Proposed Mixed Use Development

26-30 Hope Street, Penrith

TRAFFIC AND PARKING ASSESSMENT REPORT

13 September 2021

Ref 21559

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants

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1. INTRODUCTION

This report has been prepared to accompany a development application to Penrith City Council for a mixed use development proposal to be located at 26-30 Hope Street, Penrith (Figures 1 and 2).

Council has previously approved the demolition of the existing buildings on the site and the construction of a new six-storey residential apartment development, comprising a total of 38 units (DA20/0365).

Off-street parking in the DA20/0365 scheme was approved for a total of 61 cars (including 4 disabled spaces) in a new two-level basement parking area, in accordance with Council's *DCP 2014* requirements. Vehicular access to the site was approved to be provided via a new entry/exit driveway located towards the western end of the Hope Street site frontage.

This new development application involves converting half of the DA20/0365 approved ground floor private storage room, into a medical clinic, comprising two consulting rooms and a reception/waiting area.

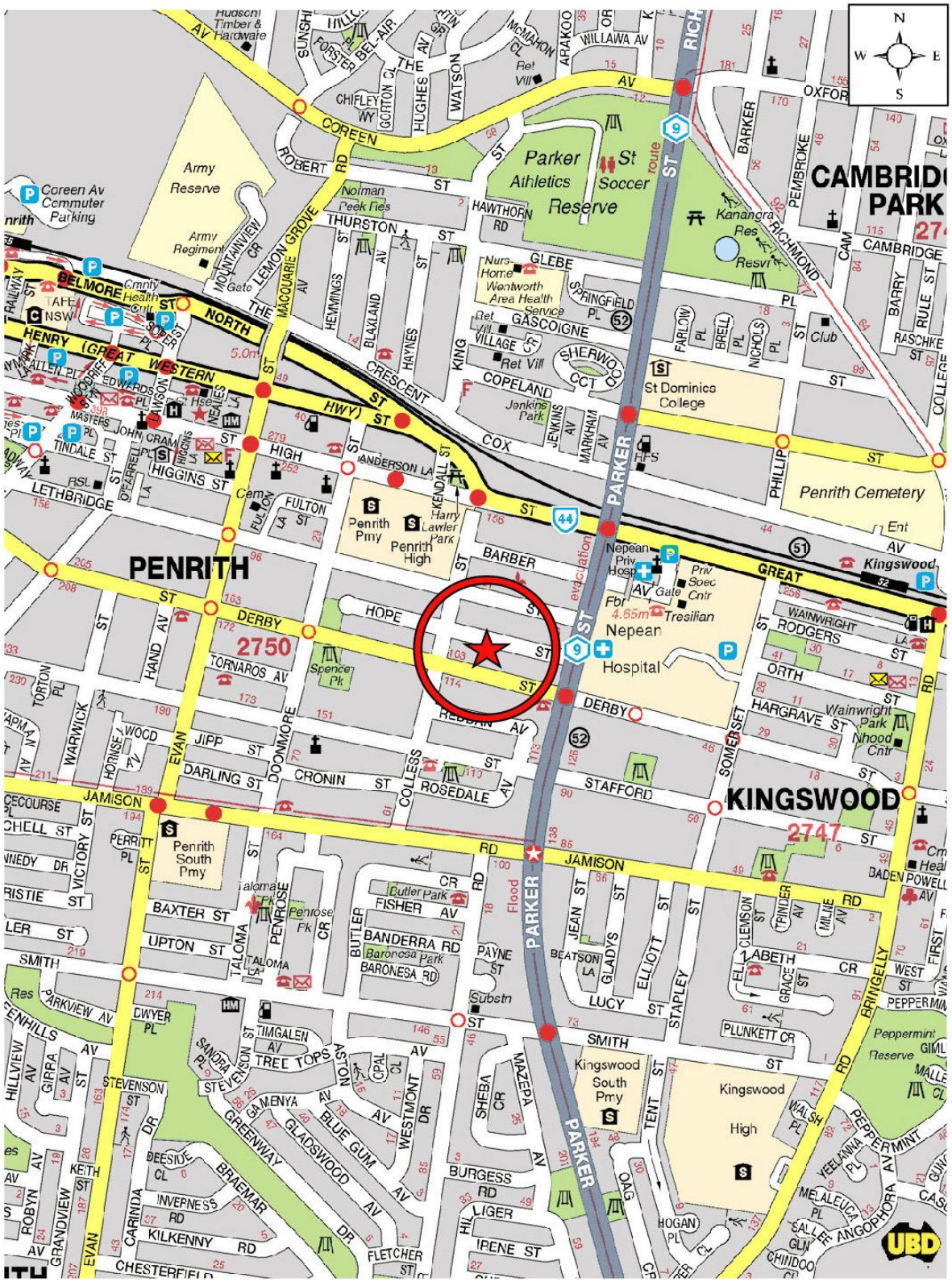
The proposed works also include the conversion of the DA20/0365 approved Units 18 & 19 on Level 2 from *1 bed* & *3 bed* apartments, respectively, into two x *2 bed* apartments. The vast majority of the approved floor plans remain *unchanged* from the DA20/0365 approved scheme, including the overall apartment yield.

Off-street parking is proposed to be provided for a total of 61 cars (including 5 disabled spaces) in a new two-level basement parking area, in a near-identical layout to the DA20/0365 approved scheme and in accordance with Council's *DCP 2014* requirements. Vehicular access to the site is proposed to be provided via a new entry/exit driveway located towards the western end of the Hope Street site frontage, consistent with the approved design.

The purpose of this report is to assess the traffic and parking implications of the development proposal and to that end this report:

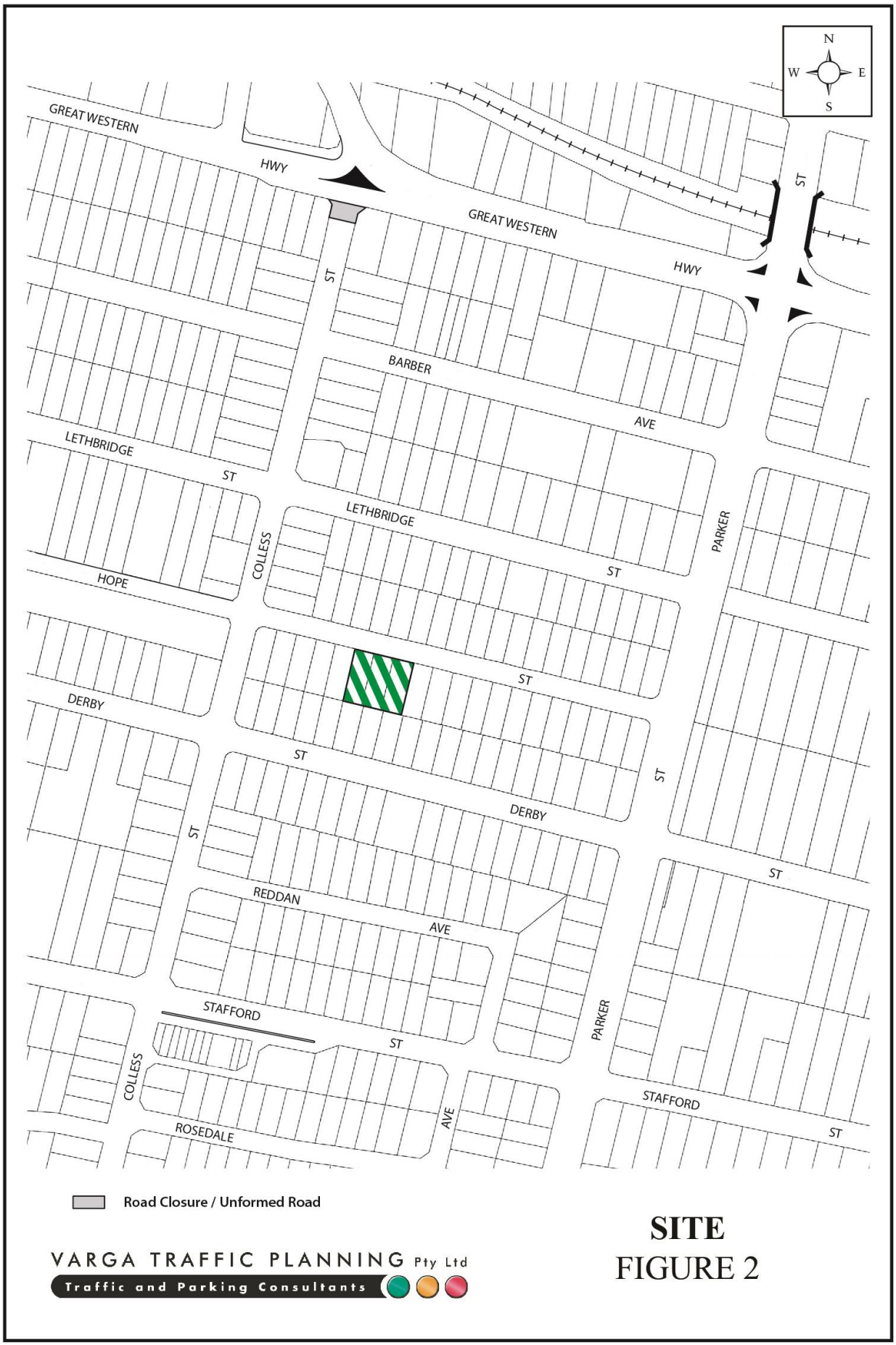
- describes the site and provides details of the development proposal

- reviews the road network in the vicinity of the site
- estimates the traffic generation potential of the development proposal
- assesses the traffic implications of the development proposal in terms of road network capacity
- reviews the geometric design features of the proposed car parking and loading facilities for compliance with the relevant codes and standards
- assesses the adequacy and suitability of the quantum of off-street car parking and loading provided on the site.



LOCATION
FIGURE 1

VARGA TRAFFIC PLANNING Pty Ltd
Traffic and Parking Consultants



2. PROPOSED DEVELOPMENT

Site

The subject site is located on the southern side of Hope Street, approximately 100m east of Colless Street. The site has a street frontage approximately 47m in length to Hope Street and occupies an area of approximately 1,894m^2. The subject site is currently occupied by three dwelling houses, each with a separate vehicular access driveway off Hope Street.

An aerial image of the site and its surroundings is reproduced below.

Previously Approved Development – DA20/0365

Council has previously approved the demolition of the existing buildings on the site to facilitate the construction of a new six-storey residential apartment development, comprising a total of 38 units, as follows:

DA20/0365 – Approved Unit Mix	
1 bedroom apartments:	13
2 bedroom apartments:	19
3 bedroom apartments:	6
TOTAL APARTMENTS:	**38**

Off-street parking for the DA20/0365 approved scheme was approved for a total of 61 cars in a new two-level basement parking area, in accordance with Council's *DCP 2014* requirements. Vehicular access to the site was approved to be provided via a new entry/exit driveway located towards the western end of the Hope Street site frontage.

Waste collection for the DA20/0365 scheme was approved to be undertaken by Council's 9.7m long garbage truck, with a dedicated loading area to be located in the south-western corner of the ground floor level. The approved loading area included a mechanical turntable, thereby allowing all trucks to enter and exit the site in a forward direction at all times.

Vehicular access to the loading area was approved to be provided via the abovementioned entry/exit driveway located at the western end of the Hope Street site frontage.

Plans of the DA20/0365 approved scheme were prepared by *Building Design & Technology* and are reproduced in Appendix A.

Proposed Development

In order to compliment the nearby Hospital Precinct located to the east of the site, and to achieve a more economically viable outcome, this development application involves a number of modifications to the DA20/0365 approved scheme.

As noted in the foregoing, this new development application involves converting half of the DA20/0365 approved ground floor private storage room, into a medical clinic, comprising two consulting rooms and a receptionist/waiting area.

The medical clinics will have a *maximum* of 2 specialist doctors and a secretary/support staff on site at any given time.

It is envisaged that the appointments for the consulting rooms will be booked at 30 minute intervals, such that there will only ever be 2 or 3 appointments occurring at any one point in time.

The proposed clinics seek to operate 6 days a week, as follows:

Monday to Wednesday & Friday:	8:30am to 5:30pm
Thursday:	8:30am to 7:00pm
Saturday:	8:30am to 1:00pm
Sunday:	CLOSED

In addition, the proposed works also include the conversion of the DA20/0365 approved Units 18 & 19 on Level 2 from *1 bed* & *3 bed* apartments, respectively, into two x *2 bed* apartments. The vast majority of the approved floor plans remain *unchanged* from the DA20/0365 approved scheme, including the overall apartment yield, as follows:

	Approved	**Proposed**
1 bedroom apartments:	13	12
2 bedroom apartments:	19	21
3 bedroom apartments:	6	5
TOTAL APARTMENTS:	**38**	**38**

Off-street parking is proposed for a total of 61 cars, comprising 45 residential spaces (including 4 disabled spaces), 8 visitor spaces (including a shared car wash bay), 7 medical spaces (including a disabled space) and a dedicated service bay, in a new two-level basement car parking area, in accordance with Council's requirements.

Waste collection for the proposed development is again to be undertaken by Council's 9.7m long garbage truck, with a dedicated loading area to be located in the south-western corner of the ground floor level, equipped with a mechanical turntable, consistent with the approved design.

Vehicular access to the car parking and loading area is to be provided via the approved entry/exit driveway located at the western end of the Hope Street site frontage, which remains *unchanged*.

In this regard, it is noted that the previously approved basement footprint, approved car parking layout, vehicular access, loading and waste collection arrangements remain generally *unchanged* from the DA20/0365 approved scheme.

Plans of the proposed development have been prepared by *Building Design & Technology* and are reproduced in Appendix B.

3. TRAFFIC ASSESSMENT

Road Hierarchy

The road hierarchy allocated to the road network in the vicinity of the site by the Roads and Maritime Services is illustrated on Figure 3.

Great Western Highway is classified by the RMS as a *State Road* and provides the key east-west road link in the area, linking Parramatta to Emu Plains. It typically carries three traffic lanes in each direction in the vicinity of the site, with opposing traffic flows separated by a central median island and turning bays provided at key locations.

Parker Street/The Northern Road are also classified by the RMS as a *State Roads* and provide the key north-south road link in the area, linking Bligh Park to Narellan. It typically carries three traffic lanes in each direction in the vicinity of the site, with opposing traffic flows separated by a central median island and turning bays provided at key locations.

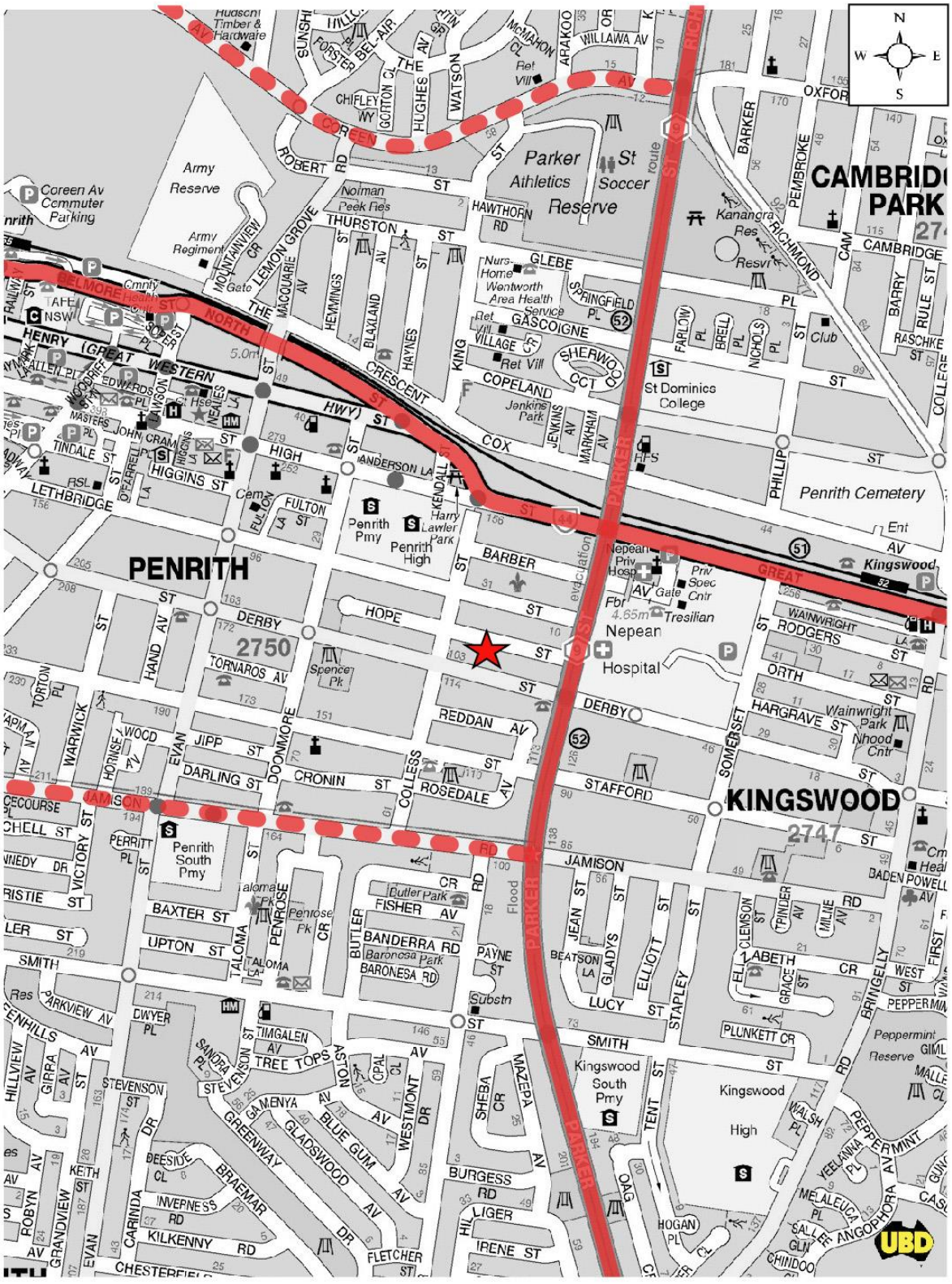
Jamison Road (west of Parker Street) is classified by the RMS as a *Regional Road* and provides a secondary east-west road link through the local area between Parker Street and Mulgoa Road. It typically carries two traffic lanes in each direction in the vicinity of the site with kerbside parking permitted at selected locations.

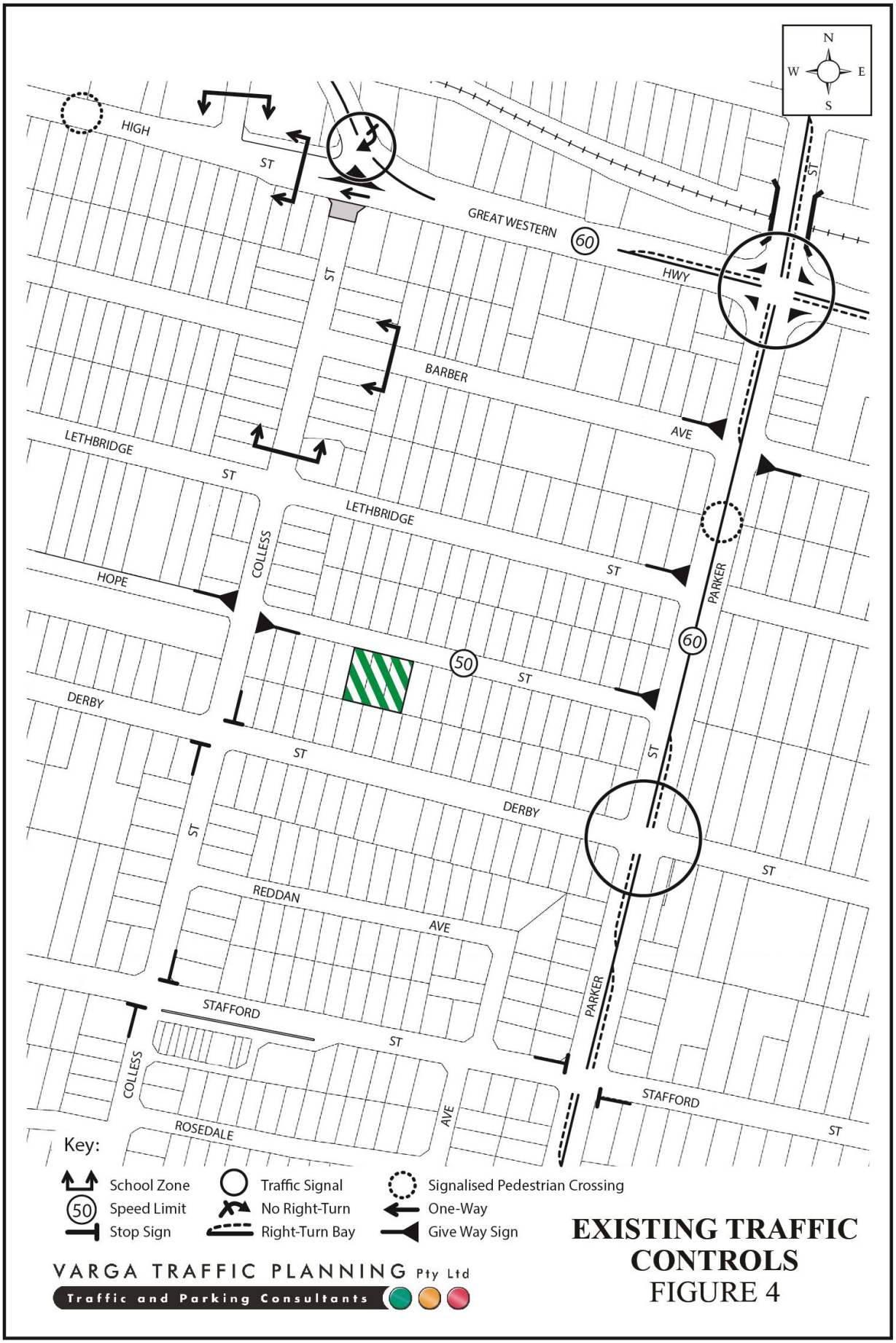
Hope Street is a local, unclassified road which is primarily used to provide vehicular and pedestrian access to frontage properties. Kerbside parking is generally permitted on both sides of the road.

Existing Traffic Controls

The existing traffic controls which apply to the road network in the vicinity of the site are illustrated on Figure 4. Key features of those traffic controls are:

- a 60 km/h SPEED LIMIT which applies to the Great Western Highway and Parker Street





- a 50 km/h SPEED LIMIT which applies to Hope Street and all other local roads in the area

- a 40 km/h SCHOOL SPEED ZONE which applies within the vicinity of Penrith Public School and Penrith High School

- GIVE WAY SIGNS in Hope Street where it intersects with Parker Street and Colless Street

- TRAFFIC SIGNALS in Parker Street where it intersects with the Great Western Highway and Derby Street

- a CENTRAL MEDIAN ISLAND in Parker Street which precludes right turn movements into and out of Hope Street.

Projected Traffic Generation

The traffic implications of development proposals primarily concern the effects of the *additional* traffic flows generated as a result of a development and its impact on the operational performance of the adjacent road network, particularly during the weekday commuter peak periods.

An indication of the traffic generation potential of the development proposal is provided by reference to the Roads and Maritime Services' publication *Guide to Traffic Generating Developments, Section 3 – Land Use Traffic Generation (October 2002)* and the updated traffic generation rates in the RMS *Technical Direction* (TDT 2013/04a) document.

The TDT 2013/04a document specifies that it replaces those sections of the RMS *Guidelines* indicated, and must be followed when RMS is undertaken trip generation and/or parking demand assessments.

The RMS *Guidelines* and the updated TDT 2013/04a are based on extensive surveys of a wide range of land uses and nominate the following traffic generation rates which are applicable to the development proposal:

High Density Residential Flat Dwellings

AM: 0.19 peak hour vehicle trips per unit

PM: 0.15 peak hour vehicle trips per unit

The RMS *Guidelines* also make the following observation in respect of high density residential flat buildings:

Definition

A *high density residential flat building* refers to a building containing 20 or more dwellings. This does not include aged or disabled persons housing. *High density residential flat buildings* are usually more than 5 levels, have basement level car parking and are located in close proximity to public transport services. The building may contain a component of commercial use.

Factors

The above rates include visitors, staff, service/delivery and on-street movements such as taxis and pick-up/set-down activities.

Notwithstanding, it is noted that the site is located outside the 800m radius to both Penrith and Kingswood railway stations. As such, the more conservative traffic generation rate nominated in the RMS *Guidelines* has been adopted in this instance, as follows:

High Density Residential Flat Buildings in Sub-Regional Centres

0.29 peak hour vehicle trips/dwelling

Furthermore, the RMS *Guidelines* do not however nominate a traffic generation rate for small, local medical centres, referring only to "extended hours medical centres". For the purposes of this assessment therefore, a *first principles* approach has been taken.

In practical terms, the proposed medical clinic is expected to comprise the arrival of 2 to 3 staff during the morning peak period and the subsequent departure of 2 to 3 staff during the afternoon peak period.

Patient consults are expected to be booked at 30-minute intervals throughout the day, including the first and last hours of the day, such that on a typical day there will be 2 patients per hour arriving and departing.

Assuming all staff and patients drive to the medical clinics, the proposed clinic could therefore expect to generate in the order of 7 vehicle movements during the weekday road network peak periods – i.e. 5 trips TO/2 trips FROM in the morning peak and 2 trips TO/5 trips FROM in the afternoon peak.

Application therefore of the above traffic generation rates and assumptions to the various components of the development proposal yields a total traffic generation potential of approximately 18 vehicle trips per hour (vph) during the weekday peak periods (TO & FROM, combined), as set out below:

Projected Future Traffic Generation Potential of the Site

Health Consulting Rooms (1 clinic, 2 consulting rooms):	7 peak hour vehicle trips
Residential apartments (38 apartments):	11 peak hour vehicle trips
TOTAL TRAFFIC GENERATION POTENTIAL:	**18 peak hour vehicle trips**

That projected future level of traffic generation potential should however, be offset or *discounted* by the volume of traffic which could reasonably be expected to be generated by the previously approved uses of the site, in order to determine the *nett change* in traffic generation potential expected to occur as a consequence of the current development proposal.

Application of the above residential traffic generation rate to the 38 residential apartments approved as part of DA20/0365 yields a traffic generation potential of approximately 11 vph.

Accordingly, it is likely that the proposed development will result in *nett increase* in the traffic generation potential of the site of approximately 7 vph, as set out below:

Projected Nett Increase in Peak Hour Traffic Generation Potential of the Site as a consequence of the Development Proposal

Projected Future Traffic Generation Potential:	18 peak hour vehicle trips
Less Previously Approved Traffic Generation Potential:	-11 peak hour vehicle trips
NETT INCREASE IN TRAFFIC GENERATION POTENTIAL:	**7 peak hour vehicle trips**

In this regard, it is noted that a portion of the patients visiting the proposed 'medical' component will be drawn from residents living within the apartments above as well as the surrounding local residential area, many of whom will live within walking distance.

In any event, that projected *nett increase* in traffic activity as a consequence of the development proposal is minimal, consistent with the R4 zoning objectives of the site and will clearly not have any unacceptable traffic implications in terms of road network capacity.

4. PARKING IMPLICATIONS

Existing Kerbside Parking Restrictions

The existing kerbside parking restrictions which apply to the road network in the vicinity of the site comprise:

- NO STOPPING restrictions along the western side of Parker Street

- generally UNRESTRICTED kerbside parking along both sides of Hope Street, including along the site frontage, and throughout the local area

- BUS ZONES located at regular intervals along both sides of Derby Street and also High Street.

Off-Street Parking Provisions

The off-street car parking rates applicable to the development proposal are specified in the *Penrith Development Control Plan 2014, C10 Transport Access and Parking* document in the following terms:

Residential Flat Buildings

1 bedroom apartment:	1 space per dwelling
2 bedroom apartment:	1 space per dwelling
3 bedroom apartment:	2 spaces per dwelling
Visitors:	1 space per 5 dwellings
Service Bay:	1 space for every 40 dwellings
Carwash Bay:	1 space for every 50 dwellings

Health Consulting Rooms/Medical Centres

3 spaces per health care professional practising at any one time *plus*

1 space per receptionist/support staff

Application of the above parking rates to the various components of the development proposal yields an off-street parking requirement of 59 parking spaces, as set out on the following page:

Residential (38 apartments):	43.0 spaces
Visitors:	7.6 spaces
Service Bay:	1.0 space
Car wash bay:	0.8 spaces
Sub-Total:	**52.4 spaces**
Health Consulting Rooms (2 doctors):	6.0 spaces
Health Consulting Rooms – Support (1 staff):	1.0 space
Sub-Total:	**7.0 spaces**
TOTAL:	**59.4 spaces**

The proposed development makes provision for a total of 61 off-street parking spaces, comprising 45 residential spaces (including 4 disabled spaces), 8 visitor spaces (including a shared car wash bay), 7 medical centre spaces (including a disabled space) and a dedicated service bay, thereby satisfying Council's *DCP 2014* parking requirements.

In this regard, it is noted that the previously approved basement footprint remains consistent with the proposed basement, however with a *minor* shift/reduction in the garbage holding area/bin lift in the upper basement level, in order to accommodate the conversion of a standard car space into a disabled space with its associated disabled shared area.

The geometric design layout of the proposed parking facilities has been designed to comply with the relevant requirements specified in the Standards Australia publications *AS2890.1*, *AS2890.2*, *AS2890.3* & *AS2890.6* in respect of parking bay dimensions, ramp gradients, overhead clearances and aisle widths.

Loading/Servicing Provisions

Loading/servicing for the proposed medical centre component is expected to be undertaken by a variety of light commercial vehicles such as vans, utilities and wagons, which are capable of fitting into the proposed loading/service bay located at the bottom of the entry ramp on the upper basement level.

Waste collection for the proposed development is to be undertaken on site by Council's 9.7m long garbage truck, as detailed below. In this regard, a dedicated loading area is to be located in the south-western corner of the ground floor level, consistent with the approved design.

The proposed loading area includes a mechanical turntable, thereby allowing all trucks to enter and exit the site in a forward direction at all times.

2.3 DESIGN SPECIFICATIONS REAR LOAD WASTE COLLECTION VEHICLES

The following dimensions are provided for a standard heavy rigid vehicle as identified in Australian Standard 2890.2:

2.3.1 Low Entry Heavy Rigid Waste Collection Vehicle

Vehicle Classifications	Heavy Rigid Vehicle Dimensions
Overall Length (m)	9.7
Operational Length (m)	11.7
Design Width (m)	2.8
Design Height (m)	3.1
Swept Circle (m)	17.0
Clearance (travel height) (m)	3.5
Roadway/ramp grade (max)	1:6.5 (15.4%)
Rate of change of grade (max)	1:12 (8.3%) in 4.0m of travel
Gross Weight (max tonnes)	28.0
Front Chassis Clearance	13°
Rear Chassis Clearance	16°

Table 1: Standard dimensions in accordance with AS 2890.2

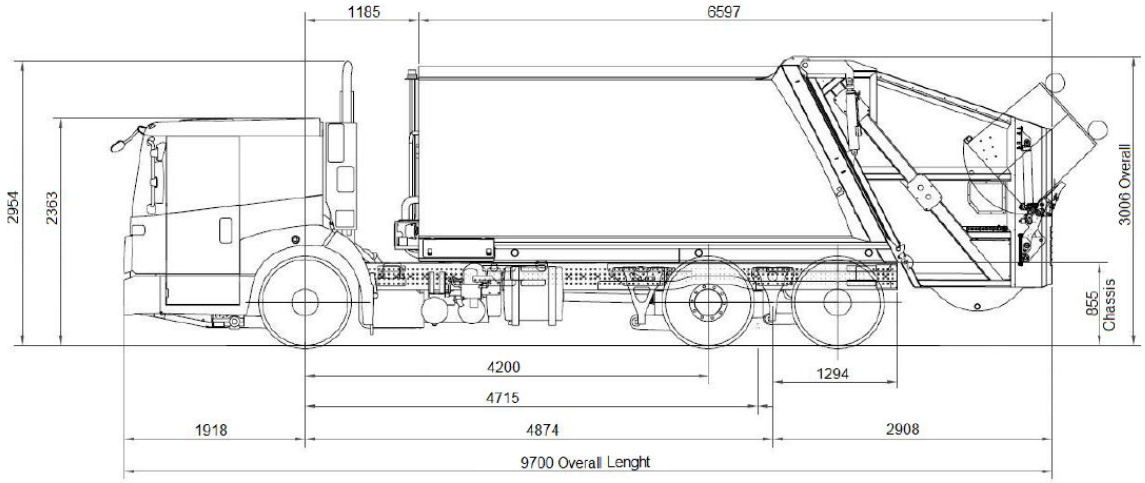


Figure 1: 9.7m Heavy Rigid Rear Load Waste Collection Vehicle specifications

In summary, the proposed parking and loading facilities satisfy the relevant requirements specified in both Council's *DCP 2014* as well as the Australian Standards and it is therefore concluded that the proposed development will not have any unacceptable parking or loading implications.

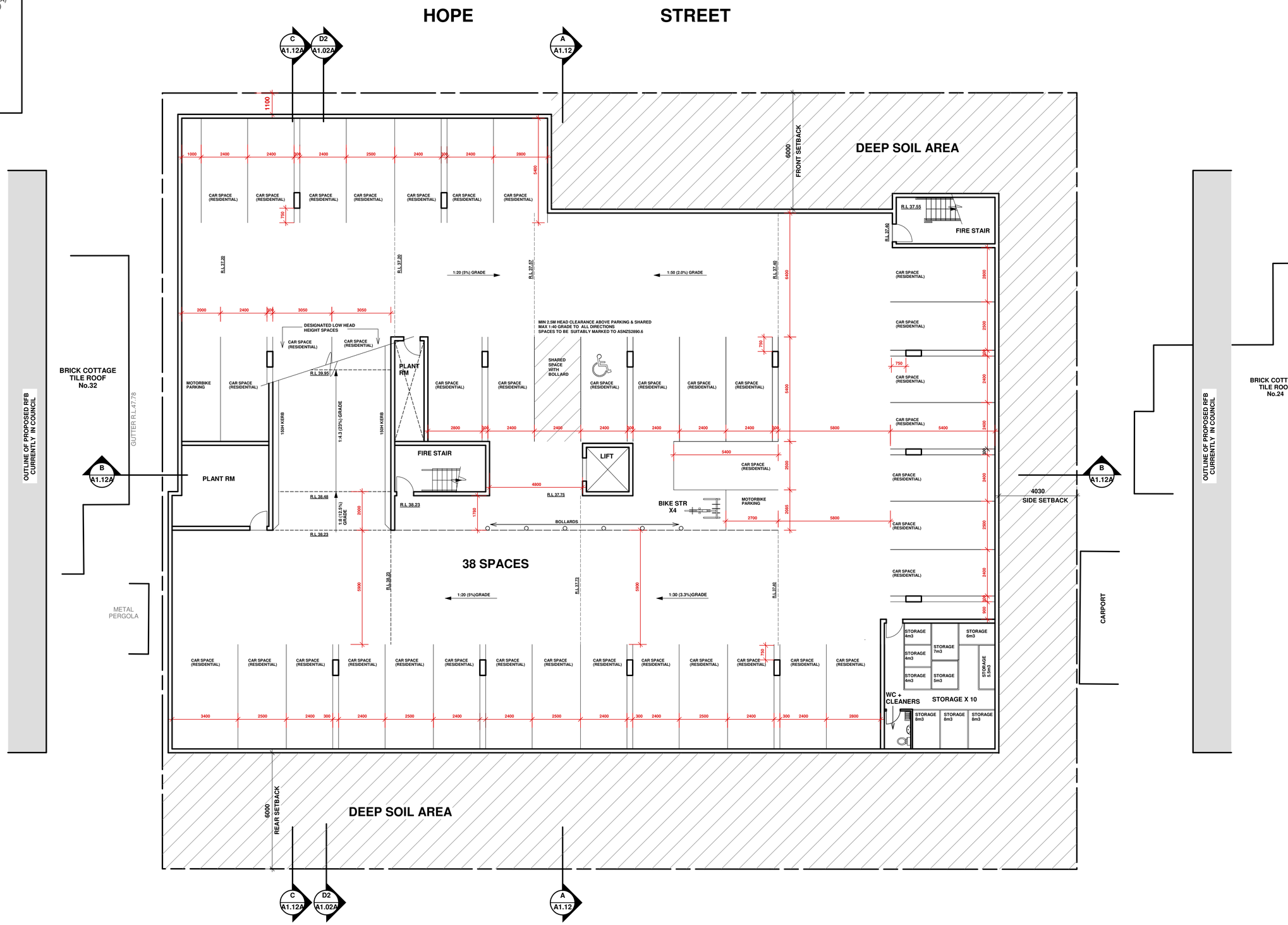
APPENDIX A

PREVIOUSLY APPROVED ARCHITECTURAL PLANS

DA20/0365

SITE CALCULATIONS

SITE AREA:	1894.4sqm
LANDSCAPED/DEEP SOIL AREAS:	
LANDSCAPED AREA AT REAR:	488sqm
LANDSCAPED AREA AT FRONT:	185sqm
TOTAL LANDSCAPED AREA:	673sqm (35.5% OF TOTAL SITE AREA)
REQUIRED AREA:	663sqm (35% OF TOTAL SITE AREA)
GROUND FLOOR COMMUNAL:	380sqm(70sqm INTERNAL)
LEVEL 5 COMMUNAL:	133sqm
TOTAL COMMUNAL:	513sqm (27% OF SITE AREA)
CAR PARKING:	
VISITOR:	10 (INCLUDES 1 WASHBAY)
RESIDENT:	50 (INCLUDES 4 ACCESSIBLE)
SERVICE VEHICLE:	1
TOTAL REQUIRED:	52
TOTAL PROVIDED:	61
BIKE PARKING:	12
MOTORBIKE PARKING:	2



PROPOSED LOWER BASEMENT

Scale: 1:100

DATE	REV	AMENDMENTS
01.06.20	A	DA ISSUE

1. DO NOT SCALE FROM DRAWING, USE WRITTEN DIMENSIONS ONLY
2. BUILDER TO CHECK AND VERIFY ALL DIMENSIONS & LEVELS PRIOR TO COMMENCEMENT OF WORK.
3. IT IS THE OWNERS RESPONSIBILITY TO ENSURE THAT THE ENGINEER HAS INVESTIGATED SUBSOIL CONDITIONS & DESIGNED ALL STRUCTURAL ELEMENTS TO SUIT.
4. THE DESIGNS & DETAILS CONTAINED ON THIS DRAWING ARE SUPPLIED IN CONFIDENCE & ARE NOT TO BE USED FOR ANY OTHER PURPOSE EXCEPT THAT AUTHORISED BY

BUILDING DESIGN & TECHNOLOGY Pty Ltd
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PO Box 795 Kings Langley NSW 2147
Ph: 02 9687 0814 Mob: 0412 199 759
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REGISTERED ARCHITECT ZACHARY HAU 9914

PROJECT :	PROPOSED UNIT DEVELOPMENT LOCATED AT 26-30 HOPE ST PENRITH
TITLE:	LOWER BASEMENT PLAN
SCALE :	A1 @ 1:100
DRAWN :	MM
PROJECT DATE :	FEB 2020
CHECKED :	ZH
REV :	A
PROJECT No.	201727A
DWG No.	DA1.02

T.N M.M

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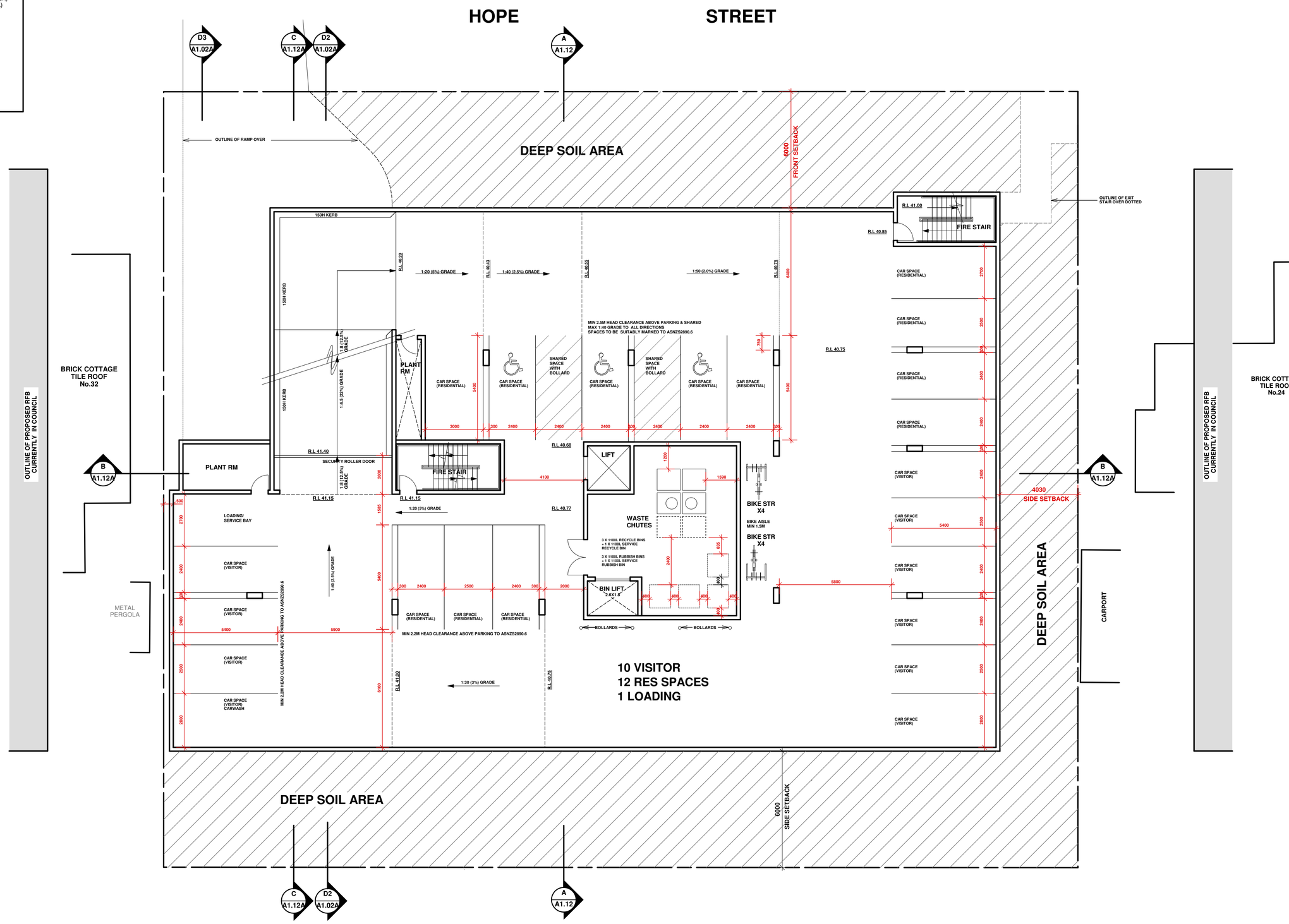

PROPOSED UPPER BASEMENT

Scale: 1:100

DATE	REV	AMENDMENTS
01.06.20	A	DA ISSUE

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REGISTERED ARCHITECT ZACHARY HAU 9914

PROJECT :	PROPOSED UNIT DEVELOPMENT LOCATED AT 26-30 HOPE ST PENRITH
TITLE:	PROPOSED UPPER BASEMENT PLAN
SCALE : A1 @ 1:100	DRAWN : MM
PROJECT DATE : FEB 2020	CHECKED : ZH REV : A
PROJECT No. 201727A	DWG No. DA1.01

T.N M.M

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MOTORBIKE PARKING:	2

UNIT AREA BREAKDOWN

UNIT 1 - 92sqm (2 BED) + 26sqm COURTYARD
UNIT 2 - 67sqm (1 BED) + 23sqm COURTYARD
UNIT 3 - 100sqm (2 BED) + 85sqm COURTYARD
UNIT 4/11/20 - 93sqm (2 BED) + 18sqm BALC
UNITS 5/12/21 - 57sqm (1 BED) + 11sqm BALC

UNITS 6/13/22 - 74sqm (2 BED) + 15sqm BALC
UNITS 7 - 83sqm (2 BED) + 23sqm BALC
UNITS 8 - 62sqm (1 BED) + 8sqm BALC
UNITS 9 - 104sqm (2 BED) + 10sqm BALC
UNITS 10 - 108sqm (2 BED) + 42sqm BALC

UNITS 14/23 - 86sqm (2 BED) + 23sqm BALC
UNITS 1524 - 55sqm (1 BED) + 8sqm BALC
UNITS 16/25 - 99sqm (2 BED) + 11sqm BALC
UNITS 17/26 - 89sqm (2 BED) + 16sqm BALC
UNITS 18 - 55sqm (1 BED) + 16sqm BALC

UNITS 19/28 - 110sqm (3 BED) + 20sqm BALC
UNITS 27 - 57sqm (1 BED) + 16sqm BALC
UNITS 29 - 110sqm (3 BED) + 20sqm BALC
UNITS 30 - 58sqm (1 BED) + 15sqm BALC
UNITS 31 - 97sqm (2 BED) + 26sqm BALC

UNITS 32 - 108sqm (3 BED) + 13sqm BALC
UNITS 33 - 77sqm (2 BED) + 19sqm BALC
UNITS 34 - 73sqm (1 BED + STUDY) + 9sqm BALC
UNITS 35 - 60sqm (1 BED) + 20sqm BALC

UNITS 36 - 95sqm (2 BED) + 26sqm BALC
UNITS 37 - 124sqm (3 BED) + 14sqm BALC
UNITS 38 - 128sqm (3 BED) + 22sqm BALC

TOTAL 1 BEDS = 12
TOTAL 1 BED + STUDY = 1
TOTAL 2 BEDS = 19
TOTAL 3 BEDS = 6
TOTAL UNITS = 38

BASIX INCLUSIONS CERT 919932M-03:

HOT WATER UNIT
5.5 STAR GAS INSTANTANEOUS HOT WATER UNIT FOR EACH UNIT
TO BEST LOCATION BY OTHERS.

WATER SAVING FITTINGS
MIN 4 STAR SHOWER HEADS, WATER SAVING FITTINGS & DUAL FLUSH 4 STAR
TOILETS ARE TO BE INSTALLED TO EACH UNIT.
4 STAR DISHWASHER TO BE INSTALLED.

INSULATION
R2.0 BATT INSULATION TO CEILINGS BELOW ROOF SLAB.
R1.0 TO EXTERNAL AFS WALLS .
R2.0 TO EXTERNAL AFS WALLS UNITS 9,10,19.
R1.0 TO INTERNAL WALLS TO GROUND FLOOR LOBBY, STAIR WALLS & GARBAGE ROOM.
R1.5EPS TO U/SIDE SLAB OVER CARPARK, GARBAGE BAY.
R2.0 TO CEILING OF ROOF SLAB.

HEATING & COOLING
1 PHASE DUCTED A/C WITH A 3 STAR RATING FOR COOLING & 3.5 STAR FOR HEATING WITH ZONING TO LIVING & BEDROOM AREAS FOR ALL UNITS.

KITCHEN APPLIANCES
GAS COOKTOP WITH ELECTRIC OVEN TO BE INSTALLED IN ALL KITCHENS.
WELL VENTILATED FRIDGE SPACES.
3.5 STAR DISHWASHER + 3 STAR CLOTHES DRYER.

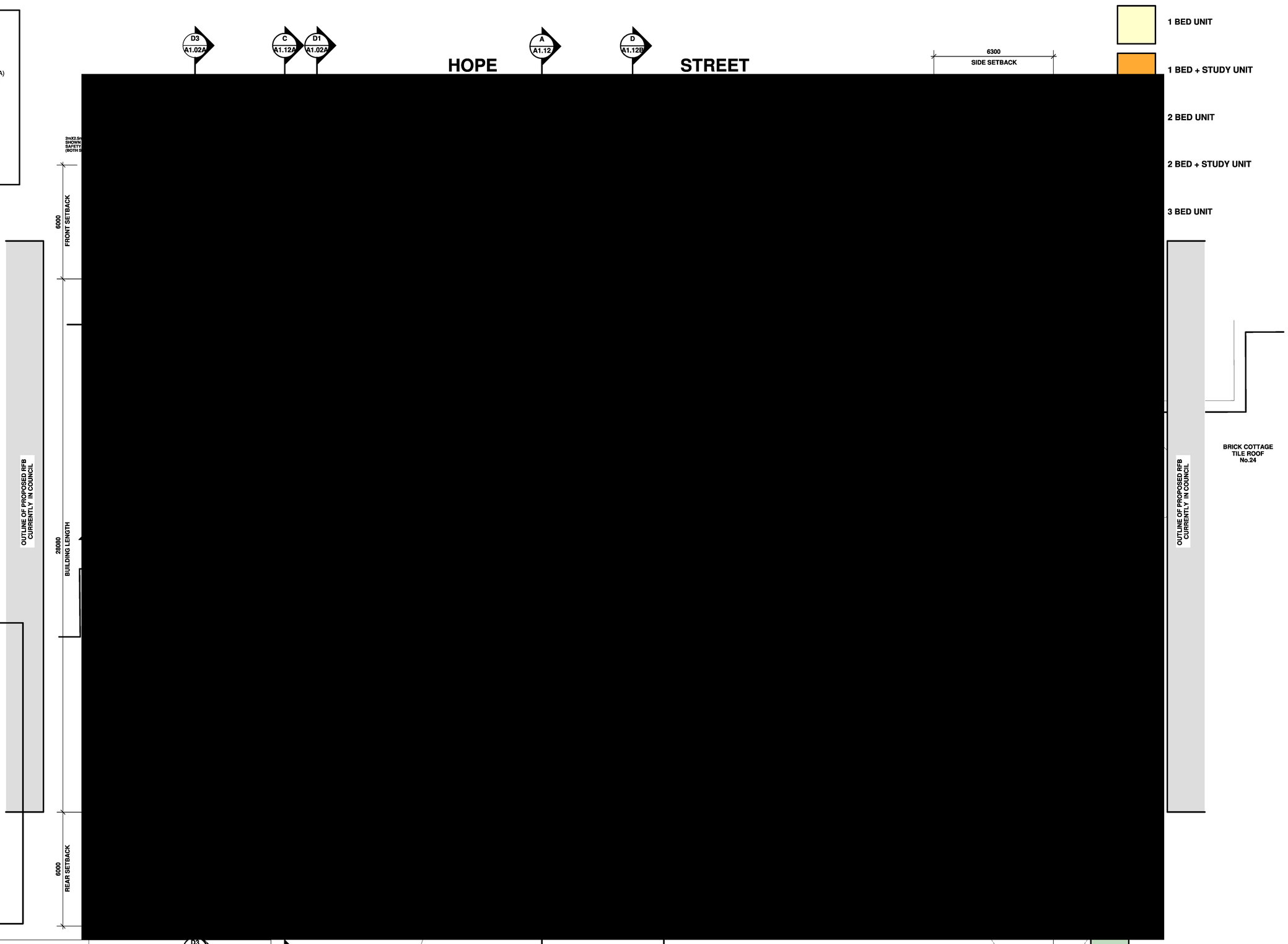
VENTILATION
ALL BATHROOMS, ENSUITES, LAUNDRY & KITCHEN ARE TO HAVE DUCTED MECHANICAL VENTILATION WITH MANUAL ON/OFF SWITCH.

ALL FRIDGE SPACES TO BE WELL VENTILATED.

ARTIFICIAL & NATURAL LIGHTING
PRIMARY TYPE OF LIGHTING TO BE LED OR FLUORESCENT TO ALL AREAS.
NATURAL LIGHTING REQUIRED TO BATHROOM FOR EACH UNIT AS FOLLOWS,
UNITS 7,14,18,23,27,29,30,35,36- 1 BATHROOM

WINDOWS & SKYLIGHTS
WINDOWS TO BE ALUMINIUM FRAMED WITH Uw VALUE 6.70 & SHGCw 0.57 FOR AWNING WINDOWS, Uw VALUE 6.70 & SHGCw 0.70 FOR FIXED,SLIDING WINDOWS & DOUBLE HUNG.
UNITS 9 & 37 TO HAVE Uw VALUE 5.4 & SHGCw 0.58 & UNITS 10 & 19 TO HAVE Uw VALUE 4.8 & SHGCw 0.59 IN ACCORDANCE WITH BASIX CERTIFICATE.

SKYLIGHTS TO BE TIMBER FRAMED DOUBLE GLAZED LOW E ARGON FILLED
Uw VALUE 2.6 & SHGCw 0.24.



PROPOSED PLAN GROUND

Scale: 1:100

NOTE: ALL EXHAUST FANS ARE TO BE SEALED

THIS AREA NOT INCLUDED IN COMMUNAL AREA CALCULATIONS

ADG COMPLIANCE TABLE

CONTROL	REQUIRED	PROPOSED
BUILDING SEPARATION	6-12m	6-12m
LIVING ROOM WIDTH	MIN 3.6m 1BR, 4m 2+ BR	3.7m 1 BR, 4.3m 2+ BR
BEDROOM SIZE	MIN 9-10sqm MIN 3m CLEAR	MIN 11sqm + 3m
COMMUNAL OPEN SPACE 25% OF SITE AREA + 3m	473sqm	GROUND FLOOR 380sqm (310sqm + 70sqm)+ MIN 3m
		5TH FLOOR - 133sqm + MIN 3m
		TOTAL COMMUNAL AREA 513sqm
SOLAR ACCESS (2HR 9AM-3PM)	MIN 85% OF 38 UNITS = 32 UNITS	32 UNITS
LANDSCAPING	1 LARGE TREE OR 2 MEDIUM TREES + 80sqm	2 LARGE TREES + 10+ MEDIUM TREES + 373sqm
DEEP SOIL AREA 7% + 6m	133sqm	288sqm + 6m
PRIVATE OPEN SPACE- GROUND FLOOR	15sqm + 3m	MIN 26sqm + MIN 3m
PRIVATE OPEN SPACE- BALCONY	8-12sqm MIN 2-2.4m	10sqm + 2m
CROSS VENTILATION	60% OF 38 UNITS = 22.8 UNITS	23 UNITS
CEILING HEIGHTS	MIN 2700mm	MIN 2700mm
APARTMENT SIZE	STUDIO 35sqm, 1BR 50sqm,	STUDIO 35sqm, 1BR MIN 50sqm
	2BR 70sqm, 3BR 90sqm	2BR MIN 83sqm, 3BR MIN 115sqm
STORAGE	STUDIO 4m3, 1BR 6m3, 2BR 8m3, 3BR 10m3	STUDIO 4m3, 1BR 6m3, 2BR 8m3, 3BR 10m3

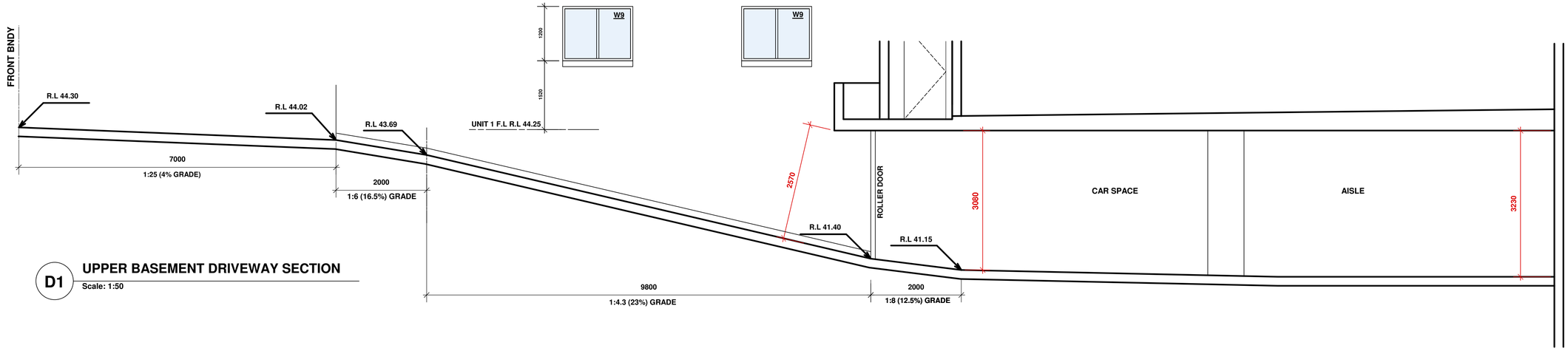
DATE	REV	AMENDMENTS
01.06.20	A	NEW DA ISSUE

1. DO NOT SCALE FROM DRAWING, USE WRITTEN DIMENSIONS ONLY
2. BUILDER TO CHECK AND VERIFY ALL DIMENSIONS & LEVELS PRIOR TO COMMENCEMENT OF WORK.
3. IT IS THE OWNERS RESPONSIBILITY TO ENSURE THAT THE ENGINEER HAS INVESTIGATED SUBSOIL CONDITIONS & DESIGNED ALL STRUCTURAL ELEMENTS TO SUIT.
4. THE DESIGNS & DETAILS CONTAINED ON THIS DRAWING ARE SUPPLIED IN CONFIDENCE & ARE NOT TO BE USED FOR ANY OTHER PURPOSE EXCEPT THAT AUTHORISED BY

BUILDING DESIGN & TECHNOLOGY Pty Ltd
APPLICATION PREPARED BY: MARK MAKHOUL
Shop 2 , 15 Bransgrove St Wentworthville 2145,
PO Box 795 Kings Langley NSW 2147
Ph: 02 9687 0814 Mob: 0412 109 759
E-mail: mark@build-design.com.au
REGISTERED ARCHITECT ZACHARY HAU 9814

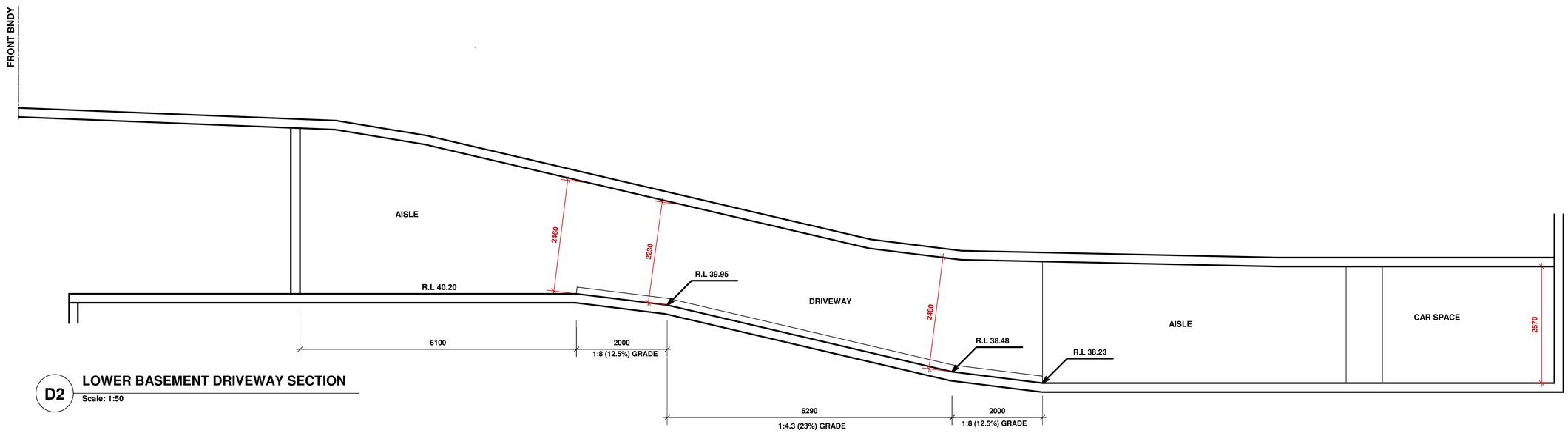
PROJECT :	PROPOSED UNIT DEVELOPMENT LOCATED AT 26-30 HOPE ST PENRITH
TITLE:	PROPOSED GROUND FLOOR PLAN
SCALE :	A1 @ 1:100
DRAWN :	MM
PROJECT DATE :	FEB 2020
CHECKED :	ZH
REV :	A
PROJECT No.	201727A
DWG No.	DA1.03

T.N M.M



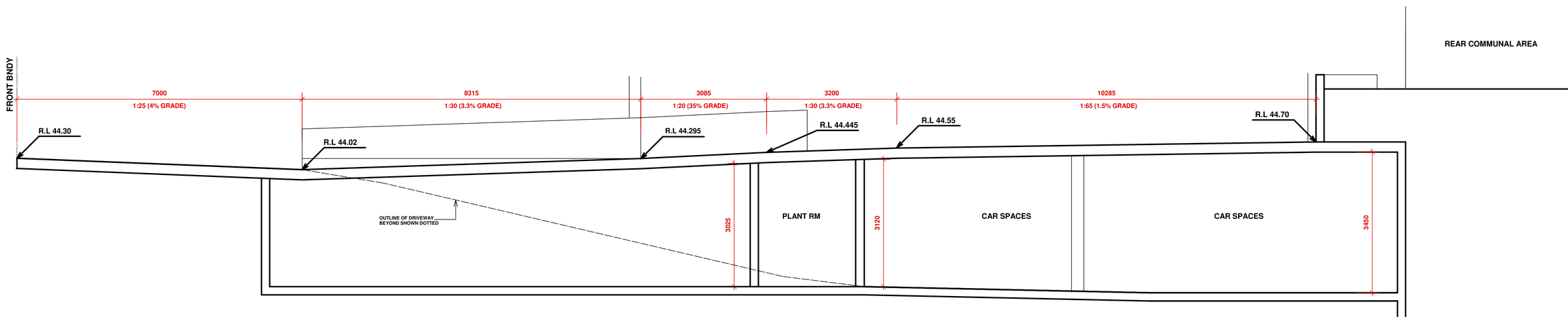
D1 UPPER BASEMENT DRIVEWAY SECTION

Scale: 1:50



D2 LOWER BASEMENT DRIVEWAY SECTION

Scale: 1:50



D3 GARBAGE TRUCK DRIVEWAY SECTION

Scale: 1:50

DATE	REV	AMENDMENTS
01.06.20	A	DA ISSUE

1. DO NOT SCALE FROM DRAWING, USE WRITTEN DIMENSIONS ONLY
2. BUILDER TO CHECK AND VERIFY ALL DIMENSIONS & LEVELS PRIOR TO COMMENCEMENT OF WORK.
3. IT IS THE OWNERS RESPONSIBILITY TO ENSURE THAT THE ENGINEER HAS INVESTIGATED SUBSOIL CONDITIONS & DESIGNED ALL STRUCTURAL ELEMENTS TO SUIT.
4. THE DESIGNS & DETAILS CONTAINED ON THIS DRAWING ARE SUPPLIED IN CONFIDENCE & ARE NOT TO BE USED FOR ANY OTHER PURPOSE EXCEPT THAT AUTHORISED BY

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E-mail: mark@build-design.com.au
REGISTERED ARCHITECT ZACHARY HAU 9914

PROJECT : PROPOSED UNIT DEVELOPMENT LOCATED AT 26-30 HOPE ST PENRITH

TITLE: BASEMENT DRIVEWAY SECTIONS

SCALE :	A1 @ 1:50	DRAWN :	MM
PROJECT DATE :	FEB 2020	CHECKED :	ZH REV : A
PROJECT No.	201727A	DWG No.	A1.02A

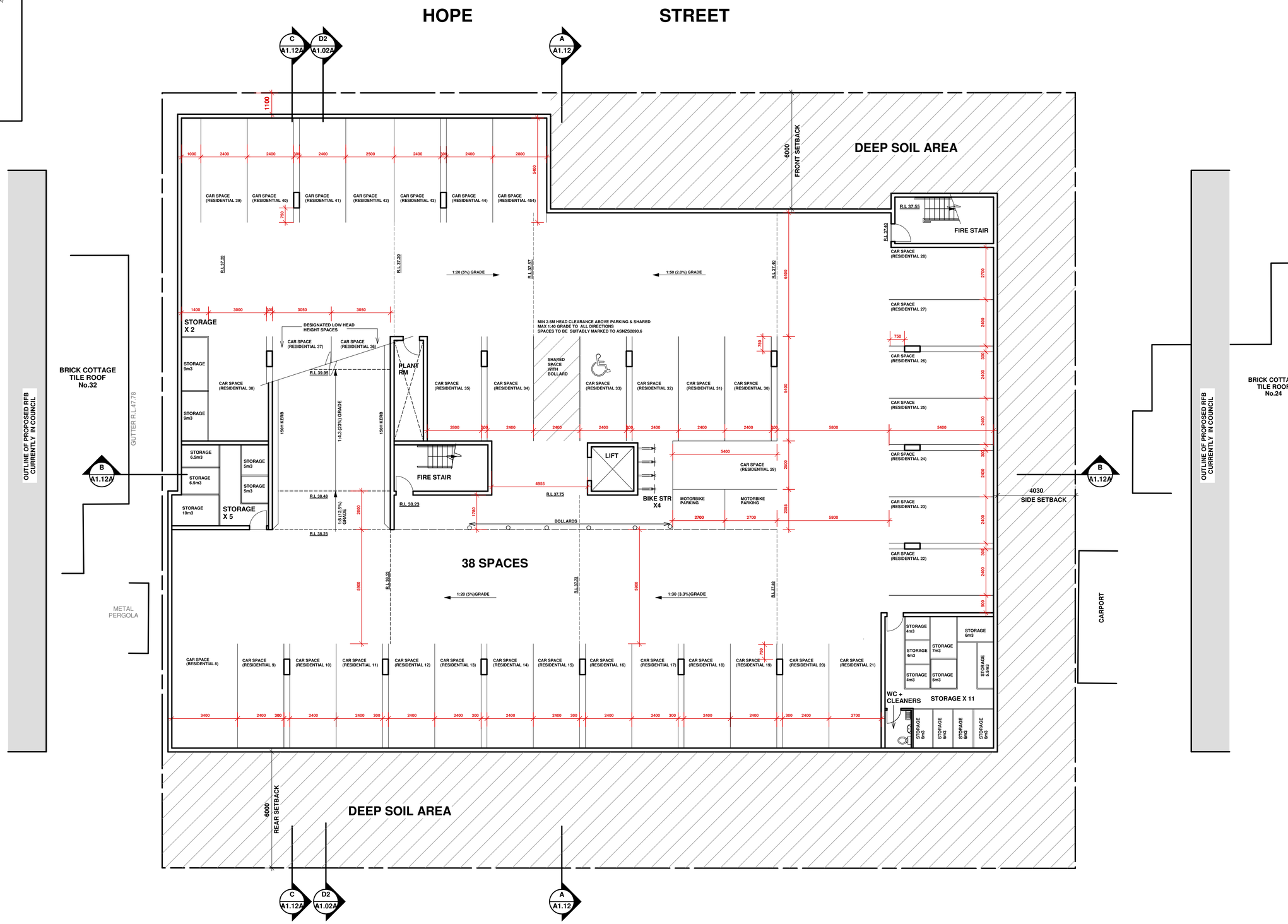
T.N M.M

APPENDIX B

PROPOSED ARCHITECTURAL PLANS

SITE CALCULATIONS

SITE AREA:	1894.4sqm
LANDSCAPED/DEEP SOIL AREAS:	
LANDSCAPED AREA AT REAR:	488sqm
LANDSCAPED AREA AT FRONT:	185sqm
TOTAL LANDSCAPED AREA:	673sqm (35.5% OF TOTAL SITE AREA)
REQUIRED AREA:	663sqm (35% OF TOTAL SITE AREA)
GROUND FLOOR COMMUNAL:	380sqm(70sqm INTERNAL)
LEVEL 5 COMMUNAL:	133sqm
TOTAL COMMUNAL:	513sqm (27% OF SITE AREA)
CAR PARKING:	
VISITOR:	8 (INCLUDES 1 WASHBAY)
RESIDENT:	45 (INCLUDES 4 ACCESSIBLE)
SERVICE VEHICLE:	1
MEDICAL SPACES:	7
TOTAL REQUIRED:	59
TOTAL PROVIDED:	61
BIKE PARKING:	12
MOTORBIKE PARKING:	2



PROPOSED LOWER BASEMENT

Scale: 1:100

DATE	REV	AMENDMENTS
24.08.21	B	NEW DA ISSUE
01.06.20	A	DA ISSUE

1. DO NOT SCALE FROM DRAWING, USE WRITTEN DIMENSIONS ONLY
2. BUILDER TO CHECK AND VERIFY ALL DIMENSIONS & LEVELS PRIOR TO COMMENCEMENT OF WORK.
3. IT IS THE OWNERS RESPONSIBILITY TO ENSURE THAT THE ENGINEER HAS INVESTIGATED SUBSOIL CONDITIONS & DESIGNED ALL STRUCTURAL ELEMENTS TO SUIT.
4. THE DESIGNS & DETAILS CONTAINED ON THIS DRAWING ARE SUPPLIED IN CONFIDENCE & ARE NOT TO BE USED FOR ANY OTHER PURPOSE EXCEPT THAT AUTHORISED BY

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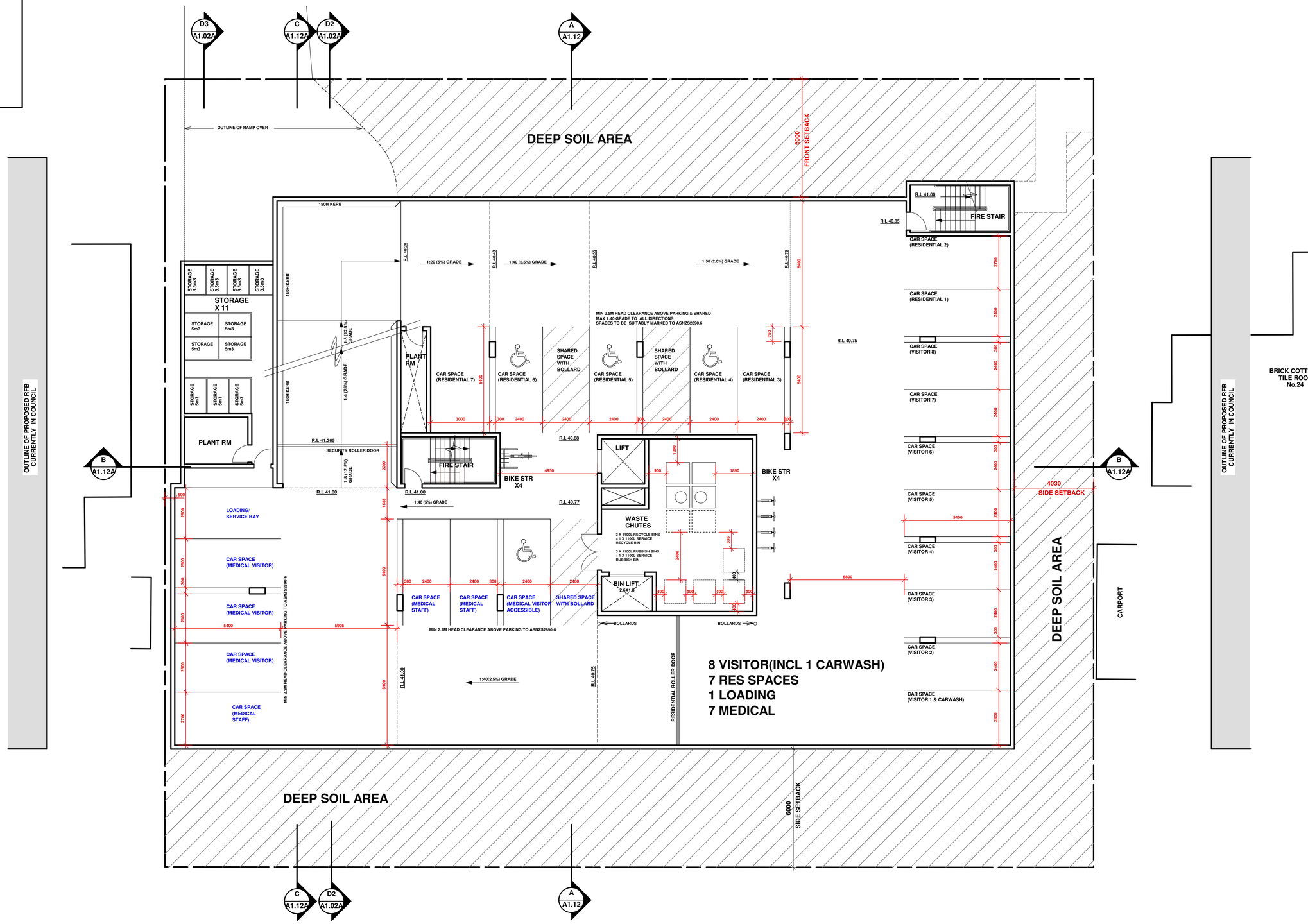
PO Box 795 Kings Langley NSW 2147
Ph: 02 9687 0814 Mob: 0412 199 759
E-mail: mark@build-design.com.au
REGISTERED ARCHITECT ZACHARY HAU 9914

PROJECT :	PROPOSED UNIT DEVELOPMENT LOCATED AT 26-30 HOPE ST PENRITH
TITLE:	LOWER BASEMENT PLAN
SCALE :	A1 @ 1:100
DRAWN :	MM
PROJECT DATE :	FEB 2020
CHECKED :	ZH
REV :	B
PROJECT No.	201727A
DWG No.	DA1.02

T.N M.M

SITE CALCULATIONS

SITE AREA:	1894.4sqm
LANDSCAPED/DEEP SOIL AREAS:	
LANDSCAPED AREA AT REAR:	488sqm
LANDSCAPED AREA AT FRONT:	185sqm
TOTAL LANDSCAPED AREA:	673sqm (35.5% OF TOTAL SITE AREA)
REQUIRED AREA:	663sqm (35% OF TOTAL SITE AREA)
GROUND FLOOR COMMUNAL:	380sqm(70sqm INTERNAL)
LEVEL 5 COMMUNAL:	133sqm
TOTAL COMMUNAL:	513sqm (27% OF SITE AREA)
CAR PARKING:	
VISITOR:	8 (INCLUDES 1 WASHBAY)
RESIDENT:	45 (INCLUDES 4 ACCESSIBLE)
SERVICE VEHICLE:	1
MEDICAL SPACES:	7
TOTAL REQUIRED:	59
TOTAL PROVIDED:	61
BIKE PARKING:	12
MOTORBIKE PARKING:	2



PROPOSED UPPER BASEMENT

Scale: 1:100

DATE	REV	AMENDMENTS
24.08.21	B	NEW DA ISSUE
01.06.20	A	DA ISSUE

1. DO NOT SCALE FROM DRAWING, USE WRITTEN DIMENSIONS ONLY
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E-mail: mark@build-design.com.au
REGISTERED ARCHITECT ZACHARY HAU 9914

PROJECT :	PROPOSED UNIT DEVELOPMENT LOCATED AT 26-30 HOPE ST PENRITH
TITLE:	PROPOSED UPPER BASEMENT PLAN
SCALE :	A1 @ 1:100
DRAWN :	MM
PROJECT DATE :	FEB 2020
CHECKED :	ZH
REV :	B
PROJECT No.	201727A
DWG No.	DA1.01

T.N M.M

SITE CALCULATIONS

SITE AREA:	1894.4sqm
LANDSCAPED/DEEP SOIL AREAS:	
LANDSCAPED AREA AT REAR:	488sqm
LANDSCAPED AREA AT FRONT:	185sqm
TOTAL LANDSCAPED AREA:	673sqm (35.5% OF TOTAL SITE AREA)
REQUIRED AREA:	663sqm (35% OF TOTAL SITE AREA)
GROUND FLOOR COMMUNAL:	380sqm(70sqm INTERNAL)
LEVEL 5 COMMUNAL:	133sqm
TOTAL COMMUNAL:	513sqm (27% OF SITE AREA)
CAR PARKING:	
VISITOR:	8 (INCLUDES 1 WASHBAY)
RESIDENT:	45 (INCLUDES 4 ACCESSIBLE)
SERVICE VEHICLE:	1
MEDICAL SPACES:	7
TOTAL REQUIRED:	59
TOTAL PROVIDED:	61
BIKE PARKING:	12
MOTORBIKE PARKING:	2

UNIT AREA BREAKDOWN

UNIT 1 - 80sqm (1 BED + STUDY) + 26sqm COURTYARD
UNIT 2 - 67sqm (1 BED) + 23sqm COURTYARD
UNIT 3 - 100sqm (2 BED) + 85sqm COURTYARD
UNIT 4/11/20 - 93sqm (2 BED) + 18sqm BALC
UNITS 5/12/21 - 57sqm (1 BED) + 11sqm BALC

UNITS 6/13/22 - 74sqm (2 BED) + 15sqm BALC
UNITS 7 - 83sqm (2 BED) + 23sqm BALC
UNITS 8 - 62sqm (1 BED) + 8sqm BALC
UNITS 9 - 104sqm (2 BED) + 10sqm BALC
UNITS 10 - 108sqm (2 BED) + 42sqm BALC

UNITS 14/23 - 86sqm (2 BED) + 23sqm BALC
UNITS 1524 - 55sqm (1 BED) + 8sqm BALC
UNITS 16/25 - 99sqm (2 BED) + 11sqm BALC
UNITS 17/26 - 89sqm (2 BED) + 16sqm BALC
UNITS 18 - 75sqm (2 BED) + 16sqm BALC

UNITS 19 - 89sqm (2 BED) + 20sqm BALC

UNITS 27 - 57sqm (1 BED) + 16sqm BALC
UNITS 28 - 110sqm (3 BED) + 20sqm BALC
UNITS 29 - 110sqm (3 BED) + 20sqm BALC
UNITS 30 - 58sqm (1 BED) + 15sqm BALC
UNITS 31 - 97sqm (2 BED) + 26sqm BALC

UNITS 32 - 108sqm (3 BED) + 13sqm BALC
UNITS 33 - 77sqm (2 BED) + 19sqm BALC
UNITS 34 - 73sqm (1 BED + STUDY) + 9sqm BALC
UNITS 35 - 60sqm (1 BED) + 20sqm BALC

UNITS 36 - 95sqm (2 BED) + 26sqm BALC
UNITS 37 - 124sqm (3 BED) + 14sqm BALC
UNITS 38 - 128sqm (3 BED) + 22sqm BALC

TOTAL 1 BEDS = 12
TOTAL 1 BED + STUDY = 2
TOTAL 2 BEDS = 19
TOTAL 3 BEDS = 5
TOTAL UNITS = 38

BASIX INCLUSIONS CERT 1106425M:

HOT WATER UNIT
5.5 STAR GAS INSTANTANEOUS HOT WATER UNIT FOR EACH UNIT TO BEST LOCATION BY OTHERS.

WATER SAVING FITTINGS
MIN 4 STAR SHOWER HEADS, WATER SAVING FITTINGS & DUAL FLUSH 4 STAR TOILETS ARE TO BE INSTALLED TO EACH UNIT.
2.5 STAR DISHWASHER TO BE INSTALLED.

INSULATION
R2.0 BATT INSULATION TO CEILINGS BELOW ROOF SLAB.
R1.0EPS TO EXTERNAL AFS WALLS, L1-3 & 5 LOBBY & GARBAGE ROOM.
R2.0EPS TO EXTERNAL AFS WALLS UNITS 10,19.
R1.0 TO INTERNAL WALLS TO GROUND FLOOR LOBBY, STAIR WALLS & GARBAGE ROOM.
R1.5EPS TO U/SIDE SLAB OVER CARPARK, GARBAGE BAY.
R2.0 IN CEILINGS BELOW SLAB.

HEATING & COOLING
1 PHASE DUCTED A/C WITH A 2.5 STAR RATING FOR COOLING & 3.0 STAR FOR HEATING WITH ZONING TO LIVING & BEDROOM AREAS FOR ALL UNITS.

KITCHEN APPLIANCES
GAS COOKTOP WITH ELECTRIC OVEN TO BE INSTALLED IN ALL KITCHENS.
WELL VENTILATED FRIDGE SPACES.
3.5 STAR DISHWASHER + 1.5 STAR CLOTHES DRYER.

VENTILATION
ALL BATHROOMS, ENSUITES, LAUNDRY & KITCHEN ARE TO HAVE DUCTED MECHANICAL VENTILATION WITH MANUAL ON/OFF SWITCH.

ALL FRIDGE SPACES TO BE WELL VENTILATED.

ARTIFICIAL & NATURAL LIGHTING
PRIMARY TYPE OF LIGHTING TO BE LED OR FLUORESCENT TO ALL AREAS.
NATURAL LIGHTING REQUIRED TO BATHROOMS/KITCHENS FOR EACH UNIT AS FOLLOWS,
UNITS 7,14,23,29,35,37- 1 BATHROOM
UNITS 1,4,11,20- 1 KITCHEN

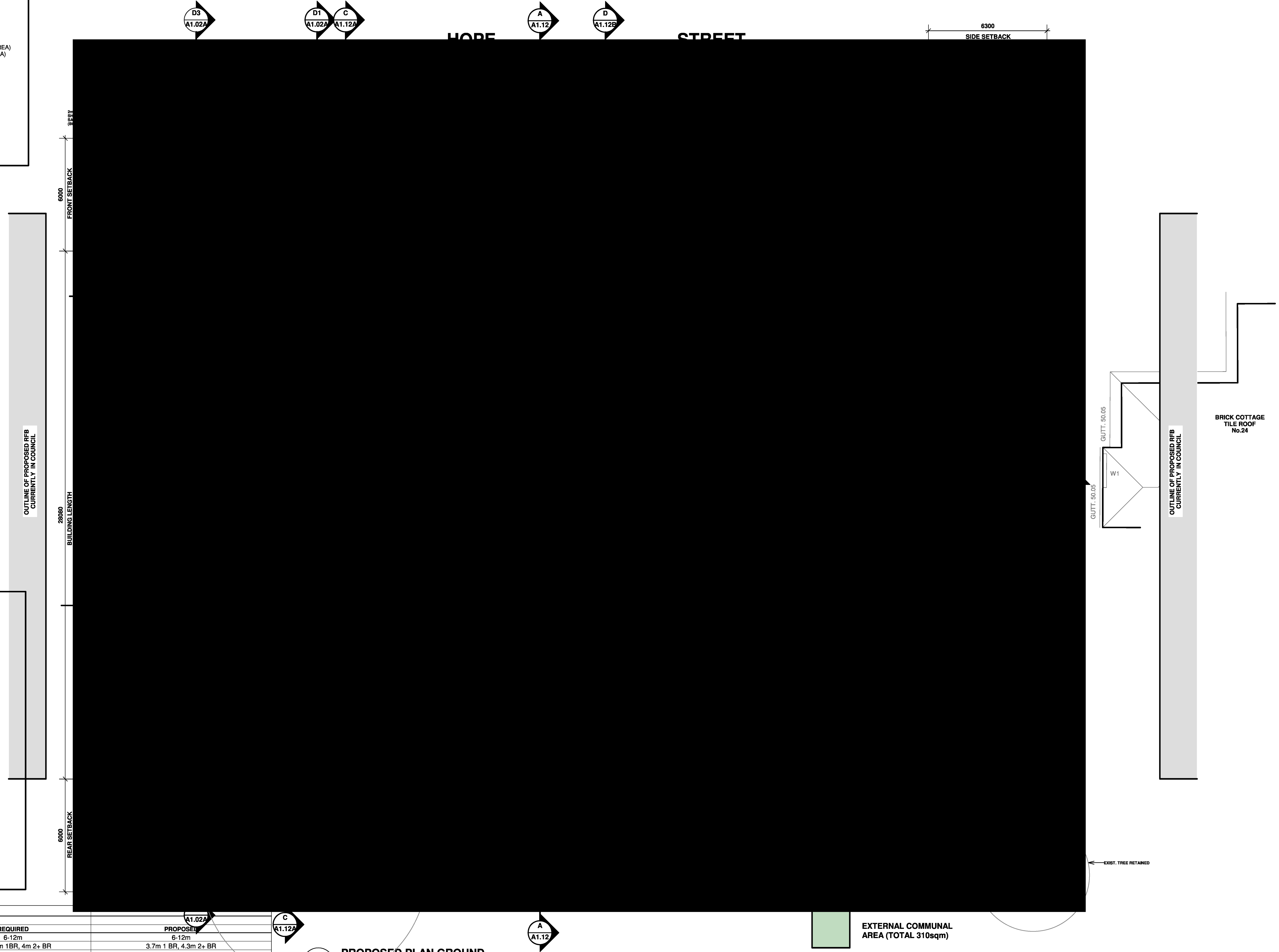
PHOTOVOLTAIC (SOLAR PANEL) SUPPLY
A PHOTOVOLTAIC SYSTEM TO BE INSTALLED WITH A CAPACITY TO GENERATE MIN 5.0KW.

WINDOWS & SKYLIGHTS
WINDOWS TO BE ALUMINIUM FRAMED WITH Uw VALUE 6.70 & SHGCw 0.57 FOR AWNING WINDOWS, Uw VALUE 6.70 & SHGCw 0.70 FOR FIXED,SLIDING WINDOWS & DOUBLE HUNG.
UNIT 10 TO HAVE Uw VALUE 4.8 & SHGCw 0.59, UNIT 18 TO HAVE Uw VALUE 5.4 & SHGCw 0.58,
UNIT 19 TO HAVE Uw VALUE 4.1 & SHGCw, UNIT 37 TO HAVE Uw VALUE 5.4 & SHGCw 0.58 +
Uw VALUE 5.4 & SHGCw 0.49 FOR AWNING WINDOWS IN ACCORDANCE WITH BASIX CERTIFICATE.

SKYLIGHTS TO BE TIMBER FRAMED DOUBLE GLAZED LOW E ARGON FILLED Uw VALUE 2.6 & SHGCw 0.21 FOR UNIT 35.

ADG COMPLIANCE TABLE

CONTROL	REQUIRED	PROPOSED
BUILDING SEPARATION	6-12m	6-12m
LIVING ROOM WIDTH	MIN 3.6m 1BR, 4m 2+ BR	3.7m 1 BR, 4.3m 2+ BR
BEDROOM SIZE	MIN 9-10sqm MIN 3m CLEAR	MIN 11sqm + 3m
COMMUNAL OPEN SPACE 25% OF SITE AREA + 3m	473sqm	GROUND FLOOR 402sqm (332sqm + 70sqm)+ MIN 3m
		5TH FLOOR - 133sqm + MIN 3m
		TOTAL COMMUNAL AREA 535qm
SOLAR ACCESS (2HR 9AM-3PM)	MIN 85% OF 38 UNITS = 32 UNITS	32 UNITS
LANDSCAPING	1 LARGE TREE OR 2 MEDIUM TREES + 80sqm	2 LARGE TREES + 10+ MEDIUM TREES + 373sqm
DEEP SOIL AREA 7% + 6m	133sqm	288sqm + 6m
PRIVATE OPEN SPACE- GROUND FLOOR	15sqm + 3m	MIN 23sqm + MIN 3m
PRIVATE OPEN SPACE- BALCONY	8-12sqm MIN 2-2.4m	10sqm + 2m
CROSS VENTILATION	60% OF 38 UNITS = 22.8 UNITS	25 UNITS
CEILING HEIGHTS	MIN 2700mm	MIN 2700mm
APARTMENT SIZE	STUDIO 35sqm, 1BR 50sqm,	STUDIO 35sqm, 1BR MIN 50sqm
	2BR 70sqm, 3BR 90sqm	2BR MIN 83sqm, 3BR MIN 115sqm
STORAGE	STUDIO 4m3, 1BR 6m3, 2BR 8m3, 3BR 10m3	STUDIO 4m3, 1BR 6m3, 2BR 8m3, 3BR 10m3



[redacted]

PROPOSED PLAN GROUND
Scale: 1:100

NOTE: ALL EXHAUST FANS ARE TO BE SEALED

THIS AREA NOT INCLUDED IN COMMUNAL AREA CALCULATIONS

EXTERNAL COMMUNAL AREA (TOTAL 310sqm)

NEW MEDICAL SUITE (TOTAL 90sqm)

DATE	REV	AMENDMENTS
24.08.21	C	NEW DA ISSUE

1. DO NOT SCALE FROM DRAWING, USE WRITTEN DIMENSIONS ONLY
2. BUILDER TO CHECK AND VERIFY ALL DIMENSIONS & LEVELS PRIOR TO COMMENCEMENT OF WORK.
3. IT IS THE OWNERS RESPONSIBILITY TO ENSURE THAT THE ENGINEER HAS INVESTIGATED SUBSOIL CONDITIONS & DESIGNED ALL STRUCTURAL ELEMENTS TO SUIT.
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E-mail: mark@build-design.com.au
REGISTERED ARCHITECT ZACHARY HAU 9914

PROJECT :	PROPOSED UNIT DEVELOPMENT LOCATED AT 26-30 HOPE ST PENRITH
TITLE:	PROPOSED GROUND FLOOR PLAN
SCALE :	A1 @ 1:100
DRAWN :	MM
PROJECT DATE :	FEB 2020
CHECKED :	ZH
REV :	C
PROJECT No.	201727A
DWG No.	DA1.03

T.N M.M

SITE CALCULATIONS

SITE AREA:	1894.4sqm
LANDSCAPED/DEEP SOIL AREAS:	
LANDSCAPED AREA AT REAR:	488sqm
LANDSCAPED AREA AT FRONT:	185sqm
TOTAL LANDSCAPED AREA:	673sqm (35.5% OF TOTAL SITE AREA)
REQUIRED AREA:	663sqm (35% OF TOTAL SITE AREA)
GROUND FLOOR COMMUNAL:	402sqm(70sqm INTERNAL)
LEVEL 5 COMMUNAL:	133sqm
TOTAL COMMUNAL:	535sqm (28% OF SITE AREA)
CAR PARKING:	
VISITOR:	10 (INCLUDES 1 WASHBAY)
RESIDENT:	50 (INCLUDES 4 ACCESSIBLE)
SERVICE VEHICLE:	1
TOTAL REQUIRED:	52
TOTAL PROVIDED:	61
BIKE PARKING:	12
MOTORBIKE PARKING:	2

UNIT AREA BREAKDOWN

UNIT 1 - 80sqm (1 BED + STUDY) + 26sqm COURTYARD
UNIT 2 - 67sqm (1 BED) + 23sqm COURTYARD
UNIT 3 - 100sqm (2 BED) + 85sqm COURTYARD
UNIT 4/11/20 - 93sqm (2 BED) + 18sqm BALC
UNITS 5/12/21 - 57sqm (1 BED) + 11sqm BALC

UNITS 6/13/22 - 74sqm (2 BED) + 15sqm BALC
UNITS 7 - 83sqm (2 BED) + 23sqm BALC
UNITS 8 - 62sqm (1 BED) + 8sqm BALC
UNITS 9 - 104sqm (2 BED) + 10sqm BALC
UNITS 10 - 108sqm (2 BED) + 42sqm BALC

UNITS 14/23 - 86sqm (2 BED) + 23sqm BALC
UNITS 15/24 - 55sqm (1 BED) + 8sqm BALC
UNITS 16/25 - 99sqm (2 BED) + 11sqm BALC
UNITS 17/26 - 89sqm (2 BED) + 16sqm BALC
UNITS 18 - 75sqm (2 BED) + 16sqm BALC

UNITS 19 - 89sqm (2 BED) + 20sqm BALC

UNITS 27 - 57sqm (1 BED) + 16sqm BALC
UNITS 28 - 110sqm (3 BED) + 20sqm BALC
UNITS 29 - 110sqm (3 BED) + 20sqm BALC
UNITS 30 - 58sqm (1 BED) + 15sqm BALC
UNITS 31 - 97sqm (2 BED) + 26sqm BALC

UNITS 32 - 108sqm (3 BED) + 13sqm BALC
UNITS 33 - 77sqm (2 BED) + 19sqm BALC
UNITS 34 - 73sqm (1 BED + STUDY) + 9sqm BALC
UNITS 35 - 60sqm (1 BED) + 20sqm BALC

UNITS 36 - 95sqm (2 BED) + 26sqm BALC
UNITS 37 - 124sqm (3 BED) + 14sqm BALC
UNITS 38 - 128sqm (3 BED) + 22sqm BALC

TOTAL 1 BEDS = 10
TOTAL 1 BED + STUDY = 2
TOTAL 2 BEDS = 21
TOTAL 3 BEDS = 5
TOTAL UNITS = 38

BASIX INCLUSIONS CERT 1106425M:

HOT WATER UNIT
5.5 STAR GAS INSTANTANEOUS HOT WATER UNIT FOR EACH UNIT
TO BEST LOCATION BY OTHERS.

WATER SAVING FITTINGS
MIN 4 STAR SHOWER HEADS, WATER SAVING FITTINGS & DUAL FLUSH 4 STAR
TOILETS ARE TO BE INSTALLED TO EACH UNIT.
2.5 STAR DISHWASHER TO BE INSTALLED.

INSULATION
R2.0 BATT INSULATION TO CEILINGS BELOW ROOF SLAB.
R1.0EPS TO EXTERNAL AFS WALLS, L1-3 & 5 LOBBY & GARBAGE ROOM.
R2.0EPS TO EXTERNAL AFS WALLS UNITS 10,19.
R1.0 TO INTERNAL WALLS TO GROUND FLOOR LOBBY, STAIR WALLS & GARBAGE ROOM.
R1.5EPS TO U/SIDE SLAB OVER CARPARK, GARBAGE BAY.
R2.0 IN CEILINGS BELOW SLAB.

HEATING & COOLING
1 PHASE DUCTED A/C WITH A 2.5 STAR RATING FOR COOLING & 3.0 STAR FOR HEATING WITH
ZONING TO LIVING & BEDROOM AREAS FOR ALL UNITS.

KITCHEN APPLIANCES
GAS COOKTOP WITH ELECTRIC OVEN TO BE INSTALLED IN ALL KITCHENS.
WELL VENTILATED FRIDGE SPACES.
3.5 STAR DISHWASHER + 1.5 STAR CLOTHES DRYER.

VENTILATION
ALL BATHROOMS, ENSUITES, LAUNDRY & KITCHEN ARE TO HAVE DUCTED MECHANICAL
VENTILATION WITH MANUAL ON/OFF SWITCH.

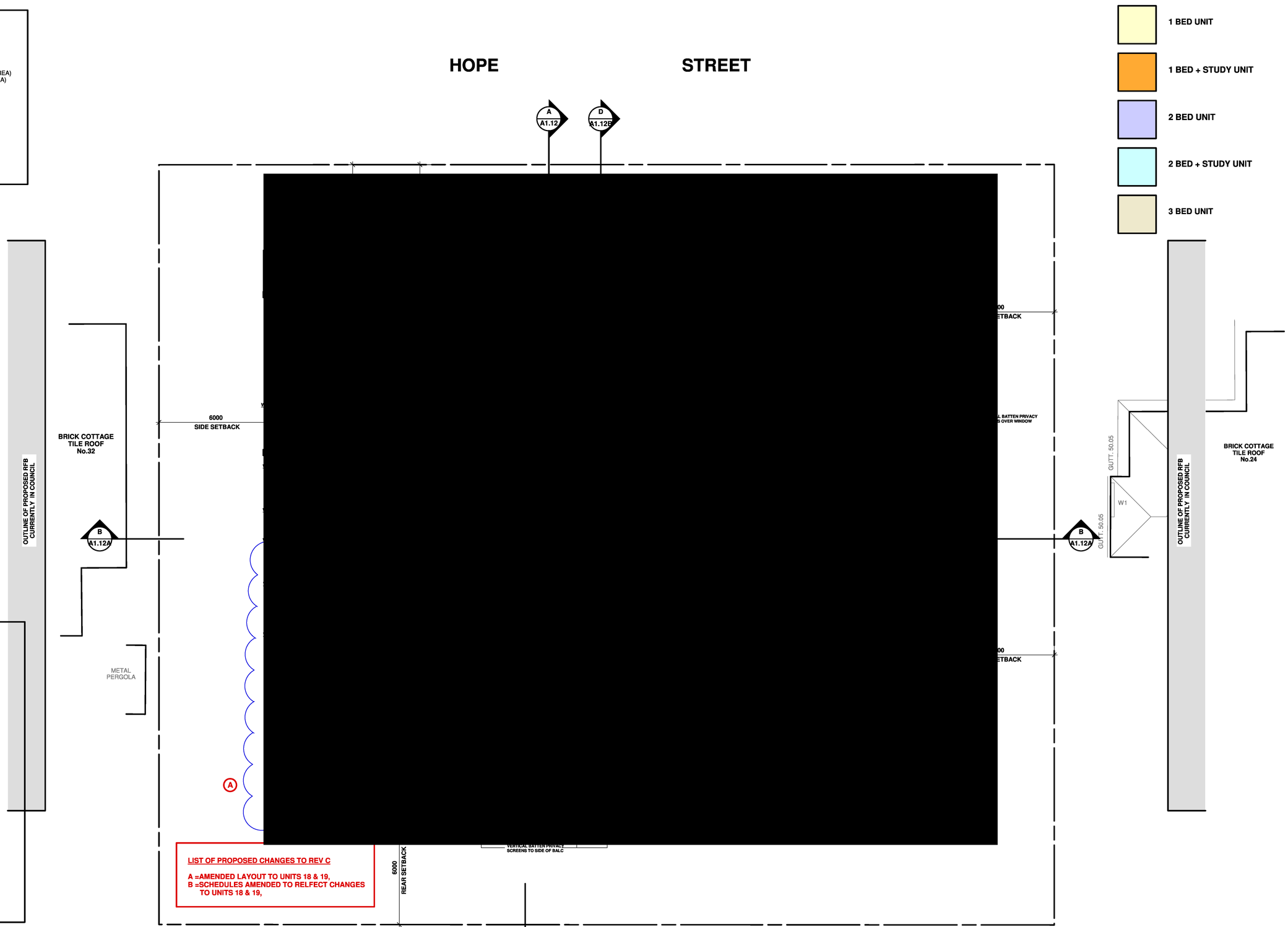
ALL FRIDGE SPACES TO BE WELL VENTILATED.

ARTIFICIAL & NATURAL LIGHTING
PRIMARY TYPE OF LIGHTING TO BE LED OR FLUORESCENT TO ALL AREAS.
NATURAL LIGHTING REQUIRED TO BATHROOMS/KITCHENS FOR EACH UNIT AS FOLLOWS,
UNITS 7,14,23,29,35,37- 1 BATHROOM
UNITS 1,4,11,20- 1 KITCHEN

PHOTOVOLTAIC (SOLAR PANEL) SUPPLY
A PHOTOVOLTAIC SYSTEM TO BE INSTALLED WITH A CAPACITY TO GENERATE MIN 5.0KW.

WINDOWS & SKYLIGHTS
WINDOWS TO BE ALUMINIUM FRAMED WITH Uw VALUE 6.70 & SHGCw 0.57 FOR AWNING
WINDOWS, Uw VALUE 6.70 & SHGCw 0.70 FOR FIXED,SLIDING WINDOWS & DOUBLE HUNG.
UNIT 10 TO HAVE Uw VALUE 4.8 & SHGCw 0.59, UNIT 18 TO HAVE Uw VALUE 5.4 & SHGCw 0.58,
UNIT 19 TO HAVE Uw VALUE 4.1 & SHGCw, UNIT 37 TO HAVE Uw VALUE 5.4 & SHGCw 0.58 +
Uw VALUE 5.4 & SHGCw 0.49 FOR AWNING WINDOWS IN ACCORDANCE WITH BASIX CERTIFICATE.

SKYLIGHTS TO BE TIMBER FRAMED DOUBLE GLAZED LOW E ARGON FILLED
Uw VALUE 2.6 & SHGCw 0.21 FOR UNIT 35.



LIST OF PROPOSED CHANGES TO REV C

A =AMENDED LAYOUT TO UNITS 18 & 19,
B =SCHEDULES AMENDED TO RELFECT CHANGES TO UNITS 18 & 19,

ADG COMPLIANCE TABLE

CONTROL	REQUIRED	PROPOSED
BUILDING SEPARATION	6-12m	6-12m
LIVING ROOM WIDTH	MIN 3.6m 1BR, 4m 2+ BR	3.7m 1 BR, 4.3m 2+ BR
BEDROOM SIZE	MIN 9-10sqm MIN 3m CLEAR	MIN 11sqm + 3m
COMMUNAL OPEN SPACE 25% OF SITE AREA + 3m	473sqm	GROUND FLOOR 402sqm (332sqm + 70sqm)+ MIN 3m
		5TH FLOOR - 133sqm + MIN 3m
		TOTAL COMMUNAL AREA 535qm
SOLAR ACCESS (2HR 9AM-3PM)	MIN 85% OF 38 UNITS = 32 UNITS	32 UNITS
LANDSCAPING	1 LARGE TREE OR 2 MEDIUM TREES + 80sqm	2 LARGE TREES + 10+ MEDIUM TREES + 373sqm
DEEP SOIL AREA 7% + 6m	133sqm	288sqm + 6m
PRIVATE OPEN SPACE- GROUND FLOOR	15sqm + 3m	MIN 23sqm + MIN 3m
PRIVATE OPEN SPACE- BALCONY	8-12sqm MIN 2-2.4m	10sqm + 2m
CROSS VENTILATION	60% OF 38 UNITS = 22.8 UNITS	25 UNITS
CEILING HEIGHTS	MIN 2700mm	MIN 2700mm
APARTMENT SIZE	STUDIO 35sqm, 1BR 50sqm, 2BR 70sqm, 3BR 90sqm	STUDIO 35sqm, 1BR MIN 50sqm 2BR MIN 83sqm, 3BR MIN 115sqm
STORAGE	STUDIO 4m3, 1BR 6m3, 2BR 8m3, 3BR 10m3	STUDIO 4m3, 1BR 6m3, 2BR 8m3, 3BR 10m3

A A1.12

PROPOSED PLAN LEVEL 2

Scale: 1:100

NOTE: ALL EXHAUST FANS ARE TO BE SEALED

DATE	REV	AMENDMENTS
26.08.21	C	MOD 4.55 APPLICATION FOR CHANGES TO UNITS 18 & 19
11.11.20	B	UPDATED ISSUE AS CLOUDED
01.06.20	A	DA ISSUE

1. DO NOT SCALE FROM DRAWING, USE WRITTEN DIMENSIONS ONLY
2. BUILDER TO CHECK AND VERIFY ALL DIMENSIONS & LEVELS PRIOR TO COMMENCEMENT OF WORK.
3. IT IS THE OWNERS RESPONSIBILITY TO ENSURE THAT THE ENGINEER HAS INVESTIGATED SUBSOIL CONDITIONS & DESIGNED ALL STRUCTURAL ELEMENTS TO SUIT.
4. THE DESIGNS & DETAILS CONTAINED ON THIS DRAWING ARE SUPPLIED IN CONFIDENCE & ARE NOT TO BE USED FOR ANY OTHER PURPOSE EXCEPT THAT AUTHORISED BY

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REGISTERED ARCHITECT ZACHARY HAU 9814

PROJECT :	**PROPOSED UNIT DEVELOPMENT LOCATED AT 26-30 HOPE ST PENRITH**
TITLE:	**PROPOSED PLAN LEVEL 2**
SCALE :	A1 @ 1:100
DRAWN :	MM
PROJECT DATE :	FEB 2020
CHECKED :	ZH
REV :	C
PROJECT No.	201727A
DWG No.	DA1.05

T.N M.M