



ACCELERATE
Sustainability Assessments

Unit 42, 20-40 Meagher Street, Chippendale, NSW, 2008

Unit 12, 8 Navigator Place, Hendra, QLD, 4011

Phone: 07 3707 6650
Email: info@accsa.net.au
A.B.N: 81 625 027 778

BASIX REPORT



Project Description: New Dwelling

Site Address: 1005-1009 Barrenjoey Road, Palm Beach, NSW, 2108

Client: DB19 Pty Ltd

Drawings: Kennon, 2424, Sheets 1 to 17

Assessment Number: 250552

Assessment Date: 09/04/2025

DISCLAIMER: This report is based on specific project information supplied to Accelerate Sustainability Assessments Pty Ltd (ABN 81 625 027 778) at the time of publication. The subsequent results are specific to this data and shall become null and void due to any error, omission or misrepresentation of information. Where information has not been noted on the drawings nor supplied in writing, default requirements have been applied according to the Basix Thermal Comfort Protocol and NatHERS Technical Note. The results of this simulation and report are for regulatory compliance purposes only and do not reflect actual energy use and/or thermal performance.





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Project Details	Address: 1005-1009 Barrenjoey Road, Palm Beach, NSW, 2108 Lot and Plan: 59 DP14682 Council: Northern Beaches Council Climate Zone: 5 Description: New Dwelling Classification: 1a
Result	Complies with BASIX standards, subject to the minimum construction requirements below and the BASIX/NatHERS certificates attached:
Construction Details	Framing Steel
	External Walls: Concrete Blockwork Insulation: R2.7 insulation
	Internal Walls: Plasterboard and Concrete Blockwork Insulation: R2.7 batts to internal garage walls
	Floor: Concrete Insulation: R2.5 underslab and slab edge insulation
	Ceiling: Plasterboard Insulation: R5.0 batts
	Roof: Steel sheeting (dark colour) Insulation: R1.3 blanket
	Glazing: All glazing to achieve maximum U-value of 2.1 and SHGC of 0.60 (+/- 5%)- window openability to all habitable spaces. Dark window frames
	Ceiling Penetrations: Sealed exhaust fans
	Other: Building must also comply with parts NSW H6P1, H6P2 and H6P3 of NCC 2022; 1400mm diameter ceiling fan to gym zone

BASIX™ Certificate

Building Sustainability Index

www.planningportal.nsw.gov.au/development-and-assessment/basix

Single Dwelling

Certificate number: 1794599S

This certificate confirms that the proposed development will meet the NSW government's requirements for sustainability, if it is built in accordance with the commitments set out below. Terms used in this certificate, or in the commitments, have the meaning given by the document entitled "BASIX Definitions" dated 10/09/2020 published by the Department. This document is available at www.planningportal.nsw.gov.au/definitions

Secretary

Date of issue: Thursday, 08 May 2025

To be valid, this certificate must be submitted with a development application or lodged with a complying development certificate application within 3 months of the date of issue.



When submitting this BASIX certificate with a development application or complying development certificate application, it must be accompanied by NatHERS certificate #HR-C9WVMB-03.

Project summary

Project name	250552
Street address	1005-1009 BARRENJOEY ROAD PALM BEACH 2108
Local Government Area	Northern Beaches Council
Plan type and plan number	Deposited Plan
Lot no.	-
Section no.	-
Project type	dwelling house (attached)
No. of bedrooms	7

Project score

Water	✓ 40	Target 40
Thermal Performance	✓ Pass	Target Pass
Energy	✓ 72	Target 72
Materials	✓ -100	Target n/a

Certificate Prepared by

Name / Company Name: Accelerate Sustainability Assessments

ABN (if applicable):

Description of project

Project address	
Project name	250552
Street address	1005-1009 BARRENJOEY ROAD PALM BEACH 2108
Local Government Area	Northern Beaches Council
Plan type and plan number	Deposited Plan
Lot no.	-
Section no.	-
Project type	
Project type	dwelling house (attached)
No. of bedrooms	7
Site details	
Site area (m ²)	3077
Roof area (m ²)	1350
Conditioned floor area (m ²)	1014.8
Unconditioned floor area (m ²)	19.1
Total area of garden and lawn (m ²)	1630
Roof area of the existing dwelling (m ²)	0

Assessor details and thermal loads		
NatHERS assessor number	DMN/16/1757	
NatHERS certificate number	#HR-C9WVMB-03	
Climate zone	56	
Area adjusted cooling load (MJ/ m².year)	10	
Area adjusted heating load (MJ/ m².year)	20	
Project score		
Water	<div><div></div></div> 40	Target 40
Thermal Performance	<div><div></div></div> Pass	Target Pass
Energy	<div><div></div></div> 72	Target 72
Materials	<div><div></div></div> -100	Target n/a

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.

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 4 star (> 4.5 but <= 6 L/min plus spray force and/or coverage tests) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 5 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 5 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 5 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 8000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 800 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: <ul style="list-style-type: none"> all toilets in the development the cold water tap that supplies each clothes washer in the development at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.) a tap that is located within 10 metres of the swimming pool in the development 		✓ ✓ ✓ ✓	✓ ✓ ✓ ✓

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Swimming Pool			
The swimming pool must not have a volume greater than 80 kilolitres.	✓	✓	
The swimming pool must be outdoors.	✓	✓	

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Simulation Method			
Assessor details and thermal loads			
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 an occupation certificate for the proposed development.			
The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX certificate, including the Cooling and Heating loads shown on the front page of this certificate and the "Construction" and "Glazing" tables below.			
The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Assessor Certificate 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. 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.	✓	✓	✓
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.		✓	✓
The applicant must show on the plans accompanying the development application for the proposed development, the locations of ceiling fans set out in the Assessor Certificate. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), the locations of ceiling fans set out in the Assessor Certificate.	✓	✓	✓

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Construction			
The applicant must construct the floors, walls, roofs, ceilings and glazing of the dwelling in accordance with the specifications listed in the tables below.	✓	✓	✓
The applicant must show through receipts that the materials purchased for construction are consistent with the specifications listed in the tables below.			✓

Construction	Area - m ²	Insulation
floor - concrete slab on ground, conventional slab.	624	not specified
floor - suspended floor above open subfloor, concrete - suspended; frame: light steel frame.	26	fibreglass batts or roll+ foil/sarking
floor - above habitable rooms or mezzanine, concrete - suspended; frame: light steel frame..	331.9	none
floor - suspended floor above garage, concrete - suspended; frame: light steel frame.	52	fibreglass batts or roll
garage floor - concrete slab on ground.	76.5	none
external wall: concrete block/plasterboard; frame: light steel frame.	all external walls	fibreglass batts or roll
internal wall: plasterboard; frame: light steel frame.	545.8	none
internal wall: plasterboard; frame: light steel frame.	76.9	fibreglass batts or roll
ceiling and roof - flat ceiling / pitched roof, framed - metal roof, light steel frame.	1350	ceiling: fibreglass batts or roll; roof: foil backed blanket.

Thermal Performance and Materials commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Glazing			
The applicant must install windows, glazed doors and skylights as described in the table below, in accordance with the specifications listed in the table.	✓	✓	✓

Frames	Maximum area - m2
aluminium	365.5
timber	0
uPVC	0
steel	0
composite	0

Glazing	Maximum area - m2
single	0
double	365.5
triple	0

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous with a performance of 7 stars.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning - ducted; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning - ducted; Energy rating: EER 3.0 - 3.5		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 1-phase airconditioning - ducted; Energy rating: EER 3.5 - 4.0		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 1-phase airconditioning - ducted; Energy rating: EER 3.5 - 4.0		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development: At least 1 Bathroom: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Laundry: individual fan, ducted to façade or roof; Operation control: manual switch on/off		✓	✓
Artificial lighting			
The applicant must ensure that a minimum of 80% of light fixtures are fitted with fluorescent, compact fluorescent, or light-emitting-diode (LED) lamps.		✓	✓
Natural lighting			
The applicant must install a window and/or skylight in 6 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓

Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Swimming pool			
The applicant must install the following heating system for the swimming pool in the development (or alternatively must not install any heating system for the swimming pool): gas		✓	
The applicant must install the following pump for the swimming pool in the development, or a pump with a higher energy rating: multi-speed.		✓	
The applicant must install a timer for the swimming pool pump in the development.		✓	
Alternative energy			
The applicant must install a photovoltaic system as part of the development. The applicant must connect this system to the development's electrical system.	✓	✓	✓
The photovoltaic system must consist of: <ul style="list-style-type: none"> • photovoltaic collectors with the capacity to generate at least 8 peak kilowatts of electricity, installed at an angle between 0 degrees and 10 degrees to the horizontal facing north 	✓	✓	✓

Legend

In these commitments, "applicant" means the person carrying out the development.

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).

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.

Commitments identified with a  in the "Certifier check" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate (either interim or final) for the development may be issued.

Nationwide House Energy Rating Scheme®

NatHERS® Certificate No. #HR-C9WVMB-03

Thermal performance
star rating

Generated on 08 May 2025 using Hero 4.1 (Chenath v3.23)

Property

Address 1005-1009 Barrenjoey Road, Palm Beach, NSW, 2108
Lot/DP 59/DP14682
NCC Class* 1a
Floor/all Floors 1 of 2 floors
Type New

Plans

Main Plan 2424-13/02/25
Prepared by DB19 Pty Ltd

Construction and environment

Assessed floor area (m²)*		Exposure Type
Conditioned*	1014.8	Suburban
Unconditioned*	19.1	NatHERS climate zone
Total	1110.3	56 - Mascot AMO
Garage	76.5	



Accredited assessor

Name Conor Horwood
Business name Accelerate Sustainability Assessments
Email conor.horwood@accsa.net.au
Phone +61 073707665
Accreditation No. DMN/16/1757
Assessor Accrediting Organisation DMN
Declaration of interest Conflict of Interest (Managed)

NCC Requirements

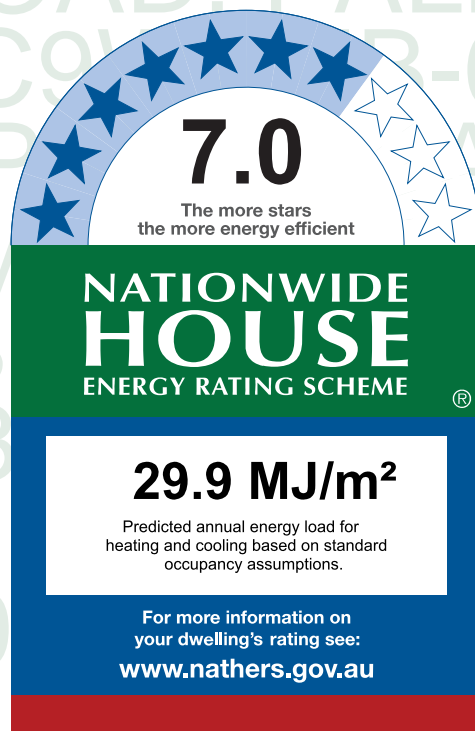
BCA provisions Volume 2
State/Territory variation Yes

National Construction Code (NCC) requirements

The NCC allows the use of NatHERS accredited software to comply with the energy efficiency requirements for houses (Class 1 buildings) and apartments (Class 2 sole-occupancy units and Class 4 parts of buildings). The applicable requirements for houses are detailed in Specification 42 of NCC Volume Two. For apartments the requirements are detailed in clauses J2D2(2)(a) and (3) of NCC Volume One.

NCC 2022 includes enhanced thermal performance requirements for houses and apartments. It also includes a new whole-of-home annual energy use budget which applies to the major equipment in the home.

The NCC, and associated ABCB Standards and support material, can be accessed at www.abcb.gov.au.



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	19.5	10.4
Load limits	25	18

Features determining load limits

Floor type	
(lowest conditioned area)	CSOG
NCC climate zone 1 or 2	N
Outdoor living area	N
Outdoor living area ceiling fan	N

Whole of Home performance rating

No Whole of Home
performance rating
generated for this
certificate.

Verification

To verify this certificate, scan the QR code or visit

<http://www.hero-software.com.au/pdf/HR-C9WVMB-03>

When using either link, ensure you are visiting <http://www.hero-software.com.au>



* Refer to glossary.

Note, variations and additions to the NCC energy efficiency requirements may apply in some states and territories.

Thermal performance rating

NatHERS thermal software models the expected heating and cooling energy loads using information about the design, construction, climate and common patterns of household use. The thermal performance rating (shown as a star rating on this Certificate) does not take into account appliances, apart from the airflow impacts from ceiling fans.

Whole of Home performance rating

NatHERS Whole of Home software uses the heating and cooling energy loads combined with the energy performance of the home's appliances (heating, cooling, hot water, lighting, pool/spa pump and onsite renewable energy generation and storage) and models the expected energy value* of the whole home. The Whole of Home performance rating is shown as a score out of 100 on this Certificate.

Heating and Cooling Load Limits

Additional information

In some locations under the NCC NatHERS pathway, separate heating and cooling load limits may apply. Minimum required star ratings in northern parts of Australia may also be affected by the presence or absence of an outdoor living area and/or an outdoor living area ceiling fan. Refer to the *ABCB Standard: NatHERS heating and cooling load limits* for details or contact the relevant local building regulating authority, noting that State and Territory variations may also apply.

Setting options:

Floor type:

- CSOG - Concrete Slab on Ground
- SF - Suspended Floor (or a mixture of CSOG and SF)
- NA - Not Applicable

NCC climate Zone 1 or 2:

- Yes
- No
- NA - Not Applicable

Outdoor living area:

- Yes
- No
- NA - Not Applicable

Outdoor living area ceiling fan:

- Yes
- No
- NA - Not Applicable

Predicted Whole of Home annual impact by appliance

Shows the contribution each appliance has on the home's annual energy use, greenhouse gas emissions and cost without solar.

Energy use:

No Whole of Home performance assessment conducted for this certificate.

Greenhouse gas emissions:

No Whole of Home performance assessment conducted for this certificate.

Cost:

No Whole of Home performance assessment conducted for this certificate.



Predicted onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

Certificate check

The checklist covers important items impacting the dwelling's ratings.

It is recommended that the accuracy of the whole certificate is checked.

Note: The boxes indicate when and who should check each item.

It is not mandatory to complete this checklist.

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Genuine certificate check

Does this Certificate match the one available at the web address or QR code verification link on the front page?

☐☐☐☐

Does the NatHERS certificate number on the NatHERS-stamped plans match the number on this Certificate?

☐☐☐☐

Thermal performance check

Windows and glazed doors

Does the window size, opening type and location shown on the NatHERS-stamped plans or as installed match what is shown in 'Window and glazed door schedule' and 'Roof window schedule' tables on this Certificate?

☐☐☐☐☐

Does the installed windows meet the substitution tolerances (AFRC* based SHGC* and U-values*) as shown in the 'Window and glazed door type and performance' and 'Roof window type and performance' tables on this Certificate?

☐☐☐

External walls

Does the external wall bulk insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'External wall type table' on this Certificate?

☐☐☐☐☐

Does the external wall shade (colour) match what is shown in the 'External wall type' table on this Certificate?

☐☐☐☐☐

Floor

Does the floor insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Floor type' table on this certificate?

☐☐☐☐☐

Ceiling penetrations*

Does the 'quantity' and 'type' of ceiling penetrations* (e.g. downlights, exhaust fans, etc) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling penetrations' table on this Certificate?

☐☐☐☐☐

Ceiling

Does the ceiling insulation (R-value) shown on the NatHERS-stamped plans or as installed match what is shown in the 'Ceiling type' table on this Certificate?

☐☐☐☐☐

Roof

Does the external roof shade (colour) on the NatHERS stamped plans or as installed match what is shown in the 'Roof type' table on this Certificate?

☐☐☐☐☐

Apartment entrance doors (NCC Class 2 assessments only)

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 type (terrain) (shown on page 1) been applied? For example, it is unlikely that a ground-floor apartment is "exposed" or a top floor high-rise apartment is "protected".

☐☐☐☐

Heating and cooling load limits*

Do the load limits settings (shown on page 1) match what is shown on the NatHERS-stamped plans?

☐☐☐☐☐

* Refer to glossary.

Certificate check

Continued

Approval stage		Construction stage		
Assessor checked	Consent authority/ surveyor checked	Builder checked	Consent authority/ surveyor checked	Occupancy/other

Additional NCC requirements for thermal performance (not included in the NatHERS assessment)

Thermal bridging

Does the dwelling meet the NCC requirement for thermal bridging?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Insulation installation method

Has the insulation been installed according to the NCC requirements?			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Building sealing

Does the dwelling meet the NCC requirements for Building Sealing?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Whole of Home performance check (not applicable if a Whole of Home assessment is not conducted)

Appliances

Does the cooling appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or as installed, match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system type and efficiency/performance shown on the NatHERS-stamped plans or as installed match the location and minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the pool pump efficiency/performance shown on the NatHERS-stamped plans or as installed match the minimum efficiency/performance requirements shown in the 'Appliance schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the onsite renewable energy system type, orientation and system size or generation capacity shown on the NatHERS stamped plans or installed match the 'Onsite Renewable Energy schedule' on this Certificate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional NCC Requirements for Services (not included in the NatHERS assessment)

Does the lighting meet the artificial lighting requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the hot water system meet the additional requirements specified in the NCC?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Provisional values* check

Have provisional values* been used in the assessment and, if so, are they noted in 'Additional notes' table below?	<input type="checkbox"/>	<input type="checkbox"/>			
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Other NCC requirements

Note: This Certificate only covers the energy efficiency requirements in the NCC. Additional requirements that must also be satisfied include, but are not limited to: condensation, structural and fire safety requirements and any state or territory variations to the NCC energy efficiency requirements.

Room schedule

Room	Zone Type	Area (m ²)
Garage	Garage	76.49
Bed 07	Bedroom	19.27
WIR 07	Night Time	7.35
Ens 07	Night Time	6.72
WC_Gym	Day Time	2.99
Steam_Gym	Unconditioned	6.24
Shwr_Gym	Unconditioned	7.23
Store	Day Time	5.97
Gym	Day Time	51.99
Drawing Room	Day Time	22.42
Hall	Day Time	5.35
Entry Lobby/Lounge	Day Time	115.33
Caretaker Residence	Bedroom	21.06
Ens_Caretaker	Night Time	5.15
Store	Unconditioned	5.61
Store	Day Time	14.25
Laundry	Day Time	16.78
PDR	Day Time	4.36
PDR_WC	Day Time	1.95
Scullery	Day Time	13.23
Cool Room	Day Time	3.71
Living Pavilion	Living	116.78
Lounge Room	Day Time	66.27
Bunk	Bedroom	40.90



Room schedule

Room	Zone Type	Area (m ²)
Bath	Night Time	10.51
Bath_WC	Night Time	1.43
Lounge/Stairs	Living	73.73
Hall	Day Time	28.53
Lift_First	Day Time	3.08
Ens 06	Night Time	6.57
Bed 06	Bedroom	20.78
Ens_Guest	Night Time	13.20
WIR_Guest	Night Time	8.77
Guest Room	Bedroom	34.35
His WIR	Night Time	17.67
Main Bed	Bedroom	47.68
His Bath	Night Time	16.09
Her WIR	Night Time	24.06
Her Bath	Night Time	16.40
Hallway	Day Time	27.68
Lift_Ground	Day Time	2.66
Kitchen/Living	Kitchen/Living	73.89
Ens 04	Night Time	9.71
Bed 04	Bedroom	19.77
Bed 03	Bedroom	20.01
Ens 03	Night Time	9.27

Window and glazed door type and performance

Default* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					



Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
A&L-108-005	A&L ComfortSmart Thermally Broken Sliding Door	2.10	0.60	0.57	0.63
STG-079-001	Aluminium Casement Window - Single Glazed	6.12	0.64	0.61	0.67

Window and glazed door schedule

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Bath	A&L-108-005	W52	2625	1600	Fixed	0	SE	None
Bed 03	A&L-108-005	W41	1800	1800	Casement	45	SE	None
Bed 04	A&L-108-005	W40	1800	1800	Casement	45	SE	None
Bed 06	A&L-108-005	W30	1800	1800	Casement	90	NE	None
Bed 07	A&L-108-005	W01	2200	1800	Fixed	0	NE	None
Bunk	A&L-108-005	W29	1800	1800	Casement	60	NE	None
Bunk	STG-079-001	W74	1800	1800	Casement	60	NE	None
Bunk	A&L-108-005	W73	2100	2200	Casement	30	SW	None
Drawing Room	A&L-108-005	W06	2820	5400	Sliding Door	90	SW	None
Ens 03	A&L-108-005	W42	1800	900	Casement	90	SE	None
Ens 04	A&L-108-005	W39	1800	900	Casement	90	SE	None
Ens 06	A&L-108-005	W04	1800	900	Fixed	0	NE	None
Ens 07	A&L-108-005	W02	2200	600	Fixed	0	NE	None
Ens_Guest	A&L-108-005	W43	1800	1800	Casement	90	SE	None
Entry Lobby/Lounge	A&L-108-005	W27	2820	2400	Sliding Door	90	SW	None
Entry Lobby/Lounge	A&L-108-005	W28	2820	1800	Fixed	0	SW	None
Entry Lobby/Lounge	A&L-108-005	W24	2820	3000	Fixed	0	SE	None
Entry Lobby/Lounge	A&L-108-005	W25	2820	9700	Fixed	0	SE	None
Entry Lobby/Lounge	A&L-108-005	W26	2820	3000	Fixed	0	SE	None
Guest Room	A&L-108-005	W44	1800	1800	Casement	90	SE	None
Guest Room	A&L-108-005	W45	1800	6000	Awning	30	SW	None



Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Gym	A&L-108-005	W05	2820	4800	Sliding Door	60	SW	None
Gym	A&L-108-005	W55	2820	6000	Fixed	0	SE	None
Hall	A&L-108-005	W46	2300	1200	Awning	60	NW	None
Hall	A&L-108-005	W47	2300	1200	Awning	60	NW	None
Hall	A&L-108-005	W48	2300	1200	Awning	60	NW	None
Hall	A&L-108-005	W49	2300	1200	Awning	60	NW	None
Hall	A&L-108-005	W50	2300	1200	Awning	90	NW	None
Hallway	A&L-108-005	W07	2820	1100	Hinged Door	90	NW	None
Hallway	A&L-108-005	W08	2820	1200	Hinged Door	90	NW	None
Her Bath	A&L-108-005	W33	2625	900	Fixed	0	SE	None
Her Bath	A&L-108-005	W34	1800	1800	Awning	45	SW	None
Her WIR	A&L-108-005	W32	2625	1200	Awning	60	SE	None
His Bath	A&L-108-005	W31	2625	1100	Awning	60	SE	None
His WIR	A&L-108-005	W03	1800	1800	Fixed	0	NE	None
Kitchen/Living	A&L-108-005	W60	400	800	Fixed	0	NW	None
Kitchen/Living	A&L-108-005	W10	2000	3000	Fixed	0	SW	None
Kitchen/Living	A&L-108-005	W59	400	3200	Awning	30	SW	None
Kitchen/Living	A&L-108-005	W58	400	800	Fixed	0	SE	None
Kitchen/Living	A&L-108-005	W57	400	1500	Fixed	0	SW	None
Kitchen/Living	A&L-108-005	W09	2820	1800	Awning	30	NW	None
Kitchen/Living	A&L-108-005	W56	400	11000	Fixed	0	NW	None
Kitchen/Living	A&L-108-005	W72	400	1400	Fixed	0	NE	None
Kitchen/Living	A&L-108-005	W61	400	1500	Fixed	0	SW	None
Kitchen/Living	A&L-108-005	W11	2820	1800	Hinged Door	90	SE	None
Kitchen/Living	A&L-108-005	W62	400	3800	Fixed	0	SE	None
Living Pavilion	A&L-108-005	W20	2820	5400	Sliding Door	90	NE	None

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Living Pavilion	A&L-108-005	W21	2820	2400	Sliding Door	90	NE	None
Living Pavilion	A&L-108-005	W22	2820	1800	Fixed	0	NE	None
Living Pavilion	A&L-108-005	W71	400	14300	Fixed	0	NE	None
Living Pavilion	A&L-108-005	W12	2820	5400	Sliding Door	90	SW	None
Living Pavilion	A&L-108-005	W13	2820	5400	Sliding Door	90	SW	None
Living Pavilion	A&L-108-005	W23	2820	1800	Fixed	0	SW	None
Living Pavilion	A&L-108-005	W63	400	15500	Fixed	0	SW	None
Lounge Room	A&L-108-005	W67	400	800	Fixed	0	NW	None
Lounge Room	A&L-108-005	W15	2000	3000	Awning	20	SW	None
Lounge Room	A&L-108-005	W68	400	800	Fixed	0	SE	None
Lounge Room	A&L-108-005	W65	400	1491	Fixed	0	SW	None
Lounge Room	A&L-108-005	W14	2820	1800	Hinged Door	90	NW	None
Lounge Room	A&L-108-005	W64	400	3643	Fixed	0	NW	None
Lounge Room	A&L-108-005	W19	2820	4800	Sliding Door	60	NE	None
Lounge Room	A&L-108-005	W70	400	6093	Fixed	0	NE	None
Lounge Room	A&L-108-005	W16	2820	1800	Fixed	0	SE	None
Lounge Room	A&L-108-005	W17	2820	1200	Fixed	0	SE	None
Lounge Room	A&L-108-005	W18	2820	1200	Fixed	0	SE	None
Lounge Room	A&L-108-005	W69	400	11000	Fixed	0	SE	None
Lounge Room	A&L-108-005	W66	400	1500	Fixed	0	SW	None
Lounge/Stairs	A&L-108-005	W54	2000	2400	Casement	90	NE	None
Lounge/Stairs	A&L-108-005	W37	1800	3400	Fixed	0	SW	None
Lounge/Stairs	A&L-108-005	W51	2300	1800	Fixed	0	NW	None
Main Bed	A&L-108-005	W53	2100	1600	Casement	90	NE	None
Main Bed	A&L-108-005	W35	1800	1800	Awning	45	SW	None
Main Bed	A&L-108-005	W36	1800	1800	Awning	90	SW	None

* Refer to glossary.

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
Entry Lobby/Lounge	A&L-108-005	W38	1800	2400	Fixed	0	SW	None

Roof window *type and performance value*

Default* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Custom* roof windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
None					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Height (mm)	Width (mm)	Orient-ation	Outdoor shade	Indoor shade
None								

Skylight *type and performance*

Skylight ID	Skylight description
None	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Caretaker Reidence	2700	820	90	NW
Entry Lobby/Lounge	2100	1840	90	NE
Garage	2700	820	90	NW
Garage	2100	2900	90	NE
Garage	2100	5500	90	NE

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Shwr_Gym	2700	1000	90	NE
Store	2100	920	90	SW
WIR 07	2700	820	90	NE

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
CONCBLOCK-190-HOL-PB	Concrete Block 190mm Hollow - Plasterboard Internally	0.85	Dark	2.70	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Bath	CONCBLOCK-190-HOL-PB	2625	3075	NE		No
Bath	CONCBLOCK-190-HOL-PB	2625	4029	SE		Yes
Bed 03	CONCBLOCK-190-HOL-PB	2625	4001	SE	2016	Yes
Bed 04	CONCBLOCK-190-HOL-PB	2625	4001	SE	2016	Yes
Bed 06	CONCBLOCK-190-HOL-PB	2625	3973	NE		No
Bed 07	CONCBLOCK-190-HOL-PB	3000	4389	NE	2130	Yes
Bed 07	CONCBLOCK-190-HOL-PB	3000	3468	NW		Yes
Bunk	CONCBLOCK-190-HOL-PB	2625	6417	NW	463	Yes
Bunk	CONCBLOCK-190-HOL-PB	2625	6374	NE		No
Bunk	CONCBLOCK-190-HOL-PB	2625	3550	SW		Yes
Caretaker Residence	CONCBLOCK-190-HOL-PB	3000	7604	NW	1125	Yes
Drawing Room	CONCBLOCK-190-HOL-PB	3000	15	NW		Yes
Drawing Room	CONCBLOCK-190-HOL-PB	3000	5417	SW	4002	Yes
Drawing Room	CONCBLOCK-190-HOL-PB	3000	14	SE		Yes
Ens 03	CONCBLOCK-190-HOL-PB	2625	1744	SE	2021	Yes
Ens 04	CONCBLOCK-190-HOL-PB	2625	1826	SE	2021	Yes
Ens 06	CONCBLOCK-190-HOL-PB	2625	3555	NW		Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
Ens 06	CONCBLOCK-190-HOL-PB	2625	1847	NE		No
Ens 07	CONCBLOCK-190-HOL-PB	3000	1796	NE	2161	Yes
Ens_Caretaker	CONCBLOCK-190-HOL-PB	3000	2647	NW	1161	Yes
Ens_Guest	CONCBLOCK-190-HOL-PB	2625	3879	SE	2019	Yes
Entry Lobby/Lounge	CONCBLOCK-190-HOL-PB	3000	8294	SW	4017	Yes
Entry Lobby/Lounge	CONCBLOCK-190-HOL-PB	3000	18623	SE	4807	Yes
Entry Lobby/Lounge	CONCBLOCK-190-HOL-PB	3000	442	SW		Yes
Entry Lobby/Lounge	CONCBLOCK-190-HOL-PB	3000	2742	NE	5598	Yes
Entry Lobby/Lounge	CONCBLOCK-190-HOL-PB	3000	446	NE		Yes
Entry Lobby/Lounge	CONCBLOCK-190-HOL-PB	3000	148	NW		Yes
Garage	CONCBLOCK-190-HOL-PB	3000	8328	NW	1133	Yes
Garage	CONCBLOCK-190-HOL-PB	3000	10208	NE		No
Garage	CONCBLOCK-190-HOL-PB	3000	6494	SE		Yes
Garage	CONCBLOCK-190-HOL-PB	3000	339	SW		Yes
Guest Room	CONCBLOCK-190-HOL-PB	2625	6283	NW	1981	Yes
Guest Room	CONCBLOCK-190-HOL-PB	2625	4488	SE	2019	Yes
Guest Room	CONCBLOCK-190-HOL-PB	2625	7186	SW	2378	Yes
Gym	CONCBLOCK-190-HOL-PB	3000	6744	SW	4016	Yes
Gym	CONCBLOCK-190-HOL-PB	3000	7765	SE	1841	No
Hall	CONCBLOCK-190-HOL-PB	2625	15458	NW	1981	Yes
Hallway	CONCBLOCK-190-HOL-PB	3000	9462	NW	3494	Yes
Her Bath	CONCBLOCK-190-HOL-PB	2625	3280	SE	1842	No
Her Bath	CONCBLOCK-190-HOL-PB	2625	4999	SW	2135	Yes
Her WIR	CONCBLOCK-190-HOL-PB	2625	4813	SE	1842	No
His Bath	CONCBLOCK-190-HOL-PB	2625	4947	NE		No

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* projection (mm)	Vertical shading feature
His Bath	CONCBLOCK-190-HOL-PB	2625	3252	SE	1842	No
His Bath	CONCBLOCK-190-HOL-PB	2625	1418	NW		Yes
His WIR	CONCBLOCK-190-HOL-PB	2625	3735	NE		No
His WIR	CONCBLOCK-190-HOL-PB	2625	1418	SE		Yes
Kitchen/Living	CONCBLOCK-190-HOL-PB	3405	909	NW		Yes
Kitchen/Living	CONCBLOCK-190-HOL-PB	3405	3597	SW	1046	Yes
Kitchen/Living	CONCBLOCK-190-HOL-PB	3405	913	SE		Yes
Kitchen/Living	CONCBLOCK-190-HOL-PB	3405	1518	SW	133	Yes
Kitchen/Living	CONCBLOCK-190-HOL-PB	3405	11114	NW	1976	Yes
Kitchen/Living	CONCBLOCK-190-HOL-PB	3405	1518	NE	3838	Yes
Kitchen/Living	CONCBLOCK-190-HOL-PB	3000	693	NW	3494	Yes
Kitchen/Living	CONCBLOCK-190-HOL-PB	3405	1510	SW	9	Yes
Kitchen/Living	CONCBLOCK-190-HOL-PB	3405	3893	SE		Yes
Lift_First	CONCBLOCK-190-HOL-PB	2625	1819	NW	1981	Yes
Lift_First	CONCBLOCK-190-HOL-PB	2625	1693	NE		Yes
Living Pavilion	CONCBLOCK-190-HOL-PB	3405	14373	NE	4061	Yes
Living Pavilion	CONCBLOCK-190-HOL-PB	3405	15861	SW	4010	Yes
Lounge Room	CONCBLOCK-190-HOL-PB	3405	894	NW		Yes
Lounge Room	CONCBLOCK-190-HOL-PB	3405	3604	SW	1036	Yes
Lounge Room	CONCBLOCK-190-HOL-PB	3405	896	SE		Yes
Lounge Room	CONCBLOCK-190-HOL-PB	3405	1491	SW	140	Yes
Lounge Room	CONCBLOCK-190-HOL-PB	3405	3643	NW		Yes
Lounge Room	CONCBLOCK-190-HOL-PB	3405	6093	NE	4061	Yes
Lounge Room	CONCBLOCK-190-HOL-PB	3405	11098	SE	2076	No
Lounge Room	CONCBLOCK-190-HOL-PB	3405	1502	SW	81	Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Lounge/Stairs	CONCBLOCK-190-HOL-PB	2625	1200	SE		Yes
Lounge/Stairs	CONCBLOCK-190-HOL-PB	2625	2845	NE		Yes
Lounge/Stairs	CONCBLOCK-190-HOL-PB	2625	1676	NW		Yes
Lounge/Stairs	CONCBLOCK-190-HOL-PB	2625	506	SE		Yes
Lounge/Stairs	CONCBLOCK-190-HOL-PB	2625	3458	SW	2119	Yes
Lounge/Stairs	CONCBLOCK-190-HOL-PB	2625	137	NE		Yes
Lounge/Stairs	CONCBLOCK-190-HOL-PB	2625	1484	SE	2019	Yes
Lounge/Stairs	CONCBLOCK-190-HOL-PB	2625	3304	NW	4013	Yes
Lounge/Stairs	CONCBLOCK-190-HOL-PB	2625	126	SW		Yes
Main Bed	CONCBLOCK-190-HOL-PB	2625	506	NW		Yes
Main Bed	CONCBLOCK-190-HOL-PB	2625	1761	NE		Yes
Main Bed	CONCBLOCK-190-HOL-PB	2625	7059	SW	2126	Yes
Main Bed	CONCBLOCK-190-HOL-PB	2625	156	NE		Yes
Shwr_Gym	CONCBLOCK-190-HOL-PB	3000	3710	NE	2161	Yes
Store	CONCBLOCK-190-HOL-PB	3000	3027	NE	2152	Yes
Store	CONCBLOCK-190-HOL-PB	3000	1972	SE	1841	No
Store	CONCBLOCK-190-HOL-PB	3000	2860	NW	1154	Yes
Store	CONCBLOCK-190-HOL-PB	3000	1962	SW		Yes
Entry Lobby/Lounge	CONCBLOCK-190-HOL-PB	2625	4640	SW	2120	Yes
WC_Gym	CONCBLOCK-190-HOL-PB	3000	1535	NE	2175	Yes
WIR 07	CONCBLOCK-190-HOL-PB	3000	1681	NE	2156	Yes

Internal wall *type*

Wall ID	Wall Type	Area (m ²)	Bulk insulation
CONCBLOCK-190-HOL-PB	Concrete Block 190mm Hollow - Plasterboard Internally	88.7	2.70
CONCBLOCK-190-HOL-PB	Concrete Block 190mm Hollow - Plasterboard Internally	3.1	0.00



Internal wall type

Wall ID	Wall Type	Area (m ²)	Bulk insulation
INT-PB	Internal Plasterboard Stud Wall	545.5	0.00
INT-PB	Internal Plasterboard Stud Wall	109.5	2.70

Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Bath	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	10.5	N/A	2.50	Tile (8mm)
Bath_WC	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	1.4	N/A	2.50	Tile (8mm)
Bed 03	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	20.0	N/A	2.50	Carpet
Bed 04	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	19.8	N/A	2.50	Carpet
Bed 06	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	20.8	N/A	2.50	Carpet
Bed 07	CSOG-200: Concrete Slab on Ground (200mm)	19.3	N/A	2.50	Carpet
Bunk	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	40.9	N/A	2.50	Carpet
Caretaker Residence	CSOG-200: Concrete Slab on Ground (200mm)	21.1	N/A	2.50	Tile (8mm)
Cool Room	CSOG-200: Concrete Slab on Ground (200mm)	3.7	N/A	2.50	Tile (8mm)
Drawing Room	CSOG-200: Concrete Slab on Ground (200mm)	22.4	N/A	2.50	Tile (8mm)
Ens 03	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	9.2	N/A	2.50	Tile (8mm)
Ens 04	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	9.7	N/A	2.50	Tile (8mm)
Ens 06	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	6.5	N/A	2.50	Tile (8mm)
Ens 07	CSOG-200: Concrete Slab on Ground (200mm)	6.7	N/A	2.50	Tile (8mm)
Ens_Caretaker	CSOG-200: Concrete Slab on Ground (200mm)	5.2	N/A	2.50	Tile (8mm)
Ens_Guest	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	13.1	N/A	2.50	Tile (8mm)
Entry Lobby/Lounge	CSOG-200: Concrete Slab on Ground (200mm)	115.3	N/A	2.50	Tile (8mm)
Garage	CSOG-200: Concrete Slab on Ground (200mm)	76.5	N/A	2.50	Tile (8mm)
Guest Room	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	34.3	N/A	2.50	Carpet
Gym	CSOG-200: Concrete Slab on Ground (200mm)	52.0	N/A	2.50	Tile (8mm)



Floor type

Location	Construction	Area (m ²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Hall	CSOG-200: Concrete Slab on Ground (200mm)	5.3	N/A	2.50	Tile (8mm)
Hall	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	28.5	N/A	2.50	Carpet
Hallway	CSOG-200: Concrete Slab on Ground (200mm)	27.7	N/A	2.50	Tile (8mm)
Her Bath	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	16.4	N/A	2.50	Tile (8mm)
Her WIR	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	24.1	N/A	2.50	Carpet
His Bath	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	16.2	N/A	2.50	Tile (8mm)
His WIR	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	17.6	N/A	2.50	Carpet
Kitchen/Living	CSOG-200: Concrete Slab on Ground (200mm)	73.9	N/A	2.50	Tile (8mm)
Laundry	CSOG-200: Concrete Slab on Ground (200mm)	16.8	N/A	2.50	Tile (8mm)
Lift_First	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	3.1	N/A	2.50	Carpet
Lift_Ground	CSOG-200: Concrete Slab on Ground (200mm)	2.7	N/A	2.50	Tile (8mm)
Living Pavilion	CSOG-200: Concrete Slab on Ground (200mm)	116.8	N/A	2.50	Tile (8mm)
Lounge Room	CSOG-200: Concrete Slab on Ground (200mm)	66.3	N/A	2.50	Tile (8mm)
Lounge/Stairs	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	73.7	N/A	2.50	Carpet
Main Bed	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	47.6	N/A	2.50	Carpet
PDR	CSOG-200: Concrete Slab on Ground (200mm)	4.4	N/A	2.50	Tile (8mm)
PDR_WC	CSOG-200: Concrete Slab on Ground (200mm)	2.0	N/A	2.50	Tile (8mm)
Scullery	CSOG-200: Concrete Slab on Ground (200mm)	13.2	N/A	2.50	Tile (8mm)
Shwr_Gym	CSOG-200: Concrete Slab on Ground (200mm)	7.2	N/A	2.50	Tile (8mm)
Steam_Gym	CSOG-200: Concrete Slab on Ground (200mm)	6.2	N/A	2.50	Tile (8mm)
Store	CSOG-200: Concrete Slab on Ground (200mm)	25.8	N/A	2.50	Tile (8mm)
WC_Gym	CSOG-200: Concrete Slab on Ground (200mm)	3.0	N/A	2.50	Tile (8mm)
WIR 07	CSOG-200: Concrete Slab on Ground (200mm)	7.3	N/A	2.50	Tile (8mm)
WIR_Guest	SUSP-CONC-200-LINED: Suspended Concrete Slab Floor (200mm) - Lined Below	8.7	N/A	2.50	Carpet

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
Bath	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bath_WC	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bed 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bed 04	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bed 06	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Bunk	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Caretaker Residence	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Ens 03	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Ens 04	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Ens 06	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Ens_Caretaker	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Ens_Guest	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Guest Room	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Hall	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Her Bath	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Her WIR	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
His Bath	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
His WIR	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Kitchen/Living	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Lift_First	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Living Pavilion	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Lounge Room	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Lounge/Stairs	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Main Bed	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

* Refer to glossary.

Ceiling type

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
PDR	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Store	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
Entry Lobby/Lounge	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes
WIR_Guest	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	5.00	Yes

Ceiling penetrations*

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
Bath	1	Exhaust Fan	350	Sealed
Ens 07	1	Exhaust Fan	350	Sealed
Kitchen/Living	1	Exhaust Fan	350	Sealed
Laundry	1	Exhaust Fan	350	Sealed
PDR	1	Exhaust Fan	350	Sealed
Steam_Gym	1	Exhaust Fan	350	Sealed
WC_Gym	1	Exhaust Fan	350	Sealed

Ceiling fans

Location	Quantity	Diameter (mm)
Gym	1	1400

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	1.30	0.85	Dark

Thermal bridging schedule for steel frame elements

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)
Wall	90 x 40	600	0.75	No
Wall	90 x 40	600	0.75	Yes (R0.20)
Floor	90 x 40	600	1.15	No

Thermal bridging *schedule for steel frame elements*

Building element	Steel section dimensions (height x width, mm)	Frame spacing (mm)	Steel thickness (BMT mm)	Thermal Break (R-value)
Ceiling	90 x 40	900	0.75	No
Roof	90 x 40	900	0.75	Yes (R0.20)

Appliance *schedule*

(not applicable if a Whole of Home performance assessment is not conducted for this certificate)

Cooling system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Heating system

Type	Location	Fuel Type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data				

Hot water system

Type	Fuel type	Hot Water CER Zone	Minimum efficiency / STC	Assessed daily load [litres]
No Whole of Home Data				

Pool / spa equipment

Type	Fuel type	Minimum efficiency / performance	Recommended capacity
No Whole of Home Data			

Onsite Renewable Energy *schedule*

Type	Orientatation	Generation Capacity [kW]
No Whole of Home Data		

Battery *schedule*

Type	Storage Capacity [kWh]
No Whole of Home Data	

Explanatory Notes

About this report

NatHERS ratings are a reliable guide for comparing different dwelling designs and to demonstrate that designs meet the energy efficiency requirements in the National Construction Code.

NatHERS ratings use computer modelling to evaluate a home's energy efficiency and performance. They use localised climate data and standard assumptions on how people use their home to predict the heating and cooling energy loads and energy value* of the whole home. The thermal performance star rating uses the home's building specifications, layout, orientation and fabric (i.e. walls, windows, floors, roofs and ceilings) to predict the heating and cooling energy loads. The Whole of Home performance rating uses information about the home's appliances and onsite energy generation and storage to estimate the home's energy value*.

The actual energy loads, cost and greenhouse gas emissions of a home may vary from that predicted. This is because the assumptions will not always match the actual occupant usage patterns. For example, the number of occupants and how people use their appliances will vary.

Energy efficient homes use less energy, are warmer on cool days, cooler on hot days and cost less to run.

Accredited assessors

For quality assured NatHERS Certificates, always use an accredited or licenced assessor registered with an Assessor Accrediting Organisation (AAO). AAOs have strict quality assurance processes, and professional development requirements ensuring consistently high standards for assessments.

Non-accredited assessors (Raters) have no ongoing training requirements and

are not quality assured.

Any queries about this report should be directed to the assessor. If the assessor is unable to address questions or concerns, contact the AAO specified on the front of this certificate.

Disclaimer

The NatHERS Certificate format is developed by the NatHERS Administrator. However, the content in the certificate is entered by the assessor. It is the assessor's responsibility to use NatHERS accredited software correctly and follow the NatHERS Technical Note to produce a NatHERS Certificate.

The predicted annual energy load, cost and greenhouse gas emissions in this NatHERS Certificate are an estimate based on an assessment of the dwelling's design by the assessor. It is not a prediction of actual energy use, cost or emissions. The information and ratings may be used to compare how other dwellings are likely to perform when used in a similar way.

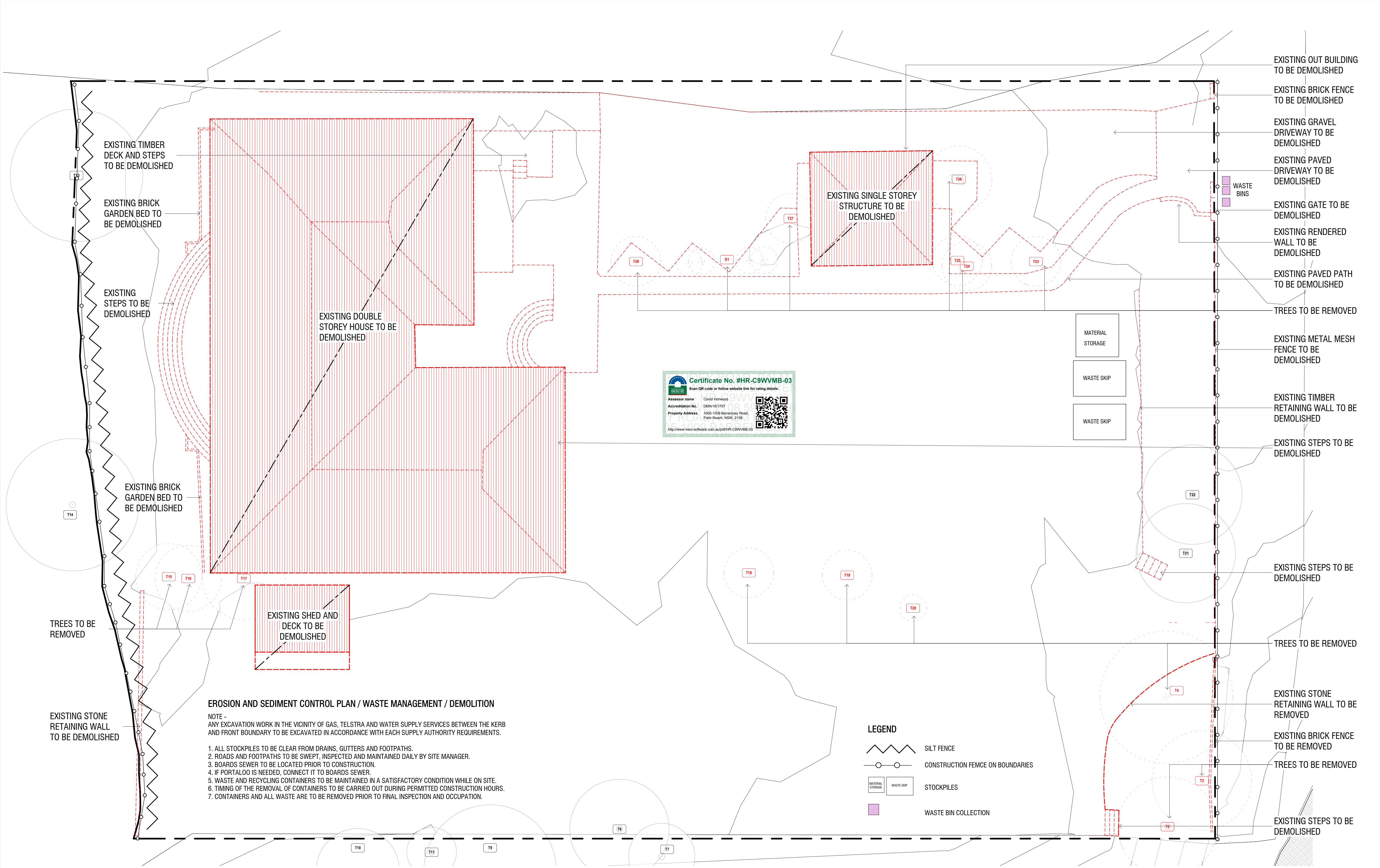
Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, behaviour, appliance performance, indoor air temperature and local climate.

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

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
AFRC	Australian Fenestration Rating Council
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, range hoods, chimneys 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.
COP	Coefficient of performance
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.
EER	Energy Efficiency Ratio, measure of how much cooling can be achieved by an air conditioner for a single kWh of electricity input
Energy use	This is your home's rating without solar or batteries.
Energy value	The net cost to society including, but not limited to, costs to the building user, the environment and energy networks (as defined in the ABCB Housing Provisions Standard).
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	see exposure categories below
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 10m e.g. suburban housing, heavily vegetated bushland areas.
Exposure category - protected	terrain with numerous, closely spaced obstructions over 10 m e.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 (NCC) Class	the NCC groups buildings by their function and use, and assigns a classification code. NatHERS software models NCC Class 1, 2 or 4 buildings and attached Class 10a buildings. Definitions can be found at www.abcb.gov.au .
Net zero home	a home that achieves a net zero energy value*.
Opening percentage	the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
Provisional value	an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional 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
Recommended capacity	this is the capacity or size of equipment that is recommended by NatHERS to achieve the desired comfort conditions in the zone or zones serviced. This is a recommendation and the final selection sizing should be confirmed by a suitably qualified person.
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 generally does not have a diffuser.
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 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.
STCs	Small-scale Technology Certificates, certificates created by the REC registry for renewable energy technologies that may be bought and sold as part of the Small-scale Renewable Energy Scheme operated by the Clean Energy Regulatory
Thermal breaks	are materials with an R-value greater than or equal to 0.2 that must separate the metal frame from the cladding. This includes, but is not limited to, materials such as timber battens greater than or equal to 20mm thick, continuous thermal breaks such as polystyrene insulation sheeting, plastic strips or furring channels.
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).
Window shading device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes horizontal* or vertical shading features* (eg eaves and balconies)

* Refer to glossary.



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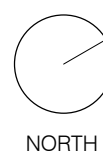
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DA APPLICATION DRAWING LIST	
SHEET NO.	SHEET NAME
DA000	COVER SHEET
DA001	CONTEXT PLAN
DA002	SURVEY PLAN
DA050	DEMOLITION
DA099	SITE PLAN
DA100	GROUND FLOOR PLAN
DA101	FIRST FLOOR PLAN
DA102	ROOF PLAN
DA200	ELEVATIONS
DA201	ELEVATIONS
DA300	SECTIONS
DA301	SECTIONS
DA500	HEIGHT COMPLIANCE AXONOMETRIC
DA501	BUILDING HEIGHT PLANE (BHP)
DA502	SHADOW DIAGRAMS
DA503	SHADOW DIAGRAMS
DA504	AREA DIAGRAMS
DA600	MATERIALS



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Assessor name

Conor Horwood


Accreditation No.

DA0016/1757

Property Address


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Palm Beach, NSW, 2108

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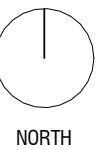
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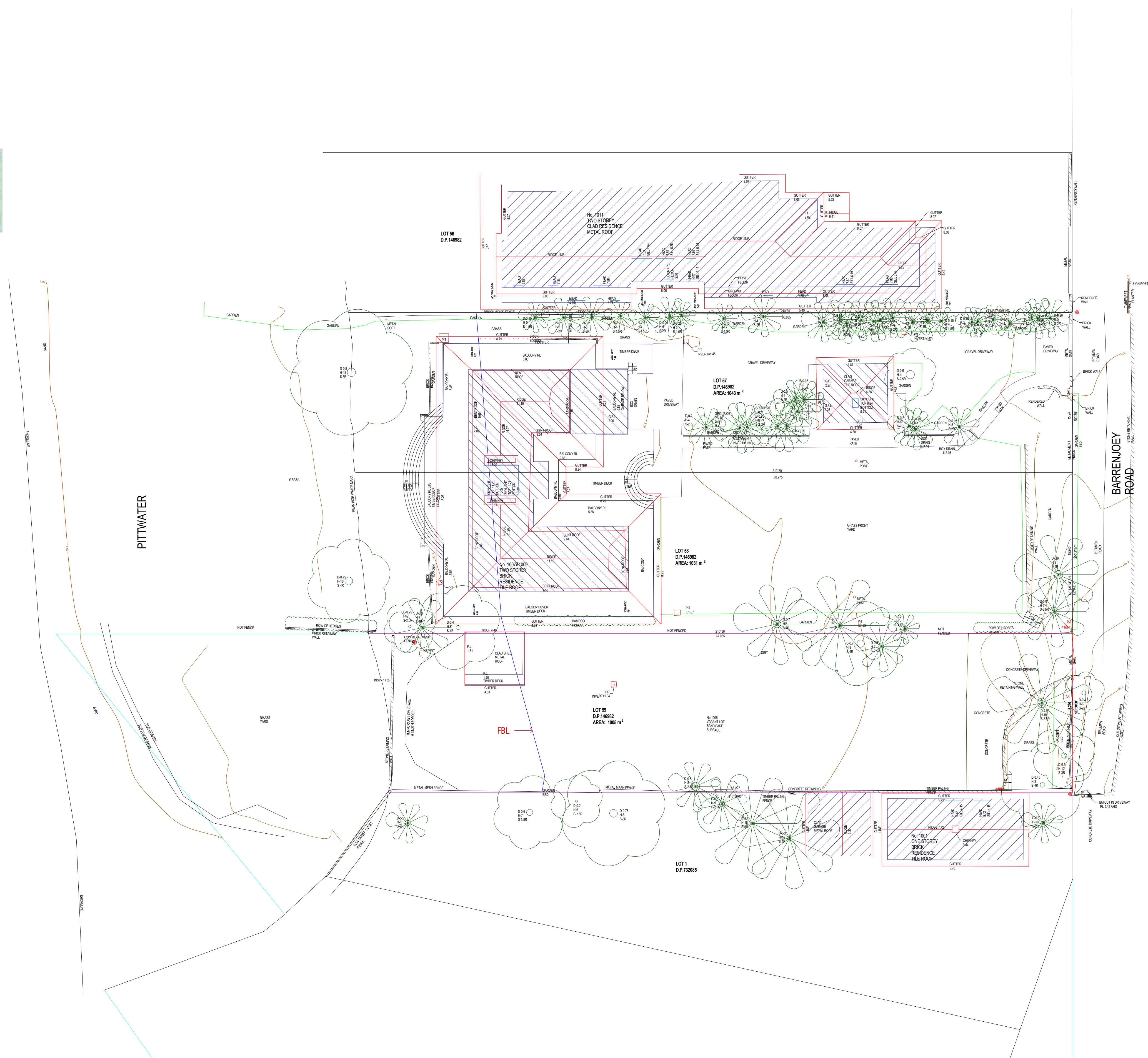
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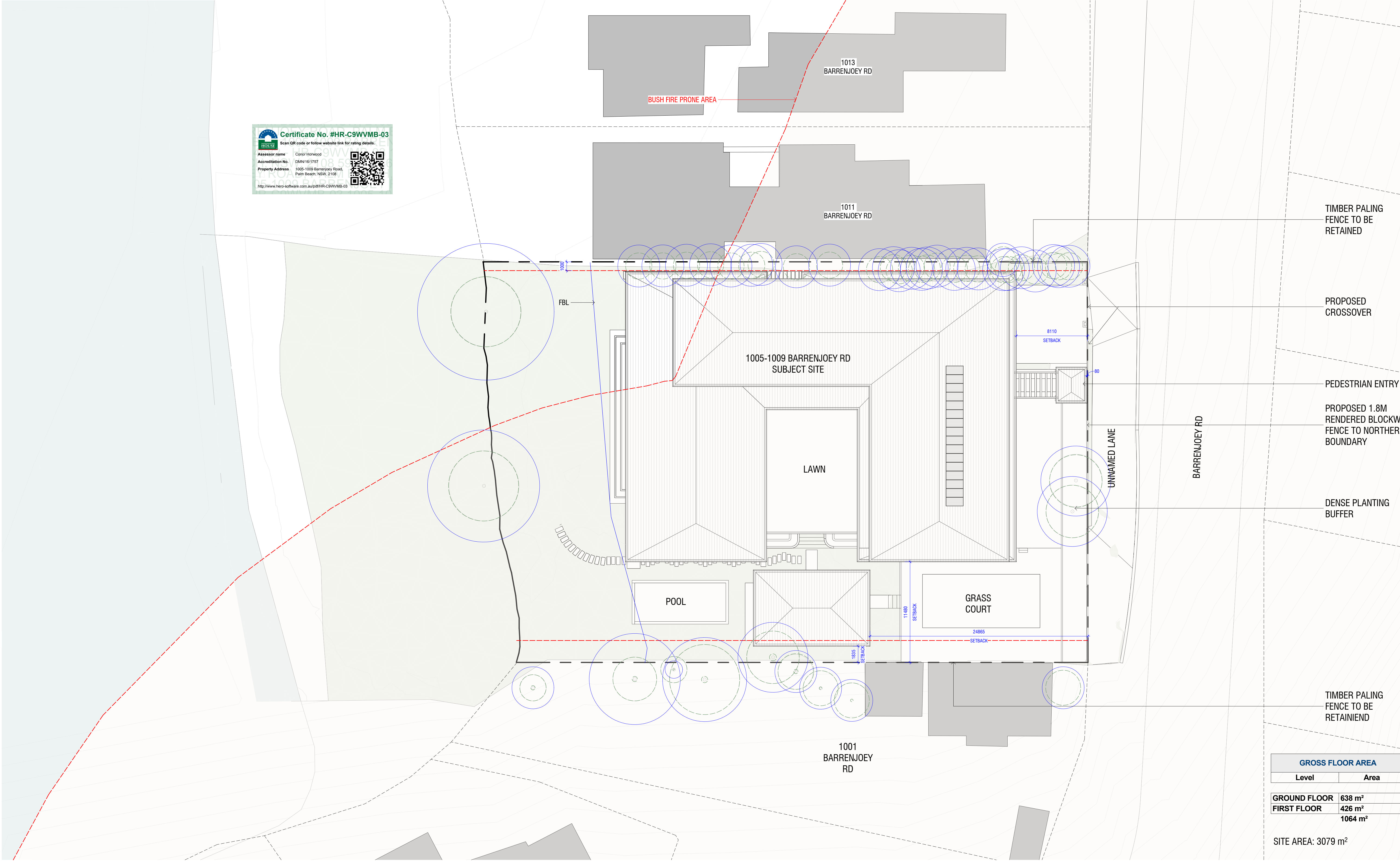
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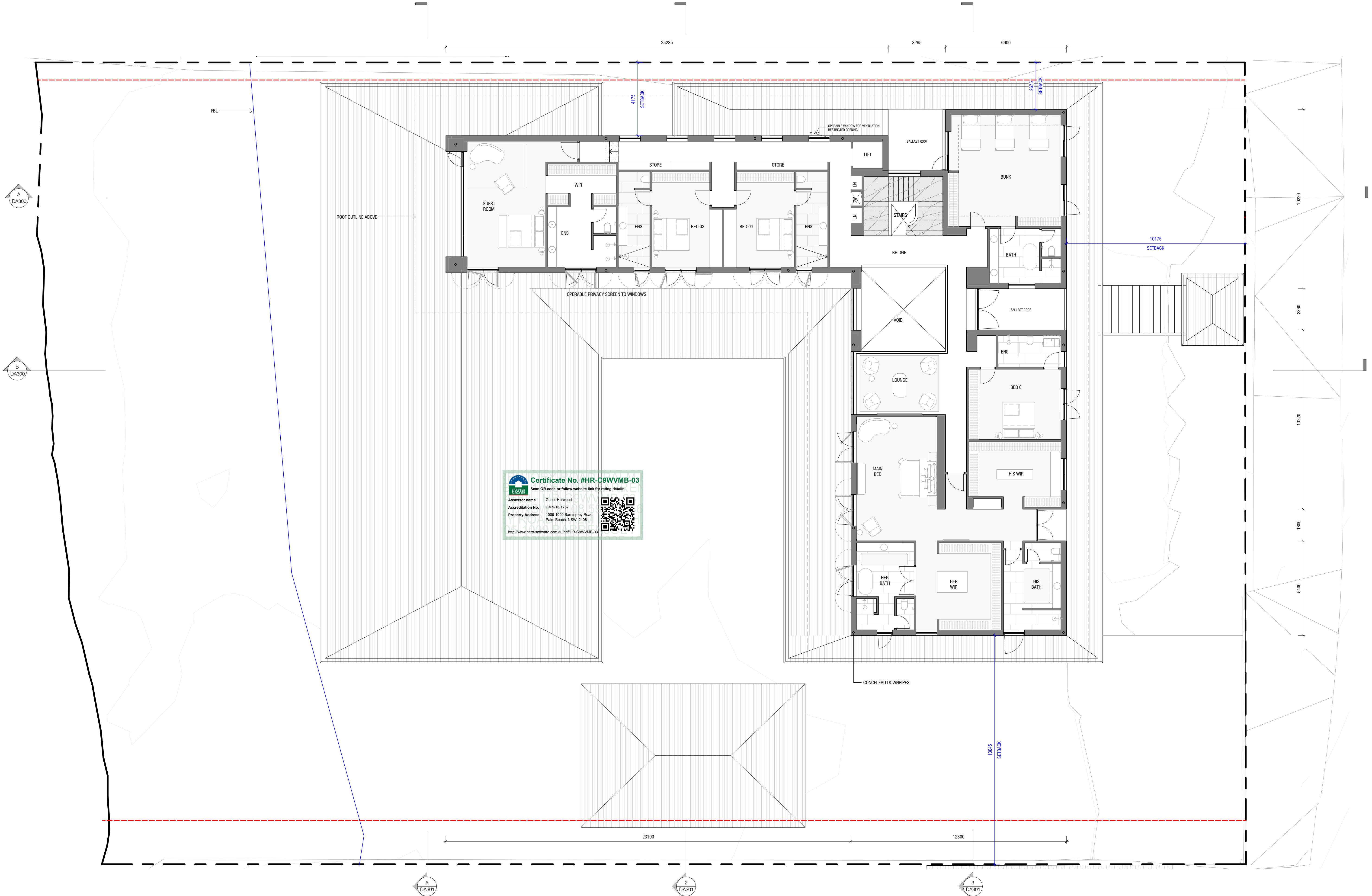
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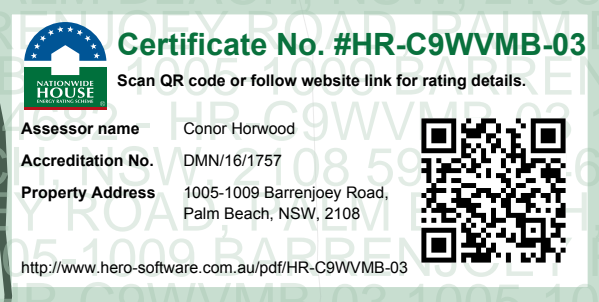
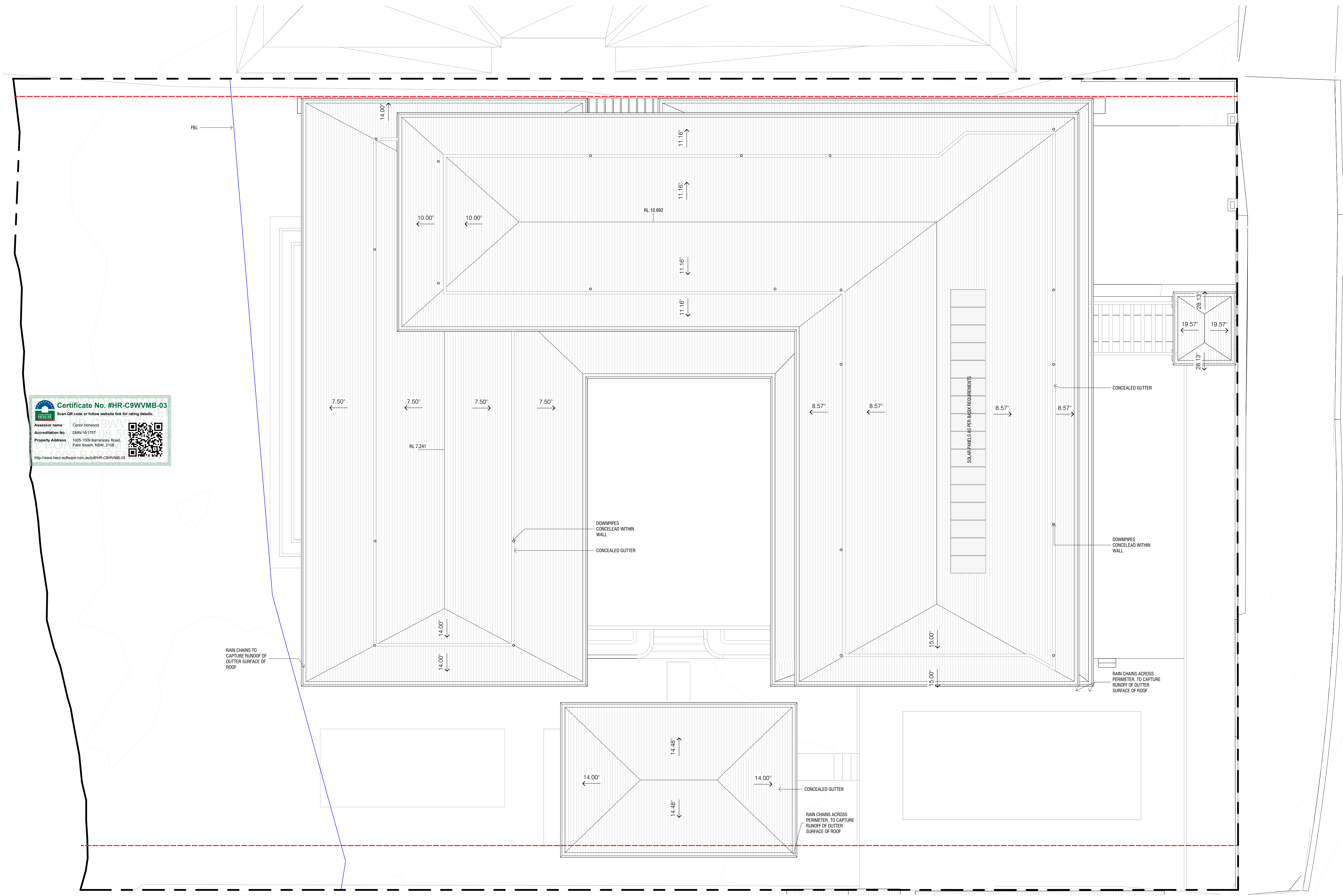
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