







01: PREVIOUS 3D DIGITAL MODEL - AERIAL SOUTH EAST

03: PREVIOUS MODIFIED 3D DIGITAL MODEL - AERIAL SOUTH EAST



02: PREVIOUS MODIFIED 3D DIGITAL MODEL - AERIAL SOUTH EAST



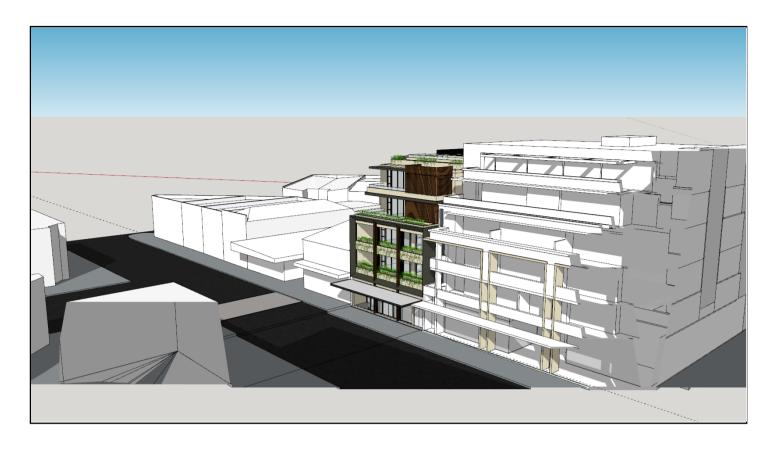
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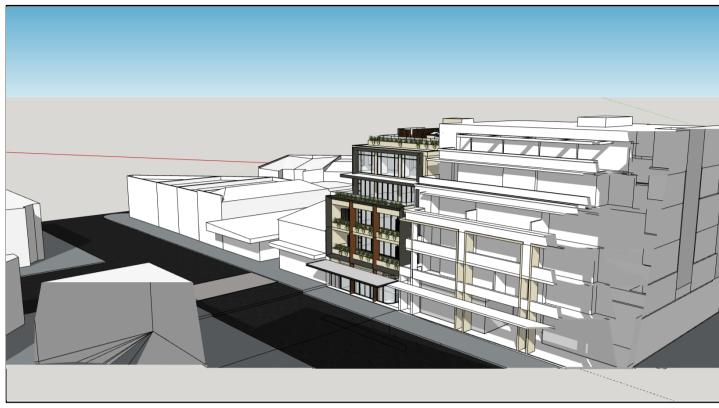
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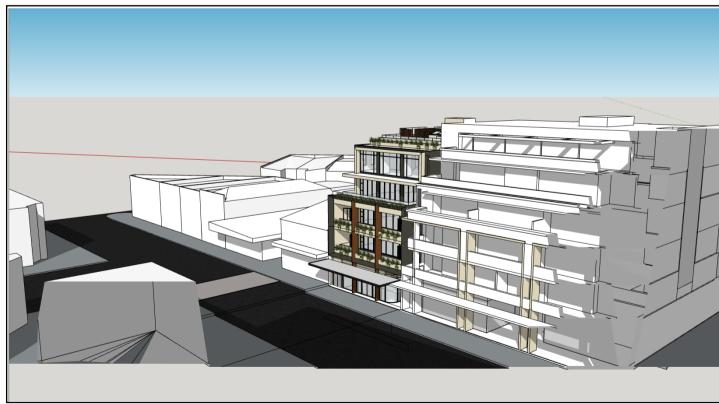


01: PREVIOUS 3D DIGITAL MODEL - FROM INTERCONTINENTAL



02: PREVIOUS MODIFIED 3D DIGITAL MODEL - FROM INTERCONTINENTAL

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04: MODIFIED 3D DIGITAL MODEL - FROM INTERCONTINENTAL

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01: PREVIOUS 3D DIGITAL MODEL - FROM KNOX LANE SOUTH WEST

03: PREVIOUS MODIFIED 3D DIGITAL MODEL - FROM KNOX LANE SOUTH WEST

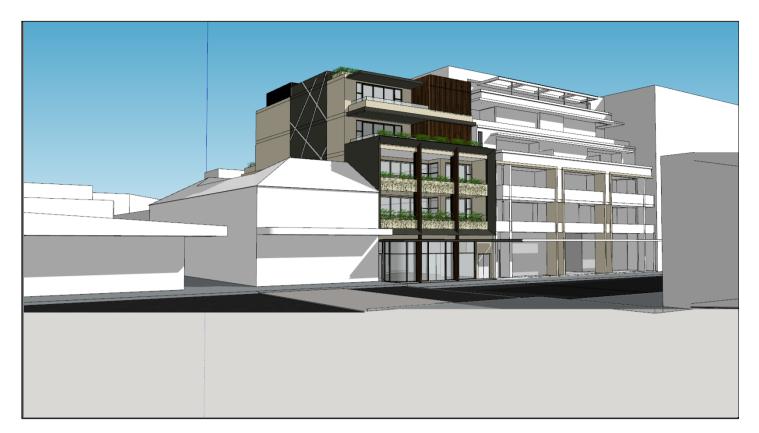


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02: PREVIOUS MODIFIED 3D DIGITAL MODEL - FROM TRANSVAAL AVENUE



04: MODIFIED 3D DIGITAL MODEL - FROM TRANSVAAL AVENUE

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01: PREVIOUS 3D DIGITAL MODEL - FROM NORTH SIDE CROSSING

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DEVELOPMENT APPLICATION

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01: PREVIOUS 3D DIGITAL MODEL - SOUTH WEST VIEW



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04: MODIFIED 3D DIGITAL MODEL - SOUTH WEST VIEW

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14 CROSS STREET
DOUBLE BAY

CHERICE PTY LTD

DRAWING:

3D DIGITAL MODEL
SCREENSHOTS SHEET 7

DATE: 15.09.21 DRAWN: DB PROJECT NO: DATING NO: DATING



planning consultants

17 September 2021 Our Ref: 21331A.Council_BMcD V3

The General Manager Woollahra Municipal Council 533 New South head Road Double Bay NSW 2028

Attention: Nick Economou

Land and Environment Court of NSW - 2021/130289

Property Development Systems Australia Pty Ltd v Council of the Municipality of Woollahra

DA 355/2019/1 14 Cross Street Double Bay

Dear Sir,

This letter has been prepared to support further amendments to the proposal in response to Council's Statement of Facts and Contentions and matters discussed in a without prejudice meeting on 15 August 2021.

The amended proposal comprises retail space facing Cross Street, a retail space facing Knox Lane, three sets of tandem car spaces accessed from Knox Lane, and three apartments (one apartment at each of levels 1 and 2 and a two-storey apartment at levels 3 and 4 with a roof terrace. This submission relies upon amended plans by Howe Architects Pty Ltd dated 13 September 2021. The amended documentation also provides a series of 3D images comparing the current proposal with the version discussed at the without prejudice conference.

This urban design response groups the matters raised into three categories:

- Built form;
- Cross Street façade and presentation; and
- Knox Lane façade and presentation.



1.0 BUILT FORM

CROSS STREET

The following are the key extracts from WDCP 2015 set the framework for built form in the Double Bay Centre applying to the subject site.

D5.3.2 Key strategies for the Double Bay Centre

Improve Double Bay's built form to provide appropriate definition to the public domain

- a) Provide direction and certainty of outcome in relation to built form to ensure:
- a coherent street scale;
- compatibility with existing urban fabric;
- a variety of building types;
- a high level of environmental amenity.

D5.4.7 Cross Street

 Allow 4 storeys on 50% of each site frontage to Knox Lane. See Control Drawings for more information.

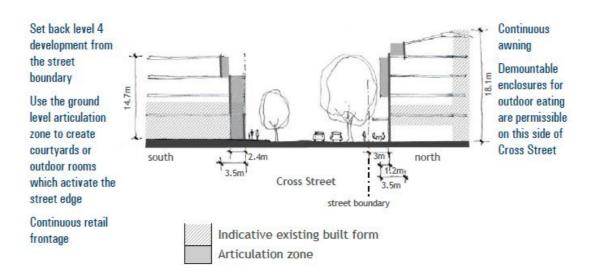


Figure 1 Cross Street Cross Section - D5.4.7 of Woollahra Development Control Plan.

The amended development proposal is consistent with the strategies outlined in Section D5.3.2. An issue raised in the Council's Statement of facts and Contentions relates to "compatibility with the existing urban fabric". Section D5.4.7 provides a cross section through Cross Street showing that the desired building envelope on the south side of the street is a **three-storey** street wall, which can incorporate balconies, with a setback fourth storey.

The building presentation to Cross Street is clearly shown as a three-storey street wall and articulation zone with fourth storey set back 3.5 metres.



The amended development proposal provides a three-storey street wall and fourth and fifth storeys set back 4.3 metres. It is consistent with the approved development at 16 -18 Cross Street, which has a three-storey street wall and set back fourth, fifth and sixth storeys as shown by **Figure 2**. In the case of the proposed development, the fifth storey is the only departure from the Cross Street façade envelope in Section 5.4.7. Developments with an overall height of six storeys have been approved and/or built recently at 16-18 Cross Street, 20-24 Cross Street and 19 - 27 Cross Street.

It is noted that the development at 16 - 18 Cross Street has a three-storey street wall which is consistent with the diagram in **Section D5.4.7 Cross Street** above. The fourth fifth and sixth storeys are set back from the street alignment.

The following **Figure 2** illustrates the presentation of the amended proposal adjacent to 16 to 18 Cross Street.

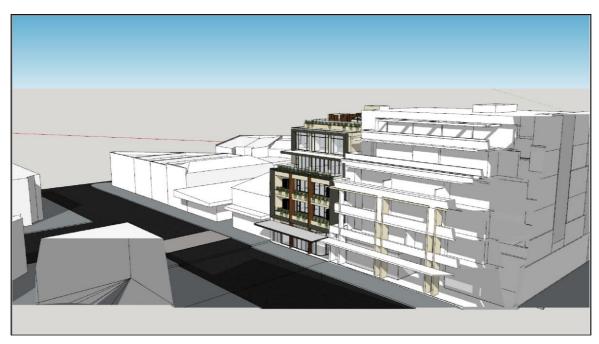


Figure 2 Showing the built form closely aligning with the built form of the building at 16 to 18 Cross Street.

KNOX LANE

WDCP 2015 contains specific built form controls for Knox Lane. **Section D5.3.2** sets out key strategies for the Double Bay Centre, include the following:

- d) Establish building envelopes that define building height and building lines (at lower and upper levels) to provide coherent street definition.
- e) Reinforce continuous active retail frontages along street boundaries.
- i) Encourage discrete vehicle access from rear lanes, while retaining some active use and address to those lanes.

Section D5.4.9 provides the desired building envelopes for Knox Lane



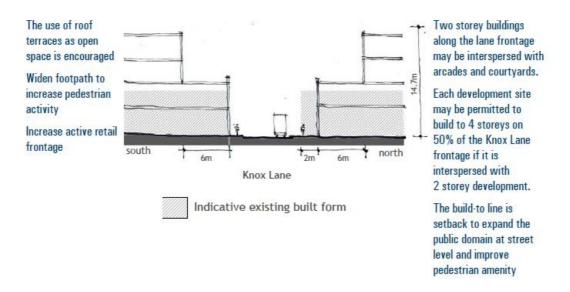


Figure 3 Cross Section through Knox Lane- Figure D5.4.9 in Woollahra Development Control Plan.

The recent approvals at 16 to 18 and 20 to 24 Cross Street depart significantly from the building envelope shown in **Section D5.4.9** of WDCP. The development at 16 to 18 Cross Street presents a three-storey street wall with the fourth to sixth storeys set back. The development at 20 to 24 Cross Street presents to Knox Lane as part four storey street wall height with set back fifth and sixth storeys and part of the whole facade set back above ground floor.



Figure 4 : Knox Lane showing the development at 20 to 24 Cross Street on the left, 16 to 18 Cross Street in the middle and the existing two-storey building at 14 Cross Street.



The proposed development has three storey street wall height with set back fourth and fifth storeys. The built form of the street wall part of the building is consistent in height and width with the approved and completed development at 16 to 18 Cross Street and the building overall is in fact one storey lower as demonstrated by **Figure 5.** The setbacks above the three-storey street wall have been increased to 3.650 and 5.050 metres consistent with the rear wall plane of 16 – 18 Cross Street.



Figure 5 3D image showing the relationship of the proposed development's three storey street wall to Knox Lane with the three storey street wall of 16 to 18 Cross Street.

2.0 CROSS STREET FAÇADE AND PRESENTATION

The built form facing Cross Street has been amended to closely align with of 16 -18 Cross Street with a three-storey street wall. The floor levels adopt those of 16 – 18 Cross Street resulting in alignment of the horizontal lines of balcony soffits and balcony balustrades as shown in **Figure 6** on the following page.

Figure 6 also shows that as a result of mirror reversing of the floor plans the lift and fire stair to the roof terrace at the top level will be against the wall of the sixth storey of 16 -18 Cross Street, where it will have no visual impact from the public domain.

Areas shaded in blue indicate deletion of the previously projection dark clad "boxes' at levels 4 and 5 to bring the facade into alignment with the 16 -18 Cross Street façade above the thtree storey street wall, which can also be seen in **Figure 2.**





Figure 6 Amended north elevation closely aligns with horizontal lines of 16 -18 Cross Street and setback above the third storey.

3.0 KNOX LANE FAÇADE AND PRESENTATION

The rear facade treatment facing Knox Lane is consistent with the rear facade treatment of the building at 16-18 Cross Street as shown in **Figure 7** on the following page. The floor levels adopt those of 16-18 Cross Street resulting in alignment of the horizontal lines of balcony soffits and balcony balustrades. The blue shahded areas indicate where the wall of the building has been moved further back from the Knox Lane alignment.





Figure 7 Knox Lane elevation showing retail space (red circle) abd alignment of three storey street wall with 16 -18 Cr\oss Street red broken line.

Section D5.4.8 of the WDCP 2015 applies specifically to the lanes. The relevant strategies include:

a) Facilitate the service role of lanes, while encouraging increased active retail frontage.

As noted above, the WDCP 2015 strategies for Double Bay seek to generally "reinforce continuous active retail frontages along street boundaries" and to "facilitate the service role of lanes, while encouraging increased active retail frontage."

At present the frontages to Knox Lane have a mix of shop fronts, vehicular entries and garage doors, service areas and blank walls. The more recent developments, with the benefit of wide frontages, have been able to incorporate shopfronts, through site links and vehicle entries to below ground parking.

The site at 14 Cross Street is 12.215 metres wide. It would not be possible to have basement parking as there is not enough space for a ramp, parking bays and a traffic aisle. Yet the development must meet Council's car parking requirements, which can only be done at the Knox Lane frontage.



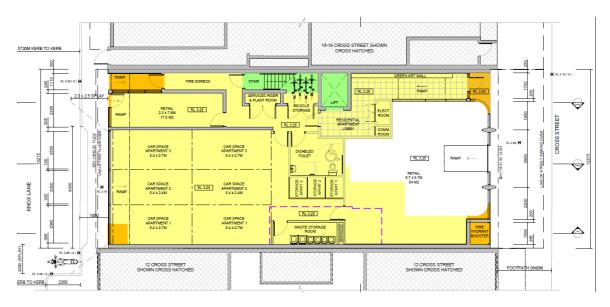


Figure 8 Amended mirror reversed ground floor plan showing addition of retail space facing Knox Lane and reduction of parking to three sets of tandem car spaces.

In these circumstances, the amended proposal has reduced parking to three pairs of tandem spaces corresponding to the reduced number of apartments. This enables a retail space to be provided facing the lane. The amended design still proposes to treat the garage doors as street art. The proposed public artwork will extend the full width and height of the doors. Marcus Parker, an established artist, has been commissioned to undertake an innovative public artwork, in association with Axolotl, in the form of a series of durable flush horizontal panels that will not be perceived as garage doors but as a distinctive abstract artwork.

The amended design is now in accordance with the requirement to "reinforce" and "facilitate" retail activation in the relevant WDCP 2015. as well as responding to the encouragement to provide "discrete vehicle access from rear lanes" at subsection (i) of **Section D5.3.2** of WDCP 2015.

4.0 CONCLUSION

The amended proposal responds well to the matters raised in the Council's Statement of Facts and Contentions. The amended development proposal will make a positive contribution to the Double Bay centre. The built form is consistent with built forms of recently approved and constructed buildings in Cross Street, and it is consistent with the street wall height provisions of WDCP 2015. It is of a smaller scale than the constructed, developments at 16 to 18 and 20 to 24 Cross Street, providing a transition to the existing two storey building at 12 Cross Street until such time as this site is redeveloped.

Brian McDonald

rian MDmald

Principal Urban Designer and Heritage Consultant

DFP Planning



Level 2, 414 Kent Street, Sydney, NSW 2000 Level 8, 757 Ann Street, Fortitude Valley, QLD 4006

holmesfire.com

DEVELOPMENT APPLICATION STATEMENT OF INTENT

To: The General Manager Project: 139040.00

Company: Woollahra Municipal Council

Email: records@woollahra.nsw.gov.au Version: E

Date: 21 October 2021

Subject: 14 Cross Street, Double Bay, NSW

To whom it may concern,

This letter is to advise that Holmes Fire has been engaged to provide fire engineering services for the proposed mixed-use development, to be located at 14 Cross Street, Double Bay, NSW.

1 INTRODUCTION

The building will comprise two retail tenancies and carparking on Ground Floor, with residential units on First Floor to Fourth Floor. The building will be under 25 m in effective height, will be sprinkler protected, and less than $6,000 \text{ m}^2$ in area.

2 PROPOSED PERFORMANCE SOLUTIONS

Holmes Fire will provide fire engineering Performance Solutions. The Performance Solutions will comply with the relevant Performance Requirements of the BCA. The design approach will be in line with the International Fire Engineering Guidelines² and other acceptable guideline documents.

The Performance Solution designs will be developed in line with BCA Clause A2.2, as applicable; i.e. complying with the relevant Performance Requirements or by equivalence comparison with the Deemed-to-Satisfy Provisions.

The proposed approach of the Performance Solution for each issue is listed below. Holmes Fire understands that all other aspects of the building will comply with the Deemed-to-Satisfy Provisions of the BCA.

- BCA Clause C1.1 requires retail tenancies within Type A construction building to achieve a Fire Resistance Level (FRL) of 180/180/180. It is proposed to rationalise the FRL of the retail tenancies on Ground Level based on the maximum credible fuel loads. A Performance Solution using an absolute approach will be provided to address Performance Requirements CP1 and CP2.
- BCA Clause C3.2 requires openings in external walls within 3 m of a side or rear allotment boundary to be protected in accordance with Clause C3.4. The building will contain openings in

² National Research Council of Canada; International Code Council, United States of America; Department of Building and Housing, New Zealand; and Australian Building Codes Board, International Fire Engineering Guidelines, Edition 2005, Australian Building Codes Board, 2005.



the external walls along the northern, southern and eastern facades which will be less than 3 m from the allotment boundaries. Some of these openings may be protected through alternative means via Performance Solutions. An absolute approach is proposed to address Performance Requirement CP2.

- BCA Clause C3.11 requires that residential SOUs are bound by fire rated construction and have any doorways be self-closing fire rated doors achieving an FRL of at least -/60/30. The proposed design incorporates a lift that opens directly into the residential SOUs on First to Fourth Floors. The lift landing door is expected to achieve an FRL of -/60/-. An absolute approach is proposed to address Performance Requirement CP2.
- BCA Clause D1.4(c)(i) requires that no point on a floor must be more than 20 m from an exit. here is an extended travel distance from the carpark to the Cross Street exit of up to 30 m. A comparative approach is proposed to address Performance Requirements DP4 and EP2.2.
- BCA Clause D1.7(b) and (c) requires a fire-isolated stair to discharge into an area meeting specific requirements and occupants passing within 6 m of external wall openings are required to be protected. The fire-isolated stair is proposed to discharge to the Ground Floor entry lobby, which does not meet these requirements.
- BCA Clause D2.19(b)(iii) and (iv) requires sliding doors within retail tenancies to open directly to a road or open space, and power-operated are required to automatically open on power failure or fire alarm. It is proposed that the sliding door from the Cross Street retail tenancy to the street opens to an area covered by the awning (i.e. not open space), and due to security concerns will not automatically open on power failure or fire trip. A Performance Solution using a comparative approach will be provided to address Performance Requirements DP2 and DP4.

3 SUMMARY

Based on Holmes Fire's review of the project documentation, it is considered that performance-based fire engineering can be utilised to demonstrate compliance with the Performance Requirements of the BCA without major changes to the current design. Additional areas requiring or benefitting from Performance Solutions may be identified as the design is further developed, however it is considered that there are no significant issues that would affect the building layout.

The information contained within this letter is based on the architectural drawings prepared by Howe Architects, as listed below.

Dwg no.	Title	Date	Issue
DA 1.100_11	Proposed Ground Floor Plan	19 October 2021	DA
DA 1.101_09	Proposed First Floor Plan	19 October 2021	DA
DA 1.102_08	Proposed Second Floor Plan	19 October 2021	DA
DA 1.103_09	Proposed Third Floor Plan	19 October 2021	DA
DA 1.104_09	Proposed Fourth Floor Plan	19 October 2021	DA



Dwg no.	Title	Date	Issue
DA 1.105_09	Proposed Roof Plan	19 October 2021	DA
DA 1.106_01	Proposed Roof Terrace Plan	19 October 2021	DA
DA 2.100_07	Proposed North Elevation	19 October 2021	DA
DA 2.101_07	Proposed South Elevation	19 October 2021	DA
DA 2.102_05	Proposed East Elevation	20 October 2021	DA
DA 2.103_04	Proposed West Elevation	19 October 2021	DA
DA 3.100.07	Proposed Section A-A	19 October 2021	DA
DA 3.101.07	Proposed Section B-B	19 October 2021	DA
DA 3.102.06	Proposed Section C-C	19 October 2021	DA
DA 3.103.06	Proposed section D-D	19 October 2021	DA

Please do not hesitate to contact Holmes Fire, should there be any queries about the above.

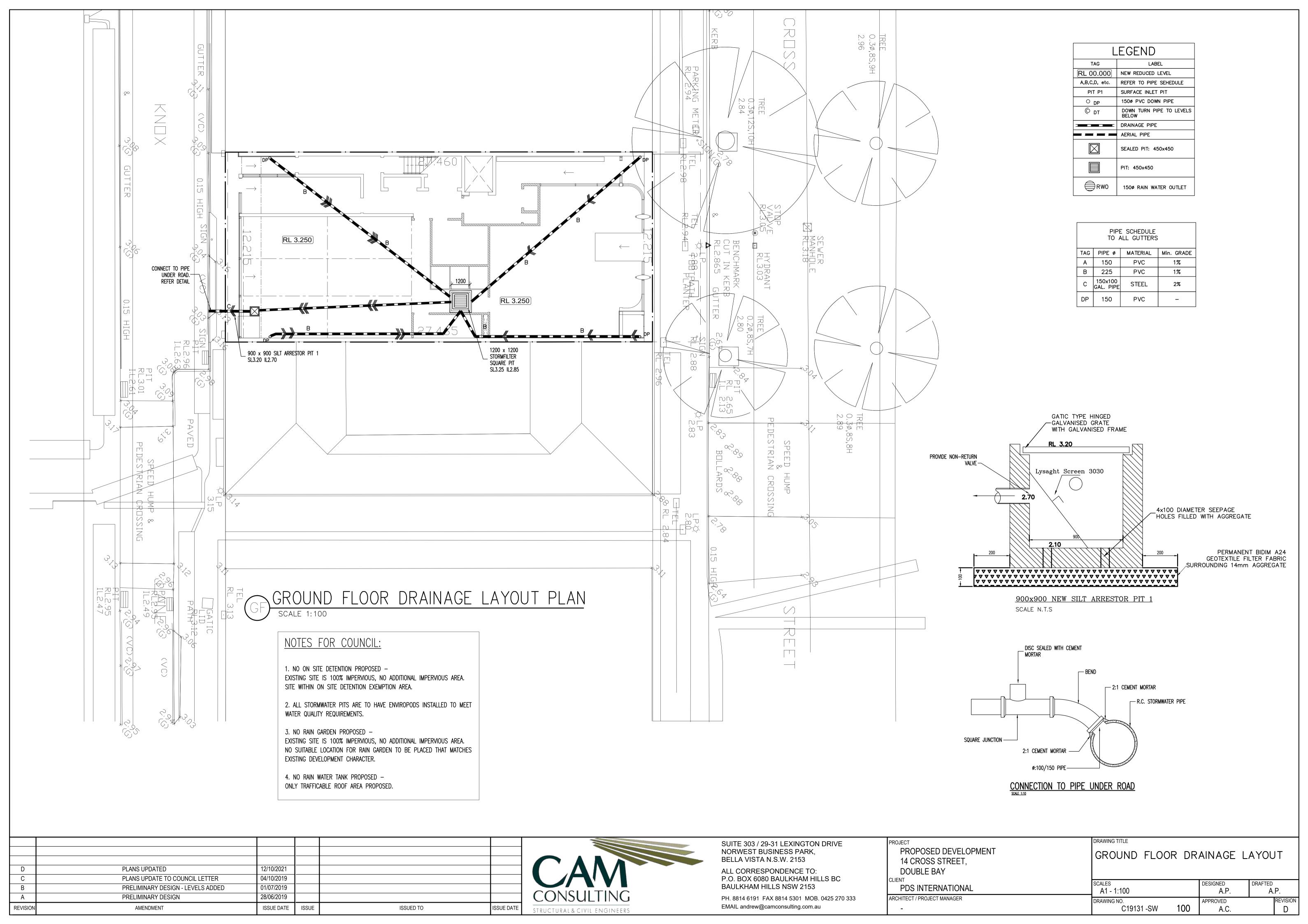
Regards,

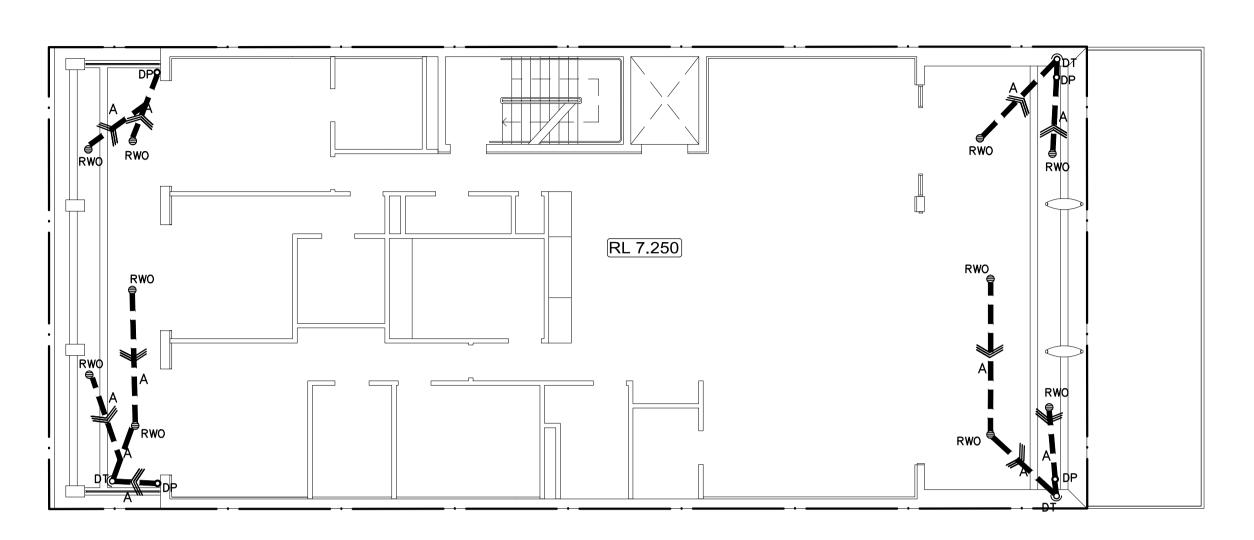
Erik Carlsson

Branch Manager / Senior Fire Engineer

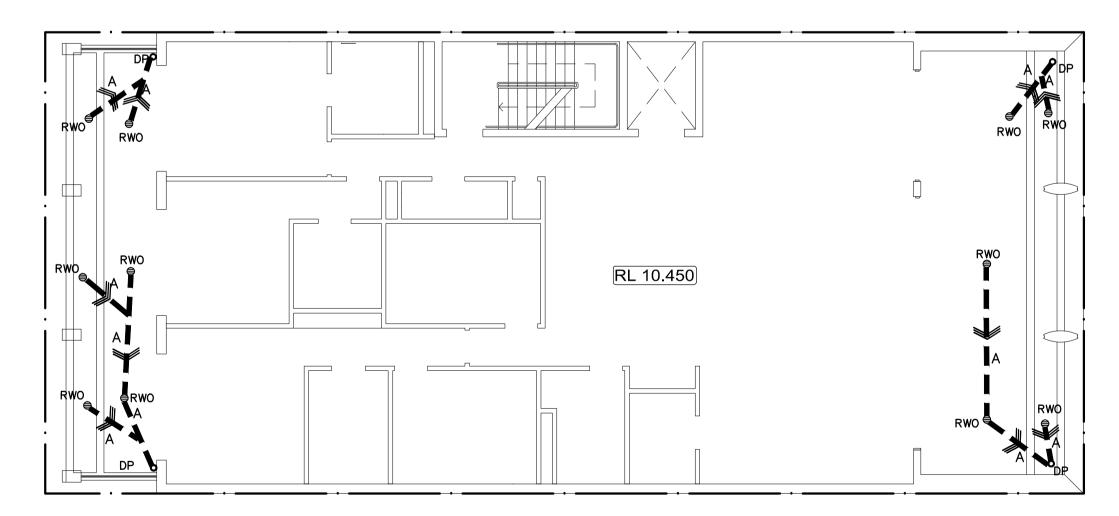
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SECOND FLOOR DRAINAGE LAYOUT PLAN

D	PLANS UPDATED	12/10/2021			
С	PLANS UPDATE TO COUNCIL LETTER	04/10/2019			
В	PRELIMINARY DESIGN - LEVELS ADDED	01/07/2019			
Α	PRELIMINARY DESIGN	28/06/2019			
REVISION	AMENDMENT	ISSUE DATE	ISSUE	ISSUED TO	ISSUE DAT



SUITE 303 / 29-31 LEXINGTON DRIVE NORWEST BUSINESS PARK, BELLA VISTA N.S.W. 2153

ALL CORRESPONDENCE TO: P.O. BOX 6080 BAULKHAM HILLS BC BAULKHAM HILLS NSW 2153

PH. 8814 6191 FAX 8814 5301 MOB. 0425 270 333 EMAIL andrew@camconsulting.com.au

PROJECT
PROPOSED DEVELOPMENT
14 CROSS STREET,
DOUBLE BAY
CLIENT
PDS INTERNATIONAL

FIRST & SECOND FLOOR DRAINAGE LAYOUT

C19131 -SW

APPROVED

LEGEND

A,B,C,D, etc. REFER TO PIPE SEHEDULE

SURFACE INLET PIT

150¢ PVC DOWN PIPE

SEALED PIT: 450x450

150¢ RAIN WATER OUTLET

1%

1%

2%

PIT: 450x450

PIPE SCHEDULE TO ALL GUTTERS

TAG PIPE Ø MATERIAL Min. GRADE PVC

PVC

STEEL

PVC

150

225

150

C 150x100 GAL. PIPE

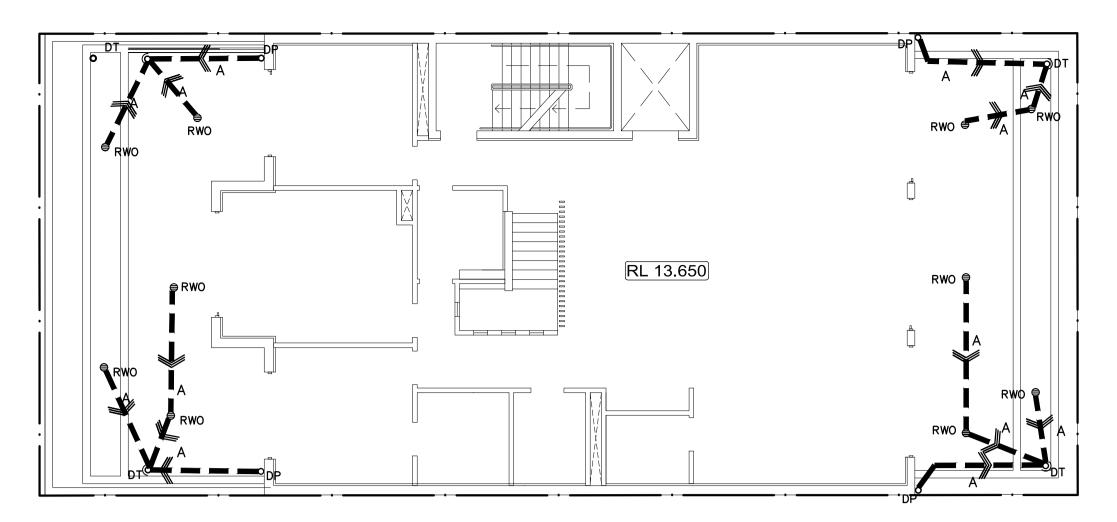
RL 00.000 | NEW REDUCED LEVEL

DRAINAGE PIPE AERIAL PIPE

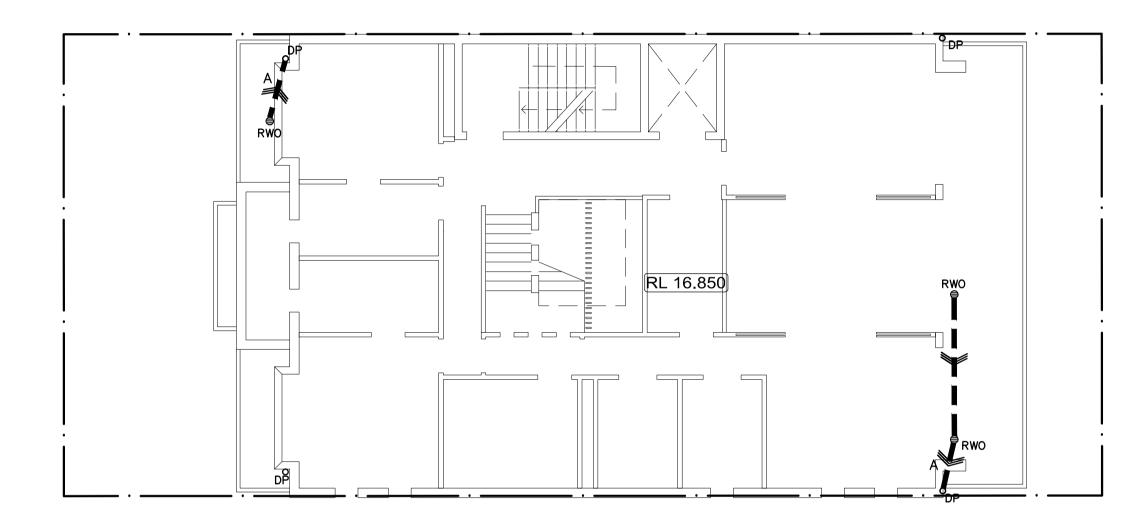
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LABEL

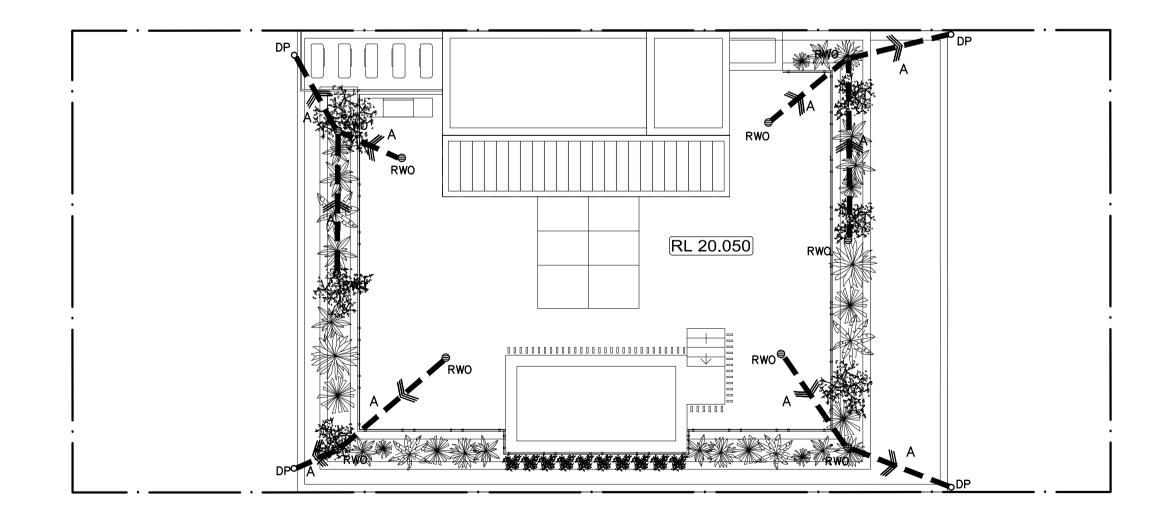
DOUBLE BAY	
PDS INTERNATIONAL	SCALES A1 - 1:100
ARCHITECT / PROJECT MANAGER	DRAWING NO







FOURTH FLOOR DRAINAGE LAYOUT PLAN SCALE 1:100



ROOF DRAINAGE LAYOUT PLAN SCALE 1: 100

D	PLANS UPDATED	12/10/2021			
С	PLANS UPDATE TO COUNCIL LETTER	04/10/2019			
В	PRELIMINARY DESIGN - LEVELS ADDED	01/07/2019			
Α	PRELIMINARY DESIGN	28/06/2019			
REVISION	AMENDMENT	ISSUE DATE	ISSUE	ISSUED TO	ISSUE DATE



SUITE 303 / 29-31 LEXINGTON DRIVE NORWEST BUSINESS PARK, BELLA VISTA N.S.W. 2153

ALL CORRESPONDENCE TO:
P.O. BOX 6080 BAULKHAM HILLS BC
BAULKHAM HILLS NSW 2153

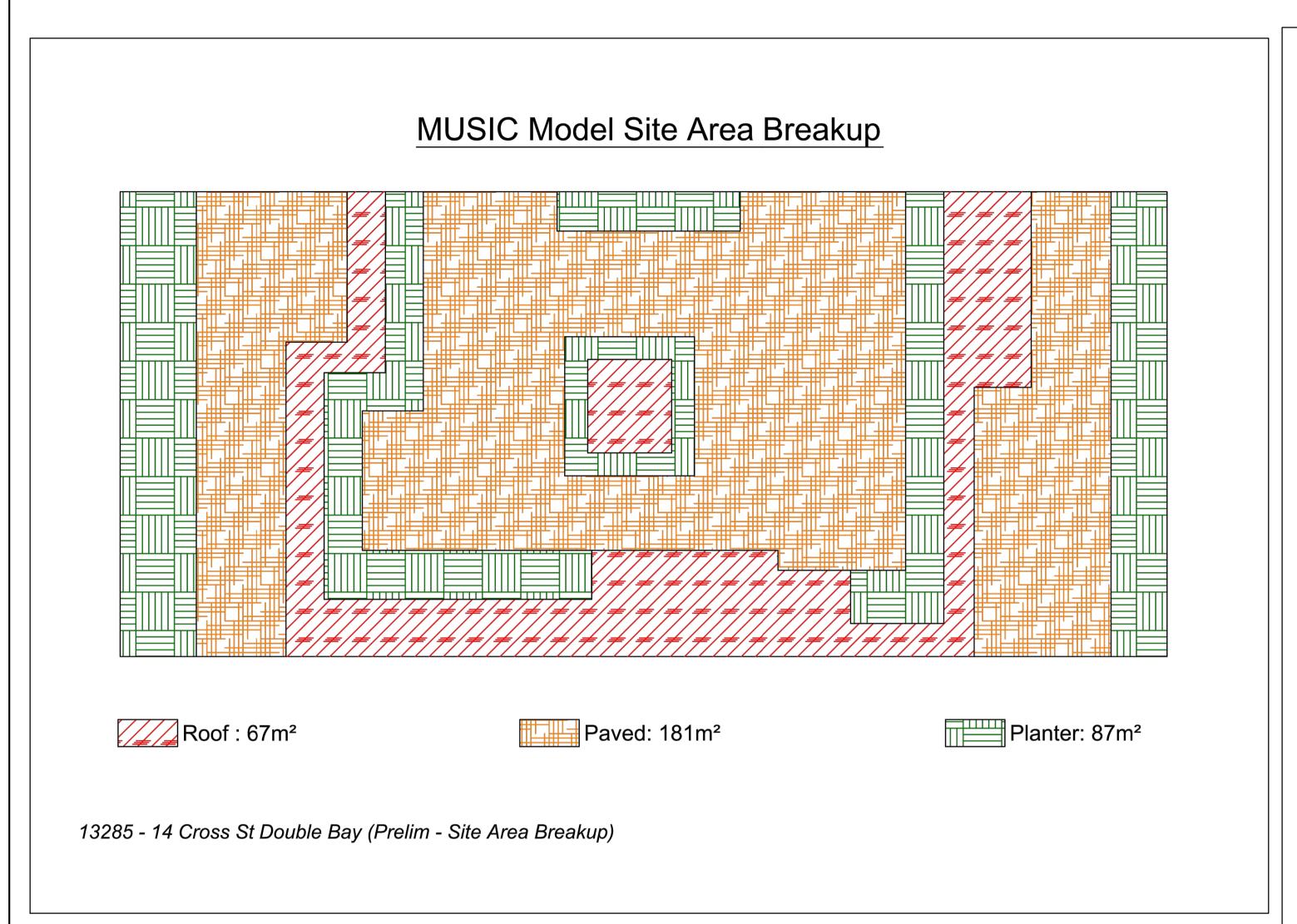
PH. 8814 6191 FAX 8814 5301 MOB. 0425 270 333 EMAIL andrew@camconsulting.com.au

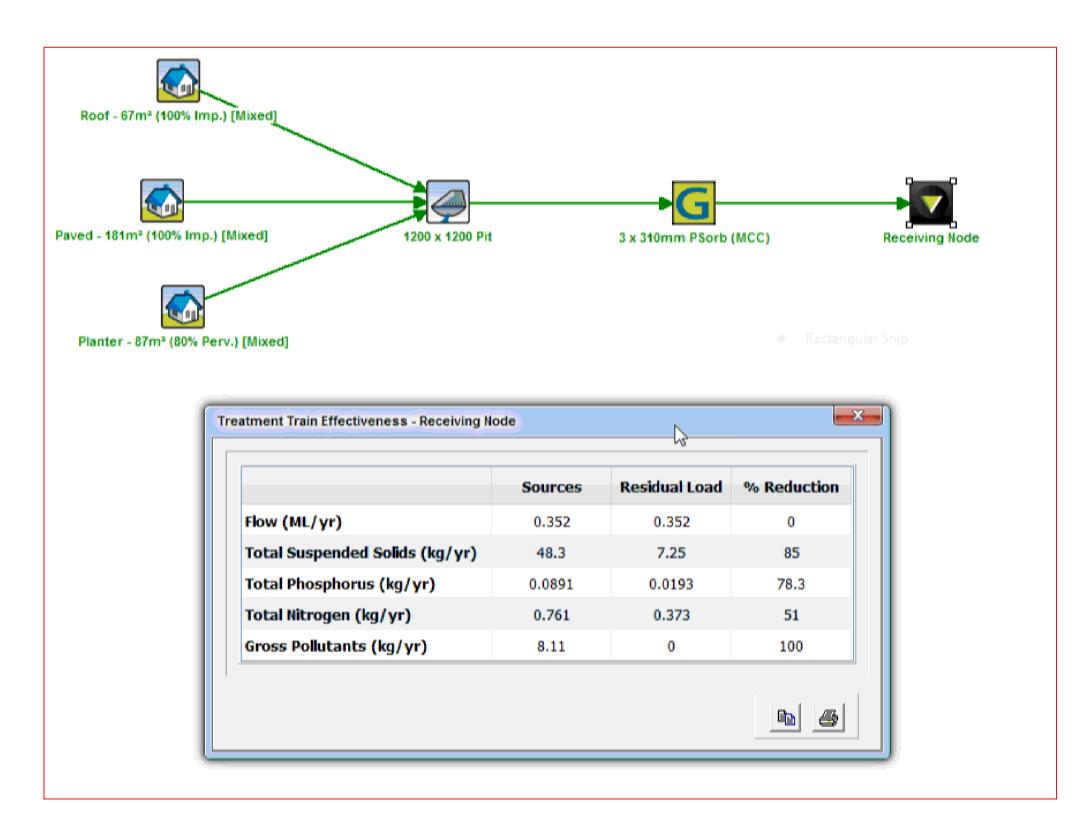
RL 00.000	NEW REDUCED LEVEL
A,B,C,D, etc.	REFER TO PIPE SEHEDULE
PIT P1	SURFACE INLET PIT
O DP	1500 PVC DOWN PIPE
© DT	DOWN TURN PIPE TO LEVELS BELOW
	DRAINAGE PIPE
	AERIAL PIPE
	SEALED PIT: 450x450
	PIT: 450x450
RWO	150¢ RAIN WATER OUTLET

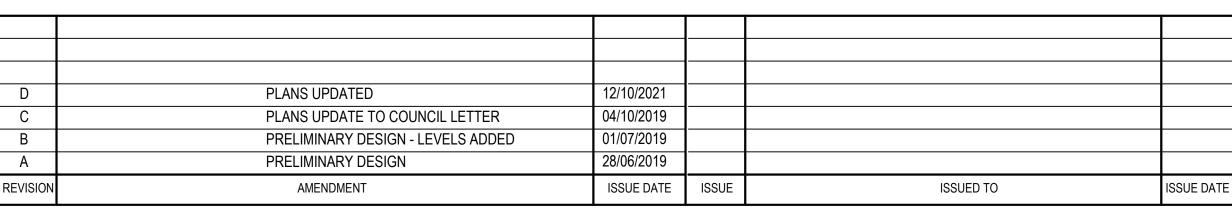
LEGEND

TAG	PIPE Ø	MATERIAL	Min. GRADE			
A	150	PVC	1%			
В	225	PVC	1%			
O	150x100 GAL. PIPE	STEEL	2%			
DP	150	PVC	_			

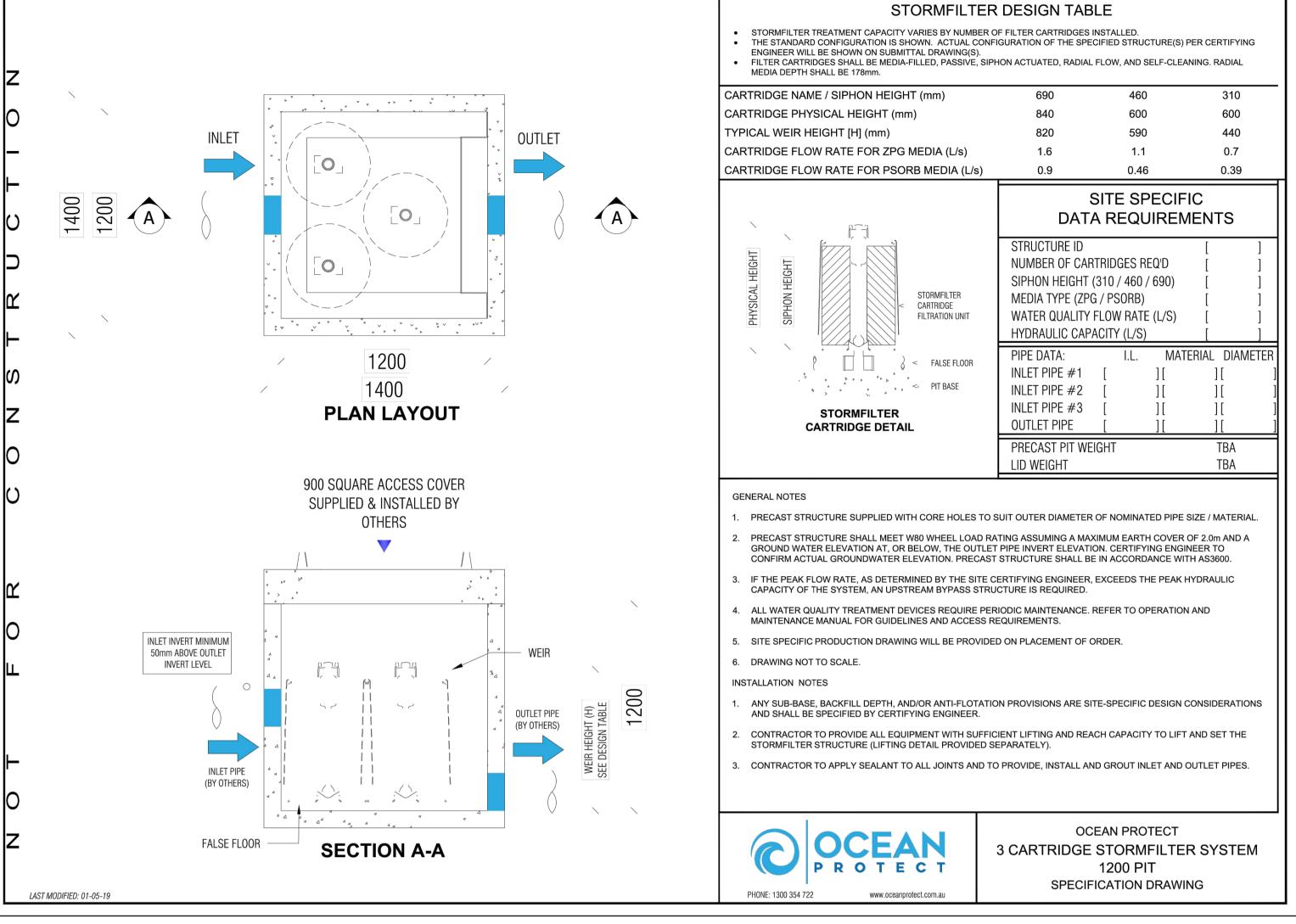
PROJECT	DRAWING TITLE				
PROPOSED DEVELOPMENT 14 CROSS STREET, DOUBLE BAY	THIRD, FOURTH & ROOF FLOOR DRAINAGE LAYOUT				
CLIENT DOCUMENT ON A LONG A LO	SCALES	DESIGNED	DRAFTED		
PDS INTERNATIONAL	A1 - 1:100	A.P.	A.P.		
ARCHITECT / PROJECT MANAGER -	DRAWING NO. C19131 -SW 1	APPROVED A.C.	REVIS		











SUITE 303 / 29-31 LEXINGTON DRIVE NORWEST BUSINESS PARK, BELLA VISTA N.S.W. 2153

ALL CORRESPONDENCE TO: P.O. BOX 6080 BAULKHAM HILLS BC BAULKHAM HILLS NSW 2153

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PROPOSED DEVELOPMENT 14 CROSS STREET, DOUBLE BAY

MUSIC CATCHMENT AREA DETAILS & TREATMENT TARGET

SCALES A1 - 1:100 PDS INTERNATIONAL ARCHITECT / PROJECT MANAGER C19131 -SW



TRAFFIC AND PARKING IMPACT ASSESSMENT MIXED USE DEVELOPMENT AT 14 CROSS STREET, DOUBLE BAY



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Transport Planning, Traffic Impact Assessments, Road Safety Audits, Expert Witness

190142.01FC - 15th September 2021



Development Type: Mixed Use Development

Site Address: 14 Cross Street, Double Bay

Prepared for: PDS International

Document reference: 190142.01FC

Status	Issue	Prepared By	Checked By	Date
Draft	Α	DW	TS	30 th July 2019
Final	Α	DW		23 rd August 2019
Final	В	DW		3 rd September 2019
Final	С	TS	СМ	15 th September 2021

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1 INTRODUCTION

M^CLaren Traffic Engineering was commissioned by *PDS International* to provide a Traffic and Parking Impact Assessment of the Mixed Use Development at 14 Cross Street, Double Bay as depicted in **Annexure A**.

1.1 Description and Scale of Development

The proposed development has the following characteristics relevant to traffic and parking:

- Three (3) residential units including:
 - Two (2) 3-bedroom units, and;
 - o One (1) 4-bedroom unit.
- 101.9m² retail GFA in two retail tenancies;
- A total of 6 car parking spaces provided onsite.

Vehicular access to the property is proposed via three (3) individual garage doors, accessed from Knox Lane.

1.2 State Environmental Planning Policy (Infrastructure) 2007

The proposed development does not qualify as a traffic generating development with relevant size and/or capacity under Clause 104 of the SEPP (Infrastructure) 2007. Accordingly, formal referral to the Roads and Maritime Services (RMS) is unnecessary and the application can be assessed by Woollahra Municipal Council officers accordingly.

1.3 Site Description

The subject site is currently zoned *B2 – Local Centre* under the Woollahra Council LEP 2014 and is currently occupied by a two-storey mixed-use building with retail premises on ground level and a single office premises on level 1. The site has frontages to Cross Street to the north and Knox Lane to the south.

Being located in a Local Centre, the site is generally surrounded by commercial developments and medium to high-density residential developments with the site directly to the west under construction as of the time of writing this report.



1.4 Site Context

The sites location is shown on an aerial photo and a street map in **Figure 1** and **Figure 2** respectively.



Site Location

FIGURE 1: SITE CONTEXT - AERIAL PHOTO



Site Location

FIGURE 2: SITE CONTEXT - STREET MAP



2 EXISTING TRAFFIC AND PARKING CONDITIONS

2.1 Road Hierarchy

The road network servicing the site has the following characteristics within close proximity to the site:

2.1.1 Cross Street

- Unclassified LOCAL Road;
- Approximately 11m in width facilitating one traffic lane in each direction and kerbside parking;
- Signposted 50km/h speed limit;
- Time restricted 2-hour ticketed parking permitted along both sides of the road between 9_{AM} 6_{PM} MON-SAT.

2.1.2 Knox Lane

- Unclassified LOCAL Road:
- Approximately 5m in width facilitating a single one-way westbound traffic flow lane;
- No speed limit signposted 50km/h applies;
- 'No Stopping' restrictions on the southern side of the road;
- Time restricted 1-hour ticketed parking permitted along the northern side of the road between 9_{AM} – 6_{PM} MON-SAT.

2.1.3 New South Head Road

- RMS Classified STATE Road (No. 173);
- Approximately 18m in width facilitating two traffic lanes in each direction and kerbside parking;
- Signposted 60km/h speed limit;
- Clearway along the southern side of the site between 6_{AM}-10_{AM}.
- Clearway along the southern side of the site between 4:30_{PM}-6_{PM}.

2.2 Existing Traffic Management

- ONE-WAY westbound traffic lane of Knox Lane;
- GIVE WAY controlled intersection of Knox Lane / Bay Street;
- STOP controlled intersection of Bay Street / Cross Street;
- Priority controlled intersection of Transvaal Avenue / Cross Street;
- Signalised intersection of Cross Street / New South Head Road;
- Raised pedestrian crossing across Cross Street near the intersection of Cross Street / Transvaal Street.



2.3 Public Transport

The subject site is in a reasonable walking distance of the existing bus stop (ID: 202819) located approximately 100m walking distance to the south of site on New South Head Road. The bus stop is services by existing bus Routes 323 (North Bondi to Edgecliff), 324 (Watsons Bay to Walsh Bay), 325 (Watsons Bay to Walsh Bay) and 326 (Edgecliff to Bondi Junction) provided by State Transit.

Double Bay Wharf is located approximately (420m) walking distance to the north of the subject site, serviced by the F7 Route. A ferry service departs every 30 minutes in commuter peak periods and provides direct access between Double Bay and Circular Quay.

The sites location subject to the surrounding public transport network is shown in **Figure 3** below.

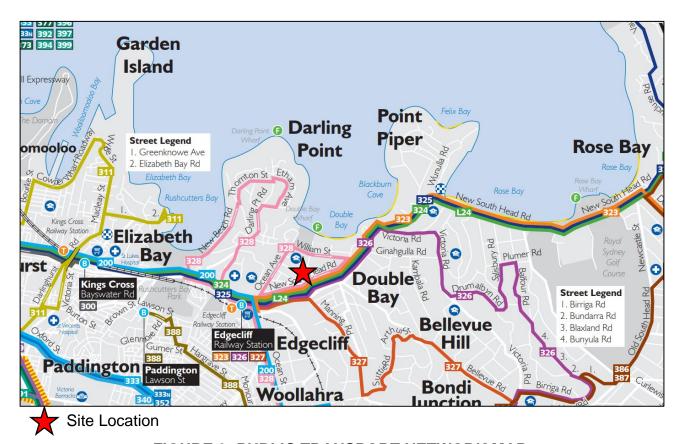


FIGURE 3: PUBLIC TRANSPORT NETWORK MAP

2.4 Future Road and Infrastructure Upgrades

From Woollahra Council Development Application tracker and website, it appears that there are no future planned road or public transport changes that will affect traffic conditions within the immediate vicinity of the subject site.



3 PARKING ASSESSMENT

3.1 DCP Parking Requirement

Reference is made to the *Woollahra Development Control Plan 2015, Chapter E1 – Parking and Access* which designates the following parking rates applicable to the proposed development:

Mixed use development (residential component) (Maximum Parking Provision)

Spaces based on number of bedrooms per dwelling³

- 1 bedroom or Studio apartment⁵: 0.5 space

- 2 bedrooms: 1 space

- 3 or more bedrooms: 1.5 spaces

- Visitors: 0.2 spaces

Retail (Minimum parking generation rate)

- 3.3 spaces per 100m²

Office premises (Minimum parking generation rate)

- 2.5 spaces per 100m²

Parking Multiplier

- Double Bay B2 Local Centre: 0.6

Table 1 presents the parking requirements of the proposal according to Council's car parking rates.

TABLE 1: DCP PARKING REQUIREMENTS

Land Use	Туре	Scale	Rate	Parking Required
Residential	Three or more bedroom units	3	1.5 per unit	4.5 (5)
	Visitor	3	0.2 per apartment	0.6 (1)
Retail	-	101.9m ²	1.98 (3.3 x 0.6) spaces per 100m ²	2.02 (2)
Total		-	-	Maximum of 6 residential Minimum of 2 Retail spaces

³ Round up to nearest whole number with halves (i.e. 0.5).



As shown above, strict application of the DCP allows a maximum of 6 car parking spaces for the residential component of the development, with 5 for residential use and 1 for residential visitor use. The retail component of the site requires a minimum of 2 car parking spaces. The proposal includes a total of 6 car parking spaces for residents, representing a shortfall from the requirements of the DCP.

3.2 Parking Justification

Further justification of the parking requirement is presented in the following subsections.

3.2.1 Residential Parking

Consideration should be made to the size of the individual apartments when determining the car parking requirement. Each apartment in the proposal is large in area and contains either 3 or 4 bedrooms. The general trend of the DCP maximum parking requirement for the residential component of mixed-use developments is 0.5 spaces per bedroom. If this is applied to the 4-bedroom apartments, then a parking rate of 2 spaces per apartment is the appropriate rate. Furthermore, the DCP maximum parking requirement for residential flat buildings and multi dwelling housing is 2 car parking spaces per apartment with 3 or more bedrooms. Therefore, it is reasonable to assume that the parking demand of each 3 and 4-bedroom unit will be in the order of two vehicles.

On this basis, a total of 6 car spaces have been proposed in order to accommodate the parking demands of residents with no overflow onto the surrounding streets.

3.2.2 Retail Parking

The DCP minimum parking rate is equal to 3.3 spaces per 100m² with an applied parking multiplier of 0.6 due to the site being located within the Double Bay B2 Local Centre. Therefore, the minimum retail car parking rate of the development equates to 2.02 (3.3 x 0.6) spaces per 100m² which is a typical parking requirement to cater only for the staff of retail premises. Therefore, the minimum retail parking requirement for the proposed development is two (2) staff car parking spaces. Furthermore, consideration should be made to the existing operation of the site when determining impact of the proposed development on the public on-street all day parking supply.

3.2.3 Existing Parking Shortfall

The existing development is comprised of a 254.4m² of retail area on ground level and 231.0m² of office area on the first floor. The existing development does not provide any off-street car parking spaces for visitors or staff. The existing parking demand of the site has been based on the DCP parking requirements. The parking requirement for the retail component of the development is 1.98 spaces per 100m² as detailed above. The parking requirement of the office component of the development is based on the DCP parking rate of 2.5 spaces per 100m² with an applied parking multiplier of 0.6 (Double Bay B2 Local Centre Multiplier), resulting in a requirement for 1.5 spaces per 100m² GFA. The parking requirement of the existing development compared to the proposed development is summarised in **Table 2** below.



TABLE 2: DCP PARKING COMPARISON BETWEEN EXISTING AND PROPOSED DEVELOPMENT

Land Use	Туре	Scale	Rate	DCP Parking Rate	Parking Provided
Existing Development					
Retail	Staff	254.4m ²	1.98 (3.3 x 0.6) spaces per 100m ²	5	0
Office	Staff	231.0m ²	1.5 (2.5 x 0.6) spaces per 100m ²	3.5 (4)	O
Total	-	-	-	9	0
Proposed Development					
Residential	Four- bedroom unit	3	1.5 per unit	4.5 (5)	6
	Visitor	3	0.2 per apartment	0.6 (1)	0
Retail	Staff	84.4m ²	1.98 (3.3 x 0.6) spaces per 100m ²	1.67 (2)	0
Total	-	-	-	8	6

As shown above, the existing development has a shortfall of five (5) retail staff car parking spaces and four (4) office staff car parking spaces from Council's DCP. Therefore, the site currently demands a total of nine (9) staff car parking spaces which would occur within the public on-street all day parking areas or within Council's public car parks. The proposed development has an onsite parking shortfall of two (2) retail staff spaces from Council's DCP. Comparing the future on-street parking demand to the existing on-street parking demand, the proposed development will reduce the demand on on-street car parking areas by seven (7) spaces. Therefore, the provision of 6 residential car parking spaces within the proposed development satisfies the residential component of the development and the reduction in scale of the commercial component of the development will result in a net reduction in demand on the local on-street parking supply.

3.3 On-Street Parking Impacts

The proposed plans include three (3) garage door spaces with access to Knox Lane. The inclusion of these garage parking spaces will require the removal of one (1) ticketed onstreet car parking space along Knox Lane. As discussed above, the on-street parking demand will be reduced by some seven (7) spaces under the proposed plans. Therefore, the reduction of one (1) on-street car parking space would still result in a net increase in onstreet car parking availability of six (6) spaces compared to the existing conditions.



3.4 Disabled Parking

Woollahra Development Control Plan 2015 - Part E8.2 states the following with regard to adaptable housing.

Development for an attached dwelling, multi dwelling housing, residential flat building or shop top housing containing 10 or more dwellings, designs and constructs at least 10% of the dwellings to Class A certification under AS 4299 – Adaptable housing.

The development proposes nil (0) adaptable units. Common practice is to provide one (1) adaptable parking space for each adaptable dwelling. Therefore, the provision of nil (0) adaptable car parking spaces satisfies this requirement. No retail car parking spaces are proposed; therefore, no retail disabled parking spaces are required. The proposed plans detail nil (0) disabled car parking spaces which satisfies the above requirements.

3.5 Bicycle Parking Requirements

Reference is made to Woollahra Council's DCP which outlines the following minimum requirements for bicycle parking spaces:

Bicycle

Residential accommodation

Residents: 1 per dwelling

Visitors: 1 per 10 dwellings

Shop, restaurant or café

Employee: 1 per 250m² GFA

Customer: 2 + 1 per 100m² over 100m² GFA

Applying the above rate, results in a total bicycle parking requirement of six (6) bicycle spaces (4 residential / employee and 2 visitor). Each apartment is provided with a storage cage of sufficient dimensions to enclose a bicycle and an additional four (4) bicycle storage spaces are provided on the ground floor, for a total of seven (7) bicycle storage spaces.

3.6 Motorcycle Parking Requirements

Reference is made to Woollahra Council's DCP which outlines the following minimum requirements for motorcycle parking spaces:

Motorcycle

Developers shall provide a minimum of 1 motorcycle parking space per 10 car spaces for all types of development.



Applying the above rates, results in a total motorcycle parking requirement of one (1) space. Similar to the staff car parking requirements of the site, consideration has been made to the existing operation of the site. The existing development requires a total of nine (9) car parking spaces to comply with Council's DCP and therefore would require 0.9 (1) motorcycle space. Similarly, the proposed development requires nine (9) car parking spaces to meet Council's parking requirement and therefore would require 0.9 (1) motorcycle space. The existing site does not provide any motorcycle parking spaces and neither do the proposed plans. Therefore, the demand for on-street motorcycle parking will not change under the proposed plans.

Whilst no motorcycle parking is proposed on-site, it is expected that an on-street motorcycle parking space could be accommodated to the east of the driveway.

3.7 Servicing & Loading

It is envisaged that waste collection will be completed by Council's waste collection service vehicles along the site's frontage to Knox Lane, consistent with the existing operation of the site.

Delivery / courier vehicles travelling to the site can utilise the existing on-street parking. The standard size of a courier vehicle is a B99 design vehicle, which can park within the existing on-street kerbside parking supply.

3.8 Car Park Design & Compliance

The car parking layout as depicted in **Annexure A**, has been assessed to achieve the relevant clauses and objectives of AS2890.1:2004. Any variances from standards are addressed in the following subsection including required changes, if any. Swept path testing has been undertaken, with the results reproduced in **Annexure B** for reference. The car parking layout includes the following features:

- Minimum 5.4m length, 2.4m width spaces for residents, with 300mm clearance added where required to walls;
- Minimum headroom of 2.2m for general circulation;
- 300mm clearance to walls to allow for door opening.

The garage car parking spaces shall be restricted, under a plan of management, to a reverse only entry manoeuvre as per the existing operation of the site and which is typical of other garage operations along Knox Lane. It is recommended that a "No Stopping" restriction be implemented for 2.5m west of the driveway to allow vehicles in the westernmost garage to enter and exit efficiently.

Whilst the plans have been assessed to comply with the relevant standards, it is usual and expected that a design certificate be required at the Construction Certificate stage to account for any changes following the development application.



3.9 Variations from Standards

3.9.1 Column Locations

The location of the columns at the entrance to the parking spaces are located within the triangular manoeuvring clearance component of the parking envelope as set out in *AS2890.1:2004 Figure 5.2*. The purpose of the parking envelope is to allow sufficient area to allow a vehicle to manoeuvre into the parking space. The width from the roller door to the opposite side of Knox Lane is approximately 7.5m which provides sufficient manoeuvring area for a vehicle to perform a reverse manoeuvre into and forward manoeuvre out of the garages. The swept path testing is reproduced in **Annexure B** for reference.

The parking spaces have been measured between centres of columns. The column locations do not negatively impact the swept path analysis, nor do they impact the door opening capabilities of parked vehicles. Therefore, the location of the columns at the entrance to the parking spaces are supported.



4 TRAFFIC ASSESSMENT

The impact of the expected traffic generation levels associated with the subject proposal is discussed in the following sub-sections.

4.1 Traffic Generation & Impact

Traffic generation rates for the relevant land uses are provided in the *Roads and Maritime* Services (RMS) Guide to Traffic Generating Developments (2002) and recent supplements and are as follows:

RMS Guide

3.3.2 Medium density residential flat building.

Smaller units and flats (up to two bedrooms)

Weekday peak hour vehicle trips = 0.4-0.5 per dwelling.

Larger units and town houses (three or more bedrooms):

Weekday peak hour vehicle trips = 0.5-0.65 per dwelling.

3.6.1 Shopping centres.

 $V(P)= 11 \ A(S) + 23 \ A(F) + 138 \ A(SM) + 56 \ A(SS) + 5 \ A(OM)$ (vehicle trips per $1000m_2$).

where:

A(S): Slow Trade gross leasable floor area (Gross Leasable Floor Area in square metres) includes major department stores such as David Jones and Grace Bros., furniture, electrical and whitegoods stores.

A(F): Faster Trade GLFA - includes discount department stores such as K-Mart and Target, together with larger specialist stores such as Fosseys.

A(SM): Supermarket GLFA - includes stores such as Franklins and large fruit markets.

A(SS): Specialty shops, secondary retail GLFA - includes specialty shops and take-away stores such as McDonalds. These stores are grouped as they tend to not be primary attractors to the centre.

A(OM): Office, medical GLFA: includes medical centres and general business offices.

3.5 Office and commercial.

Evening peak hour vehicle trips = 2 per 100 m2 gross floor area



The resulting traffic generation is summarised in **Table 3**.

TABLE 3: ESTIMATED TRAFFIC GENERATION

llee	Coolo	Concretion Bets	Tring	Peak Hour	Split (1)(2)(3)
Use	Scale	Generation Rate	Trips	AM	PM
Proposed Development					
Residential (Three + Bedrooms)	3	0.65 per dwelling	1.95 (2)	0 in 2 out	2 in 0 out
Retail	84.4m ²	5.6 trips per 100m ²	4.7 (5)	3 in 2 out	2 in 3 out
Sub Total	-	-	7	3 in 4 out	4 in 3 out
		Existing Devel	opment		
Office	231.0m ²	2 per 100m²	4.6 (5)	5 in 0 out	0 in 5 out
Retail	254.4m ²	5.6 trips per 100m ²	8.1 (8)	4 in 4 out	4 in 4 out
Subtotal	-	•	13	9 in 4 out	4 in 9 out
Net Traffic Generation	-	-	-6	-6 in 0 out	0 in -6 out

Note:

- (1) Assumes 20% inbound & 80% outbound during AM peak for residential: Vice versa for PM.
- (2) Assumes 50% inbound & 50% outbound during AM peak for retail: Vice versa for PM.
- (3) Assumes 90% inbound & 10% outbound during AM peak for office: Vice versa for PM.

As shown, the maximum traffic generation associated with the proposed development is in the order of **7** vehicle trips, equating to approximately one (1) vehicle trip every 8.5 minutes. The maximum traffic generation of the existing development is in the order of **13** vehicle trips which is a numerical surplus of six (6) vehicle trips on top of the proposed development. Therefore, the proposed development is expected to reduce the traffic generation of the site from the existing conditions.

Therefore, the proposed development will have no adverse effects on any nearby intersections in terms of traffic flow efficiency and road safety considerations.



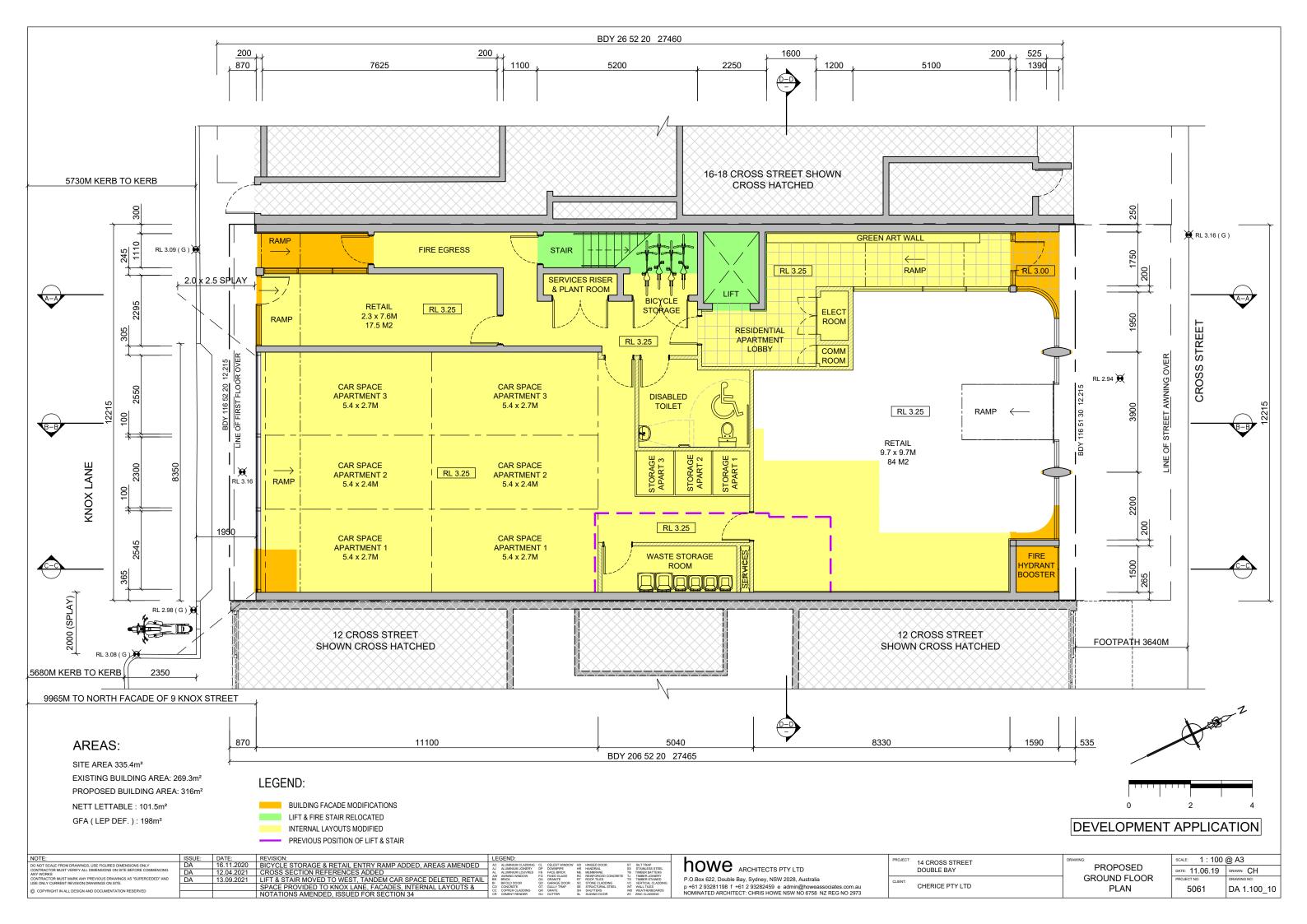
5 CONCLUSION

In view of the foregoing, the subject Mixed Use Development proposal at 14 Cross Street, Double Bay (as depicted in **Annexure A**) is fully supportable in terms of its traffic and parking impacts. The following outcomes of this traffic impact assessment are relevant to note:

- The proposal includes a total of 6 residential car parking spaces, the provision of 6
 residential car parking spaces within the proposed development satisfies the
 residential component of the development and the reduction in scale of the
 commercial component of the development has a net improvement to the local onstreet parking supply.
- Council's DCP requires the provision of six (6) bicycle parking spaces and seven (7)
 have been provided onsite resulting in compliance with Council's requirements.
- The existing site does not provide any motorcycle parking spaces and neither does the proposed plans. Therefore, the demand for on-street motorcycle parking will not change under the proposed plans. It is noted that a motorcycle parking space could be located on street to the east of the proposed driveway.
- Waste collection will be completed by Council's waste collection service along Knox Lane as per existing operations and courier vehicles can utilise on-street parking for deliveries as these types of deliveries will be infrequent.
- The parking areas of the site have been assessed against the relevant sections of AS2890.1 and have been found to generally satisfy the objectives of the standard. Swept path testing has been undertaken, with the results reproduced within **Annexure B**.
- The traffic generated by the development is minimal and when considering the existing traffic generation of the site, the proposed development is expected to reduce the traffic generation of the site. Therefore, the proposed development will not adversely affect the performance of nearby critical intersections or the existing road network, particularly in terms of Level of Service, traffic flow efficiency, residential amenity and road safety considerations.

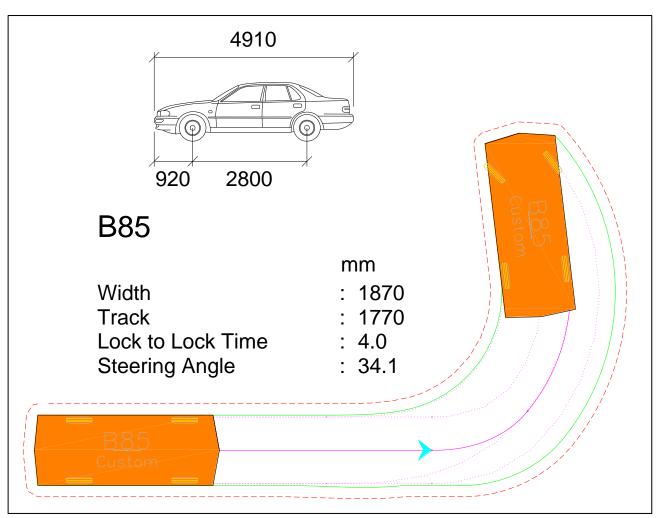


ANNEXURE A: PROPOSED PLANS (1 SHEET)





ANNEXURE B: SWEPT PATH TESTING (5 SHEETS)



AUSTRALIAN STANDARD 85TH PERCENTILE SIZE VEHICLE (B85)

Dotted Purple – Tyre Path Green – Vehicle Body Red – 300mm Clearance

All tests performed at 5 km/h forwards and 2.5km/h reverse

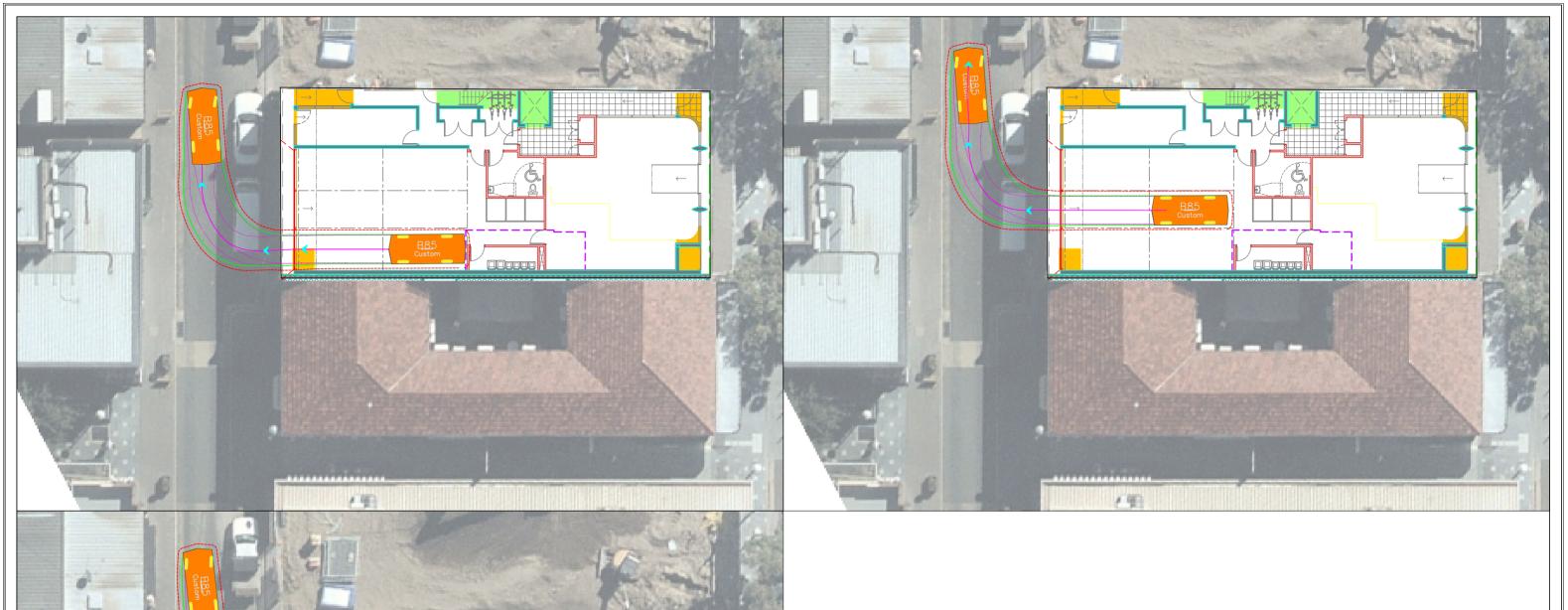


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2019/0142

2019-0142-01-01A

14 Cross Street, Double Bay







MCLAREN TRAFFIC ENGINEERING A division of RAMTRANS Australia Pty. Ltd.

Shop 7, 716-720 Old Princes Hwy, Sutherland NSW 2232 P: (02) 9521 - 7199 E: admin@mclarentraffic.com.au www.mclarentraffic.com.au

CLIENT / Project:

Property Development Systems/Mixed-Use Development

Project Address:

14 Cross Street, Double Bay

Notes: CONCEPT PLAN ONLY. NOT FOR CONSTRUCTION.

Tested Using: *AutoTURN 10 *ZWCAD 2019

Drawing Title:

Swept Path Testing - Exit

Project No: Drawing No: 2019/0142 2019-0142-01-02A Revision Date
A 15/09/2021



Building Sustainability Index www.basix.nsw.gov.au

Multi Dwelling

Certificate number: 1028436M 02

commitments set out below. Terms used in this certificate, or in the commitments, government's requirements for sustainability, if it is built in accordance with the have the meaning given by the document entitled "BASIX Definitions" dated This certificate confirms that the proposed development will meet the NSW 10/09/2020 published by the Department. This document is available at www basix nsw gov au This certificate is a revision of certificate number 1028436M lodged with the consent authority or certifier on 25 September 2019 with application 355/2019.

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: Sunday, 21 November 2021

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



Project summary		
Project name	1906012_02	
Street address	14 Cross Street DOUBLE BAY 2028	BAY 2028
Local Government Area	Woollahra Municipal Council	ıcil
Plan type and plan number	deposited 513005	
Lot no.	2	
Section no.		
No. of residential flat buildings	_	
No. of units in residential flat buildings	3	
No. of multi-dwelling houses	0	
No. of single dwelling houses	0	
Project score		
Water	40	Target 40
Thermal Comfort	V Pass	Target Pass
Energy	35	Target 35

Certificate Prepared by

Name / Company Name: Building Sustainability

ABN (if applicable): 39109172545

page 1/15

Certificate No.: 1028436M_02

Description of project

Project address	
Project name	1906012_02
Street address	14 Cross Street DOUBLE BAY 2028
Local Government Area	Woollahra Municipal Council
Plan type and plan number	deposited 513005
Lot no.	2
Section no.	
Project type	
No. of residential flat buildings	_
No. of units in residential flat buildings	8
No. of multi-dwelling houses	0
No. of single dwelling houses	0
Site details	
Site area (m²)	335
Roof area (m²)	126
Non-residential floor area (m²)	93.0
Residential car spaces	9
Non-residential car spaces	0

Common area landscape			
Common area lawn (m²)	0.0		
Common area garden (m²)	0.0		
Area of indigenous or low water use species (m²)			
Assessor details			
Assessor number	20824	44	
Certificate number	000	0004185300	
Climate zone	56		
Ceiling fan in at least one bedroom	å		
Ceiling fan in at least one living room or other conditioned area	8		
Project score			
Water	>	40	Target 40
Thermal Comfort	>	Pass	Target Pass
Energy	>	35	Target 35

Description of project

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

Residential flat buildings - Building, 3 dwellings, 5 storeys above ground

Indigenous species (min area m²)	0.0
Area of garden & lawn (m²)	37.0
DenoitibnoonU (יm) sera (m²)	0.0 s
Conditioned floor area (m²)	4 304.9 0.0 or more bedrooms
No. of bedrooms	4 <u>9 E 9</u>
.on gnillawG	ო
Indigenous species (min area m²)	0.0
Area of garden & اawn (m²)	14.0
Unconditioned floor area (m²)	
Conditioned floor area (m²)	198.9 0.0
No. of bedrooms	က
.on gnillew O	2
Indigenous species (min area m²)	0.0
Area of garden & Iawn (m²)	14.0
Unconditioned floor area (m²)	0.0
Conditioned floor area (m²)	198.9
No. of bedrooms	က
on gnilləw O	~

Description of project

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

Common areas of unit building - Building

Common area	Floor area (m²)	
Garage	102.0	
Lobby	21.0	

Common area	Floor area (m²)
Lift car (No.1)	ı
Service Lobby	28.0

Floor area (n	0.9
Sommon area	Vaste Storage

Certificate No.: 1028436M_02

Schedule of BASIX commitments

- 1. Commitments for Residential flat buildings Building
- (a) Dwellings

- (i) Water (ii) Energy (iii) Thermal Comfort
- (b) Common areas and central systems/facilities
- (i) Water (ii) Energy
- 2. Commitments for multi-dwelling houses
- 3. Commitments for single dwelling houses
- 4. Commitments for common areas and central systems/facilities for the development (non-building specific)
- (i) Water (ii) Energy

Certificate No.: 1028436M_02

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

(a) Dwellings

 (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 sepecies' column of the table below, and any arrivals landscaping of this dwelling. (This are of indigenous sepecies' column of the table below, and and lawn' for the dwelling child welling. (This are of indigenous sepecies' column of 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. (c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, where indicated for a dwelling in the "HAV recirculation or diversion" column of the table below. (e) The applicant must install: (a) A how water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HAV recirculation or diversion" column of the table below; and the "HV recirculation or diversion and to the hot water diversion systems of the table below; and must connect the hot water diversion tank to rather solumn of the table below; and must connect the hot water diversion tank to rather solumn of the table below; and the abolity and the same should be a specified in the table. 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. (b) The applicant must install, for the dwelling, each alternative water supply system, with the specified size is listed for that dwelling in the table. (d) The applicant must install, for the dwelling, each alternative water supply system, with the specified size is lessed in the table. (d) The applicant must install, for the dwelling, each alternative water supply system, with th	(i) Water	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
 (b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the develling in the "Indigenous species" column of the table below, as private and savaling of that advelling, the abplicant water that the "Indigenous species" column of the table below, as private and adversive or appliance to be installed in the "Description of Project Label. (c) If a rating is specified in the table below for a fixture or appliance to be installed in the dwelling, the applicant must install an on demand hot water recirculation system which regulates all hot water use throughout the dwelling, where indicated for advelling in the "HVV recirculation or diversion" column of the table below. (e) The applicant must install: (a) a hot water diversion system to all showers, kitchen sinks and all basins in the dwelling, where indicated for a dwelling in the "HVV recirculation or diversion" column of the table below; and the "HVV recirculation or diversion" solumn of the table below; and the "HVV recirculation or diversion" solumn of the table below; and the "HVV recirculation or diversion and to all tolleds in the dwelling. (b) a separate diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. 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, 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 (sxcluding any area swinchs supply system), and to diver to verflow as specified. Each system must be configured to collect under the system, and to diver to verflow as specified. Each system, and to diver to verflow as specified. Each system must be soonable and to diver to verflow as specified say specified.	(a) The applicant must comply with the commitments listed below in carrying out the development of a dwelling listed in a table below.			
(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: (a) 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 the "HW recirculation or diversion" column of the table below; and the "HW recirculation or diversion" column of the table below; and the "HW recirculation or diversion" column of the table below; and a hot water diversion tank (or tanks) connected to the hot water diversion systems of at least 100 litres. 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, 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 configurated to collect run-off from the table below. Each system must be configurated to collect can-off from the table say the must be specified. Each system must be specified.	(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).	>	>	
 (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 the "HW recirculation or diversion" column of the table below; and must connect the hot water diversion tank to all tollets 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. (g) The applicant must install, for the dwelling, each alternative water supply system, with the specified (excluding any area which supplies any other alternative water supply system), and to olivert overflow as specified. Each system must be configured to collect run-off from the areas specified. Each system must be configured to collect run-off she water supply system, with the specified. 	(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.		>	>
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 (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. 	(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		>	>
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	(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.	>	>	>

Individual spa	Spa Spa cover shaded	
lnc	Volume (max volume)	1
	Pool shaded	2
Individual pool	Pool Pool cover location	outdoors
pul		ou
	Volume (max volume)	7.5
Appliances	All dish- washers	3 star
Appli	All clothes washers	3 star
	All All toilet All All HW All All Shower- flushing kitchen bathroom recirculation clothes heads systems taps or diversion washers	2
se	All bathroom taps	4 star
Fixtures	All kitchen taps	4 star 4 star
	All toilet All flushing kitche systems taps	4 star
	All shower- heads	3 star (> 4 star 7.5 but <= 9 L/min)
	Dwelling All show no.	က

	Spa top-up	•	
	Pool top-up	ı	
	Laundry connection	•	
	Toilet connection (s)	ı	
eo,	Landscape connection	•	
Alternative water source	Configuration	•	
	Size	ı	
	Alternative water supply systems	•	
	Dwelling no.	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.		>	>

Certificate No.: 1028436M_02

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Certificate No.: 1028436M_02

(ii) Energy	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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.		>	>
(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	ilation system	Kitchen venti	Kitchen ventilation system	Laundry vent	Laundry ventilation system
Dwelling no.	Dwelling Hot water system no.	Each bathroom	Operation control	Each kitchen	Operation control	Each laundry	Operation control
All dwellings	gas instantaneous 6	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

ing	Main s kitchen	0	yes
Natural lighting	No. of No. of Subathrooms Kanada Kana	0	0
	All	yes	yes
	Each Iaundry	yes	yes
ghting	All bathrooms/ toilets	yes	yes
Artificial lighting	Each kitchen	yes	yes
	No. of living &/or dining rooms	4	3
	No. of bedrooms &/or study	വ	3
bu	bedroom areas	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning
Heating	living areas	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning
bu	bedroom areas	1-phase1-phase1-phase1-phaseairconditioningairconditioningairconditioningEER 3.5 - 4.0EER 3.5 - 4.0EER 3.5 - 4.0	1-phase 1-phase 1-phase 1-phase airconditioning airconditioning
Cooling	Dwelling living areas no.	1-phase airconditioning EER 3.5 - 4.0	1-phase airconditioning
	Dwelling I no.	m	All

	or Private ed outdoor or s unsheltered line clothes drying line	ou	OU
	Indoor or sheltered clothes drying line	yes	yes
iures	Clothes	1.5 star	2.5 star 1.5 star yes
iency meas	Clothes	2.5 star	2.5 star
Appliances & other efficiency measures	Dishwasher Clothes Clothes Indoor or washer dryer sheltered clothes drying line	2.5 star	2.5 star
Appliance	Well ventilated fridge space	1	ı
	Refrigerator	1	•
	Timer Kitchen cooktop/oven	gas cooktop & electric oven	gas cooktop & electric oven
pa	Timer	ı	ı
Individual spa	Timer Spa heating system	1	1
loc	Timer	yes	1
Individual pool	Dwelling Pool heating system	gas	1
	Dwelling no.	က	All other dwellings

(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.			

(iii) Thermal Comfort	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
(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.		>	3
(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.	>	>	>

Dwelling no.	Therma: Area adjusted heating load (in mJ/m²/yr) 22.1 30.8	Thermal loads Area adjusted cooling load (in mJ/m²/yr) 9.0 10.2
All other dwellings	35.8	24.0

BASIX

(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.	>	>	3
(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 no common facility	Toilets rating no common facility	Taps rating no common facility	Clothes washers rating 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.	>	>	>

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	Common area ventilation syst	entilation system		Common area lighting	
Common area	Ventilation system type	Ventilation efficiency measure	Primary type of artificial lighting	Lighting efficiency measure	Lighting control system/BMS
Garage	no mechanical ventilation	1	light-emitting diode	zoned switching with motion sensor	No
Lift car (No.1)	•	•	light-emitting diode	connected to lift call button	No
Waste Storage	no mechanical ventilation		light-emitting diode	manual on / manual off	No
Lobby	no mechanical ventilation	•	light-emitting diode	daylight sensor and motion sensor	No
Service Lobby	no mechanical ventilation	1	light-emitting diode	motion sensors	No

Specification	Number of levels (including basement): 6
Туре	gearless traction with V V V F motor
Central energy systems	Liff (No. 1)

4. 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.		>	>

Taps rating Clothes washers rating	no common facility no common laundry facility
Taps rating	no common facility
Toilets rating	no common facility
Showerheads rating	no common facility
Common area	All common areas

(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.	>	>	>	

	Photovoltaic system	Rated electrical output (min): 1.3 peak kW	ıt (min): 1.3 peak kW		
Alternative energy supply					
BASIX Planning, Industry & Environment ww	www.basix.nsw.gov.au	Version: 3.0 / DARWINIA_3_18_5	Certificate No.: 1028436M_02	Sunday, 21 November 2021	page 14/15

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.
- 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.
- 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 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 it is required to monitor in relation to the building or part, has been fulfilled).

Certificate No.: 1028436M_02

Sunday, 21 November 2021

Nationwide House Energy Rating Scheme — Class 2 summary NatHERS Certificate No. 0004185300

Generated on 20 Nov 2021 using AccuRate Sustainability V2.4.3.21

Property

Address 14 Cross Street , Double Bay

NSW, 2028

Lot/DP Lot 2 DP 513005

NatHERS climate zone 56

Accredited assessor



Rachel Clarke

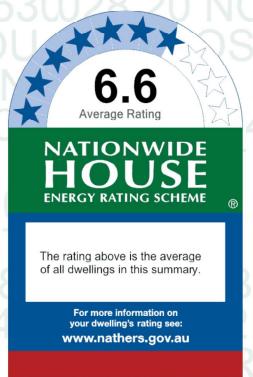
Building Sustainability

rclarke@buildingsustainability.com.au

0294204414

Accreditation No. 20824

Assessor Accrediting Organisation ABSA





Verification

To verify this certificate, scan the QR code or visit hstar.com.au/QR/Generate?p=DwynhTJpb. When using either link, ensure you are visiting hstar.com.au

Summary of all dwellings

Certificate number and link	Unit Number	Heating load (MJ/m²/p.a.)	Cooling load (MJ/m ² /p.a.)	Total load (MJ/m ² /p.a.)	Star rating
0006809743	1	22.08	9.04	31.13	7.6
0006809750	2	30.78	10.21	41.00	6.8
0006809768	3	35.76	24.03	59.79	5.4
Average	DIF	29.54	14.43	43.97	6.6

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated buildings are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.



Explanatory Notes

About this report

This summary rating is the average rating of all NCC Class 2 dwellings in a development. The individual dwellings' ratings are a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate the energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances, or energy production of solar panels. For more details about an individual dwelling's assessment, refer to the individual dwelling's NatHERS Certificate (accessible via link).

Accredited Assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO). AAOs have specific quality assurance processes in place, and continuing professional development requirements, to maintain a high and consistent standard of assessments across the country.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content, input and creation of the NatHERS Certificate is by the assessor. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

Nationwide House Energy Rating Scheme NatHERS Certificate No. 0006809743

Generated on 20 Nov 2021 using AccuRate Sustainability V2.4.3.21

Property

Address Unit 1, 14 Cross Street , Double Bay

NSW, 2028

Lot/DP Lot 2 DP 513005

NCC Class* 2

Type New Home

Plans

Main Plan 5061

Prepared by GB

Construction and environment

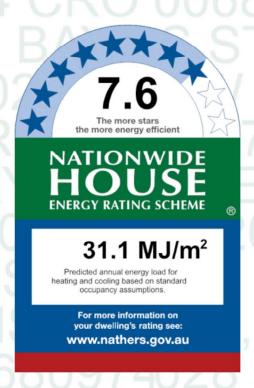
Assessed floor area (m²)* Exposure Type

Conditioned* 198.9 Suburban

Unconditioned* 0.0 NatHERS climate zone

Total 198.9 56

Garage



Thermal performance

Heating Cooling

22.1

MJ/m² MJ/m²

Accredited assessor

Name Rachel Clarke

Business name Building Sustainability

Email rclarke@buildingsustainability.com.au

Phone 0294204414

Accreditation No. 20824

Assessor Accrediting Organisation

ABSA

Declaration of interestNo potential conflicts of interest to declare

About the rating

NatHERS software models the expected thermal energy loads using information about the design and construction, climate and common patterns of household use. The software does not take into account appliances, apart from the airflow impacts from ceiling fans.

Verification

To verify this certificate, scan the QR code or visit



hstar.com.au/QR/Generate? p=sZqXTHQpz.

p=sZqX i HQpz. Whon using either l

When using either link, ensure you are visiting hstar.com.au

National Construction Code (NCC) requirements

The NCC's requirements for NatHERS-rated houses are detailed in 3.12.0(a)(i) and 3.12.5 of the NCC Volume Two. For apartments the requirements are detailed in J0.2 and J5 to J8 of the NCC Volume One.

In NCC 2019, these requirements include minimum star ratings and separate heating and cooling load limits that need to be met by buildings and apartments through the NatHERS assessment. Requirements additional to the NatHERS assessment that must also be satisfied include, but are not limited to: insulation installation methods, thermal breaks, building sealing, water heating and pumping, and artificial lighting requirements. The NCC and NatHERS Heating and Cooling Load Limits (Australian Building Codes Board Standard) are available at www.abcb.gov.au.

State and territory variations and additions to the NCC may also apply.



Certificate check

Ensure the dwelling is designed and then built as per the NatHERS Certificate. While you need to check the accuracy of the whole Certificate, the following spot check covers some important items impacting the dwelling's rating.

Genuine certificate

Does this Certificate match the one available at the web address or QR code in the verification box on the front page? Does the set of NatHERS-stamped plans for the dwelling have a Certificate number on the stamp that matches this Certificate?

Ceiling penetrations*

Does the 'number' and 'type' of ceiling penetrations (e.g. downlights, exhaust fans, etc) shown on the stamped plans or installed, match what is shown in this Certificate?

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

Apartment entrance doors

Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

Exposure*

Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

Window and glazed door type and performance

Default* windows

Window ID	Window	Maximum SHGC*		Substitution tolerance ranges		
Williaow ID	Description	U-value*	SIGC	SHGC lower limit	SHGC upper limit	
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54	
ALM-004-01 A	Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62	

Custom* windows

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
	Description	U-value*	31100	SHGC lower limit	SHGC upper limit
No Data Availabl	e				



Window and glazed door schedule

Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
ALM-004-01 A	D04a	2700	2250	Sliding	45	SW	None
ALM-004-01 A	D04b	2700	500	Other	00	SW	None
ALM-004-01 A	D03a	2700	500	Other	00	NE	None
ALM-003-01 A	D03b	2700	1900	Other	80	NE	None
ALM-004-01 A	D03c	2700	500	Other	00	NE	None
ALM-004-01 A	D02	2700	3450	Sliding	65	NE	None
ALM-004-01 A	D01a	2700	500	Other	00	NE	None
ALM-003-01 A	D01b	2700	1900	Other	80	NE	None
ALM-004-01 A	D01c	2700	500	Other	00	NE	None
ALM-004-01 A	D06a	2700	2250	Sliding	45	SW	None
ALM-004-01 A	D06b	2700	500	Other	00	SW	None
ALM-004-01 A	D05a	2700	2250	Sliding	45	SW	None
ALM-004-01 A	D05b	2700	500	Other	00	SW	None
	ALM-004-01 A ALM-004-01 A ALM-004-01 A ALM-003-01 A ALM-004-01 A	ALM-004-01 A D04a ALM-004-01 A D04b ALM-004-01 A D03a ALM-003-01 A D03b ALM-004-01 A D03c ALM-004-01 A D02 ALM-004-01 A D01a ALM-003-01 A D01b ALM-004-01 A D01c ALM-004-01 A D06a ALM-004-01 A D06b ALM-004-01 A D05a	ID no. (mm) ALM-004-01 A D04a 2700 ALM-004-01 A D04b 2700 ALM-004-01 A D03a 2700 ALM-003-01 A D03b 2700 ALM-004-01 A D03c 2700 ALM-004-01 A D02 2700 ALM-004-01 A D01a 2700 ALM-003-01 A D01b 2700 ALM-004-01 A D01c 2700 ALM-004-01 A D06a 2700 ALM-004-01 A D06b 2700 ALM-004-01 A D05a 2700	ID no. (mm) (mm) ALM-004-01 A D04a 2700 2250 ALM-004-01 A D04b 2700 500 ALM-004-01 A D03a 2700 500 ALM-003-01 A D03b 2700 1900 ALM-004-01 A D03c 2700 500 ALM-004-01 A D02 2700 3450 ALM-004-01 A D01a 2700 500 ALM-003-01 A D01b 2700 1900 ALM-004-01 A D01c 2700 500 ALM-004-01 A D06a 2700 2250 ALM-004-01 A D06b 2700 500 ALM-004-01 A D05a 2700 500	ID no. (mm) (mm) type ALM-004-01 A D04a 2700 2250 Sliding ALM-004-01 A D04b 2700 500 Other ALM-004-01 A D03a 2700 500 Other ALM-003-01 A D03b 2700 1900 Other ALM-004-01 A D03c 2700 500 Other ALM-004-01 A D02 2700 3450 Sliding ALM-004-01 A D01a 2700 500 Other ALM-003-01 A D01b 2700 1900 Other ALM-004-01 A D01c 2700 500 Other ALM-004-01 A D06a 2700 2250 Sliding ALM-004-01 A D06b 2700 500 Other ALM-004-01 A D05a 2700 500 Other	ID no. (mm) (mm) type % ALM-004-01 A D04a 2700 2250 Sliding 45 ALM-004-01 A D04b 2700 500 Other 00 ALM-004-01 A D03a 2700 500 Other 00 ALM-003-01 A D03b 2700 1900 Other 80 ALM-004-01 A D03c 2700 500 Other 00 ALM-004-01 A D02 2700 3450 Sliding 65 ALM-004-01 A D01a 2700 500 Other 00 ALM-003-01 A D01b 2700 1900 Other 80 ALM-004-01 A D01c 2700 500 Other 00 ALM-004-01 A D06a 2700 500 Other 00 ALM-004-01 A D06b 2700 500 Other 00 ALM-004-01 A D06b 2700 500 Other 00	ID no. (mm) (mm) type % Orientation ALM-004-01 A D04a 2700 2250 Sliding 45 SW ALM-004-01 A D04b 2700 500 Other 00 SW ALM-004-01 A D03a 2700 500 Other 00 NE ALM-003-01 A D03b 2700 1900 Other 00 NE ALM-004-01 A D03c 2700 500 Other 00 NE ALM-004-01 A D01a 2700 3450 Sliding 65 NE ALM-004-01 A D01a 2700 500 Other 00 NE ALM-003-01 A D01b 2700 1900 Other 80 NE ALM-004-01 A D01c 2700 500 Other 00 NE ALM-004-01 A D06a 2700 2250 Sliding 45 SW ALM-004-01 A D06b 2700

Roof window type and performance

Default* roof windows

Window ID	Window	Maximum	SHGC*	Substitution to	lerance ranges
WITIGOW ID	Description	U-value*	01100	SHGC lower limit	SHGC upper limit
No Data Availa	ble				

Custom* roof windows

Window ID	Window	Maximum	Maximum SHGC*		lerance ranges
WILLIAM ID	Description	U-value*	эпос	SHGC lower limit	SHGC upper limit
No Data Availal	blo				

Roof window schedule

Location Window Window Opening Height Width Orientation % (mm)	Outdoor Indoor shade shade
--	-------------------------------

No Data Available

Skylight type and performance

Skylight ID	Skylight description	
No Data Available		



Skylight schedule

Location Skylight No. Skylight shaft length (mm) Area (m²) Orientation Skylight shaft Preflectance

No Data Available

External door schedule

Location Height (mm) Width (mm) Opening % Orientation

No Data Available

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-001	Concrete wall/Plasterboard	50	Medium		No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
bed 1	EW-001	2700	600	NW		No
bed 1	EW-001	2700	3500	SW	2750	Yes
living/dining/kitchen	EW-001	2700	11500	NE	3750	Yes
living/dining/kitchen	EW-001	2700	2800	SE		No
laundry	EW-001	2400	2200	SE		No
bath	EW-001	2400	3800	SE		No
bed 3	EW-001	2700	4000	SW	2750	Yes
bed 2	EW-001	2700	3750	SW	2750	Yes

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-001	Plasterboard/Concrete wall	180.39	
IW-002	Plasterboard/Concrete wall	99.69	

Floor type

Location	Construction	Area Sub-floor Added insulation Cove (m²) ventilation (R-value)	ering
bed 1/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		et 10 + er underlay
ensuite 1/Neighbour	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	6.40 Ceral	mic tile
hall 1/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		et 10 + er underlay



Location	Construction	Area Sub-floor Added (m) ventilation (R-value	on Covering e)
living/dining/kitchen/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	73.90	Carpet 10 + rubber underlay 8
living/dining/kitchen/Neighbour	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	21.10	Ceramic tile
laundry/Neighbour	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	6.50	Ceramic tile
bath/Neighbour	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	11.00	Ceramic tile
bed 3/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	26.20	Carpet 10 + rubber underlay 8
bed 2/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	14.20	Carpet 10 + rubber underlay 8
ensuite 2/Neighbour	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	5.10	Ceramic tile
WC/Neighbour	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	3.20	Ceramic tile
study/media room/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	10.60	Carpet 10 + rubber underlay 8

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/bed 1	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No
Neighbour/ensuite 1	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No
Neighbour/hall 1	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No
Neighbour/living/dining/kitchen	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No
Neighbour/living/dining/kitchen	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No
Neighbour/laundry	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No
Neighbour/bath	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No
Neighbour/bed 3	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No
Neighbour/bed 2	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No
Neighbour/ensuite 2	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No
Neighbour/WC	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No
Neighbour/study/media room	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No

Ceiling penetrations*

Location	Quantity	Туре	Diameter (mm²)	Sealed/unsealed
No Data Available				



Ceiling fans

Location Quantity Diameter (mm)

No Data Available

Roof type

Construction Added insulation (R-value) Solar absorptance Roof shade

No Data Available



Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

AAOs have specific quality assurance processes in place, and continuing professional development requirements, to maintain a high and consistent standard of assessments across the country. Non-accredited assessors do not have this level of quality assurance or any ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the Nathers Certificate was developed by the Nathers Administrator. However the content of each individual certificate is entered and created by the assessor to create a Nathers Certificate. It is the responsibility of the assessor who prepared this certificate to use Nathers accredited software correctly and follow the Nathers Technical Notes to produce a Nathers Certificate.

The predicted annual energy load in this Nathers Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHES accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate

Not all assumptions that may have been made by the assessor while using the Nathers accredited software tool are presented in this report and further details or data files may be available from the assessor.

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
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Nationwide House Energy Rating Scheme NatHERS Certificate No. 0006809750

Generated on 20 Nov 2021 using AccuRate Sustainability V2.4.3.21

Property

Address Unit 2, 14 Cross Street , Double Bay .

NSW, 2028

Lot/DP Lot 2 DP 513005

NCC Class* 2

Type New Home

Plans

Main Plan 5061

Prepared by GB

Construction and environment

Assessed floor area (m²)* Exposure Type

Conditioned* 198.9 Suburban

Unconditioned* 0.0 NatHERS climate zone

Total 198.9 56

Garage



Thermal performance

Heating Cooling
30.8 10.2
MJ/m² MJ/m²

Accredited assessor

Name Rachel Clarke

Business name Building Sustainability

Email rclarke@buildingsustainability.com.au

Phone 0294204414

Accreditation No. 20824

Assessor Accrediting Organisation

ABSA

Declaration of interest No potential conflicts of interest to declare

About the rating

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Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate?

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Does the 'External Door Schedule' show apartment entrance doors? Please note that an "external door" between the modelled dwelling and a shared space, such as an enclosed corridor or foyer, should not be included in the assessment (because it overstates the possible ventilation) and would invalidate the Certificate.

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Has the appropriate exposure level (terrain) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

Provisional* values

Have provisional values been used in the assessment and, if so, noted in "additional notes" below?

Additional notes

Window and glazed door type and performance

Default* windows

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit	
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54	
ALM-004-01 A	Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62	

Custom* windows

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
WITIGOW ID	Description	U-value*		SHGC lower limit	SHGC upper limit	
No Data Availab	le					



Window and glazed door schedule

Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
ALM-004-01 A	D04a	2700	2250	Sliding	45	SW	None
ALM-004-01 A	D04b	2700	500	Other	00	SW	None
ALM-004-01 A	D03a	2700	500	Other	00	NE	None
ALM-003-01 A	D03b	2700	1900	Other	80	NE	None
ALM-004-01 A	D03c	2700	500	Other	00	NE	None
ALM-004-01 A	D02	2700	3450	Sliding	65	NE	None
ALM-004-01 A	D01a	2700	500	Other	00	NE	None
ALM-003-01 A	D01b	2700	1900	Other	80	NE	None
ALM-004-01 A	D01c	2700	500	Other	00	NE	None
ALM-004-01 A	D06a	2700	2250	Sliding	45	SW	None
ALM-004-01 A	D06b	2700	500	Other	00	SW	None
ALM-004-01 A	D05a	2700	2250	Sliding	45	SW	None
ALM-004-01 A	D05b	2700	500	Other	00	SW	None
	ALM-004-01 A ALM-004-01 A ALM-004-01 A ALM-003-01 A ALM-004-01 A	ALM-004-01 A D04a ALM-004-01 A D04b ALM-004-01 A D03a ALM-003-01 A D03b ALM-004-01 A D03c ALM-004-01 A D02 ALM-004-01 A D01a ALM-003-01 A D01b ALM-004-01 A D01c ALM-004-01 A D06a ALM-004-01 A D06b ALM-004-01 A D05a	ID no. (mm) ALM-004-01 A D04a 2700 ALM-004-01 A D04b 2700 ALM-004-01 A D03a 2700 ALM-003-01 A D03b 2700 ALM-004-01 A D03c 2700 ALM-004-01 A D02 2700 ALM-004-01 A D01a 2700 ALM-003-01 A D01b 2700 ALM-004-01 A D01c 2700 ALM-004-01 A D06a 2700 ALM-004-01 A D06b 2700 ALM-004-01 A D05a 2700	ID no. (mm) (mm) ALM-004-01 A D04a 2700 2250 ALM-004-01 A D04b 2700 500 ALM-004-01 A D03a 2700 500 ALM-003-01 A D03b 2700 1900 ALM-004-01 A D03c 2700 500 ALM-004-01 A D02 2700 3450 ALM-004-01 A D01a 2700 500 ALM-003-01 A D01b 2700 1900 ALM-004-01 A D01c 2700 500 ALM-004-01 A D06a 2700 2250 ALM-004-01 A D06b 2700 500 ALM-004-01 A D05a 2700 500	ID no. (mm) (mm) type ALM-004-01 A D04a 2700 2250 Sliding ALM-004-01 A D04b 2700 500 Other ALM-004-01 A D03a 2700 500 Other ALM-003-01 A D03b 2700 1900 Other ALM-004-01 A D03c 2700 500 Other ALM-004-01 A D02 2700 3450 Sliding ALM-004-01 A D01a 2700 500 Other ALM-003-01 A D01b 2700 1900 Other ALM-004-01 A D01c 2700 500 Other ALM-004-01 A D06a 2700 2250 Sliding ALM-004-01 A D06b 2700 500 Other ALM-004-01 A D05a 2700 500 Other	ID no. (mm) (mm) type % ALM-004-01 A D04a 2700 2250 Sliding 45 ALM-004-01 A D04b 2700 500 Other 00 ALM-004-01 A D03a 2700 500 Other 00 ALM-003-01 A D03b 2700 1900 Other 80 ALM-004-01 A D03c 2700 500 Other 00 ALM-004-01 A D02 2700 3450 Sliding 65 ALM-004-01 A D01a 2700 500 Other 00 ALM-003-01 A D01b 2700 1900 Other 80 ALM-004-01 A D01c 2700 500 Other 00 ALM-004-01 A D06a 2700 500 Other 00 ALM-004-01 A D06b 2700 500 Other 00 ALM-004-01 A D06b 2700 500 Other 00	ID no. (mm) (mm) type % Orientation ALM-004-01 A D04a 2700 2250 Sliding 45 SW ALM-004-01 A D04b 2700 500 Other 00 SW ALM-004-01 A D03a 2700 500 Other 00 NE ALM-003-01 A D03b 2700 1900 Other 00 NE ALM-004-01 A D03c 2700 500 Other 00 NE ALM-004-01 A D01a 2700 3450 Sliding 65 NE ALM-004-01 A D01a 2700 500 Other 00 NE ALM-003-01 A D01b 2700 1900 Other 80 NE ALM-004-01 A D01c 2700 500 Other 00 NE ALM-004-01 A D06a 2700 2250 Sliding 45 SW ALM-004-01 A D06b 2700

Roof window type and performance

Default* roof windows

Window ID	Window	Maximum SHGC		Substitution tolerance ranges		
WITIGOW ID	Description	escription U-value*	31130	SHGC lower limit	SHGC upper limit	
No Data Availa	ble					

Custom* roof windows

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
WITHOUT ID	Description	U-value*		SHGC lower limit	SHGC upper limit	
No Data Availa	ble					

Roof window schedule

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade	
No Data Ava	ilable								

Skylight type and performance

Skylight ID	Skylight description	
No Data Available		



Skylight schedule

Skylight **Skylight** Skylight Skylight shaft Area Outdoor Location shaft length Orientation Diffuser (m^2) No. shade reflectance (mm)

No Data Available

External door schedule

Location Height (mm) Width (mm) Opening % Orientation No Data Available

External wall type

Wall	Wall	Solar	Wall shade	Bulk insulation	Reflective
ID	type	absorptance	(colour)	(R-value)	wall wrap*
EW-001	Concrete wall/Plasterboard	50	Medium		No

External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
bed 1	EW-001	2700	600	NW		No
bed 1	EW-001	2700	3500	SW	2750	Yes
living/dining/kitchen	EW-001	2700	11500	NE	3750	Yes
living/dining/kitchen	EW-001	2700	5600	SE		No
laundry	EW-001	2400	2200	SE		No
bath	EW-001	2400	3800	SE		No
bed 3	EW-001	2700	4000	SW	2750	Yes
bed 3	EW-001	2700	3400	SE		No
bed 2	EW-001	2700	3750	SW	2750	Yes

Internal wall type

Wall ID	Wall type	Area (m²)	Bulk insulation
IW-001	Plasterboard/Concrete wall	180.39	
IW-002	Plasterboard/Concrete wall	64.05	

Floor type

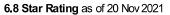
Location	Construction	Area Sub-floor Added insulat (m²) ventilation (R-value)	ion Covering ue)
bed 1/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	14.50	Carpet 10 + rubber underlay 8
ensuite 1/Neighbour	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	6.40	Ceramic tile



Location	Construction	Area Sub-floor Added insulation (m) ventilation (R-value)	n Covering
hall 1/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	6.20	Carpet 10 + rubber underlay 8
living/dining/kitchen/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	73.90	Carpet 10 + rubber underlay 8
living/dining/kitchen/Neighbour	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	21.10	Ceramic tile
laundry/Neighbour	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	6.50	Ceramic tile
bath/Neighbour	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	11.00	Ceramic tile
bed 3/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	26.20	Carpet 10 + rubber underlay 8
bed 2/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	14.20	Carpet 10 + rubber underlay 8
ensuite 2/Neighbour	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	5.10	Ceramic tile
WC/Neighbour	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	3.20	Ceramic tile
study/media room/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	10.60	Carpet 10 + rubber underlay 8

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Neighbour/bed 1	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No
Neighbour/ensuite 1	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No
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Neighbour/living/dining/kitchen	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No
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Neighbour/laundry	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No
Neighbour/bath	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No
Neighbour/bed 3	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No
Neighbour/bed 2	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No
Neighbour/ensuite 2	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No
Neighbour/WC	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No
Neighbour/study/media room	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No





Ceiling penetrations*

Location Quantity Type Diameter (mm²) Sealed/unsealed

No Data Available

Ceiling fans

Location Quantity Diameter (mm)

No Data Available

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof e shade
as_ROOF-B013.rof #2016 © Concrete slab 200mm - Drained Tile walking surface - R2.0 insulation under slab - Susp. Ceiling under	R2.0	50	Medium



Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

AAOs have specific quality assurance processes in place, and continuing professional development requirements, to maintain a high and consistent standard of assessments across the country. Non-accredited assessors do not have this level of quality assurance or any ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the Nathers Certificate was developed by the Nathers Administrator. However the content of each individual certificate is entered and created by the assessor to create a Nathers Certificate. It is the responsibility of the assessor who prepared this certificate to use Nathers accredited software correctly and follow the Nathers Technical Notes to produce a Nathers Certificate.

The predicted annual energy load in this Nathers Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way.

Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

Not all assumptions that may have been made by the assessor while using the Nathers accredited software tool are presented in this report and further details or data files may be available from the assessor.

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Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).
	CO. CO. 10. Wallo in the Salpin of Wing Walloy, Tol Icco, Other Sulpin by, Yogotaton (protected of listed Fallinge tiess).

Nationwide House Energy Rating Scheme NatHERS Certificate No. 0006809768

Generated on 20 Nov 2021 using AccuRate Sustainability V2.4.3.21

Property

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NSW, 2028

Lot/DP Lot 2 DP 513005

NCC Class* 2

Type New Home

Plans

Main Plan 5061

Prepared by GB

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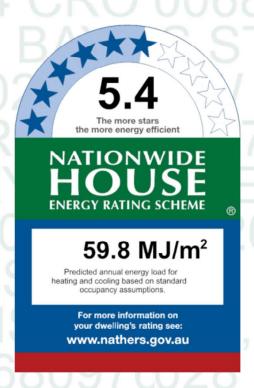
Assessed floor area (m²)* Exposure Type

Conditioned* 304.9 Open

Unconditioned* 0.0 NatHERS climate zone

Total 304.9 56

Garage



Thermal performance

Heating Cooling
35.8 24.0
MJ/m² MJ/m²

Accredited assessor

Name Rachel Clarke

Business name Building Sustainability

Email rclarke@buildingsustainability.com.au

Phone 0294204414

Accreditation No. 20824

Assessor Accrediting Organisation

ABSA

Declaration of interest No potential conflicts of interest to declare

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Default* windows

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
WITHOW ID	Description	U-value*	SHGC	SHGC lower limit SHGC upper lim 0.48 0.54	SHGC upper limit	
ALM-003-01 A	Aluminium A DG Air Fill Clear-Clear	4.8	0.51	0.48	0.54	
ALM-004-01 A	Aluminium B DG Air Fill Clear-Clear	4.8	0.59	0.56	0.62	

Custom* windows

Window ID	Window	Maximum	SHGC*	Substitution tolerance ranges		
window iD	Description	U-value*	эпос	SHGC lower limit SHGC upper limit	SHGC upper limit	
No Data Availab	le					



Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
study	ALM-004-01 A	D04a	2700	1900	Sliding	45	SW	None
study	ALM-004-01 A	D04b	2700	450	Other	00	SW	None
living/dining/kitchen	ALM-004-01 A	D03a	2700	500	Other	00	NE	None
living/dining/kitchen	ALM-003-01 A	D03b	2700	1900	Other	80	NE	None
living/dining/kitchen	ALM-004-01 A	D03c	2700	500	Other	00	NE	None
living/dining/kitchen	ALM-004-01 A	D02	2700	3450	Sliding	65	NE	None
living/dining/kitchen	ALM-004-01 A	D01a	2700	500	Other	00	NE	None
living/dining/kitchen	ALM-003-01 A	D01b	2700	1900	Other	80	NE	None
living/dining/kitchen	ALM-004-01 A	D01c	2700	500	Other	00	NE	None
living/dining/kitchen	ALM-004-01 A	W02	2700	3450	Other	00	NE	None
bed 1	ALM-004-01 A	D06a	2700	1900	Sliding	45	SW	None
bed 1	ALM-004-01 A	D06b	2700	450	Other	00	SW	None
living/media	ALM-004-01 A	D05a	2700	2250	Sliding	45	SW	None
living/media	ALM-004-01 A	D05b	2700	500	Other	00	SW	None
bed 2	ALM-003-01 A	W04a	1800	450	Awning	45	SW	None
bed 2	ALM-004-01 A	W04b	1800	1350	Other	00	SW	None
bed 2	ALM-003-01 A	W04c	1800	450	Awning	45	SW	None
library	ALM-004-01 A	W03a	400	2900	Other	00	NE	None
library	ALM-003-01 A	W03b	2300	500	Awning	45	NE	None
library	ALM-004-01 A	W03c	2300	1900	Other	00	NE	None
library	ALM-003-01 A	W03d	2300	500	Awning	45	NE	None
bed 4 (master)	ALM-004-01 A	W01a	400	2900	Other	00	NE	None
bed 4 (master)	ALM-003-01 A	W01b	2300	500	Awning	45	NE	None
bed 4 (master)	ALM-004-01 A	W01c	2300	1900	Other	00	NE	None
bed 4 (master)	ALM-003-01 A	W01d	2300	500	Awning	45	NE	None
bed 4 (master)	ALM-004-01 A	W07	2100	600	Other	00	SE	None
bed 4 (master)	ALM-004-01 A	W08	2100	600	Other	00	SE	None
bed 4 (master)	ALM-004-01 A	W09	2100	600	Other	00	SE	None
bed 3	ALM-004-01 A	W10	2100	600	Other	00	SE	None
bed 3	ALM-004-01 A	W11	2100	600	Other	00	SE	None
bed 3	ALM-003-01 A	W06a	1800	450	Awning	45	SW	None
bed 3	ALM-004-01 A	W06b	1800	1350	Other	00	SW	None
bed 3	ALM-003-01 A	W06c	1800	450	Awning	60	SW	None
bed 3 ensuite	ALM-003-01 A	W05b	1800	600	Awning	45	SW	None
bed 2 ensuite	ALM-003-01 A	W05a	1800	600	Awning	45	SW	None



Roof window type and performance

Default* roof windows

Window ID	Window	Maximum	Maximum SHGC*	Substitution to	lerance ranges
WITHOW ID	Description	U-value*	SHGC	SHGC lower limit	SHGC upper limit

No Data Available

Custom* roof windows

Window ID	Window Description	Maximum	SHGC*	Substitution tolerance ranges		
		U-value*	SHGC	SHGC lower limit	SHGC upper limit	
VEL-011-01 W	VELUX FS - Fixed Skylight DG 3mm LoE 366 / 8.5mm Argon Gap / 5.36mm Clear La	2.6	0.24	0.23	0.25	

Roof window schedule

Location	W indow ID	Window no.	Opening %	Height (mm)	Width (mm)	Orientation	Outdoor shade	Indoor shade
stairs and landings	VEL-011-01 W	SKa	0	1844	1844	NE	None	None
stairs and landings	VEL-011-01 W	SKb	0	1844	1844	SW	None	None

Skylight type and performance

Skylight ID Skylight description

No Data Available

Skylight schedule

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²) Orientation	Outdoor shade	Diffuser	Skylight shaft reflectance

No Data Available

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation	
No Data Available					

External wall type

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
EW-001	Concrete wall/Plasterboard	50	Medium		No



External wall schedule

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
study	EW-001	2700	3700	SW	1350	Yes
living/dining/kitchen	EW-001	2700	700	NE		No
living/dining/kitchen	EW-001	2700	10100	NE	200	Yes
living/dining/kitchen	EW-001	2700	700	NE		No
living/dining/kitchen	EW-001	2700	7800	SE		No
living/dining/kitchen	EW-001	3200	3450	NE	600	Yes
laundry	EW-001	2400	2300	SE		No
ensuite 1	EW-001	2400	2400	SE		No
bed 1	EW-001	2700	3600	SE		No
bed 1	EW-001	2700	3600	SW	1350	Yes
living/media	EW-001	2770	1000	SE	3600	Yes
living/media	EW-001	2700	3750	SW	400	Yes
living/media	EW-001	2770	1000	NW	3600	Yes
bed 2	EW-001	2700	600	SW		No
bed 2	EW-001	2200	2250	SW	400	Yes
bed 2	EW-001	500	2250	SW	400	Yes
bed 2	EW-001	2700	650	SW		No
stairs and landings	EW-001	1000	2250	NW		No
stairs and landings	EW-001	900	2700	NE		No
stairs and landings	EW-001	1000	2250	SE		No
stairs and landings	EW-001	900	2700	SW		No
library	EW-001	2700	700	NE		No
library	EW-001	2700	3200	NE	600	Yes
library	EW-001	2700	2000	NW		No
bed 4 (master)	EW-001	2700	3200	NE	600	Yes
bed 4 (master)	EW-001	2700	700	NE		No
bed 4 (master)	EW-001	2700	8250	SE		No
master ensuite	EW-001	2400	3900	SE		No
bed 3	EW-001	2700	3600	SE		No
bed 3	EW-001	2700	600	SW		No
bed 3	EW-001	2200	2250	SW	400	Yes
bed 3	EW-001	500	2250	SW	400	Yes
bed 3	EW-001	2700	650	SW		No
bed 3 ensuite	EW-001	2400	1850	SW		No
bed 2 ensuite	EW-001	2400	1850	SW		No



Internal wall *type*

Wall ID	Wall type	A rea (m²)	Bulk insulation	
IW-001	Plasterboard/Concrete wall	277.07		
IW-002	Plasterboard/Concrete wall	116.37		
IW-003	Plasterboard	9.32		

Floor type

Location	Construction	Area Sub-floor Added (m²) ventilation (R-value	n Covering)
study/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	14.20	Carpet 10 + rubber underlay 8
living/dining/kitchen/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	84.80	Carpet 10 + rubber underlay 8
living/dining/kitchen/Neighbour	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	18.10	Ceramic tile
laundry/Neighbour	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	5.50	Ceramic tile
ensuite 1/Neighbour	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	5.70	Ceramic tile
bed 1/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	12.80	Carpet 10 + rubber underlay 8
living/media/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	18.10	Carpet 10 + rubber underlay 8
guest toilet/Neighbour	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	5.20	Ceramic tile
hall/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	6.30	Carpet 10 + rubber underlay 8
bed 2/Neighbour	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	13.50	Carpet 10 + rubber underlay 8
stairs and landings/living/dining/kitchen	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	21.10	Carpet 10 + rubber underlay 8
stairs and landings/guest toilet	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	5.20	Carpet 10 + rubber underlay 8
stairs and landings/hall	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	2.30	Carpet 10 + rubber underlay 8
bridge/living/dining/kitchen	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	6.80	Carpet 10 + rubber underlay 8
library/living/dining/kitchen	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	21.10	Carpet 10 + rubber underlay 8
bed 4 (master)/living/dining/kitchen	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	32.10	Carpet 10 + rubber underlay 8
bed 4 (master)/laundry	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	1.90	Carpet 10 + rubber underlay 8
bed 4 (master)/hall	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	2.40	Carpet 10 + rubber underlay 8



Construction	Area Sub-floor Added insulati (R-valu	on Covering e)
as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	3.30	Ceramic tile
as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	0.10	Ceramic tile
as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	1.00	Ceramic tile
as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	5.70	Ceramic tile
as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	12.80	Carpet 10 + rubber underlay 8
as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	0.70	Carpet 10 + rubber underlay 8
as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	6.70	Ceramic tile
as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)	6.70	Ceramic tile
	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul) as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul) as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul) as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul) as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul) as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul) as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul) as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul) as_FLOR-B006 #1005 © 200mm Concrete Floor slab	Area Sub-floor (m) ventilation insulation (R-value as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul) as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul) as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul) as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul) as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul) as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul) as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul) as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul) as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul) as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul) as_FLOR-B006 #1005 © 200mm Concrete Floor slab

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
stairs and landings/living/dining/kitchen	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	•	No
bridge/living/dining/kitchen	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	•	No
library/living/dining/kitchen	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)	•	No
bed 4 (master)/living/dining/kitchen	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No
master ensuite/living/dining/kitchen	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No
bed 4 (master)/laundry	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No
master ensuite/laundry	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No
master ensuite/ensuite 1	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No
bed 3/bed 1	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No
bed 3/living/media	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No
bed 3 ensuite/living/media	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No
bed 2 ensuite/living/media	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No
stairs and landings/guest toilet	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No
stairs and landings/hall	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No
bed 4 (master)/hall	as_FLOR-B006 #1001 © 200mm Concrete Floor slab with carpet-underfelt(no insul)		No
master ensuite/hall	as_FLOR-B006 #1005 © 200mm Concrete Floor slab with ceramic tiles (no insul)		No



Ceiling penetrations*

Location Quantity Туре Diameter (mm²) Sealed/unsealed

No Data Available

Ceiling fans

Location Quantity Diameter (mm)

No Data Available

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof e shade
as_ROOF-B013.rof #2016 © Concrete slab 200mm - Drained Tile walking surface - R2.0 insulation under slab - Susp. Ceiling under	R2.0	50	Medium
as_ROOF-B013.rof #2046 © Concrete slab 200mm - WP Membrane surface - R2.0 insulation under slab - Susp. Ceiling under	R2.0	50	Medium
as_ROOF-B021 #1102 © 500mm Soil over 200mm concrete slab roof + plasterb'd ceiling under		50	Medium
mod as_ROOF-B071 #1001 © 450mm water over 200mm conc roof + R3.5 insul and plasterb'd ceiling under	R2.0	50	Medium
as_ROOF-A031 #1001 © 22.5 deg 22.5 deg Colourbond steel roof with no ceiling under		50	Medium



Explanatory notes

About this report

A NatHERS rating is a comprehensive, dynamic computer modelling evaluation of a home, using the floorplans, elevations and specifications to estimate an energy load. It addresses the building layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings), but does not cover the water or energy use of appliances or energy production of solar panels.

Ratings are based on a unique climate zone where the home is located and are generated using standard assumptions, including occupancy patterns and thermostat settings. The actual energy consumption of a home may vary significantly from the predicted energy load, as the assumptions used in the rating will not match actual usage patterns. For example, the number of occupants and personal heating or cooling preferences will vary.

While the figures are an indicative guide to energy use, they can be used as a reliable guide for comparing different dwelling designs and to demonstrate that the design meets the energy efficiency requirements in the National Construction Code. Homes that are energy efficient use less energy, are warmer on cool days, cooler on hot days and cost less to run. The higher the star rating the more thermally efficient the dwelling is.

Accredited assessors

To ensure the NatHERS Certificate is of a high quality, always use an accredited or licenced assessor. NatHERS accredited assessors are members of a professional body called an Assessor Accrediting Organisation (AAO).

Australian Capital Territory (ACT) licensed assessors may only produce assessments for regulatory purposes using software for which they have a licence endorsement. Licence endorsements can be confirmed on the ACT licensing register

AAOs have specific quality assurance processes in place, and continuing professional development requirements, to maintain a high and consistent standard of assessments across the country. Non-accredited assessors do not have this level of quality assurance or any ongoing training requirements.

Any questions or concerns about this report should be directed to the assessor in the first instance. If the assessor is unable to address these questions or concerns, the AAO specified on the front of this certificate should be contacted.

Disclaimer

The format of the NatHERS Certificate was developed by the NatHERS Administrator. However the content of each individual certificate is entered and created by the assessor to create a NatHERS Certificate. It is the responsibility of the assessor who prepared this certificate to use NatHERS accredited software correctly and follow the NatHERS Technical Notes to produce a NatHERS Certificate.

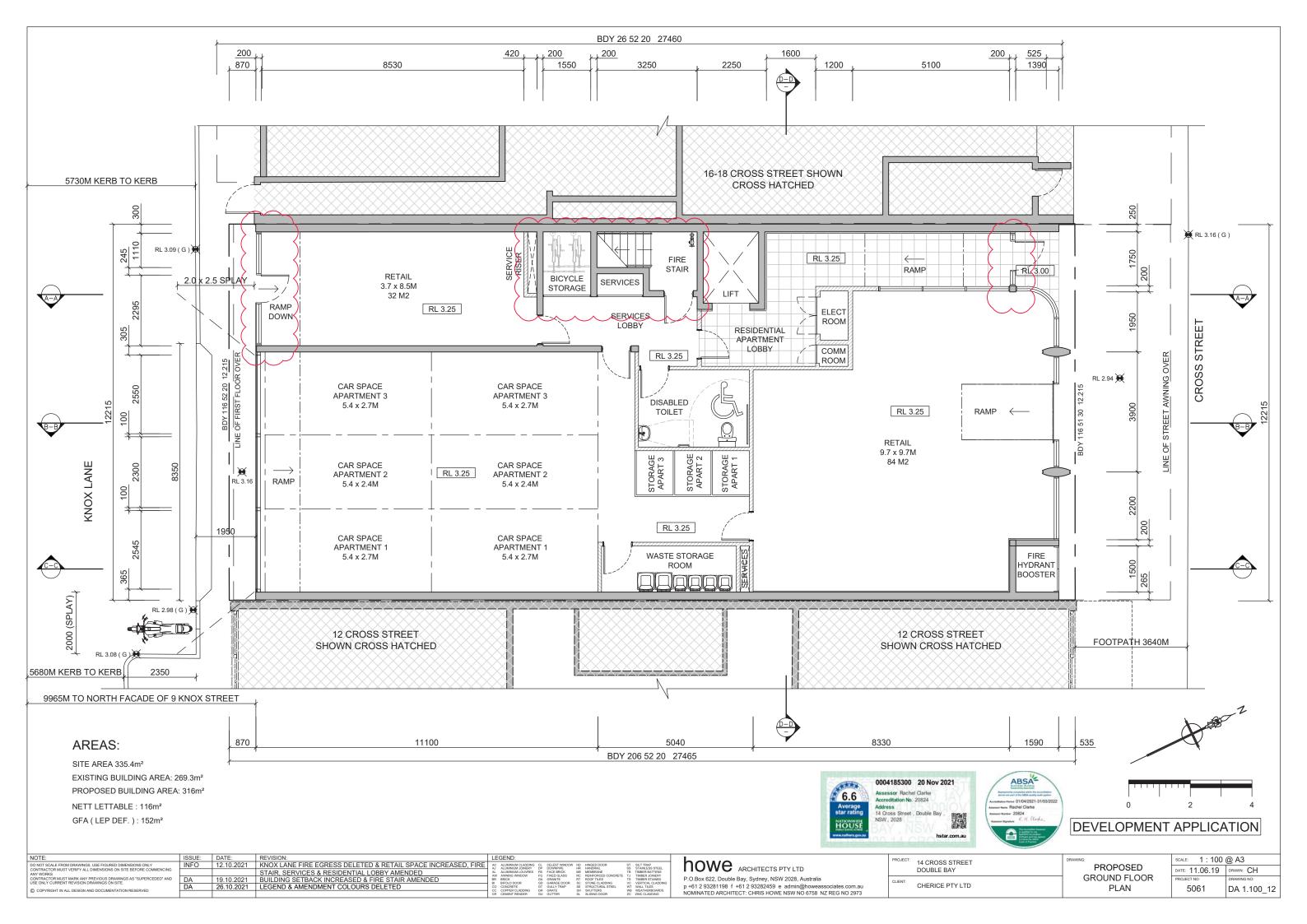
The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a

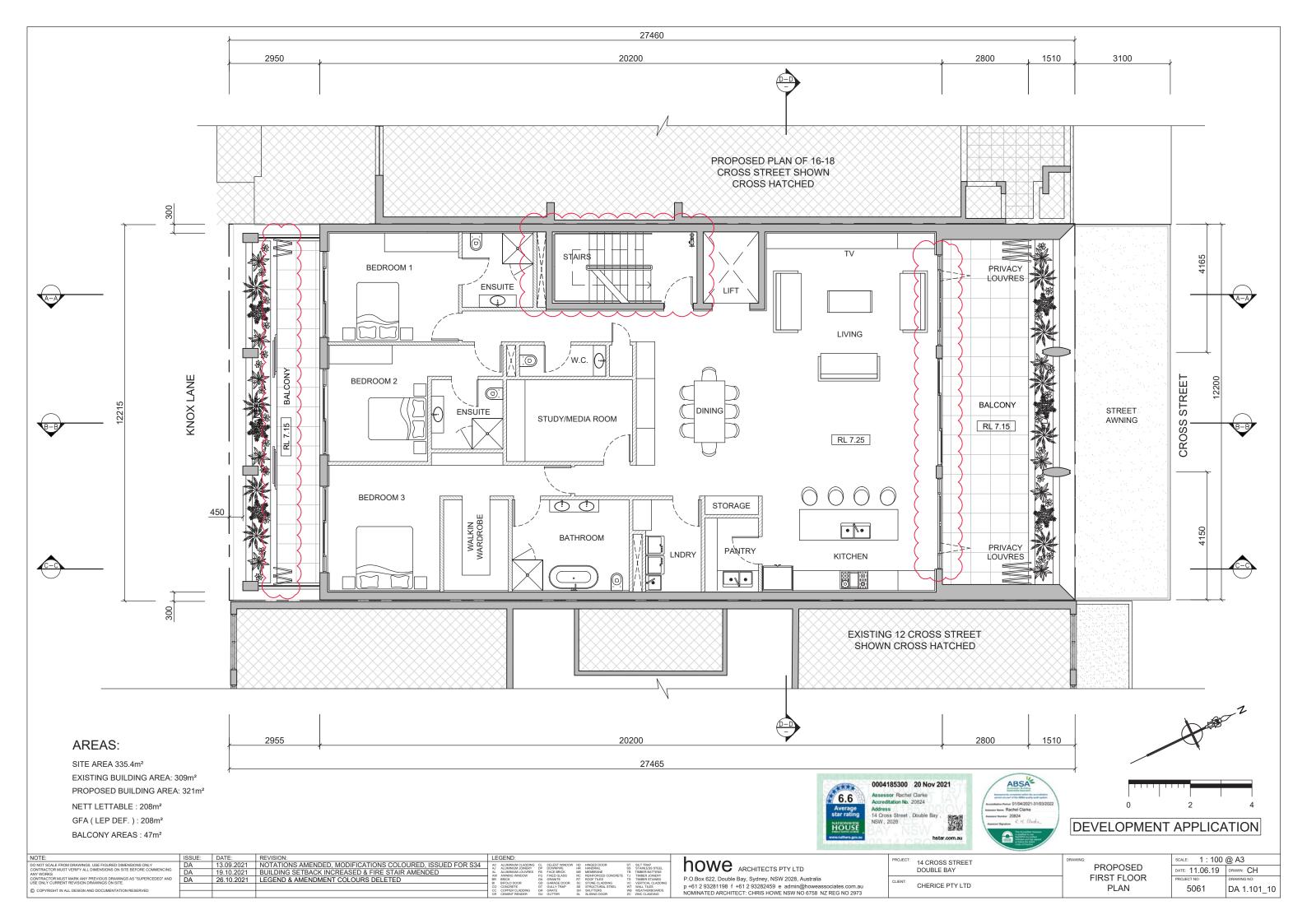
Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local

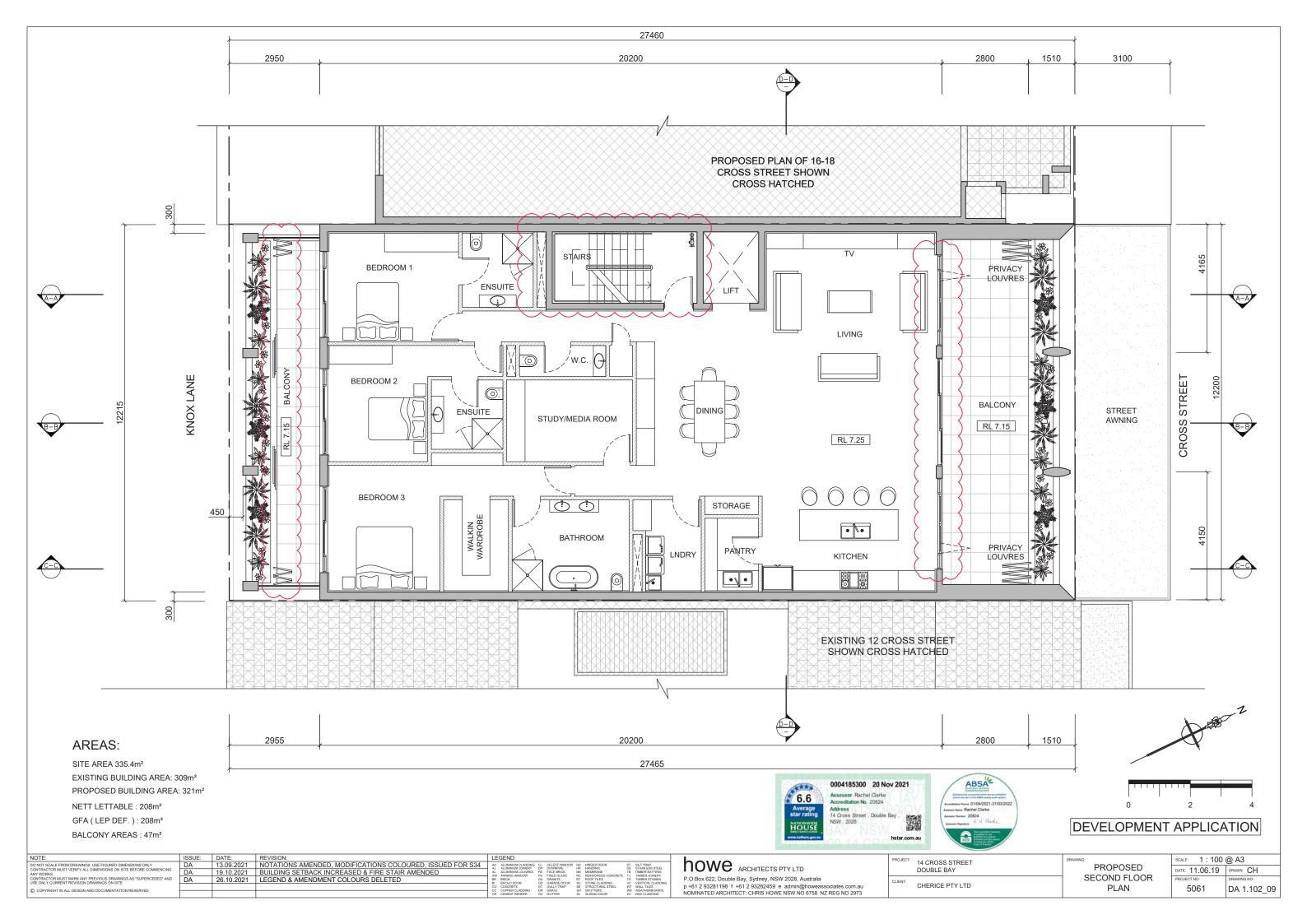
Not all assumptions that may have been made by the assessor while using the NatHERS accredited software tool are presented in this report and further details or data files may be available from the assessor.

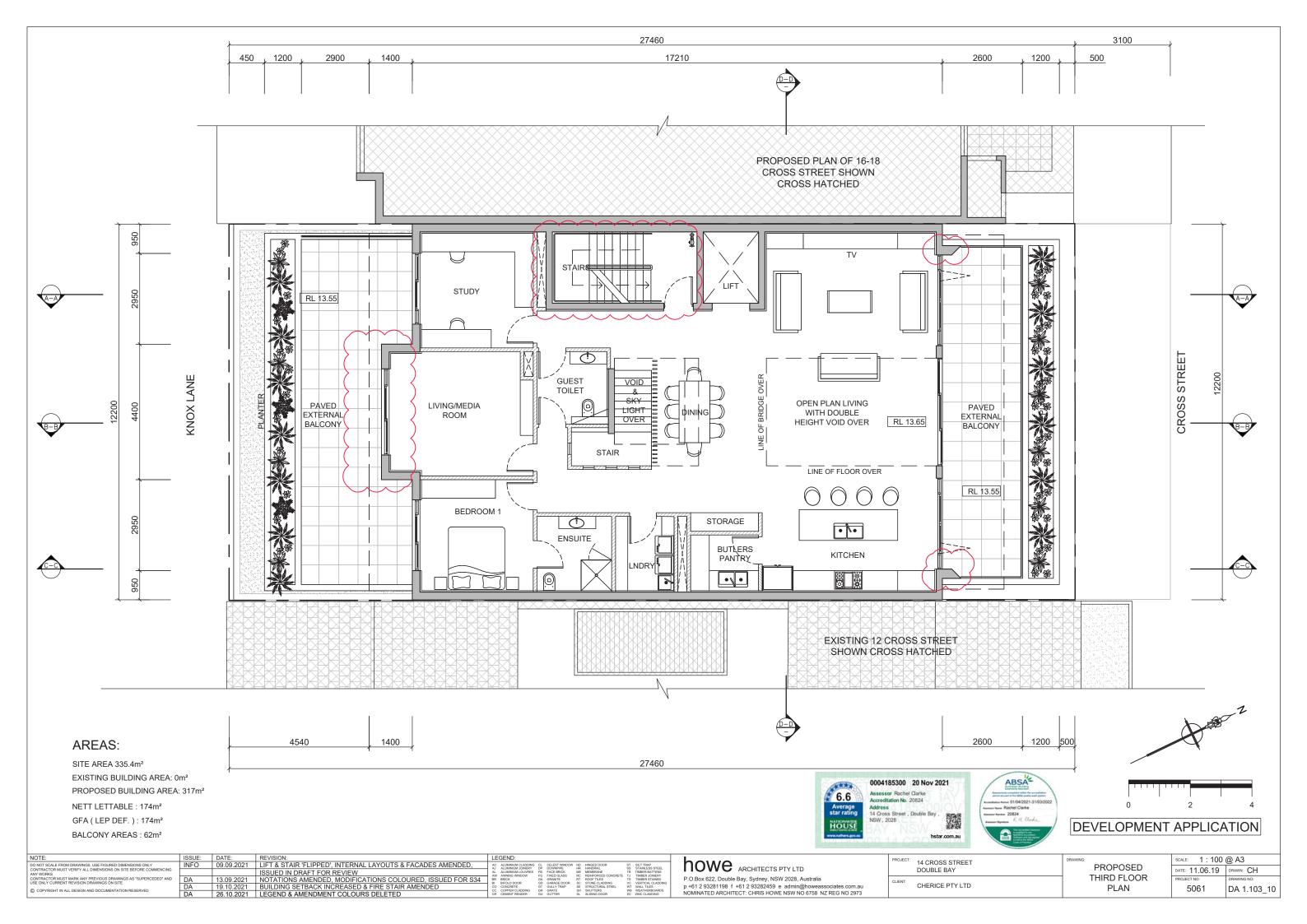
Glossary

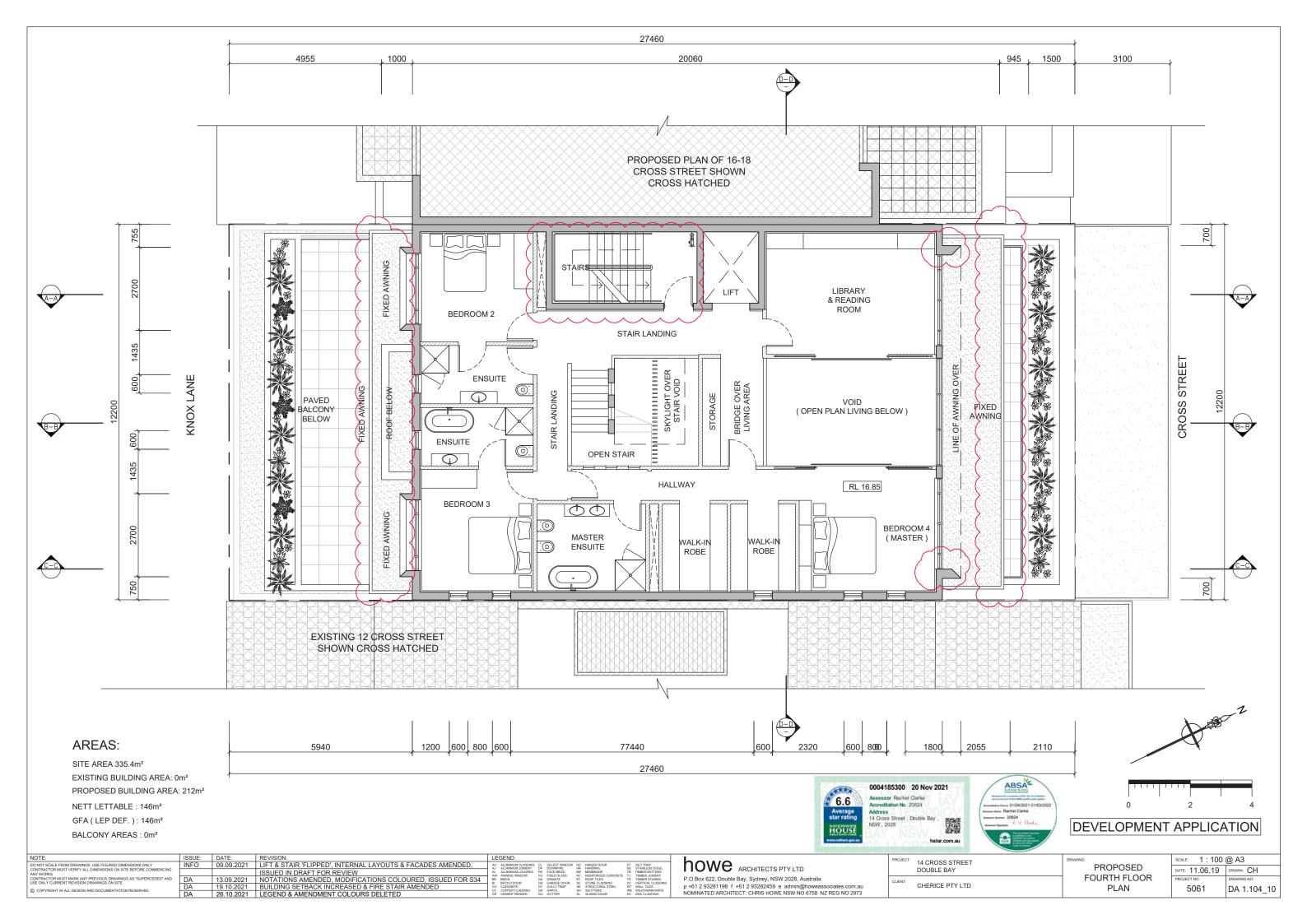
Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, chirmeys and flues. Excludes
	fixtures attached to the ceiling with small holes through the ceiling for wiring, e.g. ceiling fans; pendant lights, and heating and cooling ducts.
Conditioned	a zone within a dwelling that is expected to require heating and cooling based on standard occupancy assumptions. In some circumstances it
	will include garages.
Custom windows	windows listed in Nathers software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category – exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category – open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered
	sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category – suburban	terrain with numerous, closely spaced obstructions below 10me.g. suburban housing, heavily vegetated bushland areas.
Exposure category – protected	terrain with numerous, closely spaced obstructions over 10 me.g. city and industrial areas.
Horizontal shading feature	provides shading to the building in the horizontal plane, e.g. eaves, verandahs, pergolas, carports, or overhangs or balconies from upper levels.
National Construction Code	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4
(NOC) Class	buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional
Provisional value	value of 'medium' must be modelled. Acceptable provisional values are outlined in the Nathers Technical Note and can be found at
	www.nathers.gov.au
Reflective wrap (also known as foil)	can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
Roof window	for NatHERS this is typically an operable window (i.e. can be opened), will have a plaster or similar light well if there is an attic space, and
Teor Wildow	generally does not have a diffuser.
Shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released
Solai fieat gain coefficient (Si ISC)	inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy
	screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

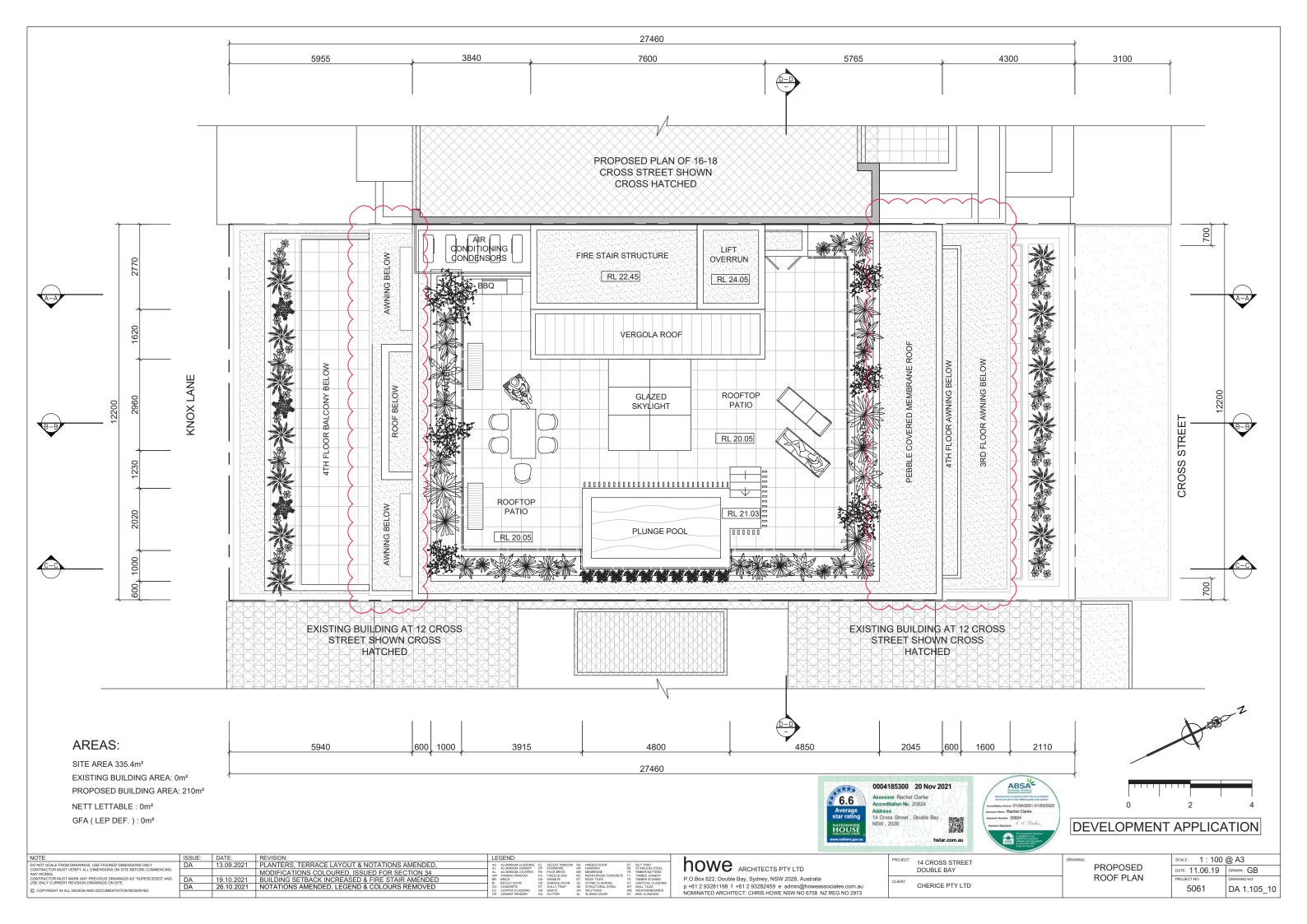


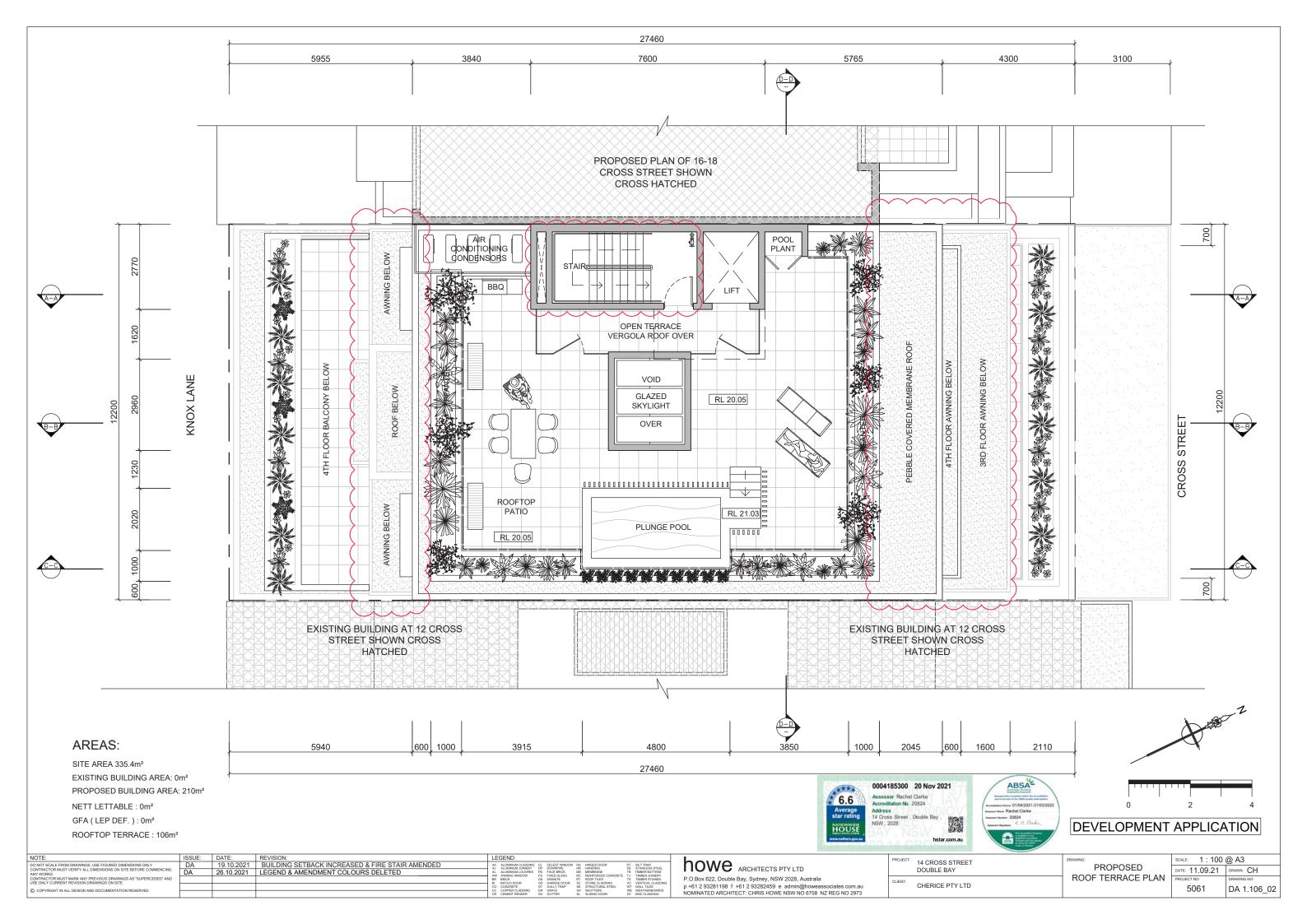


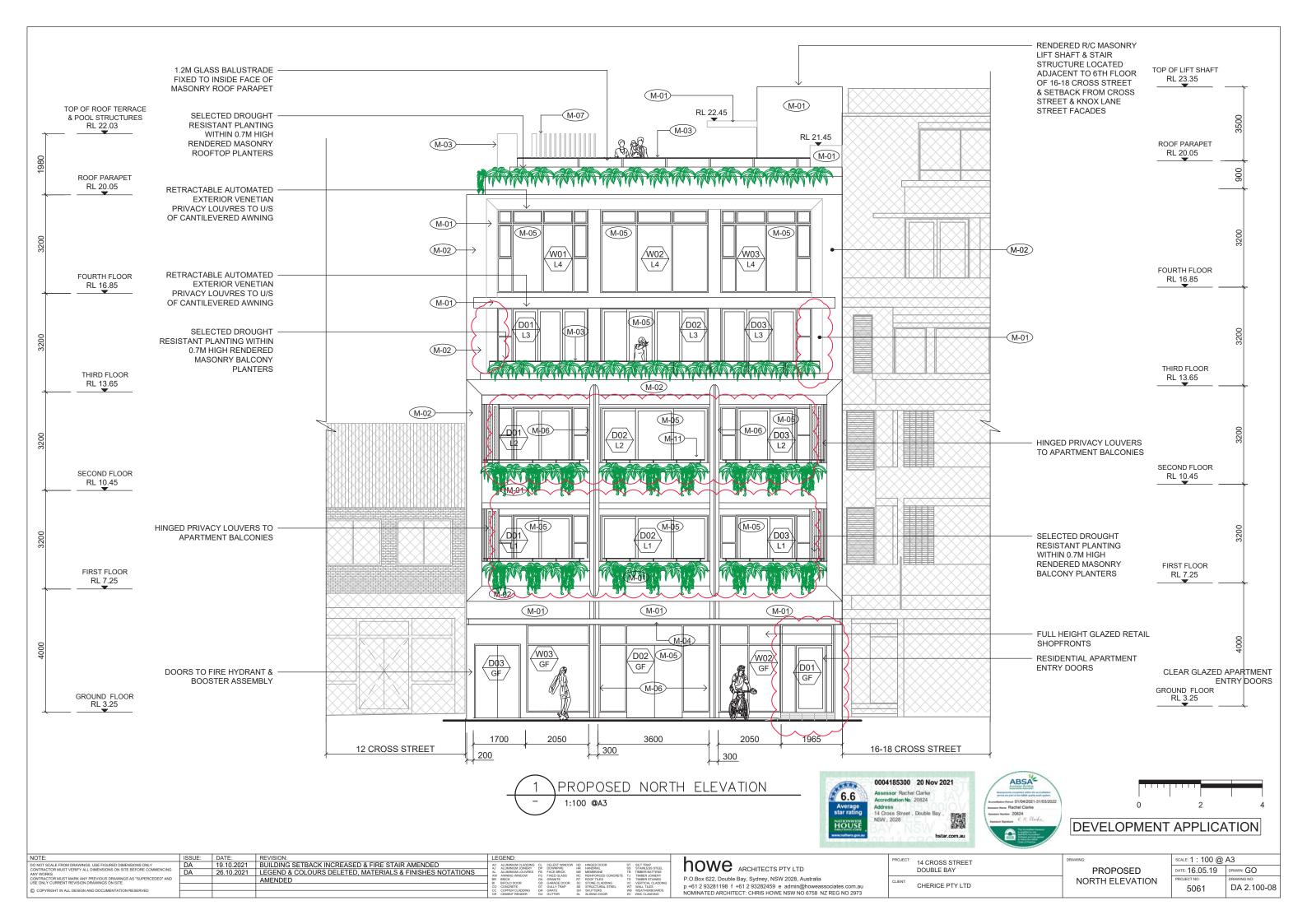


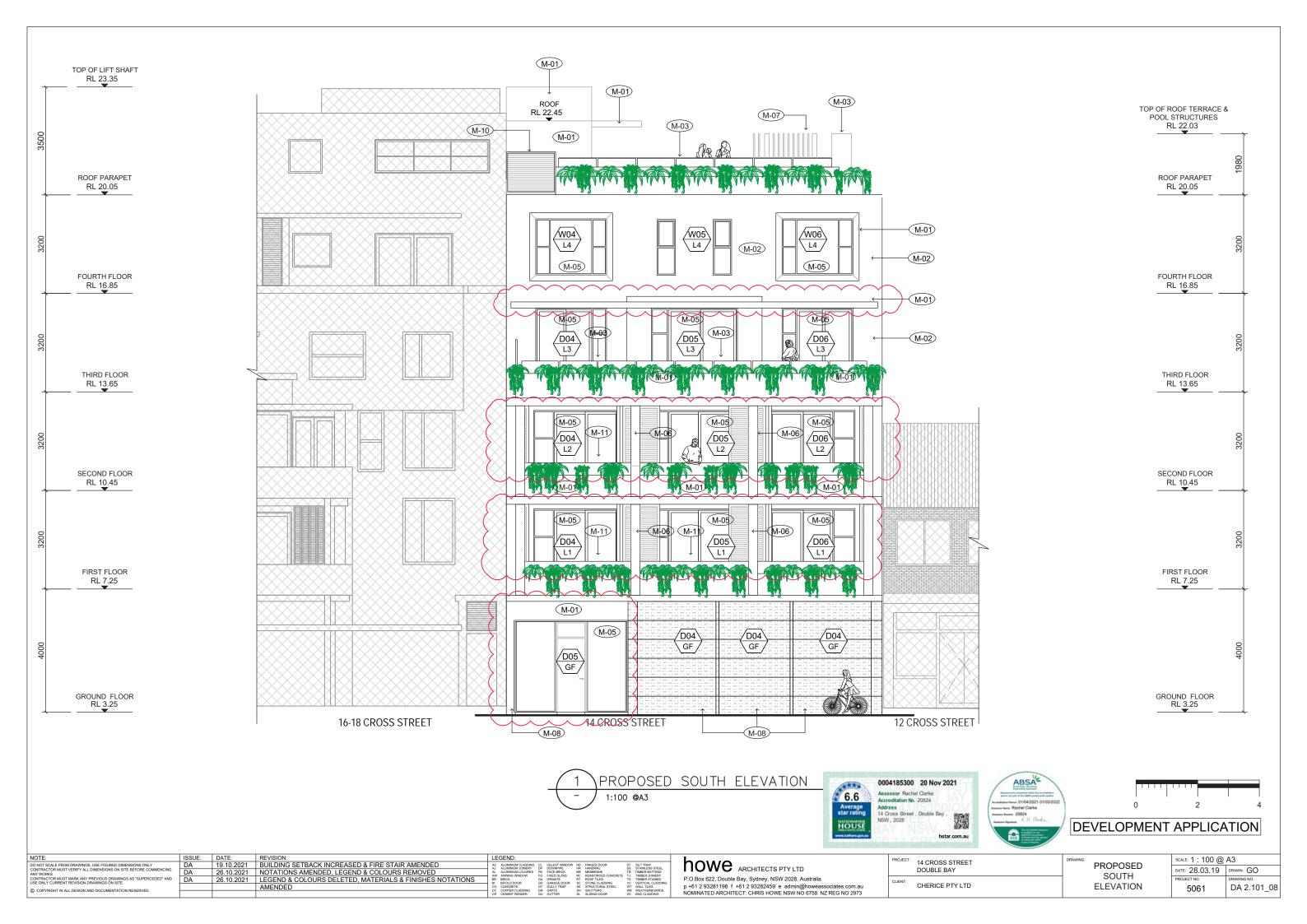


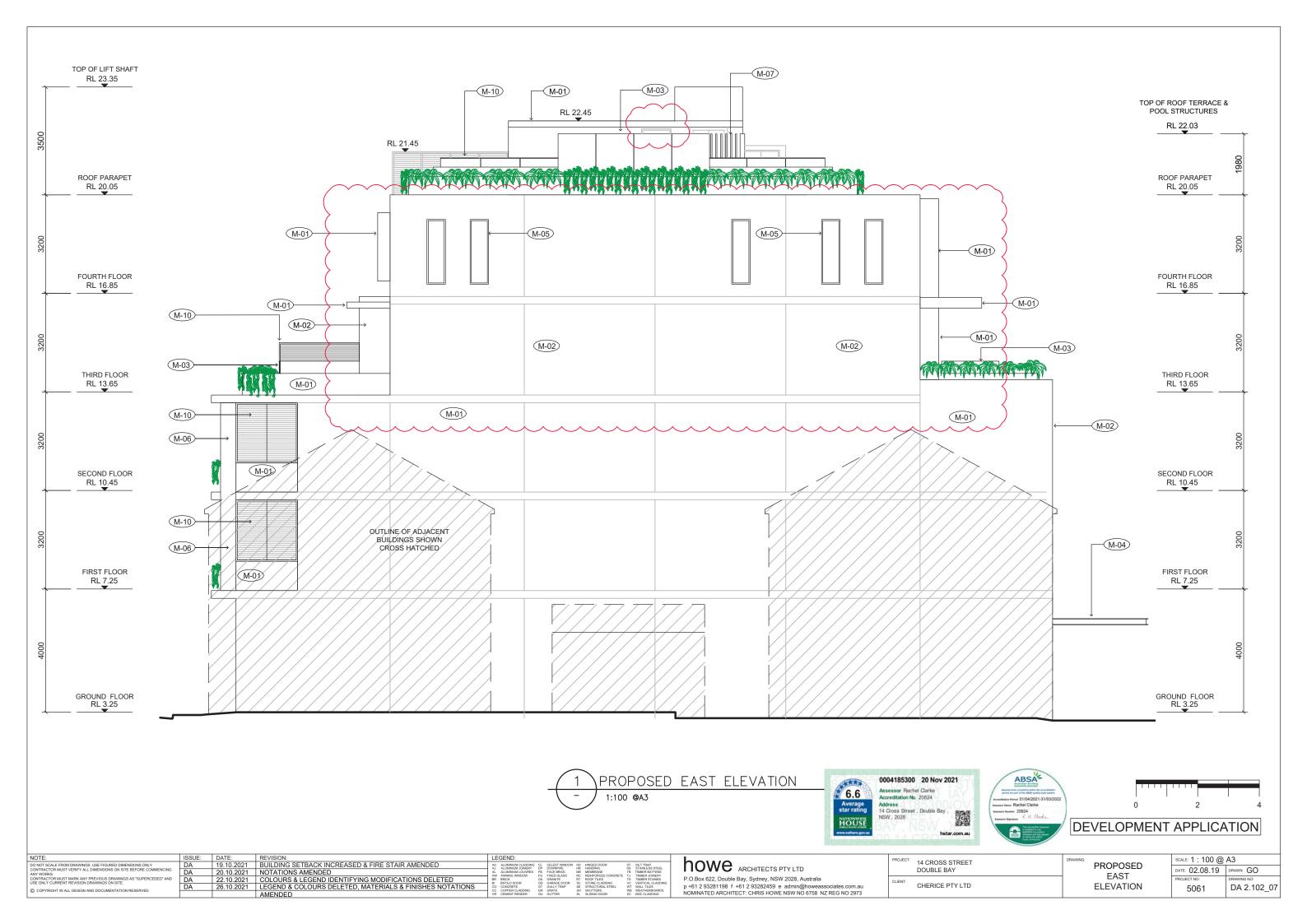


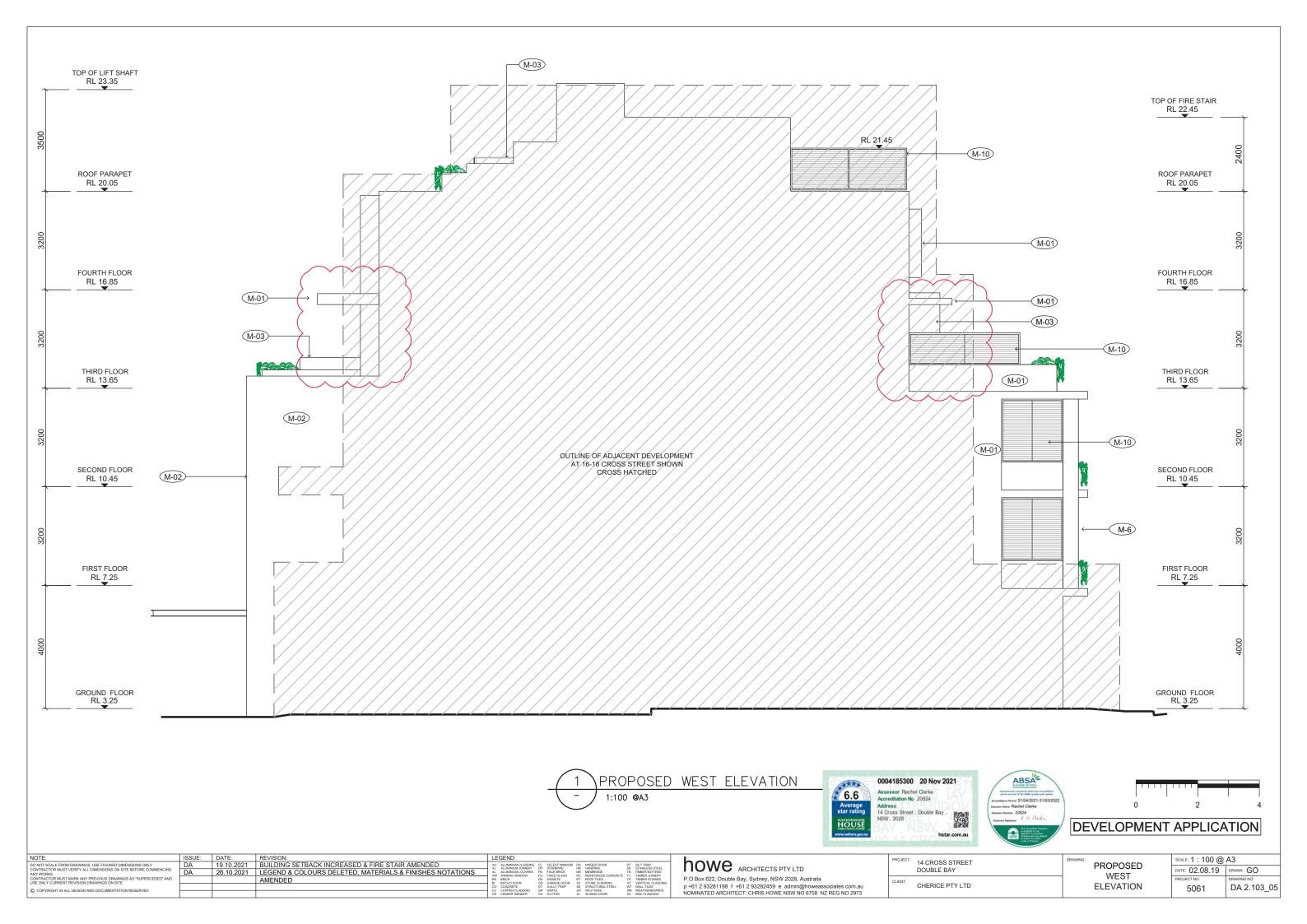


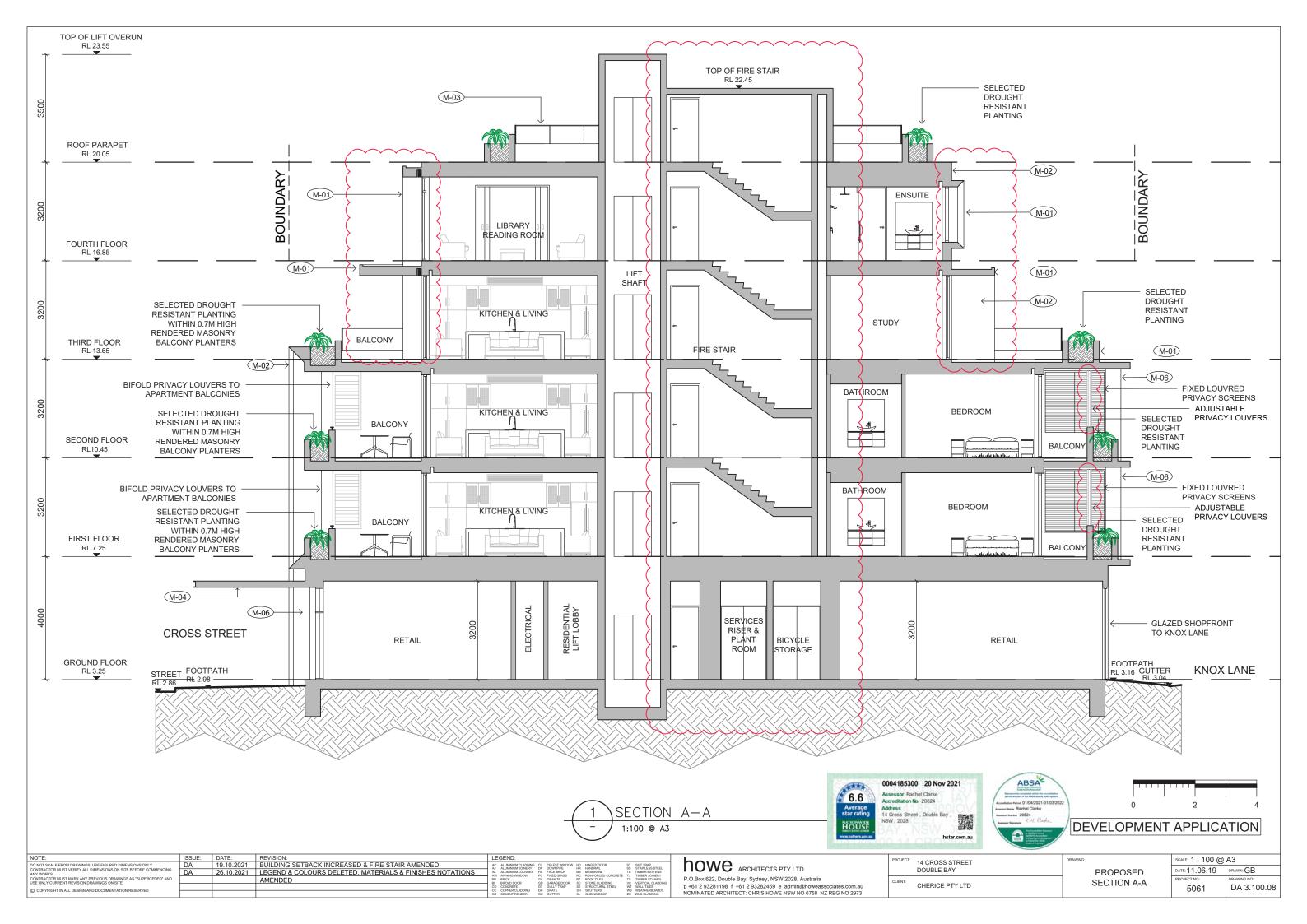


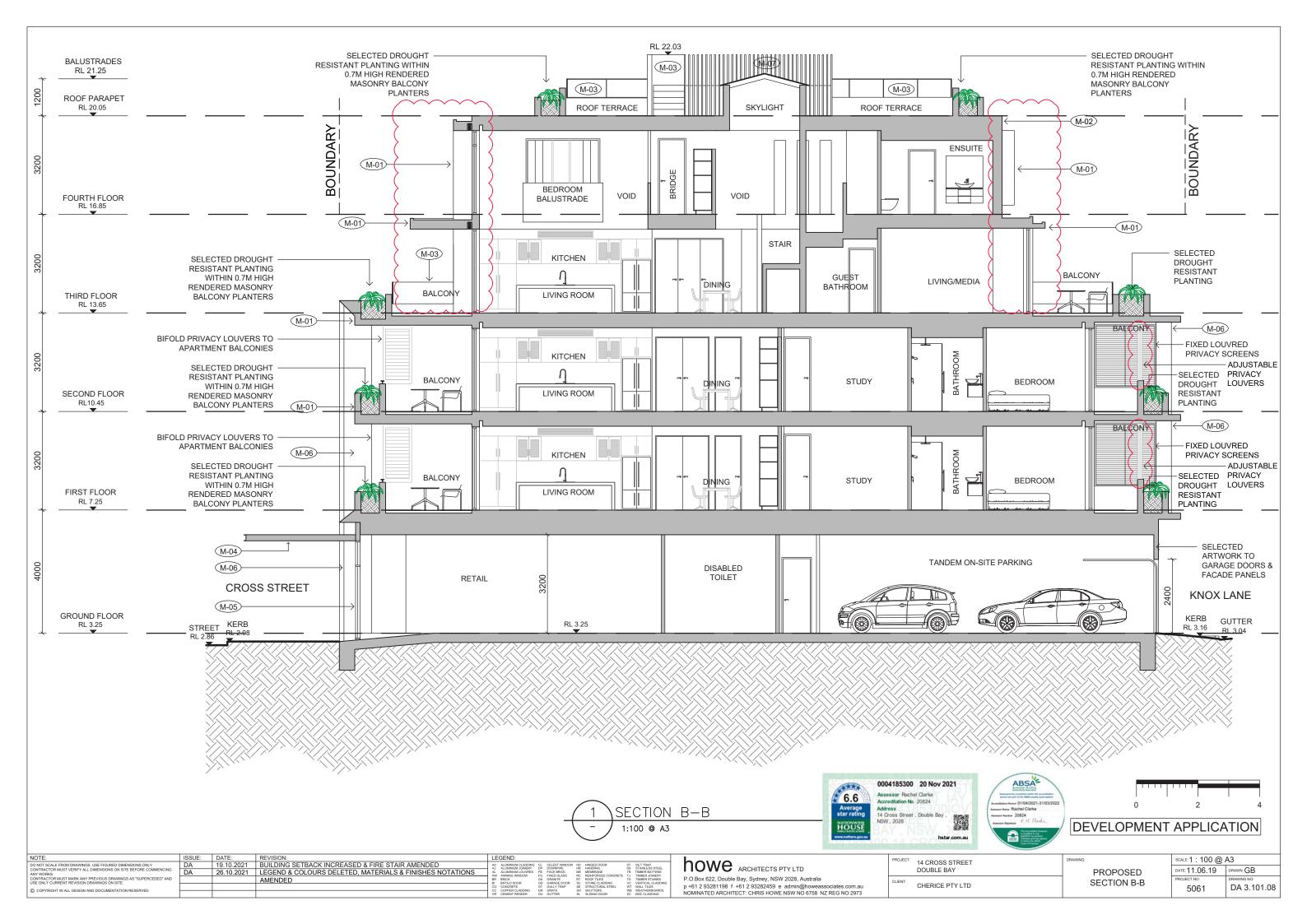


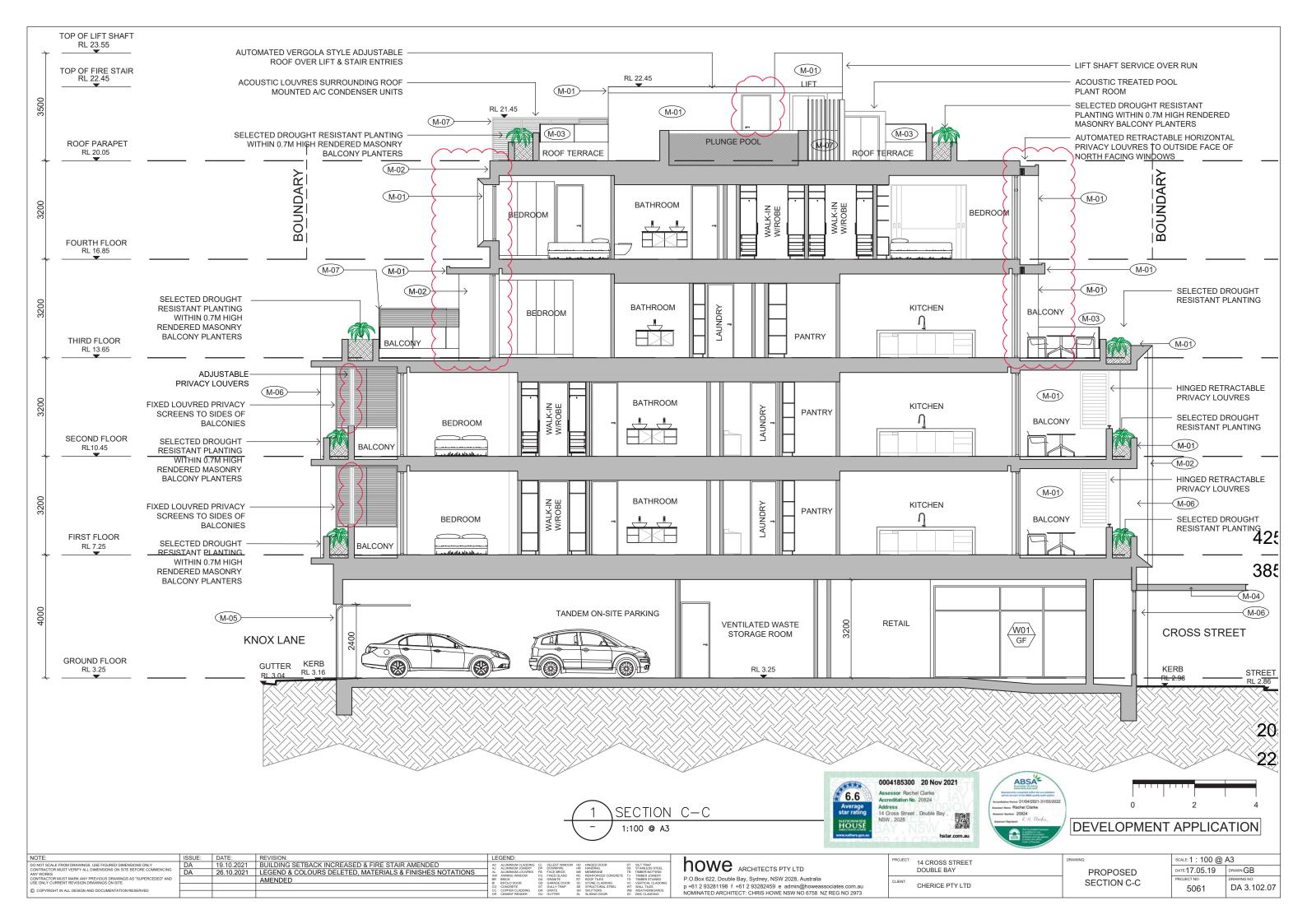


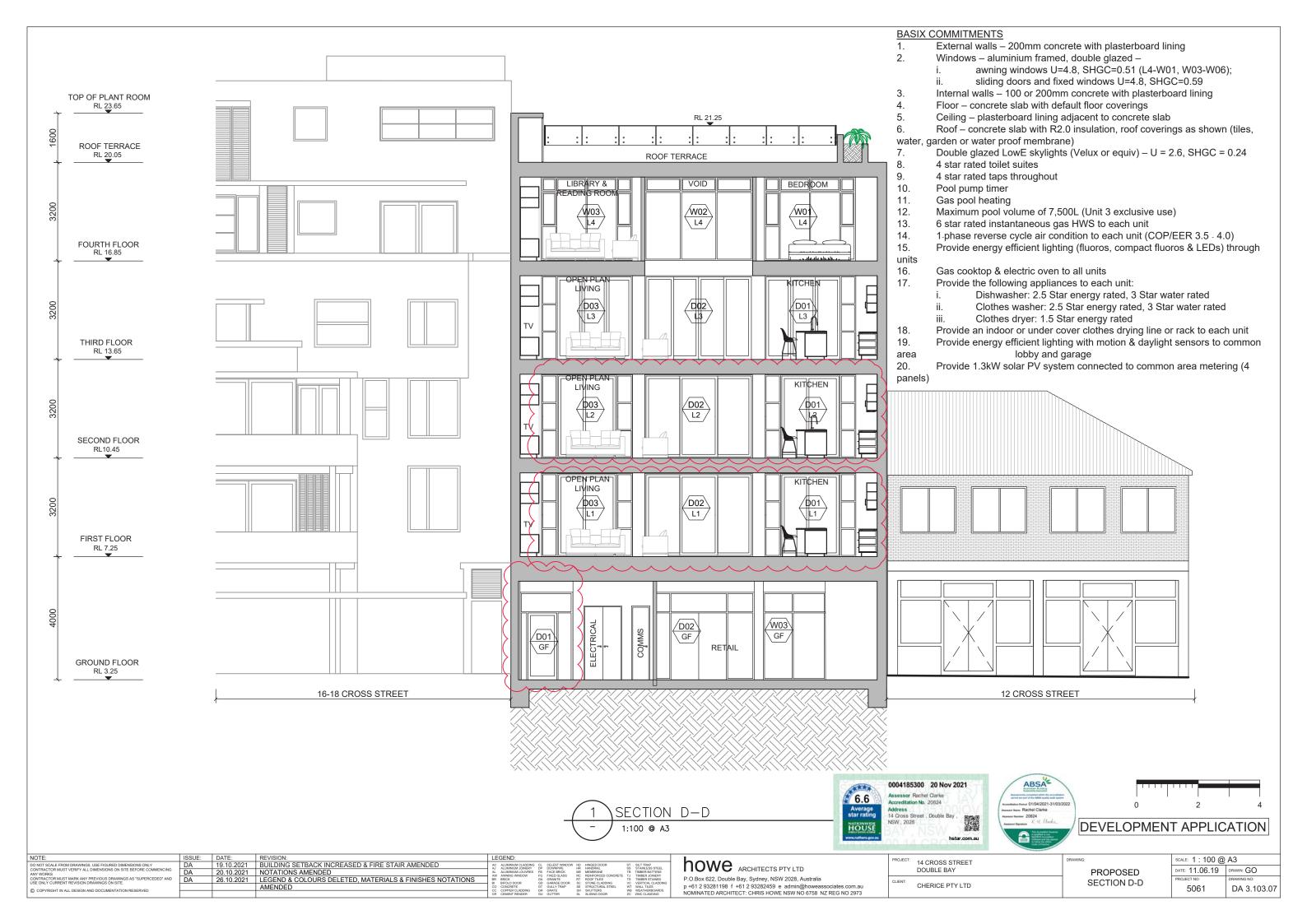












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FROM:

PAGES:

MEMO

TO: Emma Whitney

Mills Oakley

DATE: 22th November 2021

SUBJECT: 14 Cross Street Double Bay

Schedule of Design Amendments submitted for Class 1 Appeal

Emma,

As requested, please find following a comprehensive schedule of amendments to the architectural drawings from those of the Development Application architectural drawings refused by the Woollahra Planning Panel on 28th April 2021.

- 1. Ground Floor: 1.1
- 1.1 Lift shaft and fire stair moved from the east to the western side of the building
 - 1.2 Entry to apartment lobby moved from the east to the western side of the building
 - 1.3 Fire hydrant booster pump room moved from the east to the western side of the building
 - 1.4 Cross street façade amended to accommodate amendments 1.1 to 1.3 inclusive
 - 1.5 Fire egress corridor and door to Knox Lane deleted and new 32m2 retail tenancy with full height glazed facade and entry door added to western side of Knox Lane façade,
 - 1.6 Tandem on-site car parking spaces reduced from 8 to 6 to accommodate new retail tenancy, parking spaces relocated closer to eastern side of building
 - 1.7 Artwork to Knox Lane façade amended in width to accommodate amendments 1.5 and 1.6
 - 1.8 Waste storage room moved from western to eastern side of building and waste storage amended to reflect reduced apartment numbers,
 - 1.9 Apartment storage rooms relocated and apartment storage amended to reflect reduced apartment numbers
 - 2.0 Bicycle storage relocated and bicycle numbers amended to reflect reduced apartment numbers
 - 2.1 Disabled toilet, electrical room, communications cupboard, services and service risers relocated to accommodate amendments 1.1 to 1.9 inclusive
 - 2.2 Gross floor area (GFA) increased from 150m2 to 152m2 to accommodate amendment 1.1 to 2.1 inclusive
- 2 First Floor
- 2.1 Lift shaft and fire stair moved from the east to the western side of the building
- 2.2 North facing external balcony and setback to Cross Street increased

- 2.3 North facing external windows and doors to open plan living area amended and adjustable privacy louvres added to Cross Street façade
- 2.3 South facing external balcony and setback of external windows, doors and external bedroom walls facing Knox Lane increased and adjustable privacy louvres added to outside face of balcony
- 2.4 Internal light well and internal bedroom deleted, bedrooms numbers reduced from 4 to 3 and internal layout/configuration of apartment amended
- 2.5 Gross floor area (GFA) reduced from 215m2 to 208m2 as a result of amendments 2.1 to 2.4 inclusive

Second Floor

- 3.1 Lift shaft and fire stair moved from the east to the western side of the building
- 3.2 North facing external balcony and setback to Cross Street increased
- 3.3 North facing external windows and doors to open plan living area amended and adjustable privacy louvres added to Cross Street façade
- 3.3 South facing external balcony and setback of external windows, doors and external bedroom walls facing Knox Lane increased and adjustable privacy louvres added to outside face of balcony
- 3.4 Internal light well and internal bedroom deleted, bedrooms numbers reduced from 4 to 3 and internal layout/configuration of apartment amended
- 3.5 Gross floor area (GFA) reduced from 214m2 to 208m2 as a result of amendments 3.1 to 3.4 inclusive

4. Third Floor

- 4.1 Lift shaft and fire stair moved from the east to the western side of the building
- 4.1 Vertical clad building element facing Cross Street deleted and building setback to Cross Street increased
- 4.2 Building façade facing Cross Street amended including amendments to north facing windows and doors, width & height of external balcony, depth of balcony awning, addition of mitred 'box' surrounding external windows/doors to accommodate external automated privacy louvres which integrates with fourth floor facade above
- 4.3 South facing external balcony increased in depth and setback of external walls and awnings facing Knox Lane increased
- 4.4 Internal light well and internal bedroom deleted,
- 4.5 Third floor single floor apartment layout amended to integrate with apartment above to create one 4 bedroom penthouse apartment
- 4.6 Internal layout/configuration amended to accommodate amendments 4.1 to 4.5 inclusive
- 4.7 Gross floor area (GFA) reduced from 214m2 to 208m2 as a result of amendments 4.1 to 4.6 inclusive

5. Fourth Floor

- 5.1 Lift shaft and fire stair moved from the east to the western side of the building
- 5.1 Vertical clad building element, external balcony and awning facing Cross Street deleted and building setback increased by 1.52 metres
- 5.2 Building façade facing Cross Street amended including amendments to north facing windows and doors together with addition of mitred 'box' surrounding external windows/doors to accommodate external automated privacy louvres
- 5.3 Setback of south facing external walls and windows facing Knox Lane increased and mitre window surrounds & windows amended
- 5.4 Internal bedroom deleted and lightwell amended to larger skylight over new internal staircase connecting third floor below

- Fourth floor single floor apartment layout amended to integrate with previous apartment below to create one 4 bedroom penthouse apartment
- 5.6 External fixed windows with allowance for fire protection added to eastern facade
- 5.7 Internal layout/configuration amended to accommodate amendments 5.1 to 5.5 inclusive
- 5.8 Gross floor area (GFA) reduced from 181m2 to 146m2 as a result of amendments 4.1 to 4.6 inclusive
- 6. Roof Terrace
- 6.1 Lift shaft and fire stair moved from the east to the western side of the building
- 6.2 Lift extended to the roof terrace to provide disabled access, height of lift shaft and fire stair increased and fixed awning provided over lift doors and fire stair entry
- 6.3 Setback of roof terrace from Cross Street and Knox Lane increased and overall area of roof terrace decreased
- 6.4 Plunge pool relocated from western to eastern side of roof terrace and air conditioning condensers and surrounding louvred enclosed relocated from eastern to western side of the building
- 6.5 Pool plant room added adjacent to lift shaft, skylight increased in size, and area of roof terrace increased from 88.6m2 to 106m2
- 6.6 Layout/configuration of roof terrace and building roofs amended to accommodate amendments 6.1 to 6.5 inclusive
- 7. General
- 7.1 External aluminium 'strips' to east facing facade deleted
- 7.2 External wall colours and finishes amended
- 7.3 Building setbacks to Cross Street and Knox Lane increased resulting in overall decrease in building depth at the third and fourth floors
- 7.4 External fixed windows with allowance for fire protection added to fifth floor
- 7.5 Height of building increased by 0.62 metres on the eastern elevation as a result of relocation of plunge pool from western to eastern side of the building however no change to overall roof parapet height of RL 20.05
- 7.6 Height of building increased by 1.42 metres on the western elevation as a result of relocation of lift shaft and fire stair from eastern to western side of the building and extension of lift and fire stair to the roof terrace to provide disabled access, however no change to overall roof parapet height of RL 20.05
- 7.7 Overall height of building (HOB) increased by 1.42 metres as a result of increased height of lift shaft
- 7.8 Overall gross floor area (GFA) reduced from 946m2 to 852m2

Chris Howe Principal

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ATA, NZIA, RAIA, AUSES, USGBC