	2	65.0	4.5	0.0	0.0
206	1	56.0	0.0	0.0	0.0
302	2	65.0	4.5	0.0	0.0
306	1	56.0	0.0	0.0	0.0
402	2	65.0	4.5	0.0	0.0
406	1	56.0	0.0	0.0	0.0
502	2	65.0	4.5	0.0	0.0
506	1	56.0	0.0	0.0	0.0
602	3	102.0	4.8	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
103	2	65.0	4.5	0.0	0.0
107	1	56.0	0.0	0.0	0.0
203	2	65.0	4.5	0.0	0.0
207	1	56.0	0.0	0.0	0.0
303	2	65.0	4.5	0.0	0.0
307	1	56.0	0.0	0.0	0.0
403	2	65.0	4.5	0.0	0.0
407	1	56.0	0.0	0.0	0.0
503	2	65.0	4.5	0.0	0.0
507	1	56.0	0.0	0.0	0.0
603	2	87.0	0.0	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
104	2	65.0	4.5	0.0	0.0
108	1	56.0	0.0	0.0	0.0
204	2	65.0	4.5	0.0	0.0
208	1	56.0	0.0	0.0	0.0
304	2	65.0	4.5	0.0	0.0
308	1	56.0	0.0	0.0	0.0
404	2	65.0	4.5	0.0	0.0
408	1	56.0	0.0	0.0	0.0
504	2	65.0	4.5	0.0	0.0
508	1	56.0	0.0	0.0	0.0
604	2	82.0	5.3	0.0	0.0

Residential flat buildings - Building 1A, 63 dwellings, 6 storeys above ground

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
101	2	79.9	3.8	0.0	0.0
105	1	60.6	3.7	0.0	0.0
109	1	64.8	0.0	0.0	0.0
202	1	60.6	0.0	0.0	0.0
206	2	72.8	0.0	0.0	0.0
210	2	68.3	3.7	0.0	0.0
303	2	69.6	4.6	0.0	0.0
307	2	75.2	0.0	0.0	0.0
311	1	100.8	0.0	0.0	0.0
404	2	72.8	0.0	0.0	0.0
408	2	72.8	0.0	0.0	0.0
501	2	79.9	3.8	0.0	0.0
505	1	60.8	3.7	0.0	0.0
509	1	64.8	0.0	0.0	0.0
602	2	81.2	3.9	0.0	0.0
606	1	36.4	4.3	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
102	1	60.6	0.0	0.0	0.0
106	2	72.9	0.0	0.0	0.0
110	2	68.3	3.7	0.0	0.0
203	2	69.6	4.6	0.0	0.0
207	2	75.2	0.0	0.0	0.0
211	2	100.8	0.0	0.0	0.0
304	2	72.8	0.0	0.0	0.0
308	2	72.8	0.0	0.0	0.0
401	2	79.9	3.8	0.0	0.0
405	1	60.8	3.7	0.0	0.0
409	1	64.8	0.0	0.0	0.0
502	1	60.6	0.0	0.0	0.0
506	2	72.7	0.0	0.0	0.0
510	2	75.5	0.0	0.0	0.0
603	2	59.9	4.2	0.0	0.0
607	2	60.6	4.2	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
103	2	69.6	4.6	0.0	0.0
107	2	75.1	0.0	0.0	0.0
111	2	100.8	0.0	0.0	0.0
204	2	72.8	0.0	0.0	0.0
208	2	72.8	0.0	0.0	0.0
301	2	79.9	3.8	0.0	0.0
305	1	60.8	3.7	0.0	0.0
309	1	64.8	0.0	0.0	0.0
402	1	60.6	0.0	0.0	0.0
406	2	72.8	0.0	0.0	0.0
410	2	68.3	3.7	0.0	0.0
503	2	69.6	4.6	0.0	0.0
507	2	75.0	0.0	0.0	0.0
511	1	61.2	0.0	0.0	0.0
604	1	52.7	3.7	0.0	0.0
608	2	60.6	4.2	0.0	0.0

Dwelling no.	No. of bedrooms	Conditioned floor area (m ²)	Unconditioned floor area (m ²)	Area of garden & lawn (m ²)	Indigenous species (min area m ²)
104	2	72.2	0.0	0.0	0.0
108	2	72.8	0.0	0.0	0.0
201	2	79.9	3.8	0.0	0.0
205	1	60.8	3.7	0.0	0.0
209	1	64.8	0.0	0.0	0.0
302	1	60.6	0.0	0.0	0.0
306	2	72.8	0.0	0.0	0.0
310	2	68.3	3.7	0.0	0.0
403	2	69.6	4.6	0.0	0.0
407	2	75.2	0.0	0.0	0.0
411	1	100.8	0.0	0.0	0.0
504	2	72.7	0.0	0.0	0.0
508	2	72.8	0.0	0.0	0.0
601	2	98.4	3.8	0.0	0.0
605	2	64.7	0.0	0.0	0.0

Description of project

The tables below describe the dwellings and common areas within the project

Common areas of unit building - Building 1

Common area	Floor area (m²)	Common area	Floor area (m²)
Lift car (No. 1)	-	Lift car (No. 2)	-

Common areas of unit building - Building 1A

Common area	Floor area (m²)	Common area	Floor area (m²)
Lift car (No. 3)	-	Lift car (No.4)	-

Common areas of the development (non-building specific)

Common area	Floor area (m²)	Common area	Floor area (m²)
Car park area	4442.0	Garbage rooms	40.8
Plant or service room	166.3		

Schedule of BASIX commitments

1. Commitments for Residential flat buildings - Building 1

- (a) Dwellings
 - (i) Water
 - (ii) Energy
 - (iii) Thermal Comfort
- (b) Common areas and central systems/facilities
 - (i) Water
 - (ii) Energy

2. Commitments for Residential flat buildings - Building 1A

- (a) Dwellings
 - (i) Water
 - (ii) Energy
 - (iii) Thermal Comfort
- (b) Common areas and central systems/facilities
 - (i) Water
 - (ii) Energy

3. Commitments for multi-dwelling houses

4. Commitments for single dwelling houses

5. Commitments for common areas and central systems/facilities for the development (non-building specific)

- (i) Water
- (ii) Energy

Schedule of BASIX commitments

The commitments set out below regulate how the proposed development is to be carried out. It is a condition of any development consent granted, or complying development certificate issued, for the proposed development, that BASIX commitments be complied with.

1. Commitments for Residential flat buildings - Building 1

(a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✓	✓	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✓	✓
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✓	✓
(e) The applicant must install: (aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and (bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.		✓ ✓	✓ ✓
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✓	✓	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✓	
(g) The pool or spa must be located as specified in the table.	✓	✓	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✓	✓	✓

Dwelling no.	Fixtures					Appliances		Individual pool					Individual spa		
	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded	
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	2 star	4 star	-	-	-	-	-	-	-	

Alternative water source									
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up	
None	-	-	-	-	-	-	-	-	

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✓	✓
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✓	✓

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✓	✓	✓
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✓ ✓	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below; (bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and (cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✓ ✓ ✓	✓
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✓	

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	central hot water system 2	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

Cooling				Heating		Artificial lighting						Natural lighting	
Dwelling no.	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen	
101, 102, 103, 104, 105, 106, 107, 108, 201, 202, 203, 204, 205, 206, 207, 208, 301, 302	central cooling system 1	central cooling system 1	central heating system 1	central heating system 1	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no	
All other dwellings	central cooling system 1	central cooling system 1	central heating system 1	central heating system 1	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	yes	

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							Private outdoor or unsheltered clothes drying line
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	
All dwellings	-	-	-	-	gas cooktop & electric oven	-	yes	3.5 star	-	2 star	yes	no

(iii) Thermal Comfort		Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must attach the certificate referred to under "Assessor details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for a final occupation certificate for the proposed development.				
(b) The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.				
(c) The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX Certificate, including the details shown in the "Thermal Loads" table below.				
(d) The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Thermal Comfort Protocol requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor, to certify that this is the case.		✓		
(e) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.			✓	
(f) The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.			✓	✓
(g) Where there is an in-slab heating or cooling system, the applicant must: (aa) Install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab; or (bb) On a suspended floor, install insulation with an R-value of not less than 1.0 underneath the slab and around the vertical edges of the perimeter of the slab.		✓	✓	✓
(h) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.		✓	✓	✓

Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)
101	22.7
102	31.5
103	31.5
104	25.1
105	56.3

Thermal loads	
Area adjusted cooling load (in mJ/m ² /yr)	
30.6	
18.3	
21.6	
24.5	
47.9	

Thermal loads		
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
106	60.3	15.4
107	62.3	14.8
108	44.1	21.0
201	20.7	32.0
202	32.2	19.1
203	33.4	23.0
204	26.4	25.9
205	38.3	49.2
206	55.3	19.8
207	56.1	18.6
208	48.6	19.7
301	23.5	26.2
302	35.9	16.4
303	36.6	19.5
304	29.9	22.5
305	42.7	42.5
306	59.9	16.3
307	60.4	15.8
308	51.1	17.0
401	24.0	25.7
402	36.1	16.3
403	36.8	18.9
404	29.9	22.3
405	43.1	41.9
406	60.2	16.0
407	61.0	16.2
408	50.8	17.4

Thermal loads		
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)	Area adjusted cooling load (in mJ/m ² /yr)
501	29.5	26.9
502	37.7	16.4
503	37.6	19.6
504	34.7	22.7
505	43.3	41.5
506	60.1	16.0
507	60.9	16.0
508	50.0	17.9
601	40.2	18.1
602	39.0	19.4
603	55.6	16.4
All other dwellings	55.4	13.7

(b) Common areas and central systems/facilities

(i) Water		Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.			✓	✓
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.		✓	✓	✓
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.		✓	✓	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.			✓	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.			✓	✓
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.			✓	✓

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	3 star (> 6 but ≤ 7.5 L/min)	4 star	4 star	no common laundry facility

(ii) Energy		Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.			✓	✓
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.			✓	✓
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.		✓	✓	✓

Common area ventilation system		Common area lighting			
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Lift car (No. 1)	-	-	light-emitting diode	connected to lift call button	No
Lift car (No. 2)	-	-	light-emitting diode	connected to lift call button	No

Central energy systems		Specification
Central hot water system (No. 2)	Type gas-fired boiler	Piping insulation (ringmain & supply risers): (b) Piping internal to building: R1.0 (~38 mm)
Lift (No. 1)	gearless traction with V V V F motor	Number of levels (including basement): 10
Lift (No. 2)	gearless traction with V V V F motor	Number of levels (including basement): 10

2. Commitments for Residential flat buildings - Building 1A

(a) Dwellings

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below, as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of garden and lawn" for the dwelling specified in the "Description of Project" table).	✓	✓	
(c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must ensure that each such fixture and appliance meets the rating specified for it.		✓	✓
(d) The applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below.		✓	✓
(e) The applicant must install: (aa) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HW recirculation or diversion" column of the table below; and (bb) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. The applicant must connect the hot water diversion tank to all toilets in the dwelling.		✓ ✓	✓ ✓
(e) The applicant must not install a private swimming pool or spa for the dwelling, with a volume exceeding that specified for it in the table below.	✓	✓	
(f) If specified in the table, that pool or spa (or both) must have a pool cover or shading (or both).		✓	
(g) The pool or spa must be located as specified in the table.	✓	✓	
(h) The applicant must install, for the dwelling, each alternative water supply system, with the specified size, listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system), and to divert overflow as specified. Each system must be connected as specified.	✓	✓	✓

Dwelling no.	Fixtures					Appliances		Individual pool					Individual spa		
	All shower-heads	All toilet flushing systems	All kitchen taps	All bathroom taps	HW recirculation or diversion	All clothes washers	All dish-washers	Volume (max volume)	Pool cover	Pool location	Pool shaded	Volume (max volume)	Spa cover	Spa shaded	
All dwellings	3 star (> 6 but <= 7.5 L/min)	4 star	5 star	5 star	no	2 star	4 star	-	-	-	-	-	-	-	

Alternative water source									
Dwelling no.	Alternative water supply systems	Size	Configuration	Landscape connection	Toilet connection (s)	Laundry connection	Pool top-up	Spa top-up	
None	-	-	-	-	-	-	-	-	

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(b) The applicant must install each hot water system specified for the dwelling in the table below, so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling, then the applicant must connect that central system to the dwelling, so that the dwelling's hot water is supplied by that central system.	✓	✓	✓
(c) The applicant must install, in each bathroom, kitchen and laundry of the dwelling, the ventilation system specified for that room in the table below. Each such ventilation system must have the operation control specified for it in the table.		✓	✓
(d) The applicant must install the cooling and heating system/s specified for the dwelling under the "Living areas" and "Bedroom areas" headings of the "Cooling" and "Heating" columns in the table below, in/for at least 1 living/bedroom area of the dwelling. If no cooling or heating system is specified in the table for "Living areas" or "Bedroom areas", then no systems may be installed in any such areas. If the term "zoned" is specified beside an air conditioning system, then the system must provide for day/night zoning between living areas and bedrooms.		✓	✓
(e) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Artificial lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that the "primary type of artificial lighting" for each such room in the dwelling is fluorescent lighting or light emitting diode (LED) lighting. If the term "dedicated" is specified for a particular room or area, then the light fittings in that room or area must only be capable of being used for fluorescent lighting or light emitting diode (LED) lighting.		✓	✓

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.	✓	✓	✓
(g) This commitment applies if the applicant installs a water heating system for the dwelling's pool or spa. The applicant must: (aa) install the system specified for the pool in the "Individual Pool" column of the table below (or alternatively must not install any system for the pool). If specified, the applicant must install a timer, to control the pool's pump; and (bb) install the system specified for the spa in the "Individual Spa" column of the table below (or alternatively must not install any system for the spa). If specified, the applicant must install a timer to control the spa's pump.		✓ ✓	
(h) The applicant must install in the dwelling: (aa) the kitchen cook-top and oven specified for that dwelling in the "Appliances & other efficiency measures" column of the table below; (bb) each appliance for which a rating is specified for that dwelling in the "Appliances & other efficiency measures" column of the table, and ensure that the appliance has that minimum rating; and (cc) any clothes drying line specified for the dwelling in the "Appliances & other efficiency measures" column of the table.		✓ ✓ ✓	✓
(i) If specified in the table, the applicant must carry out the development so that each refrigerator space in the dwelling is "well ventilated".		✓	

	Hot water	Bathroom ventilation system		Kitchen ventilation system		Laundry ventilation system	
Dwelling no.	Hot water system	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	central hot water system 1	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off	individual fan, ducted to façade or roof	manual switch on/off

	Cooling		Heating		Artificial lighting							Natural lighting	
	living areas	bedroom areas	living areas	bedroom areas	No. of bedrooms &/or study	No. of living &/or dining rooms	Each kitchen	All bathrooms/toilets	Each laundry	All hallways	No. of bathrooms &/or toilets	Main kitchen	
Dwelling no.													
102, 105, 109, 202, 205, 209, 302, 305, 309, 311, 402, 405, 409, 411, 502, 505, 509, 511, 604, 606	central cooling system 1	central cooling system 1	central heating system 1	central heating system 1	1 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no	
All other dwellings	central cooling system 1	central cooling system 1	central heating system 1	central heating system 1	2 (dedicated)	1 (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	yes (dedicated)	0	no	

Dwelling no.	Individual pool		Individual spa		Appliances & other efficiency measures							
	Pool heating system	Timer	Spa heating system	Timer	Kitchen cooktop/oven	Refrigerator	Well ventilated fridge space	Dishwasher	Clothes washer	Clothes dryer	Indoor or sheltered clothes drying line	Private outdoor or unsheltered clothes drying line
All dwellings	-	-	-	-	gas cooktop & electric oven	-	yes	3.5 star	-	2 star	yes	no

(iii) Thermal Comfort		Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) The applicant must attach the certificate referred to under "Assessor details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for a final occupation certificate for the proposed development.				
(b) The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.				
(c) The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX Certificate, including the details shown in the "Thermal Loads" table below.				
(d) The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Thermal Comfort Protocol requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor, to certify that this is the case.		✓		
(e) The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.			✓	
(f) The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.			✓	✓
(g) Where there is an in-slab heating or cooling system, the applicant must: (aa) Install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab; or (bb) On a suspended floor, install insulation with an R-value of not less than 1.0 underneath the slab and around the vertical edges of the perimeter of the slab.		✓	✓	✓
(h) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.		✓	✓	✓

Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)
101	31.0
102	17.3
103	11.4
104	41.4
105	35.8

Thermal loads	
Area adjusted cooling load (in mJ/m ² /yr)	
21.1	
14.7	
42.2	
29.6	
47.1	

Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)
106	33.1
107	27.5
108	34.5
109	35.5
110	44.9
111	36.8
201	30.7
202	17.9
203	11.7
204	43.0
205	33.9
206	36.0
207	27.9
208	36.7
209	31.9
210	47.5
211	33.8
301	32.2
302	20.6
303	14.4
304	47.3
305	37.7
306	39.9
307	30.5
308	40.5
309	35.6
310	52.7
Area adjusted cooling load (in mJ/m ² /yr)	
	30.9
	24.8
	16.6
	47.2
	26.5
	30.7
	22.8
	14.8
	43.5
	29.7
	46.6
	31.1
	28.0
	17.3
	47.4
	29.8
	30.5
	20.8
	13.8
	34.9
	25.5
	36.4
	26.2
	22.1
	13.8
	36.1
	23.3

Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)
311	37.8
401	30.5
402	21.0
403	15.0
404	46.5
405	38.3
406	40.1
407	31.1
408	41.3
409	36.2
410	56.0
411	51.9
501	33.0
502	21.7
503	18.0
504	47.1
505	38.9
506	42.5
507	34.3
508	46.6
509	37.9
510	64.5
511	61.6
601	38.3
602	28.8
603	47.6
604	41.0
Area adjusted cooling load (in mJ/m ² /yr)	
	24.7
	22.7
	13.1
	34.3
	26.5
	35.1
	26.0
	21.0
	15.3
	35.0
	23.3
	18.6
	24.0
	13.6
	34.3
	28.0
	34.8
	20.6
	22.2
	23.9
	35.1
	20.7
	22.0
	18.5
	27.1
	32.5
	37.7

Thermal loads	
Dwelling no.	Area adjusted heating load (in mJ/m ² /yr)
605	42.2
606	46.0
607	50.2
All other dwellings	36.7
Area adjusted cooling load (in mJ/m ² /yr)	
	30.5
	38.0
	24.4
	25.0

(b) Common areas and central systems/facilities

(i) Water		Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.			✓	✓
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.		✓	✓	✓
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.		✓	✓	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.			✓	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.			✓	✓
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.			✓	✓

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	3 star (> 6 but ≤ 7.5 L/min)	4 star	4 star	no common laundry facility

(ii) Energy		Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.			✓	✓
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.			✓	✓
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.		✓	✓	✓

Common area ventilation system		Common area lighting			
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Lift car (No. 3)	-	-	light-emitting diode	connected to lift call button	No
Lift car (No.4)	-	-	light-emitting diode	connected to lift call button	No

Central energy systems		Specification
Central hot water system (No. 1)	Type gas-fired boiler	Piping insulation (ringmain & supply risers): (b) Piping internal to building: R1.0 (~38 mm)
Lift (No. 3)	gearless traction with V V V F motor	Number of levels (including basement): 10
Lift (No. 4)	gearless traction with V V V F motor	Number of levels (including basement): 10

5. Commitments for common areas and central systems/facilities for the development (non-building specific)

(b) Common areas and central systems/facilities

(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a showerhead, toilet, tap or clothes washer into a common area, then that item must meet the specifications listed for it in the table.		✓	✓
(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below. In each case, the system must be sized, be configured, and be connected, as specified in the table.	✓	✓	✓
(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.	✓	✓	
(d) A pool or spa listed in the table must have a cover or shading if specified for the pool or spa in the table.		✓	
(e) The applicant must install each fire sprinkler system listed in the table so that the system is configured as specified in the table.		✓	✓
(f) The applicant must ensure that the central cooling system for a cooling tower is configured as specified in the table.		✓	✓

Common area	Showerheads rating	Toilets rating	Taps rating	Clothes washers rating
All common areas	3 star (> 6 but ≤ 7.5 L/min)	4 star	4 star	no common laundry facility

Central systems	Size	Configuration	Connection (to allow for...)
Central water tank - rainwater or stormwater (No. 1)	30000.0	To collect run-off from at least: - 1889.0 square metres of roof area of buildings in the development - 0.0 square metres of impervious area in the development - 0.0 square metres of garden/lawn area in the development - 0.0 square metres of planter box area in the development (excluding, in each case, any area which drains to, or supplies, any other alternative water supply system).	- irrigation of 788.0 square metres of common landscaped area on the site - car washing in 2 car washing bays on the site

Central systems	Size	Configuration	Connection (to allow for...)
Pool (No. 1)	Volume: 75.0 kLs	Location: Other Pool shaded: no	-
Fire sprinkler system (No. 1)	-	So that fire sprinkler test water is contained within the fire sprinkler system for re-use, rather than disposed.	-
Central cooling system (No. 1)	-	Private water meter on make-up line connected to building management system. Conductivity controller installed in the cooling tower.	-

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(a) If, in carrying out the development, the applicant installs a ventilation system to service a common area specified in the table below, then that ventilation system must be of the type specified for that common area, and must meet the efficiency measure specified.		✓	✓
(b) In carrying out the development, the applicant must install, as the "primary type of artificial lighting" for each common area specified in the table below, the lighting specified for that common area. This lighting must meet the efficiency measure specified. The applicant must also install a centralised lighting control system or Building Management System (BMS) for the common area, where specified.		✓	✓
(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case, the system or fixture must be of the type, and meet the specifications, listed for it in the table.	✓	✓	✓

Common area ventilation system				Common area lighting		
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS	
Car park area	ventilation (supply + exhaust)	carbon monoxide monitor + VSD fan	fluorescent	zoned switching with motion sensor	No	
Switch room	ventilation exhaust only	none ie. continuous	compact fluorescent	manual on / manual off	No	
Garbage rooms	ventilation exhaust only	-	compact fluorescent	manual on / manual off	No	
Plant or service room	ventilation exhaust only	none ie. continuous	compact fluorescent	manual on / manual off	No	
Hallway/lobby	no mechanical ventilation	-	compact fluorescent	time clock and motion sensors	No	

Central energy systems	Type	Specification
Central cooling system (No. 1)	chilled water fan coil units	Energy source: electric driven compressor Heat rejection method: cooling tower Unit efficiency (min): high - COP > 4.5
Central heating system (No. 1)	fan coil + heated water	Energy source: gas boiler
Alternative energy supply	Photovoltaic system	Rated electrical output (min): 42.3 peak kW
Pool (No. 1)	Heating source: gas	Pump controlled by timer: yes

Notes

1. In these commitments, "applicant" means the person carrying out the development.
2. The applicant must identify each dwelling, building and common area listed in this certificate, on the plans accompanying any development application, and on the plans and specifications accompanying the application for a construction certificate / complying development certificate, for the proposed development, using the same identifying letter or reference as is given to that dwelling, building or common area in this certificate.
3. This note applies if the proposed development involves the erection of a building for both residential and non-residential purposes (or the change of use of a building for both residential and non-residential purposes). Commitments in this certificate which are specified to apply to a "common area" of a building or the development, apply only to that part of the building or development to be used for residential purposes.
4. If this certificate lists a central system as a commitment for a dwelling or building, and that system will also service any other dwelling or building within the development, then that system need only be installed once (even if it is separately listed as a commitment for that other dwelling or building).
5. If a star or other rating is specified in a commitment, this is a minimum rating.
6. All alternative water systems to be installed under these commitments (if any), must be installed in accordance with the requirements of all applicable regulatory authorities. NOTE: NSW Health does not recommend that stormwater, recycled water or private dam water be used to irrigate edible plants which are consumed raw, or that rainwater be used for human consumption in areas with potable water supply.

Legend

1. Commitments identified with a "✓" in the "Show on DA plans" column must be shown on the plans accompanying the development application for the proposed development (if a development application is to be lodged for the proposed development).
2. Commitments identified with a "✓" in the "Show on CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.
3. Commitments identified with a "✓" in the "Certifier check" column must be certified by a certifying authority as having been fulfilled. (Note: a certifying authority must not issue an occupation certificate (either interim or final) for a building listed in this certificate, or for any part of such a building, unless it is satisfied that each of the commitments whose fulfilment it is required to monitor in relation to the building or part, has been fulfilled).

APPENDIX B

NATHERS GROUP UNIVERSAL CERTIFICATE



Nationwide House Energy Rating Scheme* — Class 2 summary



Certificate Number: **D2K1R5PEFA**

Date of Certificate: **22 May 2019**

★ Average star rating: **5.2**

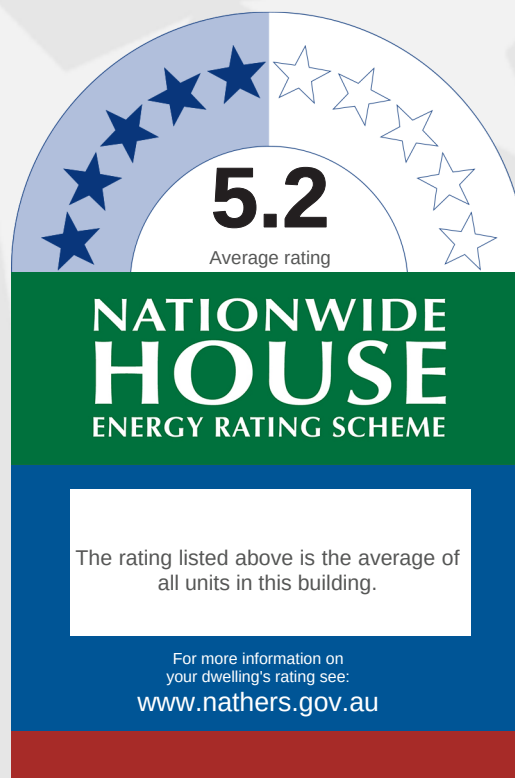
Assessor details

Accreditation number: **VIC/BDAV/16/1712**
Name: **Nicholas Asha**
Organisation: **WSP Australia**
Email: **nick.asha@wsp.com**
Phone: **+61418434221**
Declaration of interest: **No potential conflicts of interest to declare**
Software: **See individual certificates**
AAO: **BDAV**

Dwelling details

Address: **Buildings 1 and 1A, Eastlakes Town Centre**
Suburb: **Eastlakes**
State: **NSW**
Postcode: **2018**

Summary of all dwellings



Certification details

Certificate number	Unit number	Annual thermal performance loads (MJ/m2)			Star rating
		Heating load	Cooling load	Total load	
U59FKGK43E	101	31	21.1	52.1	5.9
G3LCSB7F85	101	22.7	30.6	53.3	5.8
AZ1VDPP67R	102	31.5	18.3	49.8	6.1
ME7S4AK2X9	102	17.3	14.7	32	7.5
H3XB3A5KOO	103	11.4	42.2	53.6	5.8
01OKAVCA4J	103	31.5	21.6	53.1	5.8
YOIAJKEZHW	104	25.1	24.5	49.6	6.1
2NSBU8N2B6	104	41.4	29.6	71	4.7
79F8LRUQ4B	105	56.3	47.9	104.2	3.4
GRHH2LK3H1	105	35.8	47.1	82.9	4.2
WKJJY117LK	106	33.1	30.9	64	5.1
EBRG59QIG2	106	60.3	15.4	75.7	4.4
LAPPL9W685	107	27.5	24.8	52.3	5.9
HLFPL8OJMC	107	62.3	14.8	77.1	4.4
XS1120VPJR	108	34.5	16.6	51.1	5.9
EUC5ZTK3LB	108	44.1	21	65.1	5.1

continued

Nationwide House Energy Rating Scheme* — Class 2 summary



Certificate Number: **D2K1R5PEFA**

Date of Certificate: **22 May 2019**

★ Average star rating: **5.2**

Summary of all dwellings continued

Certification details continued

Certificate number	Unit number	Annual thermal performance loads (MJ/m2)			Star rating
		Heating load	Cooling load	Total load	
ZBCW2RDIM2	109	35.5	47.2	82.7	4.2
ZPQ1VGB253	110	44.9	26.5	71.4	4.7
X2LMV506I0	111	36.8	30.7	67.5	4.9
C1OR6GCOWU	201	20.7	32	52.7	5.9
X77HJHOA67	201	30.7	22.8	53.5	5.8
G7VH5HPYY1	202	17.9	14.8	32.7	7.4
BFYJSHQDDDB	202	32.2	19.1	51.3	5.9
FAV36KU0B2	203	11.7	43.5	55.2	5.7
780OB6CDPL	203	33.4	23	56.4	5.6
IIVTWIQXEU	204	26.4	25.9	52.3	5.9
FQPSPZ4ECN	204	43	29.7	72.7	4.6
ZW8O6XK1BY	205	38.3	49.2	87.5	4
R0AKTRWY1S	205	33.9	46.6	80.5	4.3
5XN3KEAAPA	206	55.3	19.8	75.1	4.4
S9ISPXLDK8	206	36	31.1	67.1	4.9
E88LM2UEWK	207	56.1	18.6	74.7	4.5
XX8D2ZSD1F	207	27.9	28	55.9	5.6
MLVKJP9LJO	208	36.7	17.3	54	5.8
139TMK9MRO	208	48.6	19.7	68.3	4.9
Y58TKFI6D2	209	31.9	47.4	79.3	4.3
WBR4O6851S	210	47.5	29.8	77.3	4.4
ITQXG2LN9G	211	33.8	30.5	64.3	5.1
RUCQ4EH0RA	301	32.2	20.8	53	5.9
VKC1PU51IS	301	23.5	26.2	49.7	6.1
XEKPS14GL8	302	20.6	13.8	34.4	7.3
HQHEQ0YXBE	302	35.9	16.4	52.3	5.9
MD1VYSUK8J	303	36.6	19.5	56.1	5.6
IAFLFFEAPS	303	14.4	34.9	49.3	6.1
YIJDGKPARJ	304	29.9	22.5	52.4	5.9
AUB6TC8BAK	304	47.3	25.5	72.8	4.6
ZHO15DIAEO	305	37.7	36.4	74.1	4.5

continued

Nationwide House Energy Rating Scheme* — Class 2 summary



Certificate Number: **D2K1R5PEFA**

Date of Certificate: **22 May 2019**

★ Average star rating: **5.2**

Summary of all dwellings continued

Certification details continued

Certificate number	Unit number	Annual thermal performance loads (MJ/m2)			Star rating
		Heating load	Cooling load	Total load	
DDHU063UHF	305	42.7	42.5	85.2	4.1
7ECA8Q00KY	306	39.9	26.2	66.1	4.9
ONY67NL8IE	306	59.9	16.3	76.2	4.4
AGL89CDO6Q	307	30.5	22.1	52.6	5.9
6BNQSQBVAE	307	60.4	15.8	76.2	4.4
33GAJBWOQC	308	40.5	13.8	54.3	5.8
RWBO7I6H41	308	51.1	17	68.1	4.9
YUMNRTEAPG	309	35.6	36.1	71.7	4.7
XYMOO6EIJV	310	52.7	23.3	76	4.4
KKM3OFZFSC	311	37.8	24.7	62.5	5.2
Y9C35LTMF2	401	24	25.7	49.7	6.1
DAZYLRY7TI	401	30.5	22.7	53.2	5.8
9Q2NNC01BK	402	36.1	16.3	52.4	5.9
SMH9CJZQSI	402	21	13.1	34.1	7.3
5HUCY1MK8Y	403	36.8	18.9	55.7	5.7
AVF95OHT8L	403	15	34.3	49.3	6.1
HHYBC8DN0F	404	46.5	26.5	73	4.6
RDDQP69UUH	404	29.9	22.3	52.2	5.9
0OGD5EB2CI	405	43.1	41.9	85	4.1
QJXJCR5027	405	38.3	35.1	73.4	4.6
KF8HOU336P	406	40.1	26	66.1	4.9
T7HCPU0FBQ	406	60.2	16	76.2	4.4
OPKEKEU3UX	407	61	16.2	77.2	4.4
LBNVA26D67	407	31.1	21	52.1	5.9
61KL7ZUFYX	408	50.8	17.4	68.2	4.9
X877E4ALYG	408	41.3	15.3	56.6	5.6
8K579C9NBL	409	36.2	35	71.2	4.7
7YJ3K4A3VF	410	56	23.3	79.3	4.3
85EQB1I1WN	411	37.1	26.1	63.2	5.2
CD49EUX6V9	501	29.5	26.9	56.4	5.6

continued

Nationwide House Energy Rating Scheme* — Class 2 summary



Certificate Number: **D2K1R5PEFA**

Date of Certificate: **22 May 2019**

★ Average star rating: **5.2**

Summary of all dwellings continued

Certification details continued

Certificate number	Unit number	Annual thermal performance loads (MJ/m2)			Star rating
		Heating load	Cooling load	Total load	
AZXA69ZEWJ	501	33	24	57	5.6
F6B5SNCQ9U	502	37.7	16.4	54.1	5.8
4G0TIDGO5H	502	21.7	13.6	35.3	7.3
4I1Y7A0JSL	503	18	34.3	52.3	5.9
TME007M38R	503	37.6	19.6	57.2	5.6
SCTOEIHETC	504	47.1	28	75.1	4.4
YVEFALW XK5	504	34.7	22.7	57.4	5.5
ZPKMMRNOW6	505	43.3	41.5	84.8	4.1
CDEMTHFP1H	505	38.9	34.8	73.7	4.6
38BDM289C5	506	42.5	20.6	63.1	5.2
N0GG9T254H	506	60.1	16	76.1	4.4
R9XFPQ3WJM	507	60.9	16	76.9	4.4
XJKD17Y4N8	507	34.3	22.2	56.5	5.6
KJTF6DLRL2	508	46.6	23.9	70.5	4.7
1OIIGHZ10B	508	50	17.9	67.9	4.9
SLWM8TVFDK	509	37.9	35.1	73	4.6
A5TXHO55UD	510	64.5	20.7	85.2	4.1
CIFNRMW8FI	511	61.6	22	83.6	4.2
LS1D8O058S	601	38.3	18.5	56.8	5.6
0PHF80F2KL	601	40.2	18.1	58.3	5.4
REEB5UZJVB	602	39	19.4	58.4	5.4
FUY4H2ZFG5	602	28.8	27.1	55.9	5.7
170M1F6SG9	603	47.6	32.5	80.1	4.3
4XOZA4V2ML	603	55.6	16.4	72	4.7
TNLIO4U8FU	604	55.4	13.7	69.1	4.8
2RD8BWL7JW	604	41	37.7	78.7	4.4
WF9YD1465F	605	42.2	30.5	72.7	4.6
4SLUU3VBW8	606	46	38	84	4.2
UAKBLMWR1Q	607	50.2	24.4	74.6	4.5
BI8J6JMOUO	608	36.7	25	61.7	5.3

This building achieves an average star rating of: **5.2**

APPENDIX C

BASIX STAMPED DRAWING SET





GENERAL NOTES

- ALL DIMENSIONS AND EXISTING CONDITIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR BEFORE PROCEEDING WITH THE WORK:
 - ALL LEVELS RELATIVE TO AUSTRALIAN HEIGHT DATUM.
 - DO NOT SCALE DRAWINGS
 - USE FIGURED DIMENSIONS ONLY.

legend

BASIX Commitments	
Element	Material / Parameter
Construction and Insulation Details	
Ground / lowest floor	Minimum 400mm suspended concrete structural slab over basement
Upper floors	200mm suspended concrete slabs
Exposed floors	Floors above open and/or non-conditioned space. R1.0 added insulation to soffit or within framed cavity (1-101, 1-102, 1-103, 1-105, 1-108, 1A-105, 1A-108, 1A-111) R2.0 added insulation to the soffit or within framed cavity for apartments 1-106, 1-107, 1A-511 (on exposed floor above Level 4 balcony)
External walls	Compressed Fibre Cement Cladding R2.0 added insulation
Party walls between apartments	Aerated autoclaved concrete block with cavity and plasterboard lining
Walls between apartments and corridor	Aerated autoclaved concrete block with cavity and plasterboard lining R1.0 added insulation
Internal partition walls	Lightweight cavity stud, plasterboard lining
Ceilings/Roof	Concrete slab with cavity and plasterboard ceiling lining MEDIUM roof colour R4.0 added insulation for apartments 1A-510, 1A-511, R3.0 added insulation elsewhere
Floor coverings	•Bedrooms, Living/Dining, Study, Hall - carpet •Wet areas - tiles •Kitchen - tiles *Except where tiles are indicated for entire apartment
Window coverings	Holland blinds (by occupant)
Shading	All eaves, balconies, balustrades, wall extensions/wing walls, vertical shade louvres and window reveals as shown on plans and elevations.
Downlights	No downlights. Downlights if fitted are to be sealed, with approved non-ventilated downlight covers, allowing for continuous installation of insulation over the fitting without resultant penetrations in the insulation or air transfer to ceiling cavity. An IC-4 fitting rating should be sought in accordance with AS/NZS 60598 2.2.
Exhaust Fans	Provision for exhaust fans - 1 per kitchen, laundry, bathroom and ensuite. 150x150 opening, sealed.
Glazing Details	
All Dwellings	Aluminium frame windows Whole of window system parameters: •Sliding doors and windows, fixed windows: U=4.8, SHGC=0.59 •Awings and other window types: U=5.4, SHGC=0.41 <i>Installed glazing systems not to exceed U-values stated, and must have SHGC within ± 10% of value stated.</i>
Note on colour and solar absorptance (SA) - LIGHT: SA < 0.48, MEDIUM: SA 0.48 - 0.6, DARK: SA > 0.7 Any substitution of building construction materials needs to ensure required total R-value of the construction meets or exceeds that of the constructions and added insulation described above. Insulation must be installed in accordance with the thermal construction requirements of part 11.2 of the NCC Downlights have not been modelled	



G	22/07/19	For tender	GB
F	21/02/19	For tender	GB
E	10/12/18	Shake bar 'Fit'	DC
D	18/02/18	For tender	DC
C	28/7/18	For tender	DC
B	07/07/18	For tender	GB
A	19/2/18	POST TENDER	GB
ref	date	name	by
chk			

client
Level 29, 1 Market Street
Sydney 2000

fjmt
fjmt studio architecture interiors landscape urban community
sydney melbourne uk
Level 5, 15 King Street • +61 2 9251 7077 • fjmt@fjmt.com

project
EASTLAKES TOWN CENTRE - NORTH SITE
Evans Avenue Eastlakes
SYDNEY NSW 2016

title
General Series
BASIX Commitments

scale Not to Scale
first issued 17/07/18
project code
sheet no. A10004
revision

CGEN A10004 G



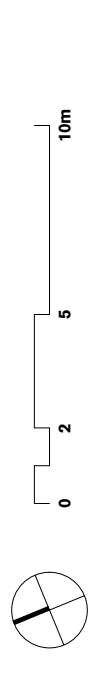
5.2
Average star rating

Certificate Number: **D2K1R5PEFA**
Assessor Name: **Nicholas Asha**
Accreditation number: **VIC/BD/AV/16/1712**
Certificate date: **22 May 2019**
Dwelling address: **Buildings 1 and 1A, Eastlakes Town Centre, Eastlakes NSW 2018**
www.nathers.gov.au



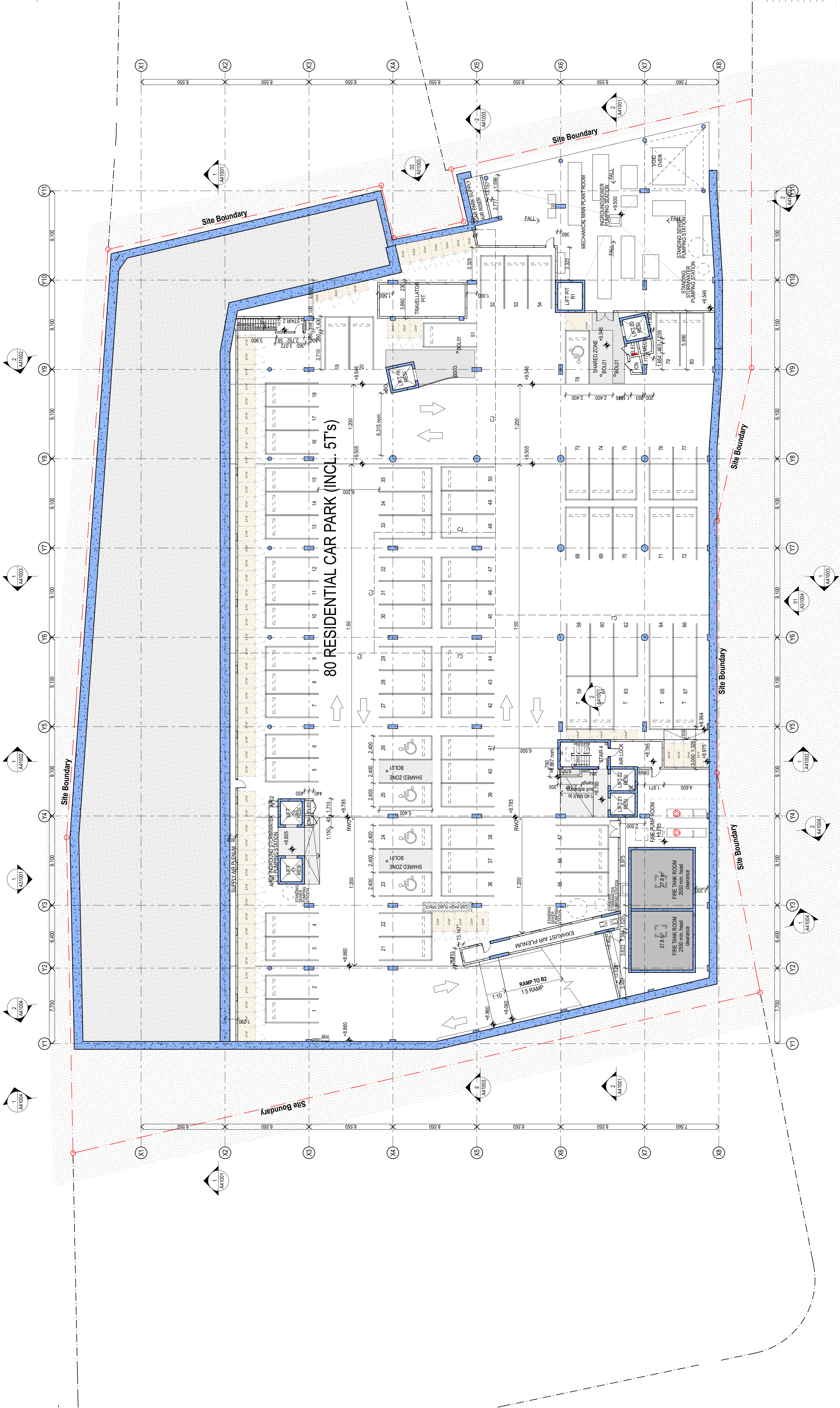
<https://www.nrs.com.au/Products/Building/Products/D2K1R5PEFA/Building/Products/D2K1R5PEFA>

For Tender



- GENERAL NOTES**
- ALL DIMENSIONS AND EXISTING CONDITIONS TO BE VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.
 - ALL LEVELS RELATIVE TO AUSTRALIAN HEIGHT DATUM.
 - DO NOT SCALE DRAWINGS.
 - USE FIGURED DIMENSIONS ONLY.

Legend	
AP02	Access Panel, Type 02
BOL#	Ballard, Type #
BS#	Balustrade System, Type #
CJ	Control Joint
CR	Cooling Riser
FAS 1	Fall Arrest System - Refer Specification
FH	Fire Hydrant
FHO	Fire Hose Reel
GTD	Grated Drain
HR#	Handrail, Type #
LRE	Lobby Riser
RWO	Rain Water Outlet
STP	Stair Press
TD	Turkish
TG#	Tactile Ground Indicator, Type #



O	D	10/12/18	Shed for "Fire Tender"	DC
M	20/7/18	For Tender		DC
L	31/5/18	Final Tender Issue		CD
K	20/6/18	Issued for Shops		GB
I	7/3/18	Particulars Issue		HK
H	2/2/18	SH/TENDER ISSUE		GB
F	10/2/17	Particulars Issue		HK
REF	date	name	by	chk

client
Level 29, 1 Market Street
Sydney 2000



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sydney architecture interiors landscape urban community
Level 5, 175 King Street +61 2 9251 1077 www.fjmt.com.au

project
EASTLAKES TOWN CENTRE - NORTH SITE
Eastlakes Avenue Eastlakes
SYDNEY NSW 2016

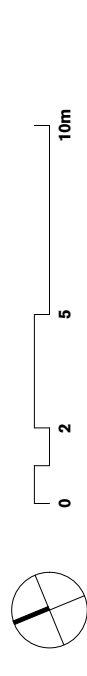
title
**General Arrangement Plans
B03 - Basement 3**

5.2
Average star rating
NATIONWIDE HOUSE
ENERGY RATINGS SCHEME
www.nateths.gov.au

Certificate Number: **D2K1R5PEFA**
Assessor Name: **Nicholas Asha**
Accreditation number: **VIC/BDAV/161712**
Certificate date: **22 May 2019**
Dwelling address: **Buildings 1 and 1A, Eastlakes Town Centre, Eastlakes NSW 2018**
www.nateths.gov.au

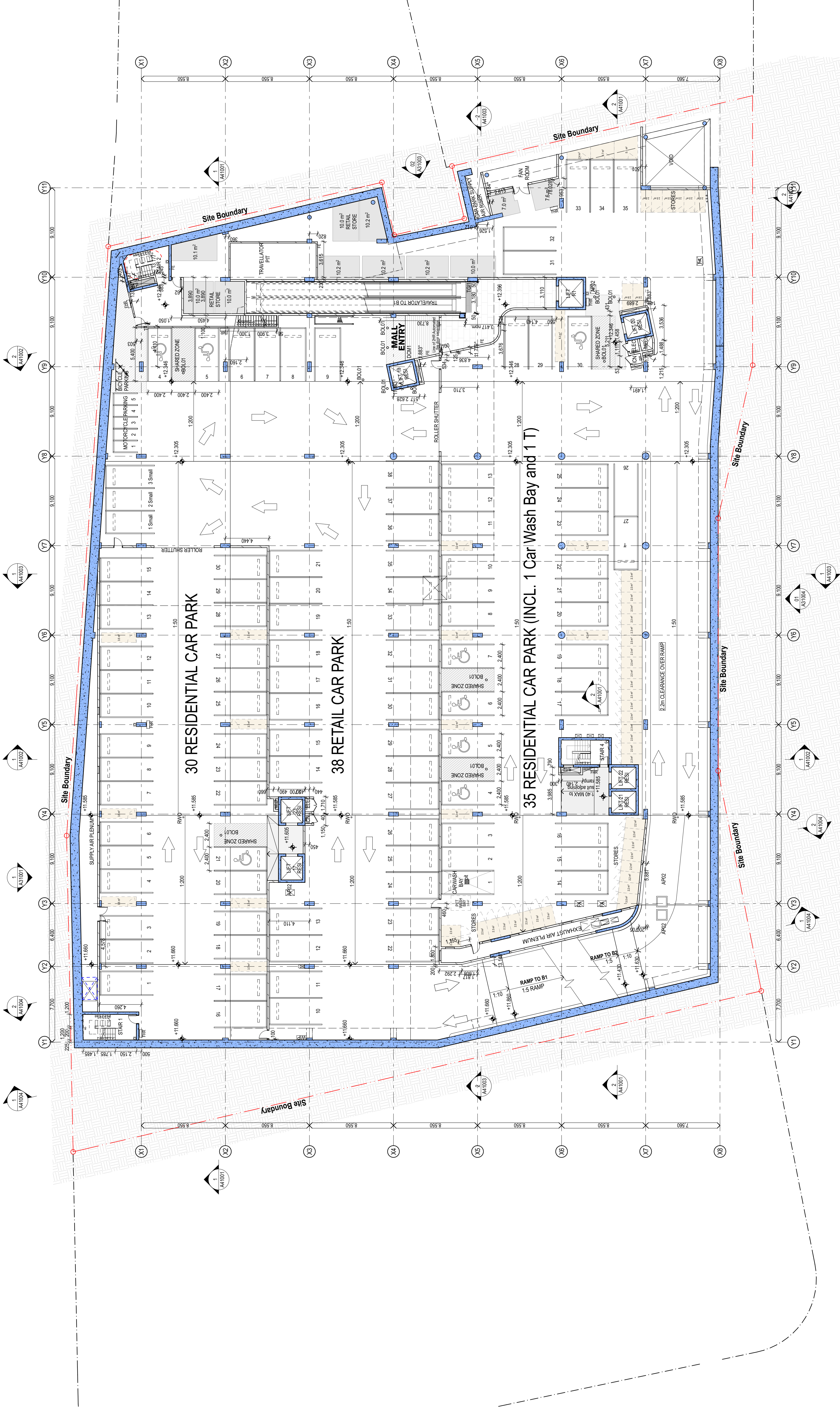


For Tender



- GENERAL NOTES**
- ALL DIMENSIONS AND EXISTING CONDITIONS TO BE VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.
 - ALL LEVELS RELATIVE TO AUSTRALIAN HEIGHT DATUM.
 - DO NOT SCALE DRAWINGS.
 - USE FIGURED DIMENSIONS ONLY.

Legend	
AP02	Access Panel, Type 02
BOL#	Ballard, Type #
BS#	Ballustrade System, Type #
CJ	Control Joint
CR	Cooling Riser
FAS 1	Fall Arrest System - Refer Specification
FH	Fire Hydrant
FHR	Fire Hose Reel
FWD	Floor Waste Outlet
GTD	Grated Drain
HR#	Handrail, Type #
LRE	Lobby Riser
RWO	Rain Water Outlet
STP	Stair Press
TD	Turkish
TG#	Tactile Ground Indicator, Type #



Y	10/17/18	Shane Jar 'For Tender'	DC
X	20/7/18	For Tender	DC
W	31/5/18	Final Tender Issue	CD
U	20/6/18	Issued for Shops	GB
S	7/9/18	Permanence Issue	HK
R	9/9/18	BIM TENDER ISSUE	GB
P	10/12/17	Permanence Issue	HK
REF	date	name	by
chk			

client
Level 29, 1 Market Street
Sydney 2000



5.2
Average star rating
NATIONWIDE HOUSE
ENERGY RATINGS SCHEME
www.nateths.gov.au

Certificate Number: D2K1R5PEFA
Assessor Name: Nicholas Asha
VIC/BDAV161712
22 May 2019

Project: **EASTLAKES TOWN CENTRE - NORTH SITE**
Eastlakes Town Centre
Eastlakes NSW 2018
Title: **General Arrangement Plans
B02 - Basement 2**



www.nateths.gov.au

For Tender

ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.

ALL LEVELS RELATIVE TO 'AUSTRALIAN HEIGHT DATUM'.

DO NOT SCALE DRAWINGS.

USE FIGURED DIMENSIONS ONLY.

Legend	Access Panel, Type 02
AP02	
BOI.#	Bollard, Type #
BS#	Balustrade System, Type #
CJ	Control Joint
CR	Cooling Riser
OK	
FAS 1	Full Area System - Refer Specification
FHI	Fire Hydrant
FHR	Fire Hose Reel
FWO	Fire Waste Outlet
GTD	Grated Drain
HR#	Handrail, Type #
LRE	Lobby Riser
RWO	Rain Water Outlet
STP	Stair Press
TD	Tandish
TG#	Tactile Ground Indicator, Type #

Y	10/12/18	Status bar "For Tender"	DC
X	28/7/18	For tender	DC
W	6/7/18	For tender	SN
V	31/5/18	Past tender issue	CD
U	25/5/18	Issued for Shita	GB
T	14/5/18	For information	SN
S	7/2/18	Preliminary issue	HK
R	27/2/18	80% TENDER ISSU/E	GB
Q	15/2/18	Preliminary issue	GB
P	10/2/17	Preliminary issue	HK
rev	date	name	chk

client
Level 29, 1 Market Street
Sydney 2000

CrownGroup

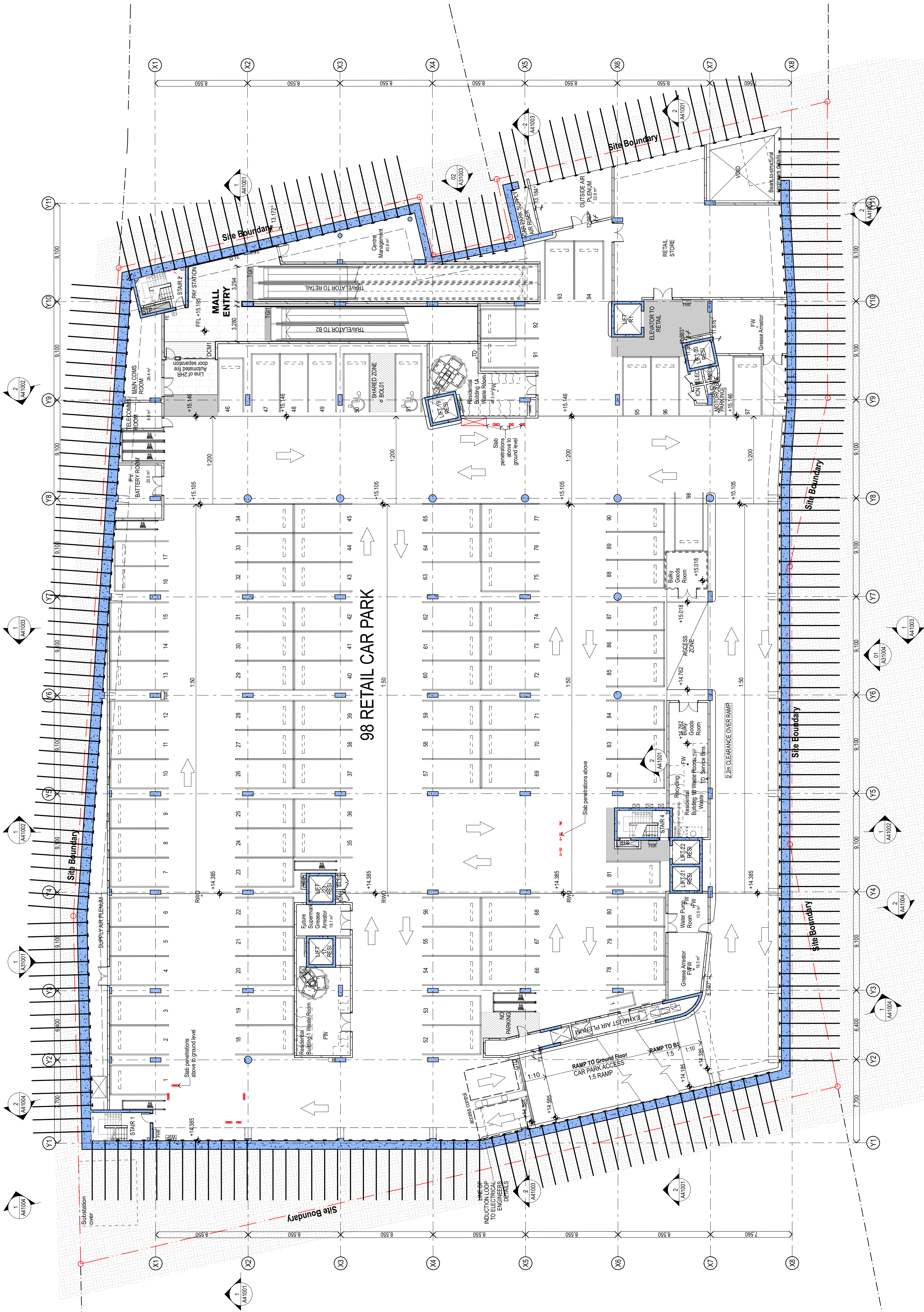


project
EASTLAKES TOWN CENTRE - NORTH SITE
Evans Avenue Eastlakes
SYDNEY NSW 2018

title
General Arrangement Plans
B01 - Basement 1

scale	1:200 @ A1	first issued	2/5/17
project code	CGEN	sheet no.	A23002
		revision	Y

For Tender



Average star rating

NATIONWIDE

HOUSE

ENERGY RATING SCHEME

www.nathers.gov.au

Certificate Number: **DK14R5PEFA**

Assessor Name: **Nicholas Asha**

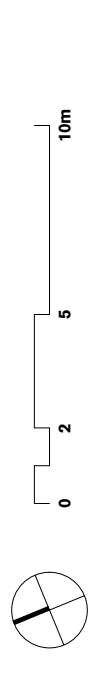
Accreditation number: **VIC/BDAF/161712**

Certificate date: **22 May 2019**

Dwelling address: **Buildings 1 and 1A,
Eastlakes Town Centre,
Eastlakes NSW 2018**

www.nathers.gov.au

https://www.nrs.com.au/qRcode/andn7PbUcId=DK14R5PEFA&gC=



- GENERAL NOTES**
- ALL DIMENSIONS AND EXISTING CONDITIONS TO BE VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.
 - ALL LEVELS RELATIVE TO AUSTRALIAN HEIGHT DATUM.
 - DO NOT SCALE DRAWINGS.
 - USE FIGURED DIMENSIONS ONLY.

Legend	
AP02	Access Panel, Type 02
B01#	Bollard, Type #
BS#	Balustrade System, Type #
CJ	Control Joint
CR	Cooling Riser
FAS 1	Fall Arrest System - Refer Specification
FH	Fire Hydrant
FHR	Fire Hose Reel
FWD	Floor Waste Outlet
GTD	Grated Drain
HR#	Handrail, Type #
LRE	Lobby Relief
RWO	Rain Water Outlet
STP	Stair Press
TD	Turkish
TG#	Tactile Ground Indicator, Type #



1 PLAN Ground Floor
1:200



Certificate Number: D2K1R5PEFA
Assessor Name: Nicholas Asha
VIC/BD/AV/16/1712
22 May 2019
Certificate date:
Dwelling address:
Buildings 1 and 1A,
Eastlakes Town Centre,
Eastlakes NSW 2018
www.nathers.gov.au



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sydney melbourne uk
Level 5, 55 King Street #412 2000 1077 #fjmtstudio

project
EASTLAKES TOWN CENTRE - NORTH SITE
Evans Avenue Eastlakes
SYDNEY NSW 2018

title
**General Arrangement Plans
L00 - Ground Floor**

scale 1:200 @ A1
sheet no. A23003
revision
project code CGEN
client Level 29, 1 Market Street
Sydney 2000

2/5/17
ZF

For Tender



- GENERAL NOTES**
- ALL DIMENSIONS AND EXISTING CONDITIONS TO BE VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.
 - ALL LEVELS RELATIVE TO AUSTRALIAN HEIGHT DATUM.
 - DO NOT SCALE DRAWINGS.
 - USE FIGURED DIMENSIONS ONLY.

Legend

AP02	Access Panel, Type 02
BOL#	Ballard, Type #
BS#	Balustrade System, Type #
CJ	Control Joint
CR	Cooling Riser
FAS 1	Fall Arrest System - Refer Specification
FH	Fire Hydrant
FHR	Fire Hose Reel
FWD	Floor Waste Outlet
GTD	Grated Drain
HR#	Handrail, Type #
LRE	Lobby Relief
RWO	Rain Water Outlet
STP	Stair Press
TD	Turkish
TG#	Tactile Ground Indicator, Type #



T	19/07/17	Shane Jar 'For Tender'	DC
S	20/07/18	For Issue	DC
O	31/05/18	Final Tender Issue	CD
P	20/07/18	Issued for Shops	GB
N	2/09/18	80% TENDER ISSUE	GB
M	1/12/18	Performance Issue	CR
K	10/02/19	Performance Issue	CR
K	10/02/19	Performance Issue	CR
REF	edit	name	by
edit			chk

client
Level 2, 1 Market Street
Sydney 2000



Certificate Number: D2K1R5PEFA
Assessor Name: Nicholas Asha
Accreditation number: VIC/BD/AV/16/1712
Certificate date: 22 May 2019
Dwelling address: Buildings 1 and 1A, Eastlakes Town Centre, Eastlakes NSW 2018
www.nathers.gov.au



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project
EASTLAKES TOWN CENTRE - NORTH SITE
Eastlakes Avenue Eastlakes
SYDNEY NSW 2018

title
General Arrangement Plans
L02 - Level 2

scale 1:200 @ A1
first issued 01/03/2017
project code
sheet no. A23005
revision
CGN

For Tender

ALL DIMENSIONS AND EXISTING CONDITIONS
SHALL BE CHECKED AND VERIFIED BY THE
CONTRACTOR BEFORE PROCEEDING WITH THE WORK.
ALL LEVELS RELATIVE TO 'AUSTRALIAN HEIGHT DATUM'.
DO NOT SCALE DRAWINGS.

Legend	
AP02	Access Panel, Type 02
B0L#	Bollard, Type #
BS#	Busstop
CJ	Control Joint
CR	Cooling Riser
FAS 1	Full Arrest System - Refer Specification
FH	Fire Hydrant
FHR	Fire Hose Reel
FWO	Floor Waste Outlet
GTD	Grated Drain
HR#	Handrail, Type #
LRE	Lobby Relief
RWO	Rain Water Outlet
STP	Stair Press
TD	Tundish
TG#	Tactile Ground Indicator, Type #



T	10/12/18	Status bar "For Tender"	TA	Status definition
S	29/7/18	For tender	DC	DC
R	6/7/18	For tender	SN	SN
C	31/5/18	Past Tender Issue	CD	CD
P	29/5/18	Issued for Share	GB	GB
O	11/5/18	For Information	SN	SN
N	23/3/18	85% TENDER ISSUE	GB	GB
W	23/3/18	Outstanding Issue	CR	CR
L	20/12/17	Pending Issue	CR	CR
K	16/10/17	Preliminary Issue	CR	CR
	rev date	name	by	chk

client
Level 29, 1 Market Street
Sydney 2000

CrownGroup



Certificate Number: D2K1R5PEFA
Assessor Name: Nicholas Asha
Accreditation number: VIC/BD/AV/16/1712
Certificate date: 22 May 2019



Buildings 1 and 1A,
Eastlakes Town Centre,
Eastlakes NSW 2018
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For Tender



- GENERAL NOTES**
- ALL DIMENSIONS AND EXISTING CONDITIONS TO BE VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.
 - ALL LEVELS RELATIVE TO AUSTRALIAN HEIGHT DATUM.
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 - USE FIGURED DIMENSIONS ONLY.

Legend

AP02	Access Panel, Type 02
B0L#	Ballard, Type #
BS#	Balustrade System, Type #
CJ	Control Joint
CR	Cooling Riser
FAS 1	Fall Arrest System - Refer Specification
FH	Fire Hydrant
FHR	Fire Hose Reel
FWD	Floor Waste Outlet
GTD	Grated Drain
HR#	Handrail, Type #
LRE	Lobby Relief
RWO	Rain Water Outlet
STP	Stair Press
TD	Turkish
TG#	Tactile Ground Indicator, Type #



T	10/12/18	Status: Not For Tender	DC
S	26/07/18	Rev: Issue	DC
O	31/05/18	Final Tender Issue	CD
P	26/07/18	Issued for Shops	GB
N	2/09/18	80% TENDER ISSUE	GB
M	1/12/18	Performance Issue	CR
L	12/02/19	Performance Issue	CR
K	16/02/17	Performance Issue	CR
REF	edit	name	by: chh

client
Level 29, 1 Market Street
Sydney 2000



Certificate Number: D2K1R5PEFA
Assessor Name: Nicholas Asha
Accreditation number: VIC/BDAV161712
Certificate date: 22 May 2019
Dwelling address: Buildings 1 and 1A, Eaststake Town Centre, Eaststake NSW 2018
www.nathers.gov.au



https://www.nathers.gov.au/Details/Details.aspx?CertificateID=D2K1R5PEFA&GridCode=

fjmt
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melbourne us
Level 5, 100 King Street +61 3 9251 1077 www.fjmt.com.au

project
EASTSTAKE TOWN CENTRE - NORTH SITE
1 Evans Avenue Eaststake
SYDNEY NSW 2018

title
General Arrangement Plans
L04 - Level 4

scale 1:200 @ A1
first issued 01/03/2017
project code
sheet no. A23007
revision
CGN

For Tender

T

ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.
ALL LEVELS RELATIVE TO 'AUSTRALIAN HEIGHT DATUM'.
DO NOT SCALE DRAWINGS.
USE ENCLOSED DIMENSIONING ONLY.

Legend	Access Panel, Type 02
AP02	
BOI.#	Bollard, Type #
BS#	Balustrade System, Type #
CJ	Control Joint
CR	Cooling Riser
OK	
FAS 1	Full Area System - Refer Specification
FHI	Fire Hydrant
FHR	Fire Hose Reel
FWO	Fire Waste Outlet
GTD	Grated Drain
HR#	Handrail, Type #
LRE	Lobby Riser
RWO	Rain Water Outlet
STP	Stair Press
TD	Tandish
TG#	Tactile Ground Indicator, Type #

CrownGroup

1 PLAN 5th Floor 1:200

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sydney melbourne uk
 Level 5, 70 King Street t +61 2 9251 7077 w fjmtstudio.com

project
EASTLAKES TOWN CENTRE - NORTH SITE
Evans Avenue Eastlakes
SYDNEY NSW 2018

title
General Arrangement Plans
L05 - Level 5

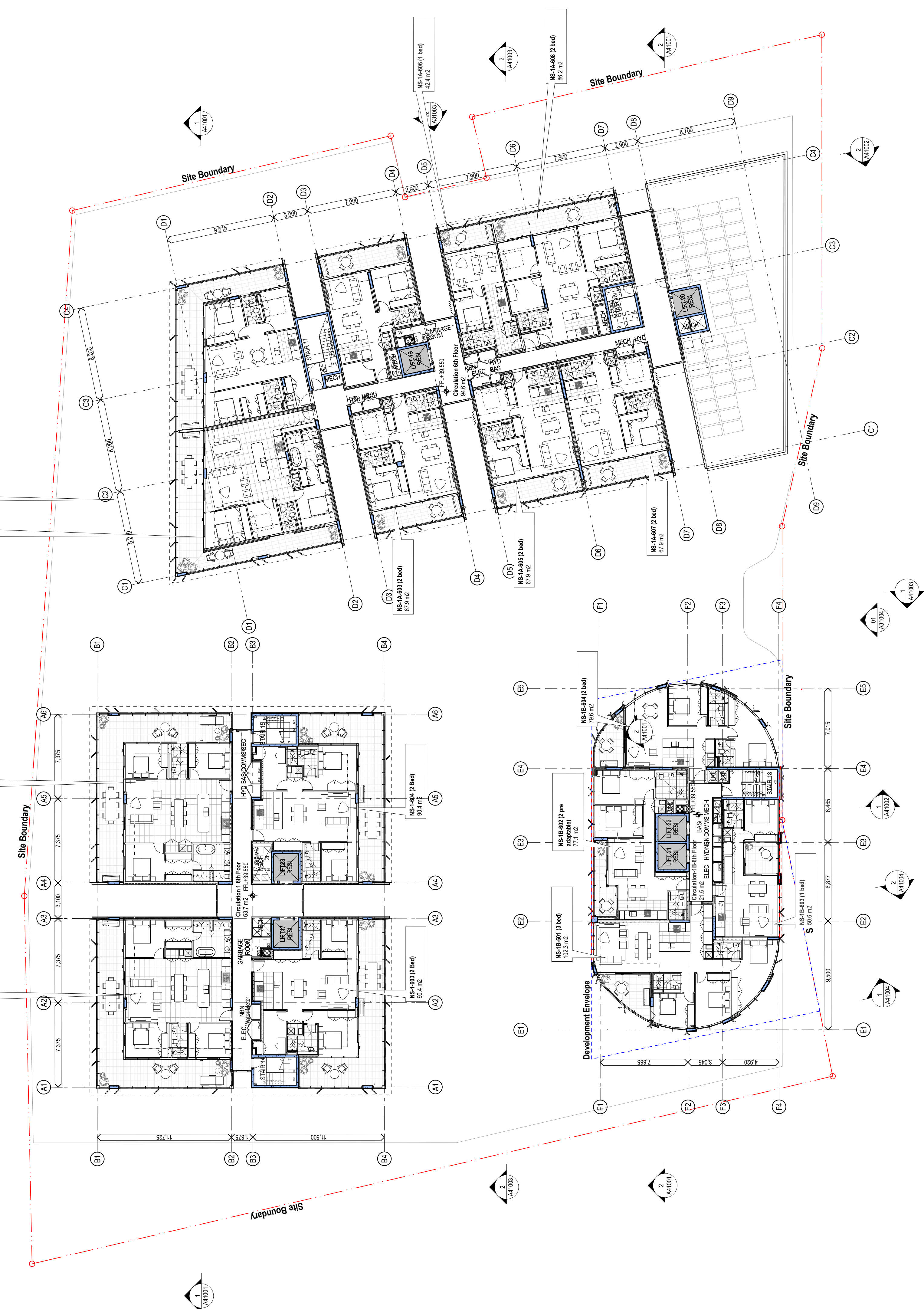
scale	1:200 @ A1	first issued	01/03/2017
project code	CGEN	sheet no.	A23008
		revision	T

For Tender



AP02	Access Panel, Type 02
BOL#	Bolard, Type #
BIS#	Ballustrade System, Type #
CJ	Control Joint
CR	Cooling Riser
FAS 1	Fall Arrest System - Refer Specification
FH	Fire Hydrant
FHR	Fire Hose Reel
RWO	Roor Waste Outlet
GDD	Grated Drain
HRA	Handrail, Type #
LRE	Lobby Relief
RWO	Rain Water Outlet
STP	Stair Press
TD	Tundish
TGI#	Tactile Ground Indicator, Type #

NOTES:
REFER TO MANTech REPORT FOR ROOF ACCESS SYSTEM REQUIREMENTS.



new	date	name	by	chk
CR	1/10/17/17	Preliminary base	CR	
CR	2/1/17/17	Preliminary base	CR	
CR	1/2/18	Preliminary base	CR	
CR	1/2/18	89% TENDER ISSUE	GB	
CR	1/2/18	For Formation	SN	
CR	1/2/18	Flat Price base	SN	
CR	3/15/18	For tender	CR	
CR	28/1/18	For tender	CR	
CR	10/12/18	Status bar "For Tender"	DC	

Level 29, 1 Market Street
Sydney 2000

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PLAN 6th Floor
1200

project	EASTLAKES TOWN CENTRE - NORTH SITE		
title	General Arrangement Plans L06 - Level 6		
scale	1:200 @ A1	first issued	01/03/2017
project code			revision
sheet no.			R
CGEN	AZ3009		



ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK. ALL LEVELS RELATIVE TO 'AUSTRALIAN HEIGHT DATUM'. DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS ONLY.

Legend	
APQ2	Access Panel, Type 02
BOL#	BOLL, Type #
BS#	Balustrade System, Type #
CJ	Control Jct
CJ	Control Jct
CR	Cooling Riser
FAS 1	Full Arrest System - Refer Specification
FH	Fire Hydrant
FHR	Fire Hose Reel
FHO	Floor Waste Outlet
GTD	Grated Drain
HRD	Handrail, Type #
LRE	Lobby Relief
RWO	Rain Water Outlet
STP	Stair Press
TD	Tundish
TG#	Tactile Ground Indicator, Type #

legend

R	10/12/18	Status per Tender	DC
P	26/11/18	For Tender	DC
O	6/11/18	For Tender	SN
C	31/5/18	Paid Tender Issue	CD
N	26/5/18	Issued for Shila	GB
M	14/5/18	For Information	SN
L	2/5/18	85% TENDER ISSUE	GB
K	20/1/18	Primary Issue	CR
J	20/1/17	Primary Issue	CR
I	16/10/17	Primary Issue	CR
	rev	date	by

client
Level 29, 1 Market Street
Sydney 2000

1 PLAN 8th Floor
1:200

For Tender



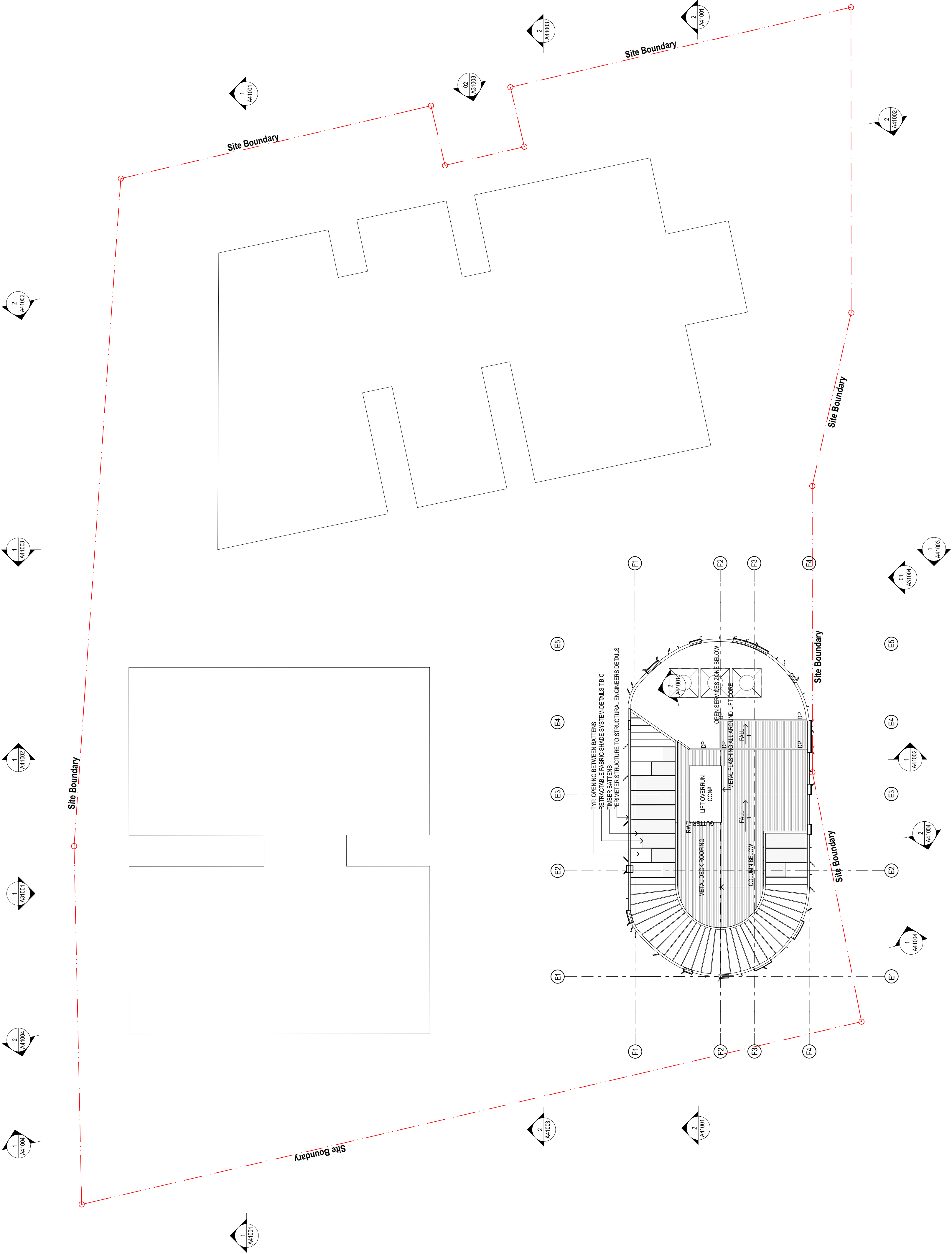
GENERAL NOTES

- ALL DIMENSIONS AND EXISTING CONDITIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR BEFORE PROCEEDING WITH THE WORK:
 - ALL LEVELS RELATIVE TO AUSTRALIAN HEIGHT DATUM.
 - DO NOT SCALE DRAWINGS.
 - USE FIGURED DIMENSIONS ONLY.

Legend

AP02	Access Panel, Type 02
B0L#	Bollard, Type #
BS#	Balustrade System, Type #
CJ	Control Joint
CR	Cooling Riser
FAS 1	Fall Arrest System - Refer Specification
FH	Fire Hydrant
FHR	Fire Hose Reel
FWO	Floor Waste Outlet
GTD	Grated Drain
HR#	Handrail, Type #
LRE	Lobby Relief
RWO	Rain Water Outlet
STP	Stair Press
TD	Turkish
YG#	Tactile Ground Indicator, Type #

NOTES:
-REFER TO WANTECH REPORT FOR ROOF ACCESS SYSTEM REQUIREMENTS



K	10/12/18	Shaw Jar "For Tender"	DC
J	29/7/18	For Tender	DC
I	31/5/18	For Tender	DC
H	31/5/18	For Tender Issue	CD
G	29/5/18	Issued for Shops	GB
F	29/5/18	Issued for Shops	GB
E	2/3/18	86% TENDER ISSUE	GB
D	1/2/18	Preliminary Issue	CR
C	15/12/17	Prepared for Issue	CR
B	15/6/17	Preliminary Issue	HK
REF	date	name	by

client
Level 29, 1 Market Street
Sydney 2000
CrownGroup



Certificate Number: D2K1R5PEFA
Assessor Name: Nicholas Asha
Accreditation number: VIC/BDAV/16/1712
Certificate date: 22 May 2019



Dwelling address:
Buildings 1 and 1A,
Eastlakes Town Centre,
Eastlakes NSW 2018
www.nathers.gov.au

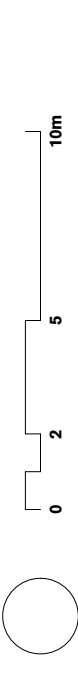
fjmt
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sydney melbourne uk
Level 5, 15 King Street +61 2 9251 1077 www.fjmt.com

project
EASTLAKES TOWN CENTRE - NORTH SITE
Evans Avenue Eastlakes
SYDNEY NSW 2016

title
**General Arrangement Plans
L09 - Roof Plan**

scale 1:200 @ A1
first issued 01/03/2017
project code CGEN
sheet no. A23012
revision K

For Tender



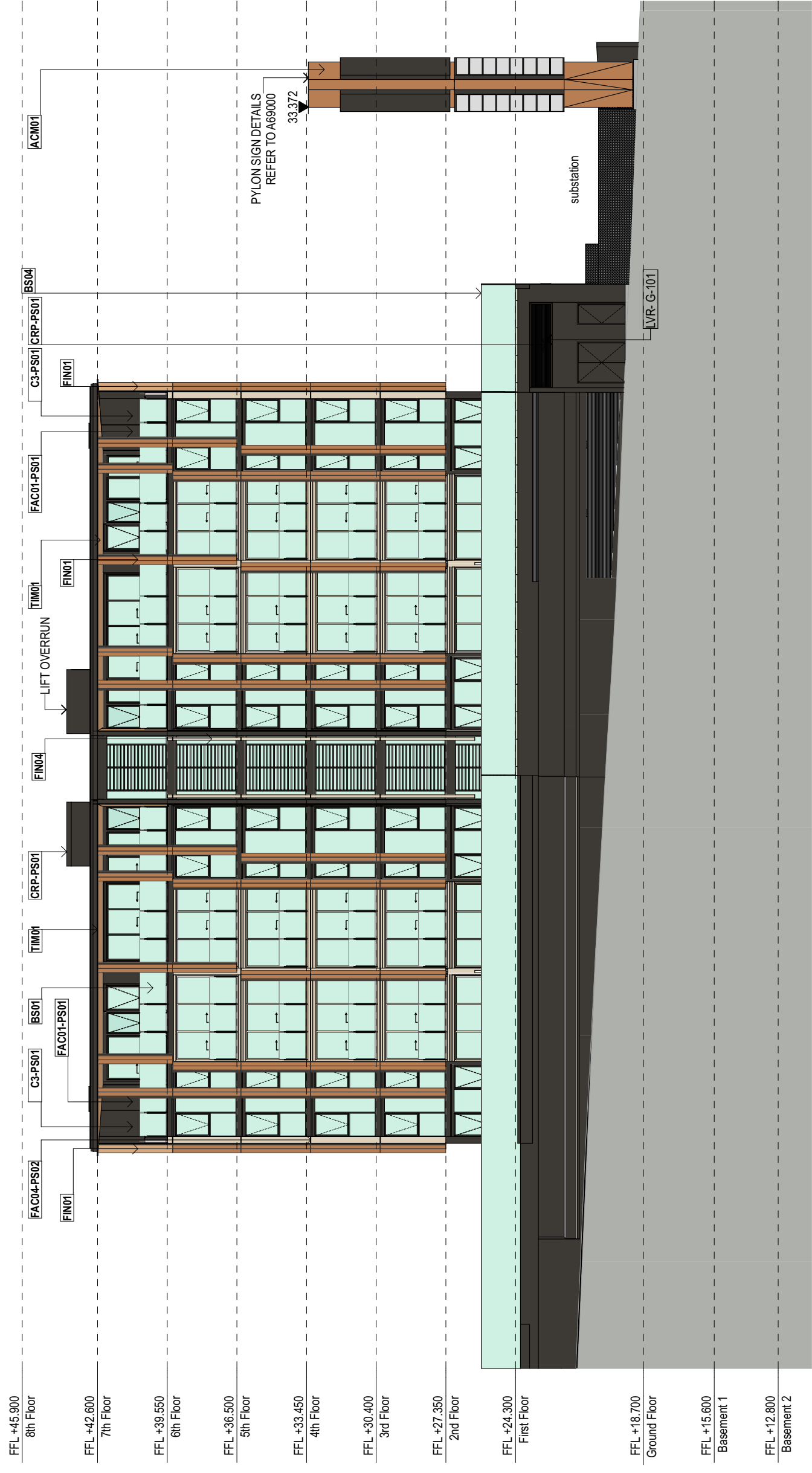
GENERAL NOTES

- ALL DIMENSIONS AND EXISTING CONDITIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR BEFORE PROCEEDING WITH THE WORK:
 - ALL LEVELS RELATIVE TO AUSTRALIAN HEIGHT DATUM.
 - DO NOT SCALE DRAWINGS
 - USE FIGURED DIMENSIONS ONLY.

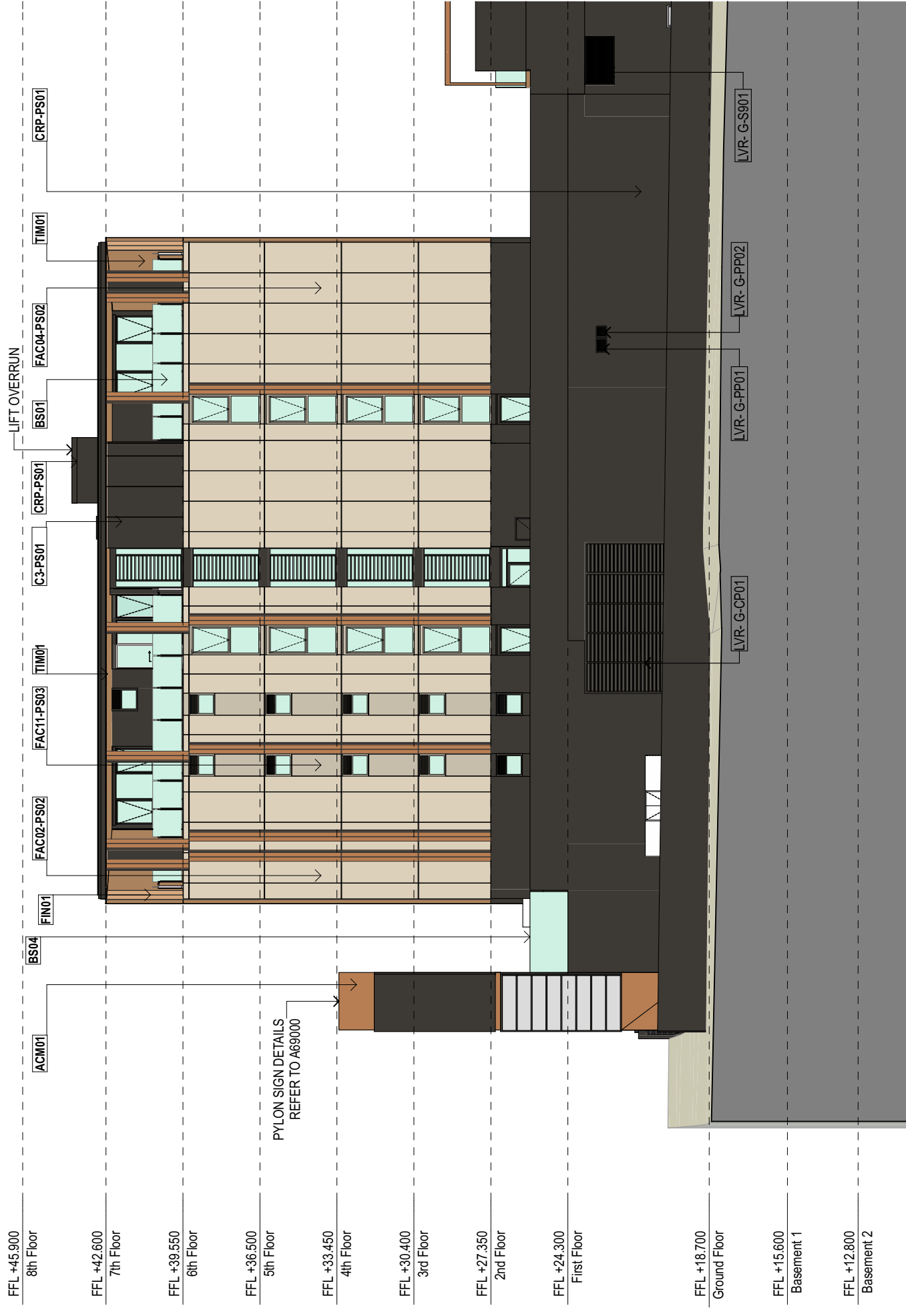
Legend

ACM01	Aluminum Composite Material, Type 01
ALF01	Aluminum Finish, Type 01
ALF02	Aluminum Finish, Type 02
BS01	Balustrade System, Type 01
BS02	Balustrade System, Type 02
CRP	Concrete Render & Paint wall type schedule for details on plan A10003
FAC#	Facade, Type #
FIN01	Facade, Aluminum Fin Type 01
FIN02	Facade, Aluminum Fin Type 02
FIN03	Facade, Aluminum Fin Type 03
FIN04	Facade, Aluminum Fin Type 04
GR01	Glass Reinforced Concrete, Type 01
PAV01	Paving, Type 01
PAV02	Paving, Type 02
PAV04	Paving, Type 04
PS01	Paint System (Exterior), Type 01
PS02	Paint System (Exterior), Type 02
PS03	Paint System (Exterior), Type 03
PS04	Paint System (Exterior), Type 04
PS05	Paint System (Exterior), Type 05
RF2	Resilient Finish, Type 2
TC01	Terracotta, Type 01
TM01	Timber, Type 01
TM02	Timber, Type 02

NOTE: DOORS ARE CLAD IN GR001



01 ELEVATION BUILDING 1 - NORTH ELEVATION
1:200



02 ELEVATION BUILDING 1 - WEST ELEVATION
1:200

L	10/07/18	Status: Not For Tender	DC
K	20/07/18	For Issue	DC
L	20/07/18	BS01, TENDRE ISSUE	GB
H	07/07/18	Permitting Issue	SN
C	24/11/18	Permitting Issue	HK
E	20/07/17	Permitting Issue	HK
D	10/07/17	Permitting Issue	HK
G	10/07/17	Permitting Issue	HK
REF	date	name	by
client			

Level 29, 1 Market Street
Sydney 2000



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sydney melbourne uk
Level 5, 170 King Street • +61 2 9251 7077 • fjmt@fjmt.com

PROJECT
EASTLAKES TOWN CENTRE - NORTH SITE
Eastlakes Avenue Eastlakes
SYDNEY NSW 2016

TITLE
Elevations 1-200
Building 1 - North, West

scale 1:200 @ A1 first issued 02/06/17
project code sheet no. revision
CGEN A31001 L



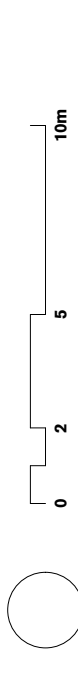
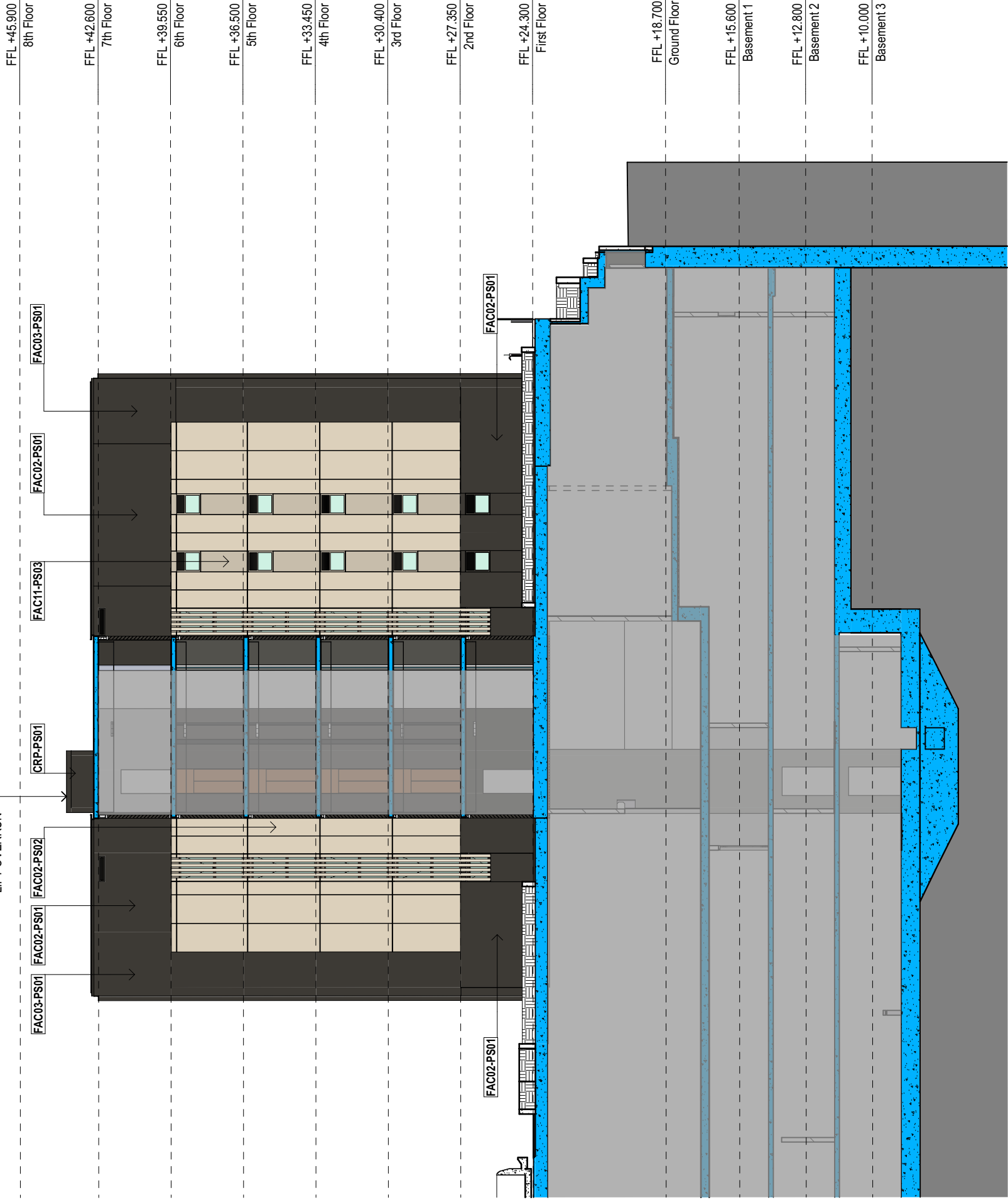
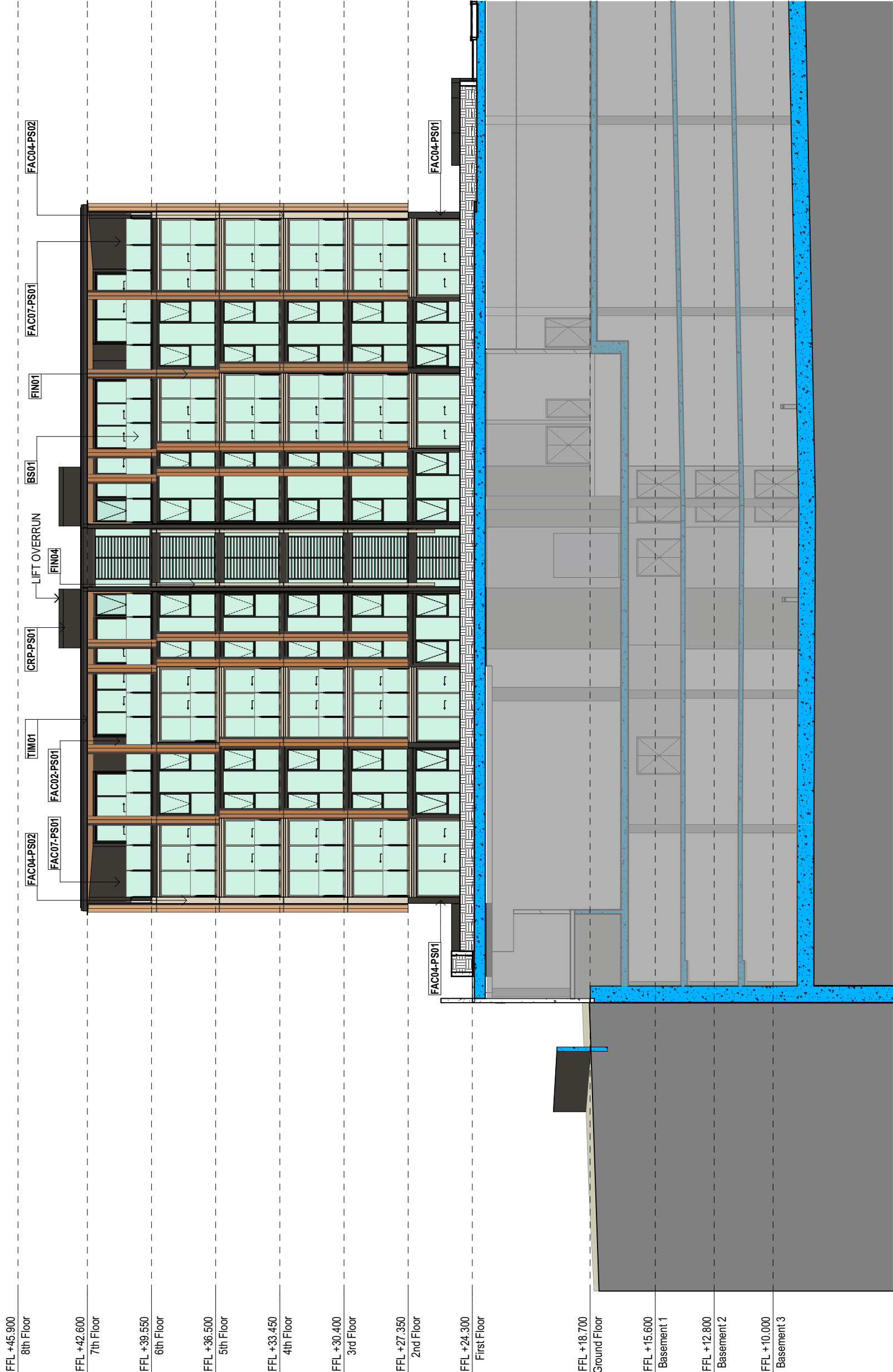
Certificate Number: **D2K1R5PEFA**
Assessor Name: **Nicholas Asha**
Accreditation number: **VIC/BDAV/161712**
Certificate date: **22 May 2019**



Dwelling address:
**Buildings 1 and 1A,
Eastlakes Town Centre,
Eastlakes NSW 2018**
www.nathers.gov.au

<https://www.fjmt.com.au/>
Level 5, 170 King Street, Sydney NSW 2000
D2K1R5PEFA-AG-001

For Tender

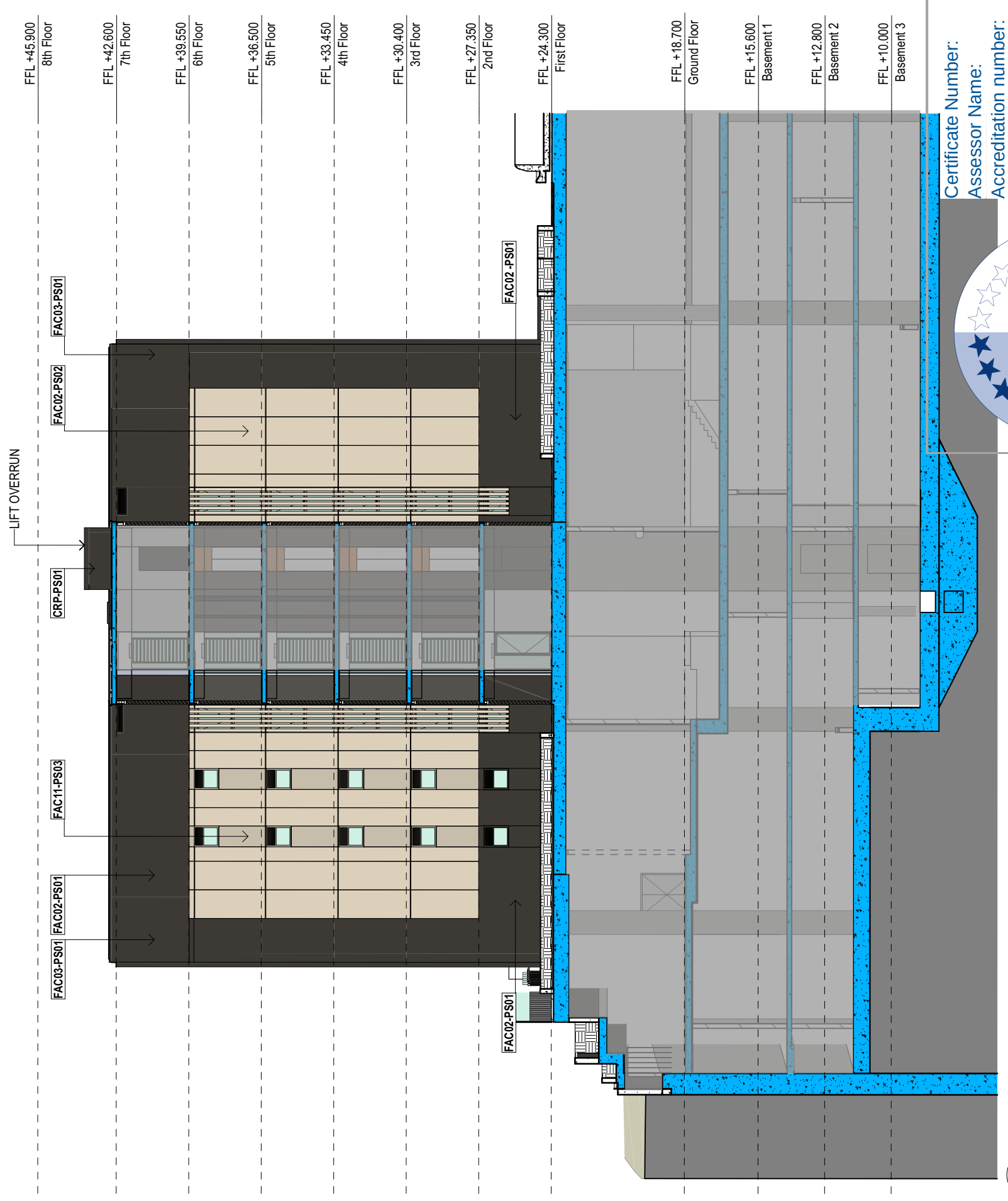
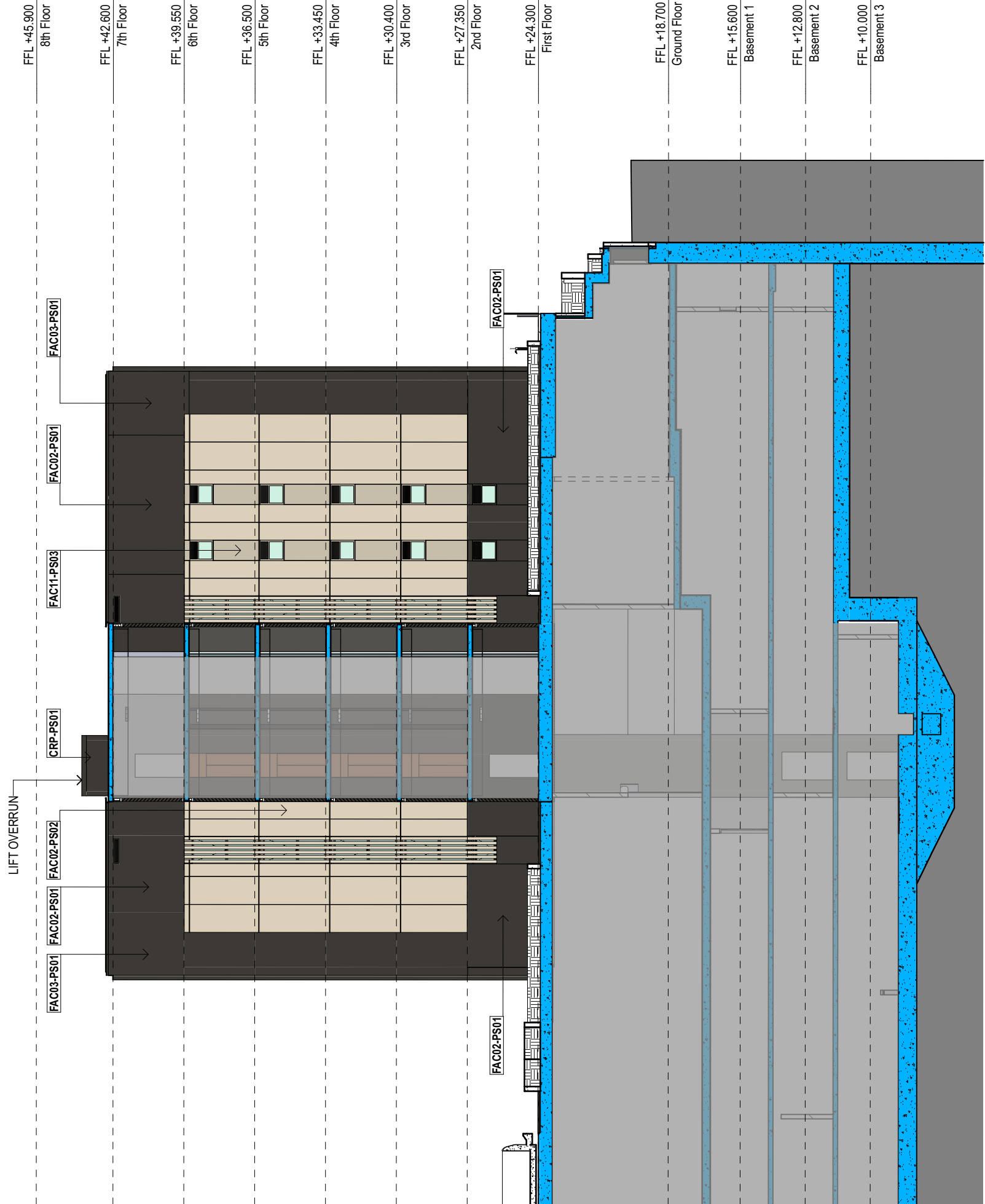


GENERAL NOTES

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- ALL LEVELS RELATIVE TO AUSTRALIAN HEIGHT DATUM.
- DO NOT SCALE DRAWINGS.
- USE FIGURED DIMENSIONS ONLY.

Legend	
ACM01	Aluminum Composite Material, Type 01
ALF01	Aluminum Finish, Type 01
ALF02	Aluminum Finish, Type 02
BS01	Balustrade System, Type 01
BS02	Balustrade System, Type 02
CRP	Concrete Bricks & Mortar
FAC#	Facade, Type # Refer to wall type schedule for details on plan A10003
FIN01	Facade, Aluminum Fin Type 01
FIN02	Facade, Aluminum Fin Type 02
FIN03	Facade, Aluminum Fin Type 03
FIN04	Facade, Aluminum Fin Type 04
GRC01	Gas Reinforced Concrete, Type 01
PAV01	Paving, Type 01
PAV02	Paving, Type 02
PAV04	Paving, Type 04
PS01	Paint System (Exterior), Type 01
PS02	Paint System (Exterior), Type 02
PS03	Paint System (Exterior), Type 03
PS04	Paint System (Exterior), Type 04
PS05	Paint System (Exterior), Type 05
RF2	Resilient Finish, Type 2
TC01	Terracotta, Type 01
TM01	Timber, Type 01
TM02	Timber, Type 02

NOTE: DOORS ARE CLAD IN GRC01



K	10/17/18	Shang Jia "Pier Tenor"	DC
J	20/17/18	For Trade	DC
H	2/2/18	BRN TENDER SSUE	GB
G	5/2/18	Paintwork Issue	SN
E	24/1/18	Paintwork Issue	HK
D	20/1/17	Paintwork Issue	HK
B	1/2/17	Paintwork Issue	HK

client
Level 29, 1 Market Street
Sydney 2000

CrownGroup

fjmt
fjmt studio architecture interiors landscape urban community
sydney melbourne uk
Level 5, Dwyer Street +61 2 9251 1077 f@fjmt.com

project
EASTLAKES TOWN CENTRE - NORTH SITE
Evans Avenue Eastlakes
SYDNEY NSW 2016

title
Elevations 1:200
Building 1 - South, East, Circulation

scale 1:200 @ A1
first issued 02/06/17

project code
sheet no. **A31002**
revision **K**

Certificate Number:
Assessor Name:
Accreditation number:
Certificate date:
Dwelling address:

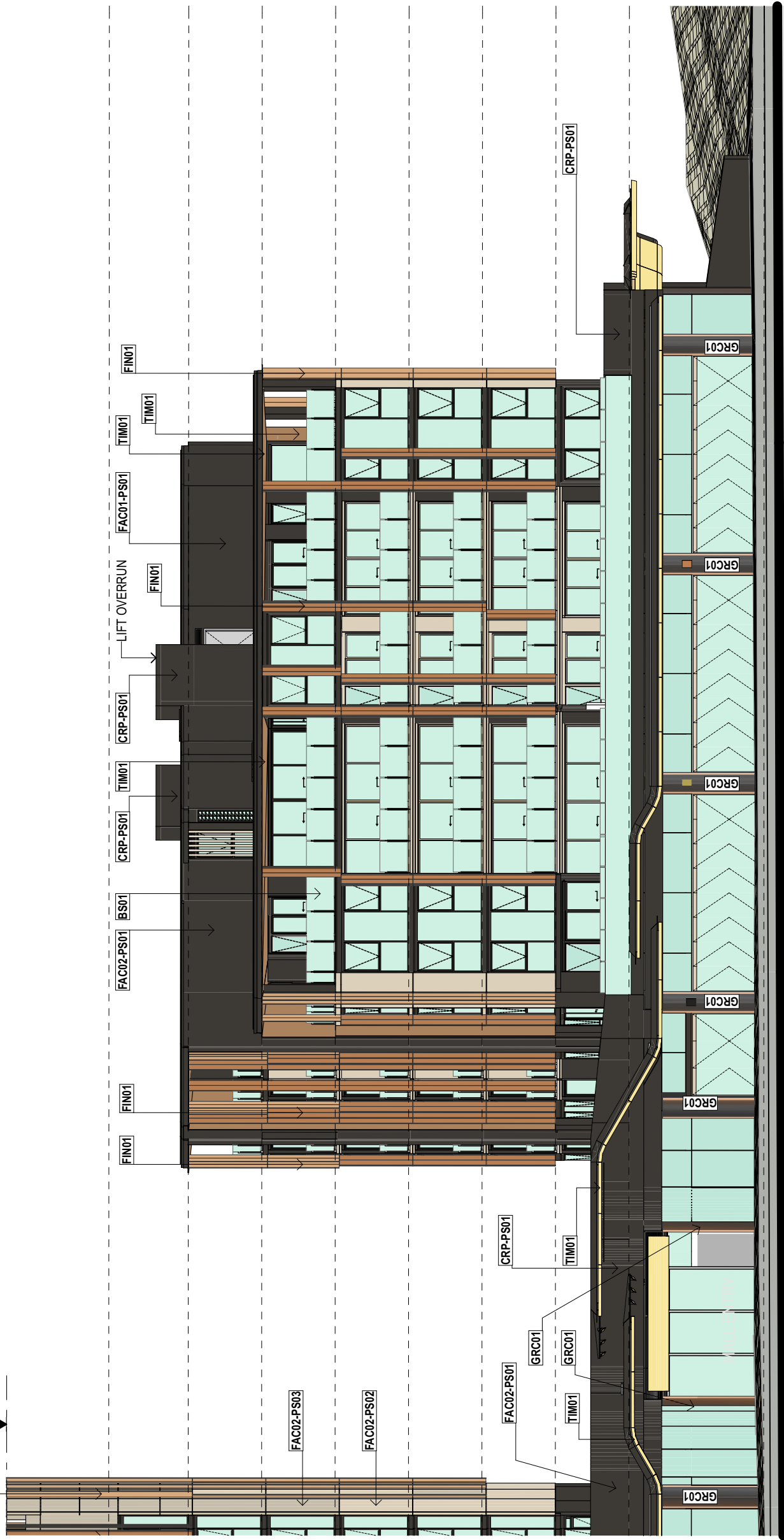
D2K1R5PEFA
Nicholas Asha
VIC/BD/AV/16/1712
22 May 2019



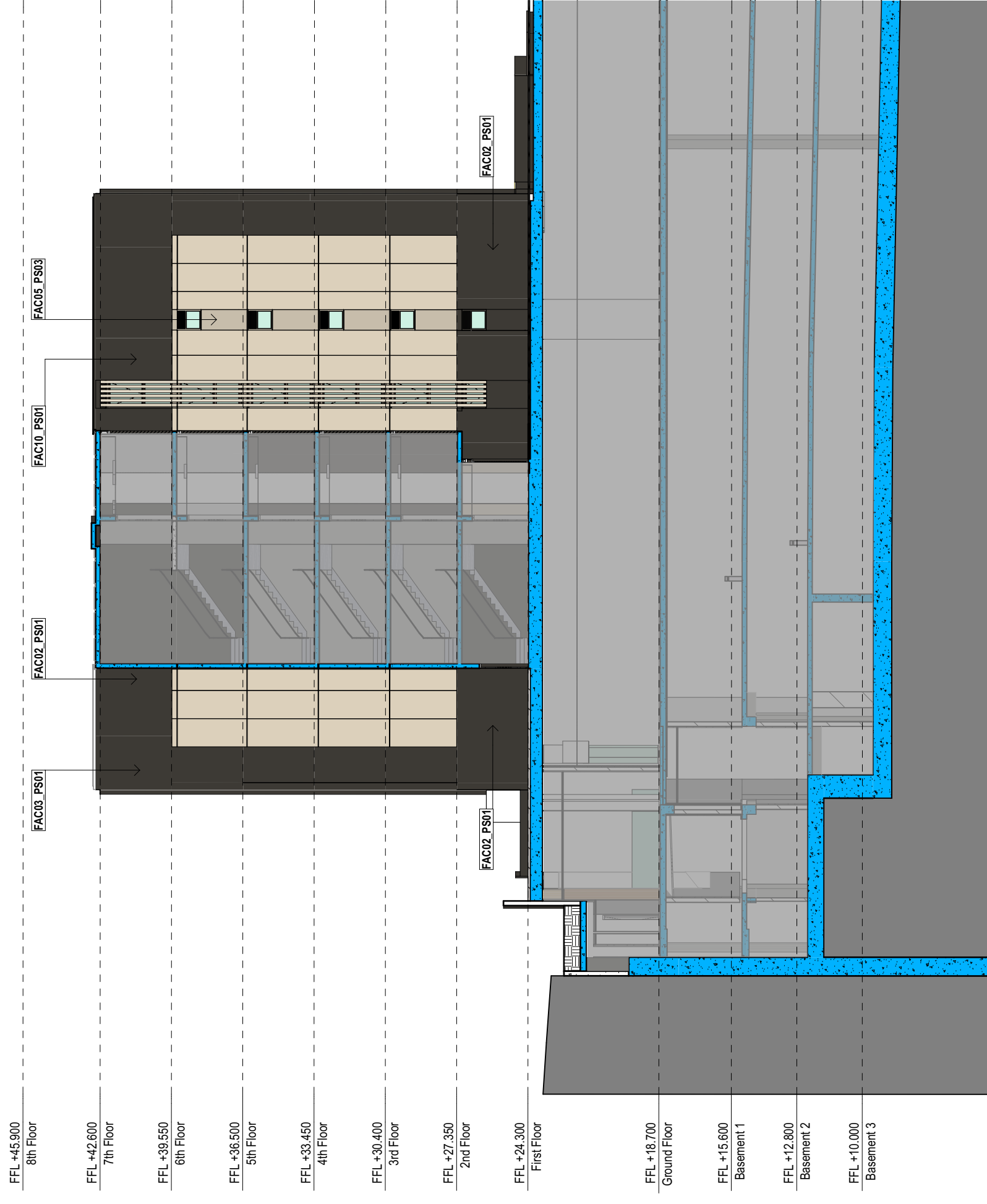
Buildings 1 and 1A,
Eastlakes Town Centre,
Eastlakes NSW 2018
www.nathers.gov.au



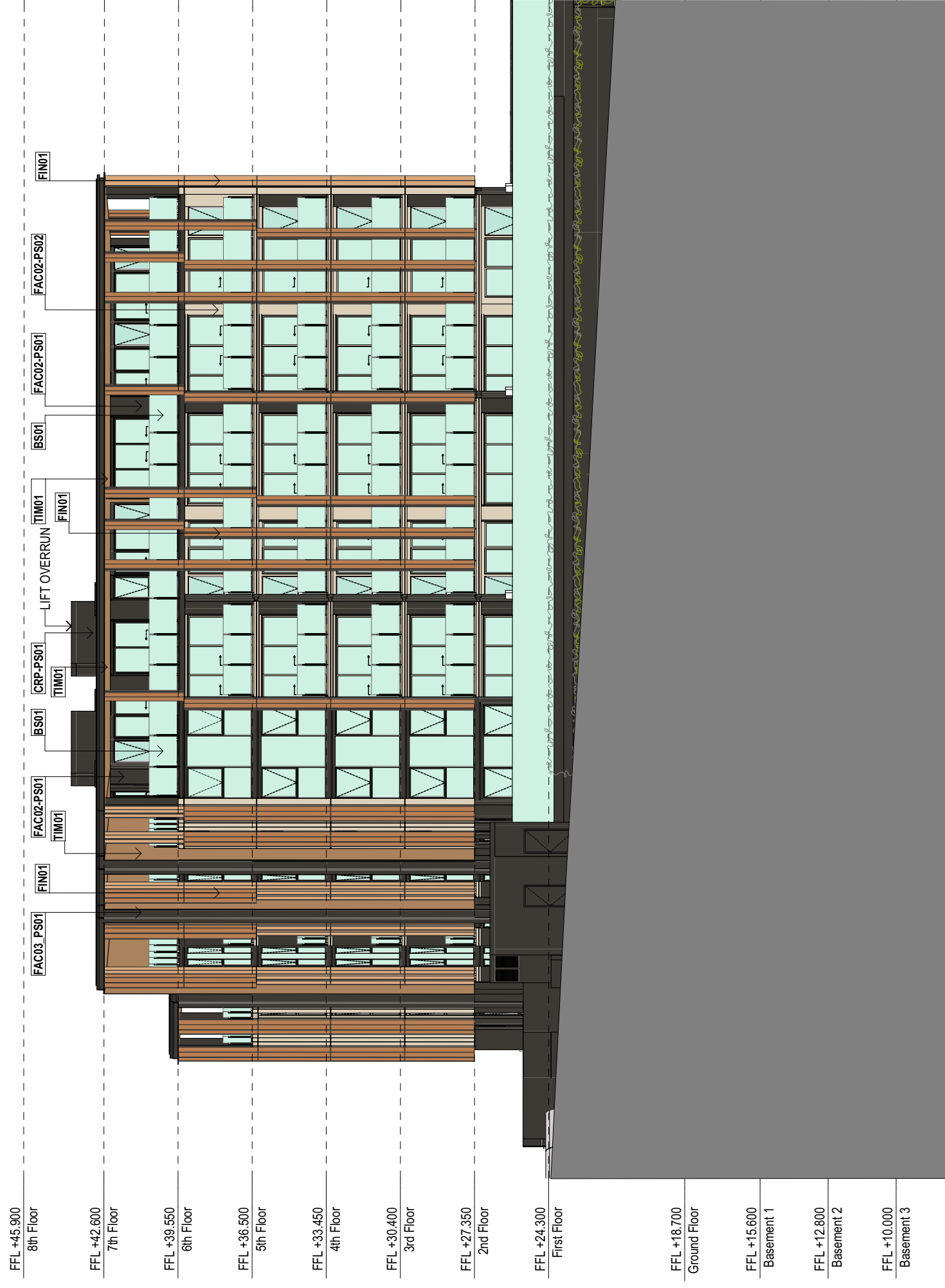
For Tender



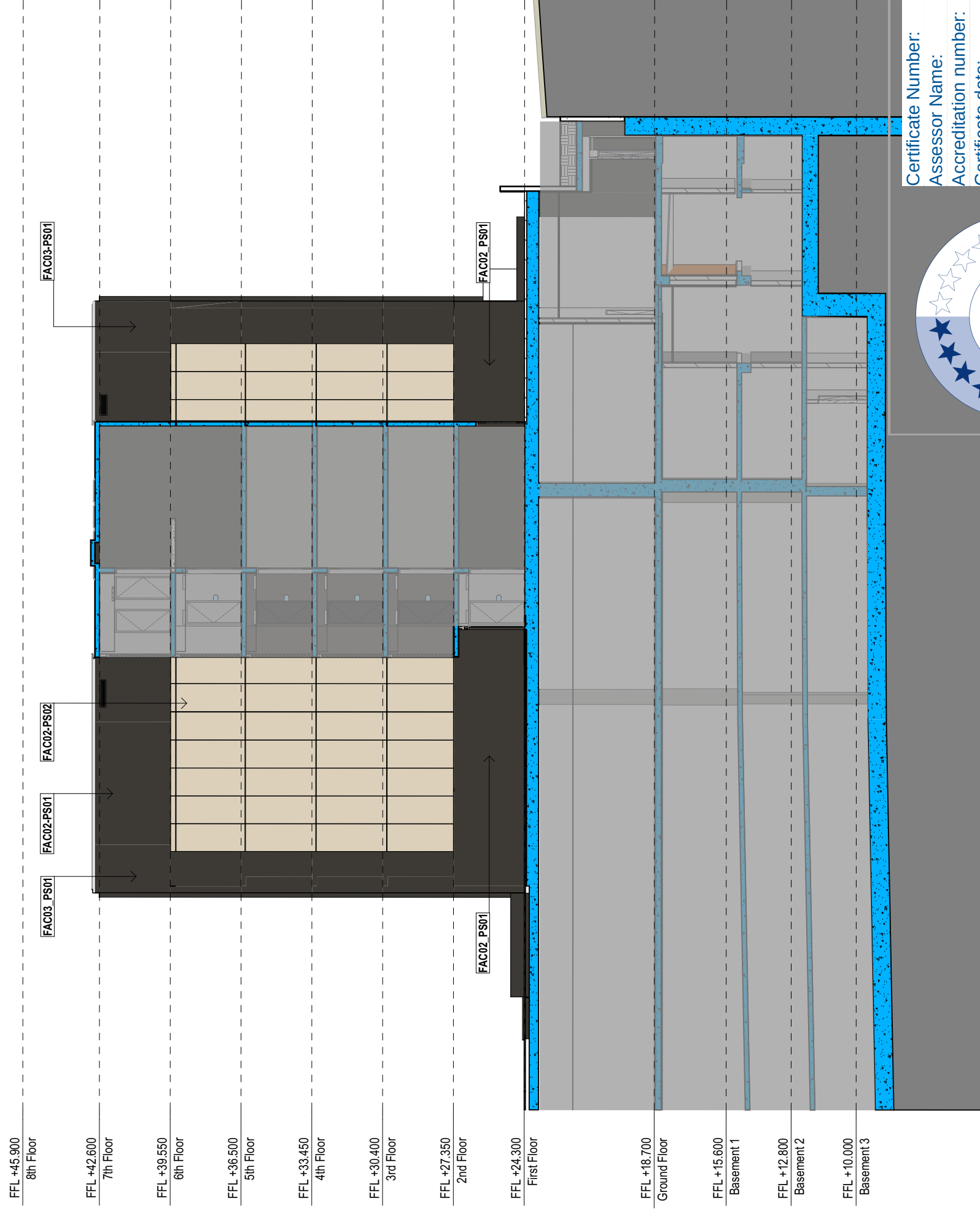
01 ELEVATION BUILDING 1A - SOUTH ELEVATION
1:200



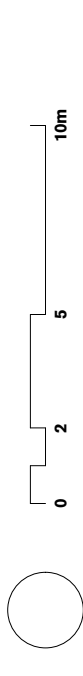
03 ELEVATION BUILDING 1A - SOUTH CIRCULATION ELEVATION
1:200



02 ELEVATION BUILDING 1A - NORTH ELEVATION
1:200



04 ELEVATION BUILDING 1A - NORTH CIRCULATION ELEVATION
1:200



- GENERAL NOTES**
- ALL DIMENSIONS AND EXISTING CONDITIONS TO BE VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.
 - ALL LEVELS RELATIVE TO AUSTRALIAN HEIGHT DATUM.
 - DO NOT SCALE DRAWINGS.
 - USE FIGURED DIMENSIONS ONLY.

Legend	
ACM01	Aluminum Composite Material, Type 01
ALF01	Aluminum Finish, Type 01
ALF02	Aluminum Finish, Type 02
BS01	Balustrade System, Type 01
BS02	Balustrade System, Type 02
CRP	Concrete Render & plaster
FAC#	Facade Type and finish details on plan A10003
FIN01	Facade, Aluminum Fin Type 01
FIN02	Facade, Aluminum Fin Type 02
FIN03	Facade, Aluminum Fin Type 03
FIN04	Facade, Aluminum Fin Type 04
GR01	Gas Reinforced Concrete, Type 01
PAV01	Paving, Type 01
PAV02	Paving, Type 02
PAV04	Paving, Type 04
PS01	Paint System (Exterior), Type 01
PS02	Paint System (Exterior), Type 02
PS03	Paint System (Exterior), Type 03
PS04	Paint System (Exterior), Type 04
PS05	Paint System (Exterior), Type 05
RF2	Resilient Finish, Type 2
TC01	Terracotta, Type 01
TM01	Timber, Type 01
TM02	Timber, Type 02

NOTE: DOORS ARE CLAD IN GR001

K	10/17/18	Shang Jue "Joe" Tenen"	DC
J	20/17/18	Joe Tenen	DC
H	20/17/18	BEN TENEN ASSIE	GB
G	20/17/18	Patricia Tenen	GB
E	20/17/18	Patricia Tenen	GB
D	20/17/18	Patricia Tenen	GB
B	20/17/18	Patricia Tenen	GB
ref	date	name	by
chh			

client
Level 29, 1 Market Street
Sydney 2000



sydney melbourne uk
Level 5, 17 King Street 4 61 2 9251 1077 info@fjmt.com

project
EASTLAKES TOWN CENTRE - NORTH SITE
Eastlakes Avenue Eastlakes
SYDNEY NSW 2016

title
Elevations 1-200
Building 1A - North, South, Circulation

scale 1:200 @ A1 first issued 02/06/17
project code sheet no. revision
CGEN A31004 K

5.2

Average star rating

NATIONWIDE

HOUSE

ENERGY RATINGS SCHEME

www.natethers.gov.au

Certificate Number: D2K1R5PEFA

Assessor Name: Nicholas Asha

Accreditation number: VIC/BDAV/161712

Certificate date: 22 May 2019

Dwelling address: Buildings 1 and 1A, Eastlakes Town Centre, Eastlakes NSW 2018

www.natethers.gov.au

<https://www.rts.com.au/>

Building Profile

<https://www.rts.com.au/>

For Tender



GENERAL NOTES

- ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.
- ALL LEVELS RELATIVE TO 'AUSTRALIAN HEIGHT DATUM'.
- DO NOT SCALE DRAWINGS.
- USE FIGURED DIMENSIONS ONLY.

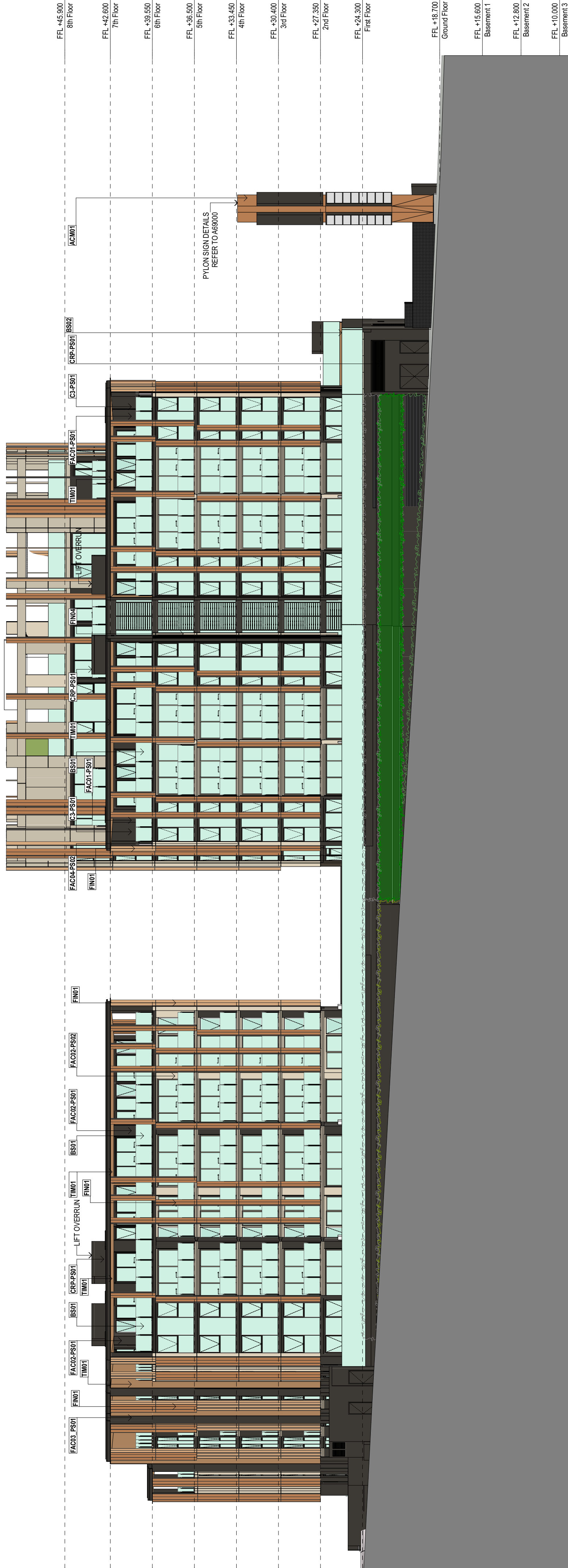
legend

ACM01	Aluminium Composite Material, Type 01	
ALF01	Aluminium Finish, Type 01	
ALF02	Aluminium Finish, Type 02	
BS01	Balustrade System, Type 01	
BS02	Balustrade System, Type 02	
CRP	Concrete Render & Paint	
FCF01	Facade, Type # refer to wall type schedule for details on plan A10003	
FN01	Facade, Aluminium Fin Type 01	
FN02	Facade, Aluminium Fin Type 02	
FN03	Facade, Aluminium Fin Type 03	
FN04	Facade, Aluminium Fin Type 04	
GR01	Glass Reinforced Concrete, Type 01	
PAV01	Paving, Type 01	
PAV02	Paving, Type 02	
PAV04	Paving, Type 04	
PS01	Paint System (Exterior), Type 01	
PS02	Paint System (Exterior), Type 02	
PS03	Paint System (Exterior), Type 03	
PS04	Paint System (Exterior), Type 04	
PS05	Paint System (Exterior), Type 05	
RF2	Resilient Finish, Type 2	
TC01	Terracotta, Type 01	
TM01	Timber, Type 01	
TM02	Timber, Type 02	

NOTE: DOORS ARE CLAD IN GRC01



1 ELEVATION SOUTH ELEVATION
1:200



2 ELEVATION NORTH ELEVATION
1:200



Average star rating
5.2

NATIONWIDE HOUSE
ENERGY RATING SCHEME

www.nathers.gov.au

Certificate number: **BD2KLRSPEFA**
 Assessor Name: **Nicholas Asha**
 Accreditation number: **VIC/BD4V16/1712**
 Certificate date: **22 May 2019**

**Buildings 1 and 1A,
Eastlakes Tower Centre,
Eastlakes NSW 2018**

www.nathers.gov.au



<https://www.nrs.com.au/certificate?certificateId=BD2KLRSPEFA&gpcert=C>

fjmt studio architecture interiors landscape urban community
sydney melbourne uk
 Level 5, 70 King Street t +61 2 9251 7077 w fjmtstudio.com

project
EASTLAKES TOWN CENTRE - NORTH SITE
Evans Avenue Eastlakes
SYDNEY NSW 2018

**Elevations 1:200
North and South Elevations**

scale	1:200 @ A1	first issued	02/05/17
project code	sheet no.		revision
C GEN	A31007		J

For Tender

APPENDIX D

THERMAL COMFORT INDIVIDUAL DWELLING RESULTS



APPENDIX D-1

THERMAL COMFORT RESULTS FOR BUILDING 1

DWELLING NUMBER ON PLANS	TOTAL AREA (M ²)	ADJUSTED HEATING LOAD (MJ/M ²)	ADJUSTED COOLING LOAD (MJ/M ²)	ADJUSTED TOTAL LOAD (MJ/M ²)	STAR RATING
NS-1-101	69.4	22.7	30.6	53.3	5.8
NS-1-102	69.4	31.5	18.3	49.8	6.1
NS-1-103	69.4	31.5	21.6	53.1	5.8
NS-1-104	69.4	25.1	24.5	49.6	6.1
NS-1-105	55.0	56.3	47.9	104.2	3.4
NS-1-106	56.2	60.3	15.4	75.7	4.4
NS-1-107	55.6	62.3	14.8	77.1	4.4
NS-1-108	56.5	44.1	21.0	65.1	5.1
NS-1-201	69.4	20.7	32.0	52.7	5.9
NS-1-202	69.4	32.2	19.1	51.3	5.9
NS-1-203	69.4	33.4	23.0	56.4	5.6
NS-1-204	69.4	26.4	25.9	52.3	5.9
NS-1-205	55.0	38.3	49.2	87.5	4.0
NS-1-206	55.6	55.3	19.8	75.1	4.4
NS-1-207	55.6	56.1	18.6	74.7	4.5
NS-1-208	56.5	48.6	19.7	68.3	4.9

NS-1-301	69.4	23.5	26.2	49.7	6.1
NS-1-302	69.4	35.9	16.4	52.3	5.9
NS-1-303	69.5	36.6	19.5	56.1	5.6
NS-1-304	69.4	29.9	22.5	52.4	5.9
NS-1-305	55.0	42.7	42.5	85.2	4.1
NS-1-306	55.6	59.9	16.3	76.2	4.4
NS-1-307	55.6	60.4	15.8	76.2	4.4
NS-1-308	56.5	51.1	17.0	68.1	4.9
NS-1-401	69.4	24.0	25.7	49.7	6.1
NS-1-402	69.4	36.1	16.3	52.4	5.9
NS-1-402	69.5	36.8	18.9	55.7	5.7
NS-1-404	69.4	29.9	22.3	46.5	5.9
NS-1-405	55.0	43.1	41.9	85.0	4.1
NS-1-406	55.6	60.2	16.0	76.2	4.4
NS-1-407	55.6	61.0	16.2	77.2	4.4
NS-1-408	56.5	50.8	17.4	68.2	4.9
NS-1-501	69.4	29.5	26.9	56.4	5.6
NS-1-502	69.4	37.7	16.4	54.1	5.8
NS-1-503	69.5	37.6	19.6	57.2	5.6
NS-1-504	69.4	34.7	22.7	57.4	5.5
NS-1-505	55.0	43.3	41.5	84.8	4.1
NS-1-506	55.6	60.1	16.0	76.1	4.4
NS-1-507	55.6	60.9	16.0	76.9	4.4
NS-1-508	56.5	50.0	17.9	67.9	4.9
NS-1-601	107.0	40.2	18.1	58.3	5.4
NS-1-602	107.0	39.0	19.4	58.4	5.4
NS-1-603	87.2	55.6	16.4	72.0	4.7
NS-1-604	87.3	55.4	13.7	69.1	4.8

APPENDIX D-2

THERMAL COMFORT RESULTS FOR BUILDING 1A

DWELLING NUMBER ON PLANS	TOTAL AREA (M ²)	ADJUSTED HEATING LOAD (MJ/M ²)	ADJUSTED COOLING LOAD (MJ/M ²)	ADJUSTED TOTAL LOAD (MJ/M ²)	STAR RATING
NS-1A-101	31.0	21.1	52.1	5.9	31.0
NS-1A-102	17.3	14.7	32.0	7.5	17.3
NS-1A-103	11.4	42.2	53.6	5.8	11.4
NS-1A-104	41.4	29.6	71.0	4.7	41.4
NS-1A-105	35.8	47.1	82.9	4.2	35.8
NS-1A-106	33.1	30.9	64.0	5.1	33.1
NS-1A-107	27.5	24.8	52.3	5.9	27.5
NS-1A-108	34.5	16.6	51.1	5.9	34.5
NS-1A-109	35.5	47.2	82.7	4.2	35.5
NS-1A-110	44.9	26.5	71.4	4.7	44.9
NS-1A-111	36.8	30.7	67.5	4.9	36.8
NS-1A-201	30.7	22.8	53.5	5.8	30.7
NS-1A-202	17.9	14.8	32.7	7.4	17.9
NS-1A-203	11.7	43.5	55.2	5.7	11.7

NS-1A-204	43.0	29.7	72.7	4.6	43.0
NS-1A-205	33.9	46.6	80.5	4.3	33.9
NS-1A-206	36.0	31.1	67.1	4.9	36.0
NS-1A-207	27.9	28.0	55.9	5.6	27.9
NS-1A-208	36.7	17.3	54.0	5.8	36.7
NS-1A-209	31.9	47.4	79.3	4.3	31.9
NS-1A-210	47.5	29.8	77.3	4.4	47.5
NS-1A-211	33.8	30.5	64.3	5.1	33.8
NS-1A-301	32.2	20.8	53.0	5.9	32.2
NS-1A-302	20.6	13.8	34.4	7.3	20.6
NS-1A-303	14.4	34.9	49.3	6.1	14.4
NS-1A-304	47.3	25.5	72.8	4.6	47.3
NS-1A-305	37.7	36.4	74.1	4.5	37.7
NS-1A-306	39.9	26.2	66.1	4.9	39.9
NS-1A-307	30.5	22.1	52.6	5.9	30.5
NS-1A-308	40.5	13.8	54.3	5.8	40.5
NS-1A-309	35.6	36.1	71.7	4.7	35.6
NS-1A-310	52.7	23.3	76.0	4.4	52.7
NS-1A-311	37.8	24.7	62.5	5.2	37.8
NS-1A-401	30.5	22.7	53.2	5.8	30.5
NS-1A-402	21.0	13.1	34.1	7.3	21.0
NS-1A-403	15.0	34.3	49.3	6.1	15.0
NS-1A-404	46.5	26.5	73.0	4.6	46.5
NS-1A-405	38.3	35.1	73.4	4.6	38.3
NS-1A-406	40.1	26.0	66.1	4.9	40.1
NS-1A-407	31.1	21.0	52.1	5.9	31.1
NS-1A-408	41.3	15.3	56.6	5.6	41.3
NS-1A-409	36.2	35.0	71.2	4.7	36.2
NS-1A-410	56.0	23.3	79.3	4.3	56.0
NS-1A-411	51.9	18.6	70.5	4.8	51.9
NS-1A-501	33.0	24.0	57.0	5.6	33.0
NS-1A-502	21.7	13.6	35.3	7.3	21.7
NS-1A-503	18.0	34.3	52.3	5.9	18.0

NS-1A-504	47.1	28.0	75.1	4.4	47.1
NS-1A-505	38.9	34.8	73.7	4.6	38.9
NS-1A-506	42.5	20.6	63.1	5.2	42.5
NS-1A-507	34.3	22.2	56.5	5.6	34.3
NS-1A-508	46.6	23.9	70.5	4.7	46.6
NS-1A-509	37.9	35.1	73.0	4.6	37.9
NS-1A-510	64.5	20.7	85.2	4.1	64.5
NS-1A-511	61.6	22.0	83.6	4.2	61.6
NS-1A-601	38.3	18.5	56.8	5.6	38.3
NS-1A-602	28.8	27.1	55.9	5.7	28.8
NS-1A-603	47.6	32.5	80.1	4.3	47.6
NS-1A-604	41.0	37.7	78.7	4.4	41.0
NS-1A-605	42.2	30.5	72.7	4.6	42.2
NS-1A-606	46.0	38.0	84.0	4.2	46.0
NS-1A-607	50.2	24.4	74.6	4.5	50.2
NS-1A-608	36.7	25.0	61.7	5.3	36.7