Proposed Dual Occupancy

DEVELOPMENT APPLICATION

Henry Joyce
henry@joycon.com.au
0411 363 134

Info

Project	
Client	Bill Martin
Site	9 Tropic Gardens Drive, Smiths Lake
Lot	41 /-/ DP 226785
BAL	BAL 29
Site Area	1761.51
Landscape	870.6
Landscape/Open Space	0.49:1
Existing Dwelling Footprint	218
Proposed Dwelling Footprint	288.4

Index

JOYCON

Drawn	Henry Joyce
Plot Date	19/3/2025
Project NO	3657
Project Status	Draft
Client	Bill Martin
BAL Rating	BAL 29
Lot	41 /-/ DP 226785
Site	9 Tropic Gardens Drive, Smiths Lake

DRAWING TITLE :
Cover Sheet

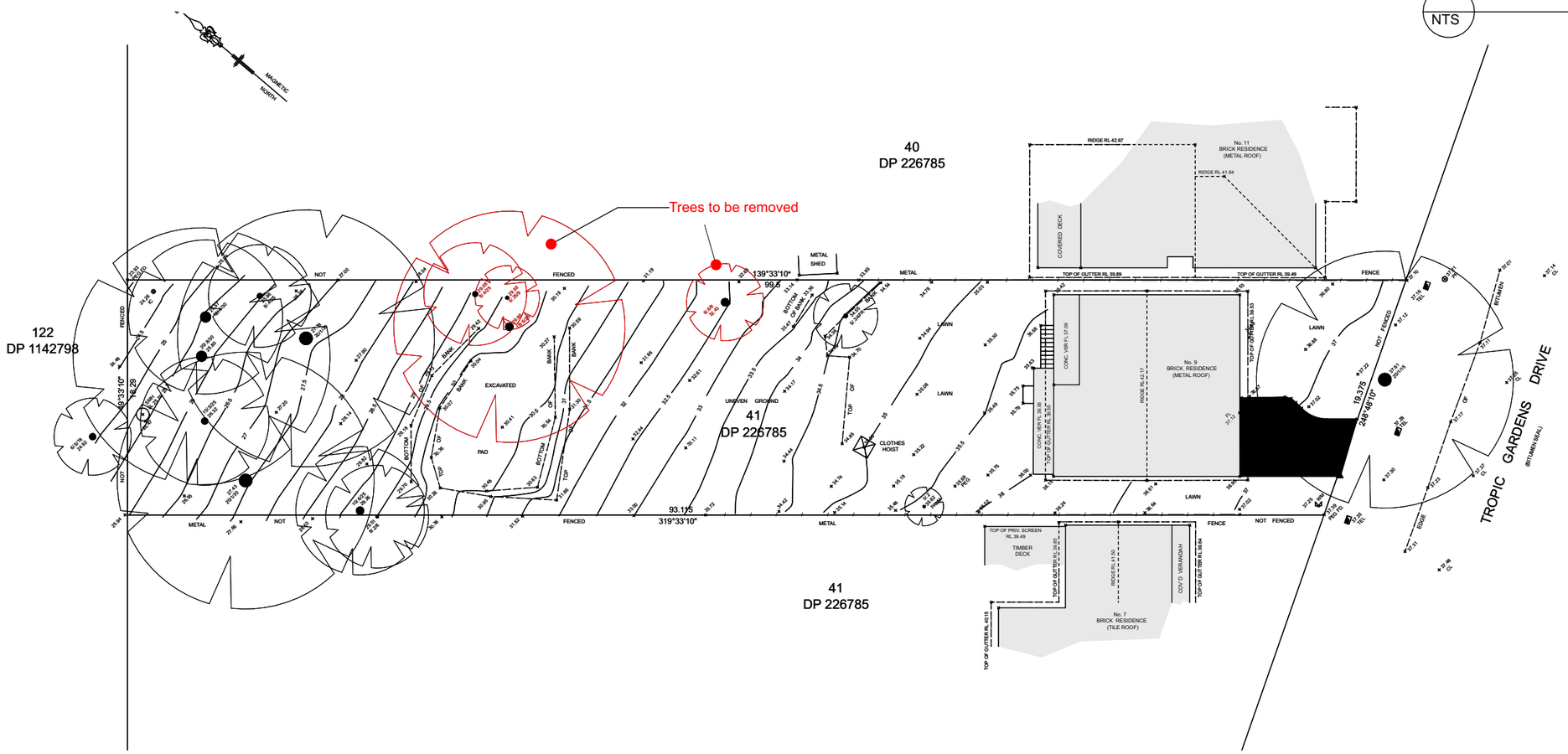
PROJECT NAME :
Proposed Dual Occupancy

REVISION NO.

DRAWING NO.
DA 000

NTS

Location Plan/Satellite Imagery



Survey
1:400

JOYCON

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DRAWING TITLE :

Site Survey

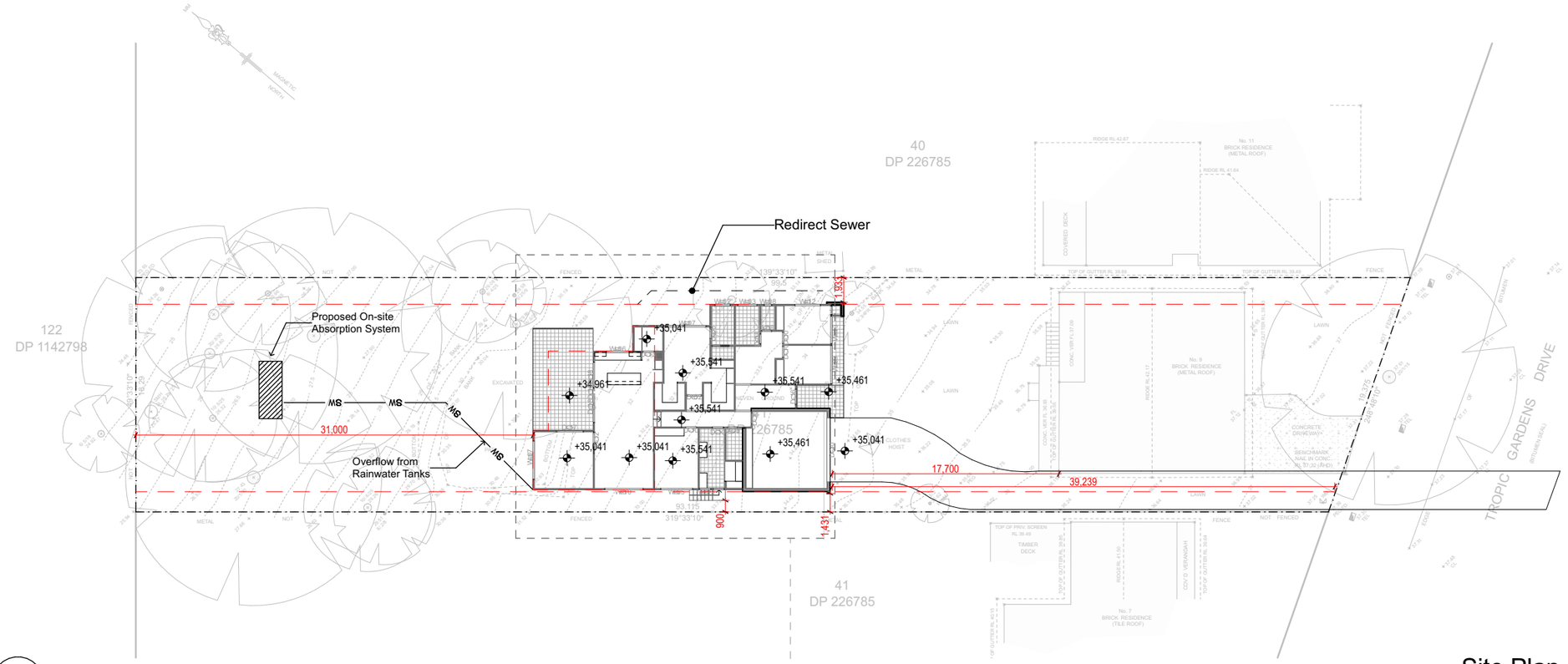
PROJECT NAME :

Proposed Dual Occupancy

REVISION NO.

DRAWING NO.

DA 001



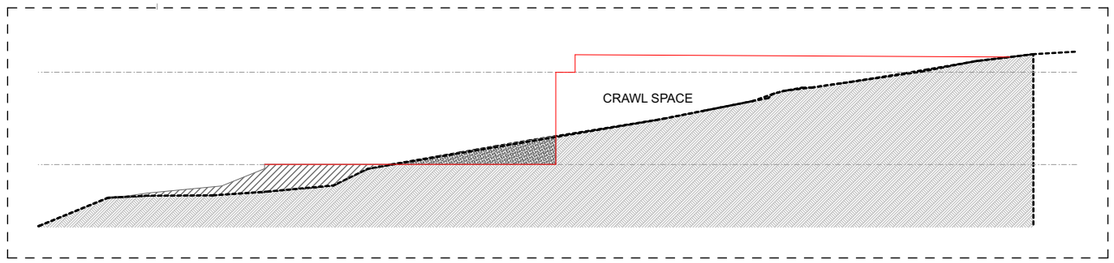
Site Plan
1:400

CUT

FILL

LINE OF SLOPE

FINISHED LEVEL



Cut & Fill Diagram
1:200

JOYCON

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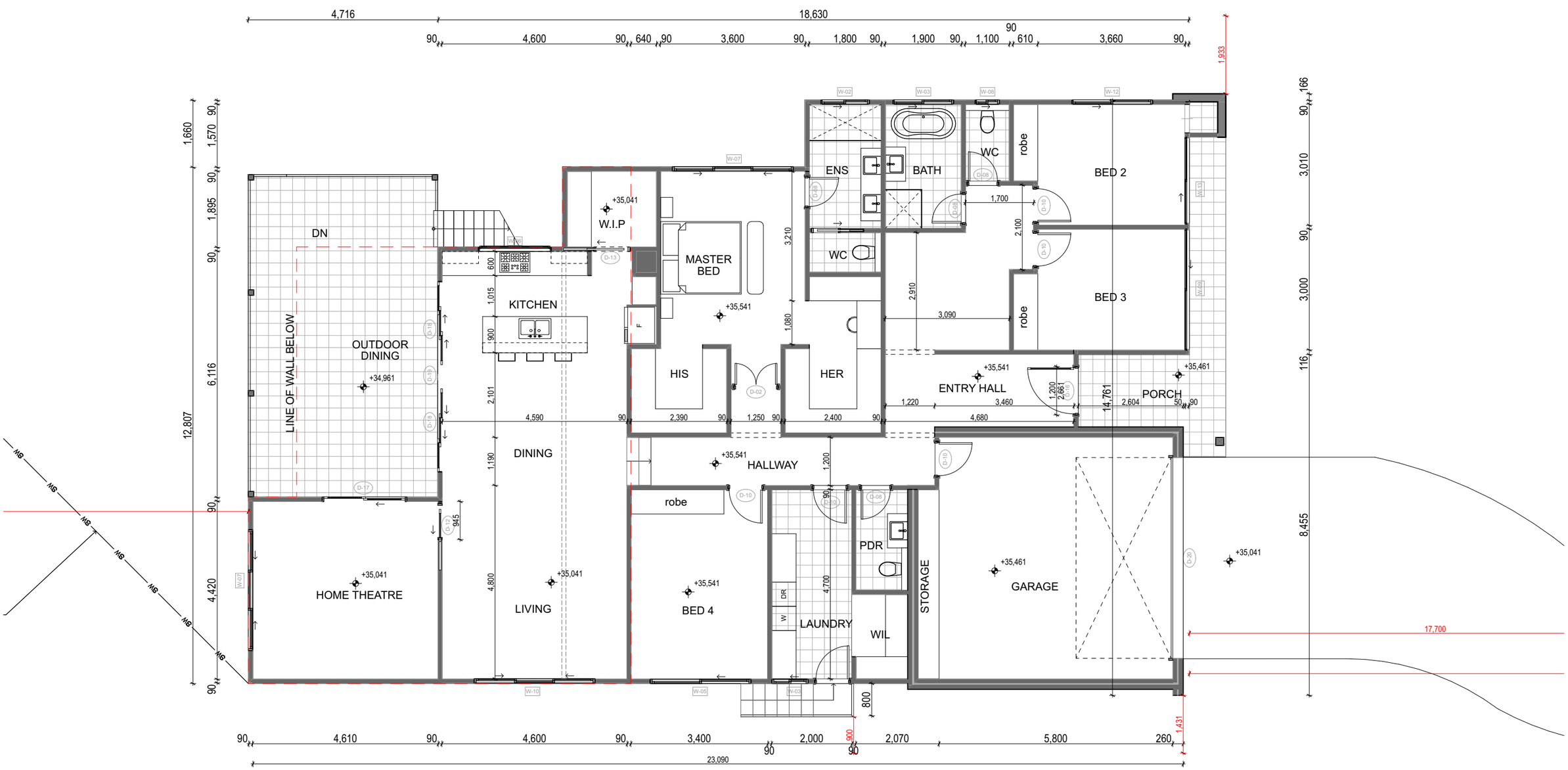
Site	9 Tropic Gardens Drive, Smiths Lake

DRAWING TITLE :
Site Plan

PROJECT NAME :
Proposed Dual Occupancy

REVISION NO.

DRAWING NO.
DA 002



GROUND FLOOR PLAN
1:100

JOYCON

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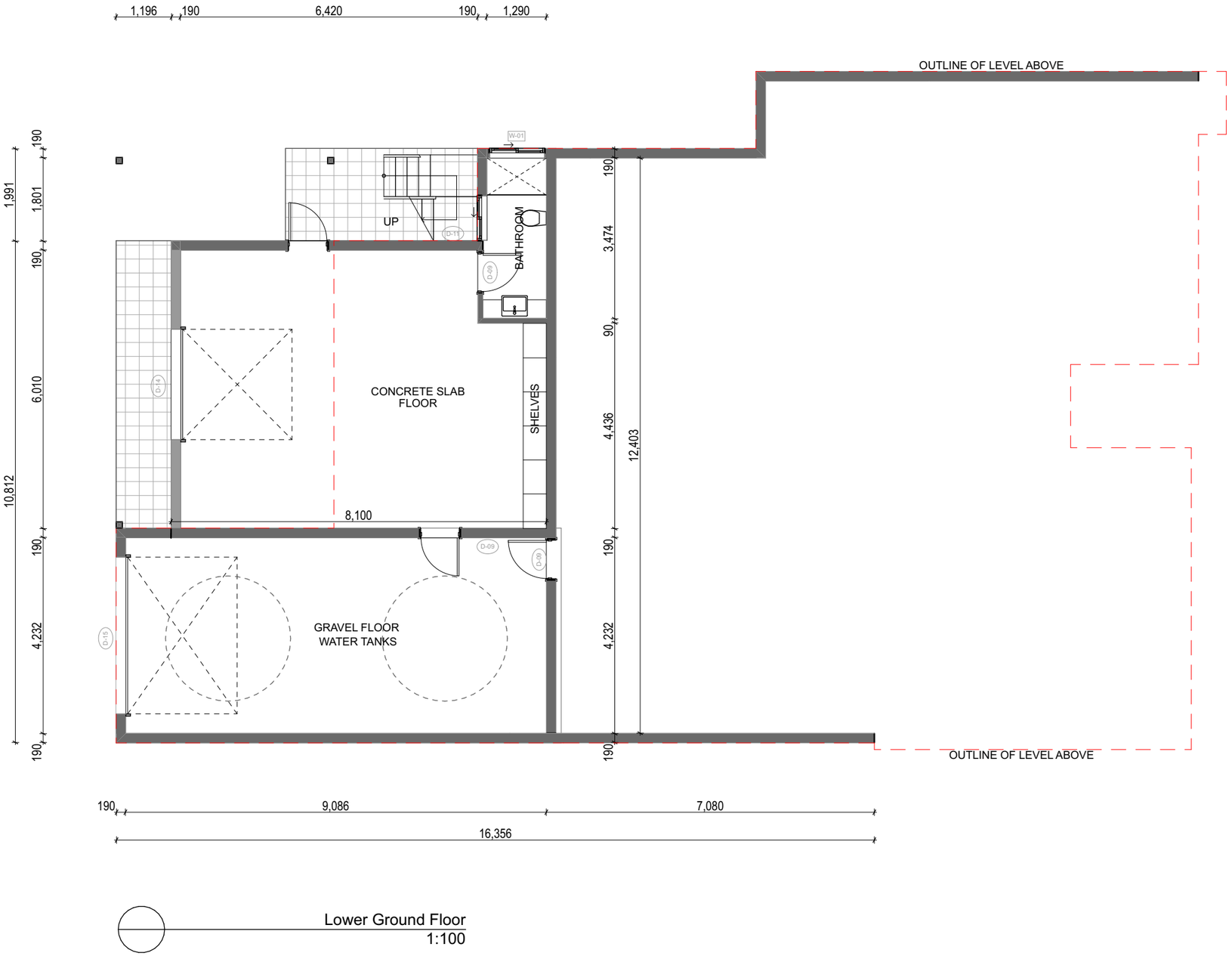
DRAWING TITLE :
Ground Floor

PROJECT NAME :
Proposed Dual Occupancy

REVISION NO.

DRAWING NO.
DA 101



Lower Ground Floor
1:100

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DRAWING TITLE :

Lower Ground Floor

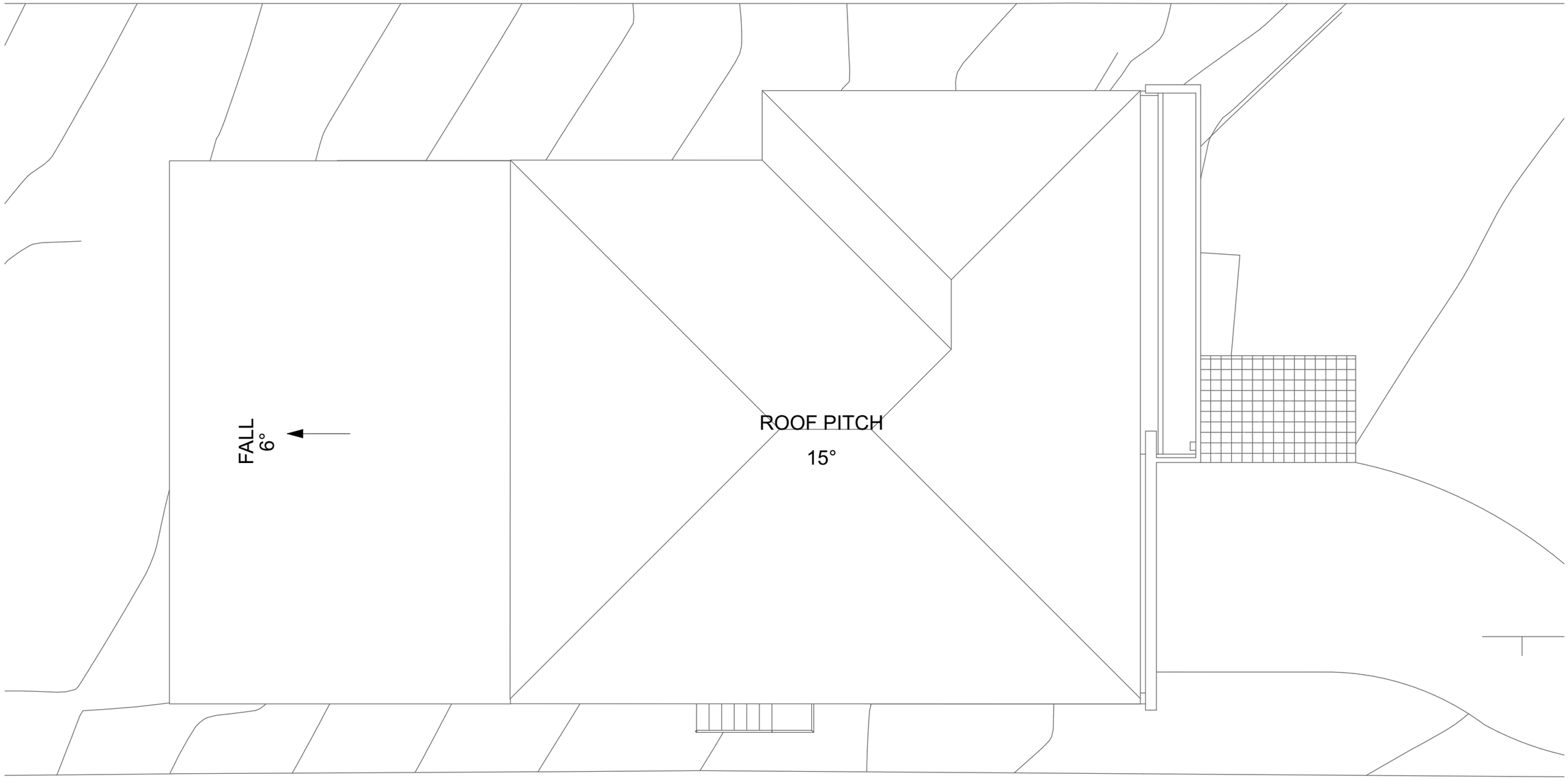
PROJECT NAME :

Proposed Dual Occupancy

REVISION NO.

DRAWING NO.

DA 100



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DRAWING TITLE :

Roof Plan

PROJECT NAME :

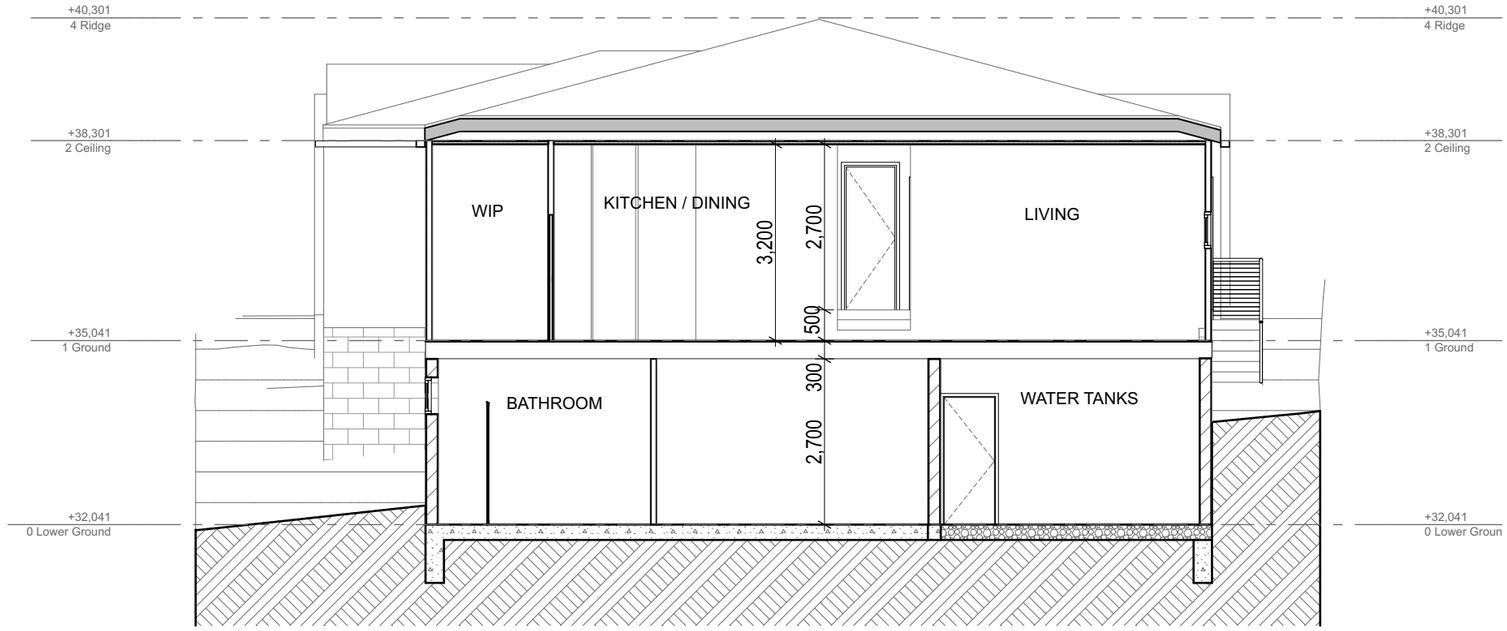
Proposed Dual Occupancy

REVISION NO.

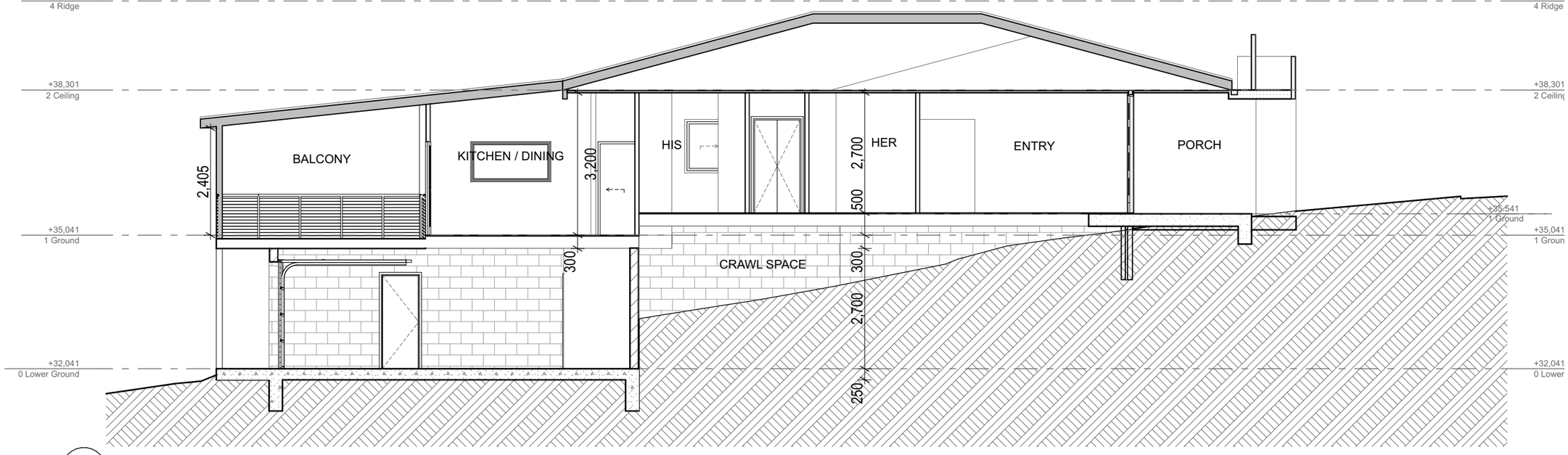
N

DRAWING NO.

DA 102



S-02 Cross Section
1:100



S-01 Long Section
1:100

JOYCON

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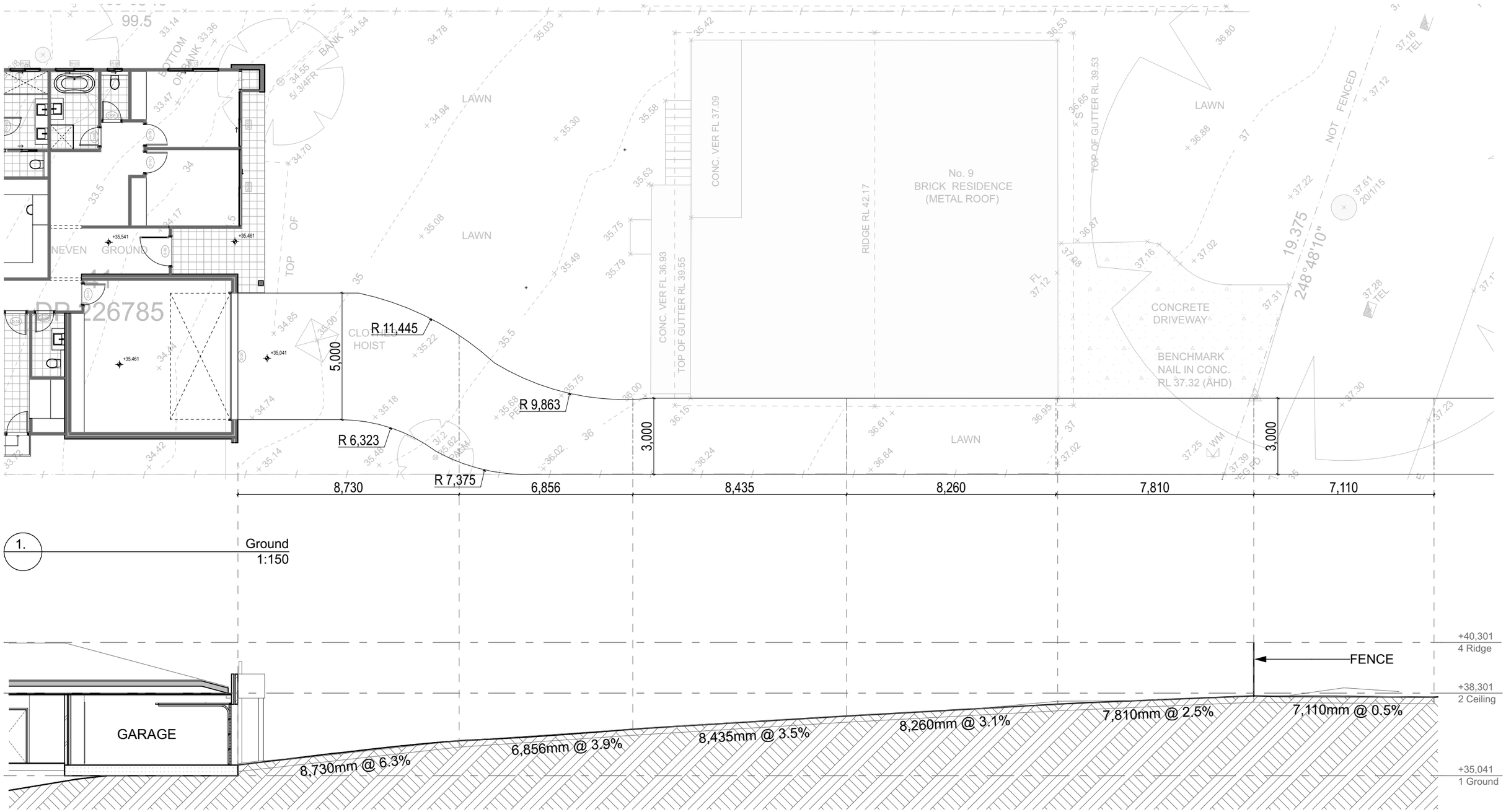
DRAWING TITLE :
Sections 1

PROJECT NAME :
Proposed Dual Occupancy

REVISION NO.

DRAWING NO.
DA 200



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DRAWING TITLE :

Driveway Section

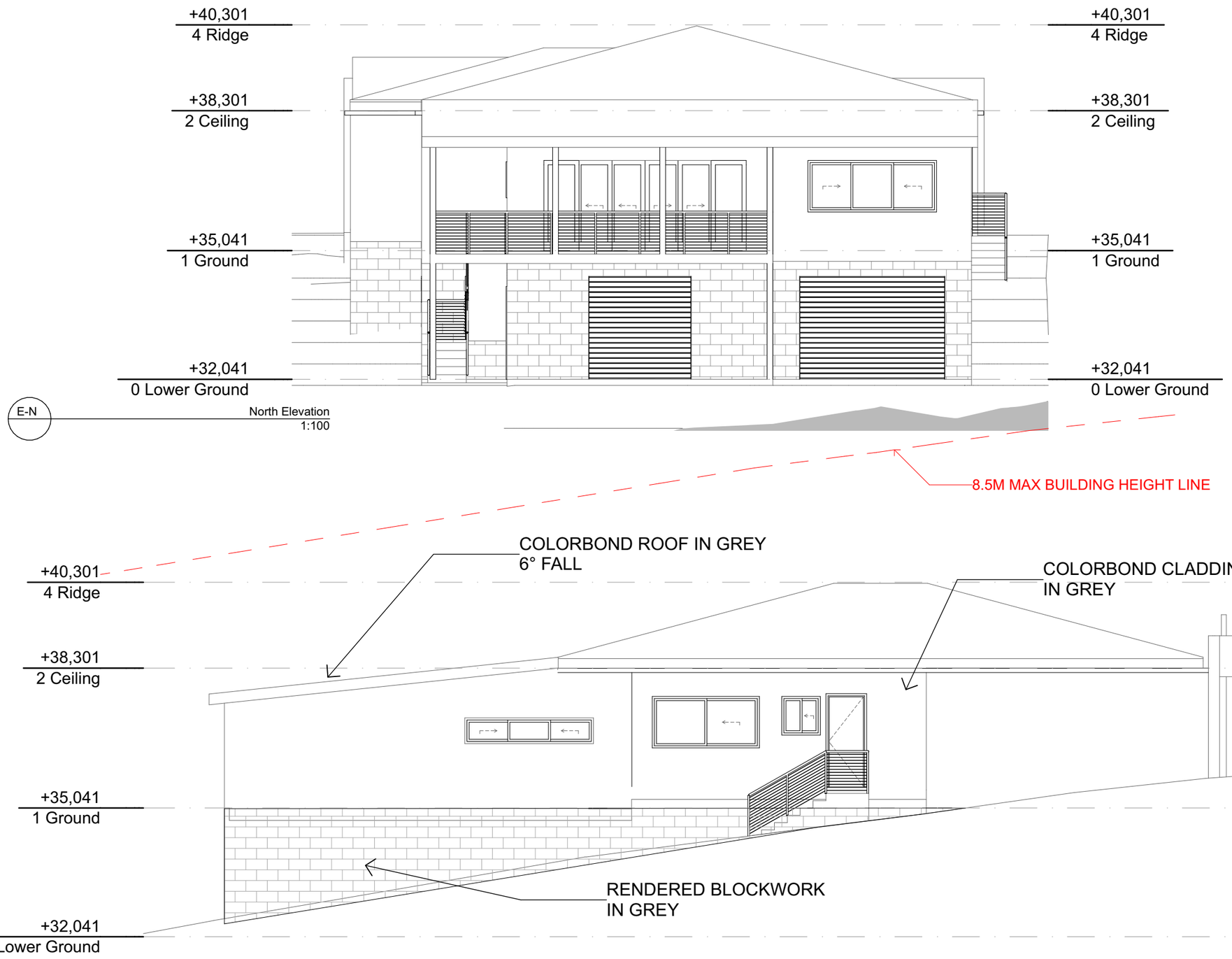
PROJECT NAME :

Proposed Dual Occupancy

REVISION NO.

DRAWING NO.

DA 201



E-N — North Elevation
1:100

E-W — West Elevation
1:100

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DRAWING TITLE :

North / West Elevations

PROJECT NAME :

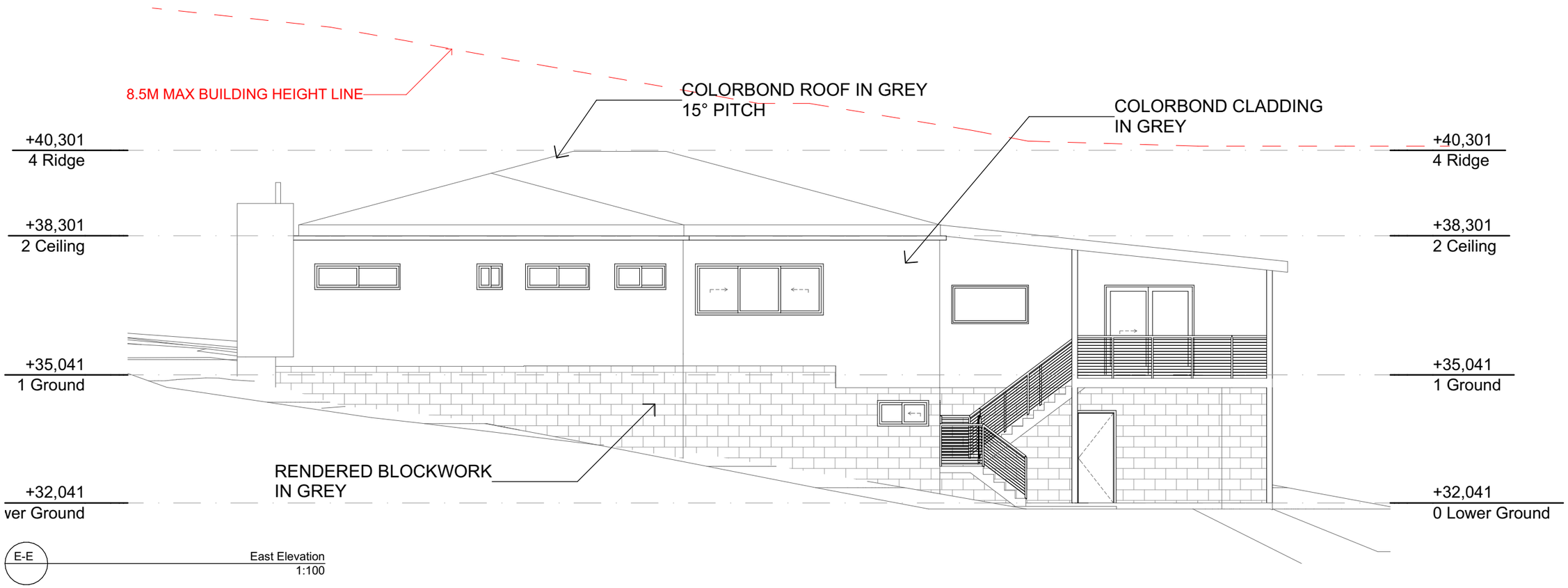
Proposed Dual Occupancy

REVISION NO.

DRAWING NO.

DA 300

E-S South Elevation
1:100



E-E East Elevation
1:100

JOYCON

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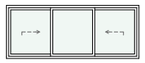
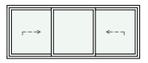
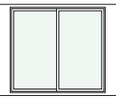
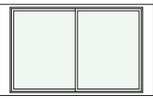
Site	9 Tropic Gardens Drive, Smiths Lake

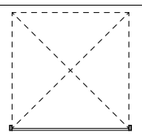
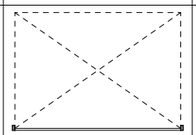
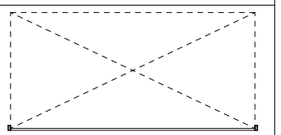
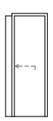
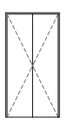
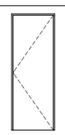
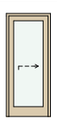
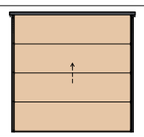
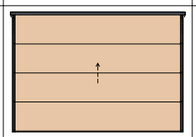
DRAWING TITLE :
South / East Elevations

PROJECT NAME :
Proposed Dual Occupancy

REVISION NO.

DRAWING NO.
DA 301

Window Schedule														
Element ID	W-01	W-02	W-03	W-04	W-05	W-06	W-07	W-07	W-08	W-09	W-09	W-10	W-11	W-12
Quantity	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Area	0.7	0.7	0.8	0.9	3.0	1.6	3.6	3.6	0.4	4.1	5.8	1.8	0.6	1.2
Nominal W x H Size	1,200×600	1,200×600	900×900	1,500×600	2,500×1,200	1,800×900	3,000×1,200	3,000×1,200	600×600	2,150×1,930	3,000×1,930	3,000×600	974×600	2,000×600
Orientation	East	East	West	East	West	East	East	North	East	South	South	West	North	East
3D Front View														

Door Schedule															
Element ID	D-01	D-02	D-08	D-09	D-10	D-10	D-11	D-12	D-13	D-14	D-15	D-16	D-17	D-18	D-20
Height	2,100	2,100	2,100	2,072	2,100	2,340	2,100	2,100	2,100	2,400	2,400	2,661	2,100	2,100	2,400
Width	720	1,040	720	820	820	820	820	900	900	2,400	3,400	1,200	2,100	2,360	5,000
2D Plan Preview															
3D Front View															

JOYCON

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Project Status	Draft
Client	Bill Martin
BAL Rating	BAL 29
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Site	9 Tropic Gardens Drive, Smiths Lake

DRAWING TITLE :

Schedule

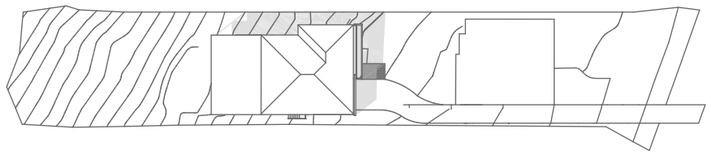
PROJECT NAME :

Proposed Dual Occupancy

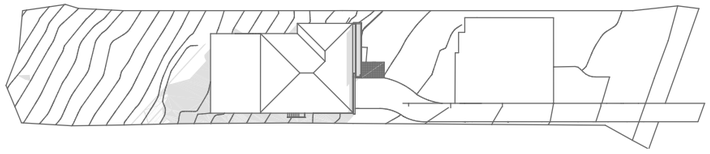
REVISION NO.

DRAWING NO.

DA 400



Shadow Study 21 Mar at 0900h
1:1000



Shadow Study 21 June at 0900h
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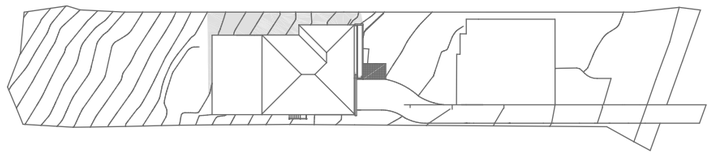

Shadow Study 21 Mar at 1200h
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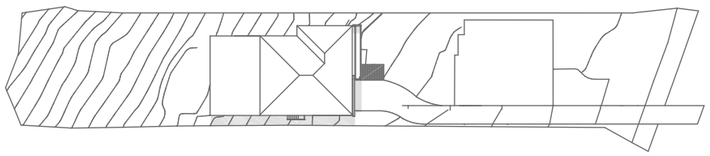

Shadow Study 21 June at 1200h
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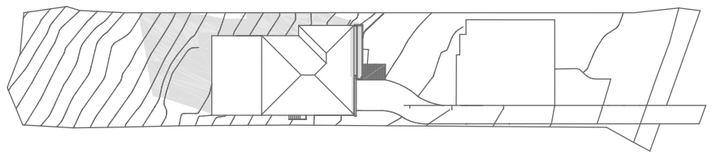
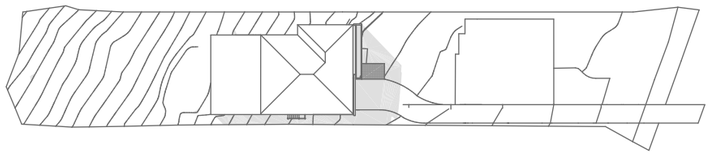


Shadow Study 21 Mar at 1500h
1:1000



Shadow Study 21 June at 1500h
1:1000

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DRAWING TITLE :

Shadow Diagrams

PROJECT NAME :

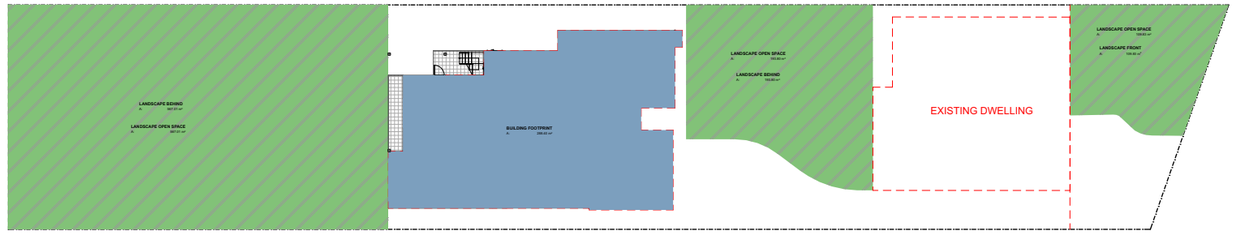
Proposed Dual Occupancy

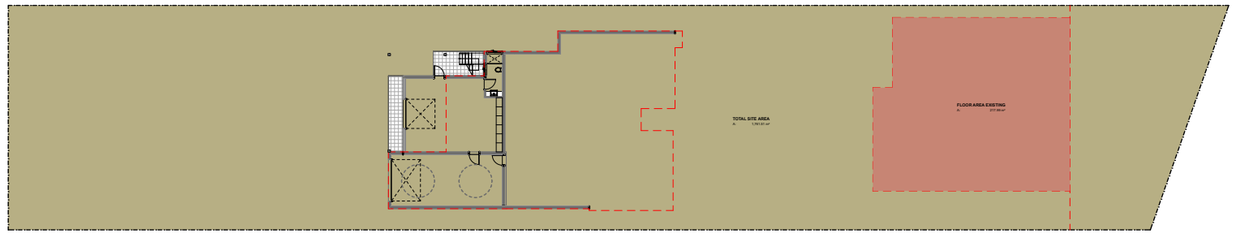
REVISION NO.

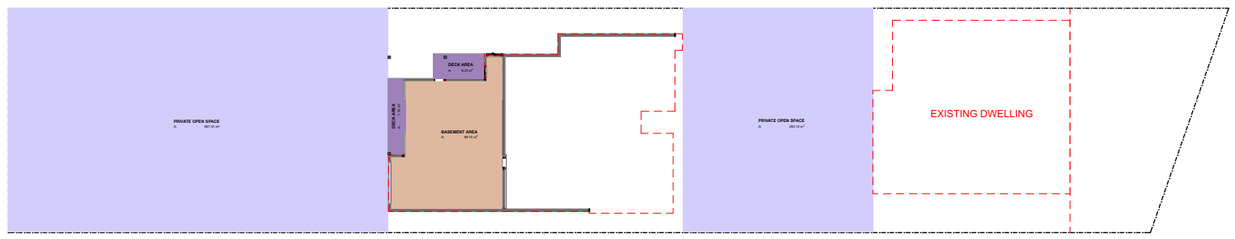
DRAWING NO.

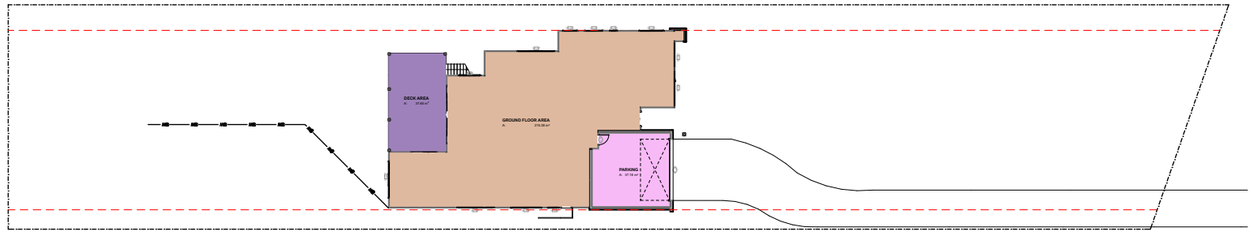
DA 500

000	TOTAL SITE AREA	1,761.5
001	FLOOR AREA EXISTING	218.0
002	LANDSCAPE OPEN SPACE	870.6
003	BUILDING FOOTPRINT	288.4
004	DECK	53.2
005	PARKING	37.2
006	PRIVATE OPEN SPACE	850.1
007	BASEMENT AREA	89.7
008	GROUND FLOOR AREA	215.4
009	LANDSCAPE BEHIND	760.8
009	LANDSCAPE FRONT	109.8









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DRAWING TITLE :

Areas Plan

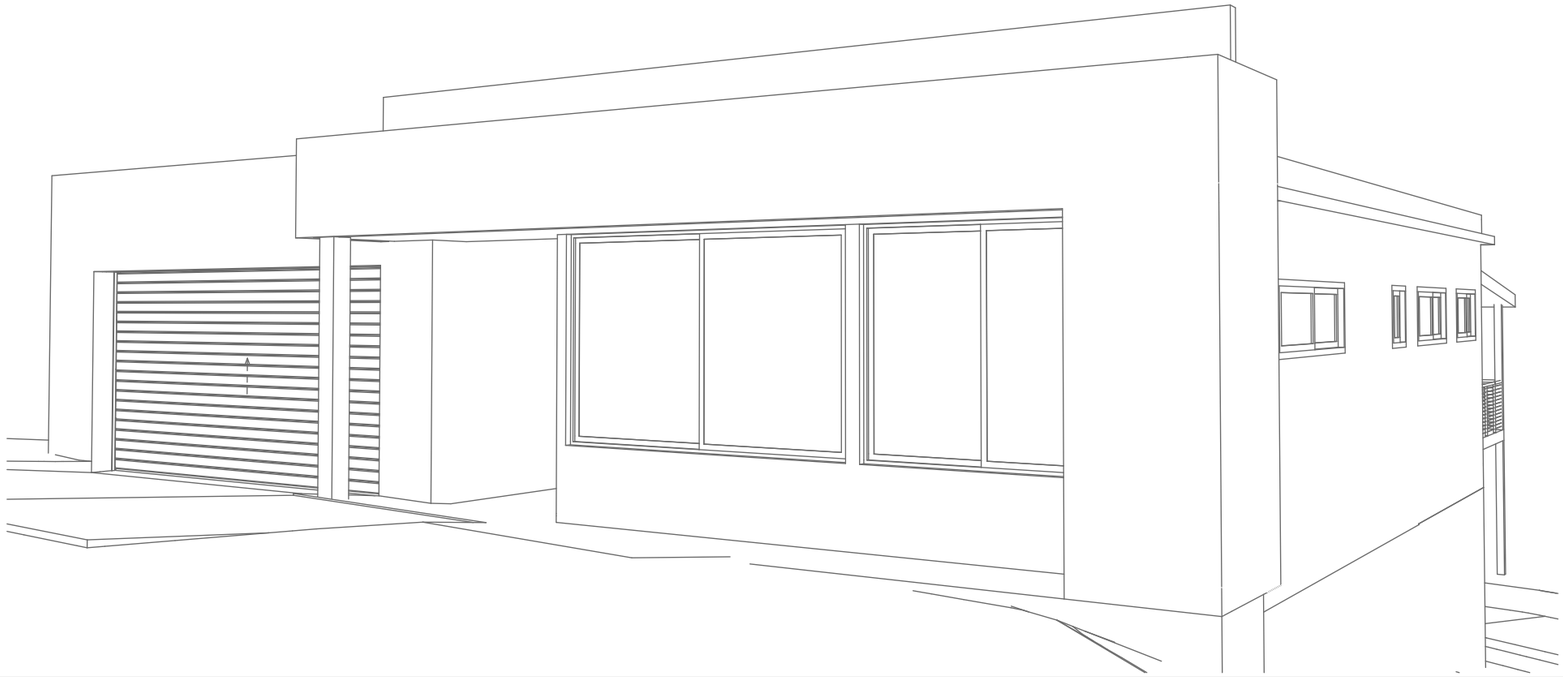
PROJECT NAME :

Proposed Dual Occupancy

REVISION NO.

DRAWING NO.

DA 600



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DRAWING TITLE :

Perspectives

PROJECT NAME :

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REVISION NO.

DRAWING NO.

DA 700

BASIX® Certificate

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

Single Dwelling

Certificate number: 1783538S

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.basix.nsw.gov.au

Secretary
Date of issue: Friday, 14 February 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-QEWJQC-01.

Project summary	
Project name	9 Tropic Gardens
Street address	9 TROPIC GARDENS Drive SMITHS LAKE 2428
Local Government Area	Mid-Coast Council
Plan type and plan number	Deposited Plan DP226785
Lot no.	41
Section no.	-
Project type	dwelling house (detached) - secondary dwelling
No. of bedrooms	4

Project score		
Water	✔ 40	Target 40
Thermal Performance	✔ Pass	Target Pass
Energy	✔ 76	Target 70
Materials	✔ -46	Target n/a

Certificate Prepared by
Name / Company Name: Clockwork Consulting
ABN (if applicable): 41152105783

Description of project

Project address	
Project name	9 Tropic Gardens
Street address	9 TROPIC GARDENS Drive SMITHS LAKE 2428
Local Government Area	Mid-Coast Council
Plan type and plan number	Deposited Plan DP226785
Lot no.	41
Section no.	-

Project type	
Project type	dwelling house (detached) - secondary dwelling
No. of bedrooms	4

Site details	
Site area (m²)	2026
Roof area (m²)	251
Conditioned floor area (m²)	183.8
Unconditioned floor area (m²)	28.1
Total area of garden and lawn (m²)	1250
Roof area of the existing dwelling (m²)	220
Number of bedrooms in the existing dwelling	4

Assessor details and thermal loads	
NatHERS assessor number	10243
NatHERS certificate number	HR-QEWJQC-01
Climate zone	15
Area adjusted cooling load (MJ/m².year)	22
Area adjusted heating load (MJ/m².year)	26

Project score		
Water	✔ 40	Target 40
Thermal Performance	✔ Pass	Target Pass
Energy	✔ 76	Target 70
Materials	✔ -46	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
Landscape			
The applicant must plant indigenous or low water use species of vegetation throughout 1000 square metres of the site.	✔	✔	
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 6 star in each toilet in the development.		✔	✔
The applicant must install taps with a minimum rating of 6 star in the kitchen in the development.		✔	
The applicant must install basin taps with a minimum rating of 6 star in each bathroom in the development.		✔	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 4000 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 120 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:			
• all toilets in the development		✔	✔
• the cold water tap that supplies each clothes washer in the development		✔	✔

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
• 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.)		✔	✔

JOYCON

Drawn	Henry Joyce
Plot Date	19/3/2025
Project NO	3657
Project Status	Draft
Client	Bill Martin
BAL Rating	BAL 29
Lot	41 /-/ DP 226785
Site	9 Tropic Gardens Drive, Smiths Lake

DRAWING TITLE :
BASIX

PROJECT NAME :
Proposed Dual Occupancy

REVISION NO.

DRAWING NO.
DA 800

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 - m²	Insulation
floor - suspended floor above enclosed subfloor, particle board; frame: laminated veneer lumber (LVL).	139	fibreglass batts or roll
floor - suspended floor above garage, particle board; frame: laminated veneer lumber (LVL).	67	fibreglass batts or roll
garage floor - concrete slab on ground.	120.7	none
external wall: framed (metal clad); frame: timber - H2 treated softwood.	127.8	fibreglass batts or roll+ foil/sarking
external wall: brick veneer; frame: timber - H2 treated softwood.	68.6	fibreglass batts or roll+ foil/sarking
external garage wall: concrete block/plasterboard; frame: no frame.	62.2	none
internal wall: plasterboard; frame: timber - H2 treated softwood.	201.1	not specified
internal wall: cavity brick wall; frame: timber - H2 treated softwood.	21.4	not specified
ceiling and roof - flat ceiling / pitched roof, framed - metal roof, timber - untreated softwood.	175.8	ceiling: fibreglass batts or roll; roof: foil backed blanket.
ceiling and roof - flat ceiling / flat roof, framed - metal roof, timber - untreated softwood.	75.2	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	41.3
timber	0
uPVC	0
steel	0
composite	0

Glazing	Maximum area - m2
single	0
double	41.3
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: electric heat pump with a performance of 36 to 40 STCs or better.	✔	✔	✔
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: 8.5 star (average zone)		✔	✔
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: 9 star (average zone)		✔	✔
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: 9 star (average zone)		✔	✔
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: 9 star (average zone)		✔	✔
Ventilation			
The applicant must install the following exhaust systems in the development:			
At least 1 Bathroom: individual fan, open to façade; 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 the kitchen of the dwelling for natural lighting.	✔	✔	✔

JOYCON

Drawn Henry Joyce
Plot Date 19/3/2025
Project NO 3657
Project Status Draft

Client Bill Martin
BAL Rating BAL 29
Lot 41 /-/ DP 226785
Site 9 Tropic Gardens Drive, Smiths Lake

DRAWING TITLE :
BASIX

PROJECT NAME :
Proposed Dual Occupancy

REVISION NO.

DRAWING NO.
DA 801

Nationwide House Energy Rating Scheme® NatHERS® Certificate No. #HR-QEWJQC-01

Generated on 14 Feb 2025 using Hero 4.1 (Chenath v3.23)

Property

Address	9, Tropic Gardens Drive,, Smiths Lake, NSW, 2428
Lot/DP	
NCC Class*	1a
Floor/all Floors	1 of 2 floors
Type	New

Plans

Main Plan	
Prepared by	

Construction and environment

Assessed floor area (m²)*		**Exposure Type**	
Conditioned*	183.8	Suburban	
Unconditioned*	28.1	**NatHERS climate zone**	
Total	332.6	15 - Williamtown AMO	
Garage	120.7		

Accredited assessor

Name	Tim Cunningham
Business name	Clockwork Consulting
Email	tim@clockworkconsulting.com.au
Phone	+61 411835624
Accreditation No.	10243
Assessor Accrediting Organisation	HERA
Declaration of interest	No Conflict of Interest

NCC Requirements

BCA provisions	Volume 2
State/Territory variation	Yes

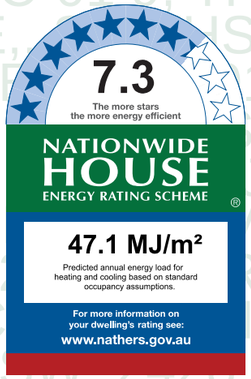
National Construction Code (NCC) requirements

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 star rating



Thermal performance (MJ/m²)

Limits taken from ABCB Standard 2022

	Heating	Cooling
Modelled	25.7	21.4
Load limits	40	33

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-QEWJQC-01.

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

About the ratings

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 onsite renewable energy impact

No Whole of Home performance assessment conducted for this certificate.

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.

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 Certifi cate?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐

JOYCON

Drawn	Henry Joyce
Plot Date	19/3/2025
Project NO	3657
Project Status	Draft
Client	Bill Martin
BAL Rating	BAL 29
Lot	41 /-/ DP 226785
Site	9 Tropic Gardens Drive, Smiths Lake

DRAWING TITLE :
NatHERS

PROJECT NAME :
Proposed Dual Occupancy

REVISION NO.

DRAWING NO.
DA 900

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?		☐	☐	☐	☐
Insulation installation method					
Has the insulation been installed according to the NCC requirements?			☐	☐	☐
Building sealing					
Does the dwelling meet the NCC requirements for Building Sealing?		☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
Does the heating appliance/s type, location and efficiency/performance shown on the NatHERS-stamped plans or installed, match the location and minimum efficiency/performance requirements shown in the *'Appliance schedule'* on this Certificate?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
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?	☐	☐	☐	☐	☐
Additional NCC Requirements for Services (not included in the NatHERS assessment)					
Does the lighting meet the artificial lighting requirements specified in the NCC?		☐	☐	☐	☐
Does the hot water system meet the additional requirements specified in the NCC?		☐	☐	☐	☐
Provisional values* check					
Have provisional values* been used in the assessment and, if so, are they noted in *'Additional notes'* table below?	☐	☐			
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 (m²)
KITCHEN/DINING/LIVING	Kitchen/Living	50.43
WIP	Day Time	4.14
MASTER BED	Bedroom	32.14
BED 4	Bedroom	15.85
HOME THEATRE	Living	20.17
GARAGE	Garage	37.36
BED 2	Bedroom	12.07
BED 3	Bedroom	11.97
LAUNDRY	Unconditioned	12.26
PDR	Unconditioned	3.19
BATH	Unconditioned	5.86
WC	Unconditioned	2.06
ENTRY HALL	Day Time	29.57
Garage 2	Garage	44.98
BATHROOM	Unconditioned	4.72
ENS	Night Time	7.49
Garage 4	Garage	38.36

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
AAFWD-020-024	Apartment Aluminium Fixed Window Double Glazed	1.99	0.25	0.24	0.26
HASWD-030-037	Housing Aluminium Sliding Window Double Glazed	3.00	0.37	0.35	0.39

Custom* windows

Window ID	Window Description	Maximum U-value*	SHGC*	SHGC substitution tolerance ranges	
				lower limit	upper limit
A&L-108-023	A&L ComfortSmart Thermally Broken Sliding Door	1.67	0.44	0.42	0.46

Window and glazed door *schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orient-ation	Shading device*
BATH	HASWD-030-037	W03	900	900	Sliding	45	ENE	None
BATHROOM	HASWD-030-037	W01	600	1200	Sliding	45	ENE	None
BATHROOM	HASWD-030-037	W15	600	900	Sliding	45	NNW	None
BED 2	HASWD-030-037	W12	600	2000	Sliding	45	ENE	None
BED 2	HASWD-030-037	W13	1930	2100	Sliding	45	SSE	None
BED 3	HASWD-030-037	W09	1930	2150	Sliding	45	SSE	None
BED 4	HASWD-030-037	W05	1200	2500	Sliding	45	WSW	None
ENS	HASWD-030-037	W02	600	1200	Sliding	45	ENE	None
HOME THEATRE	A&L-108-023	D17	2100	2100	Sliding Door	45	ENE	None
HOME THEATRE	HASWD-030-037	W07	1200	3000	Sliding	30	NNW	None
KITCHEN/DINING/LIVING	AAFWD-020-024	06	900	1800	Fixed	0	ENE	None
KITCHEN/DINING/LIVING	HASWD-030-037	W10	600	3000	Sliding	30	WSW	None
KITCHEN/DINING/LIVING	HASWD-030-037	W11	2100	2360	Sliding	45	NNW	None
KITCHEN/DINING/LIVING	HASWD-030-037	W13	2100	2360	Sliding	45	NNW	None
LAUNDRY	HASWD-030-037	W03	900	900	Sliding	45	WSW	None
MASTER BED	HASWD-030-037	W07	1200	3000	Sliding	30	ENE	None
WC	HASWD-030-037	W08	600	600	Sliding	45	ENE	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					

JOYCON

Drawn	Henry Joyce
Plot Date	19/3/2025
Project NO	3657
Project Status	Draft
Client	Bill Martin
BAL Rating	BAL 29
Lot	41 /-/ DP 226785
Site	9 Tropic Gardens Drive, Smiths Lake

DRAWING TITLE :
NatHERS

PROJECT NAME :
Proposed Dual Occupancy

REVISION NO.

DRAWING NO.
DA 901

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 (m^2)	Orient-ation	Outdoor shade	Diffuser	Shaft Reflectance
None								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
ENTRY HALL	2661	1200	90	SSE
GARAGE	2040	5000	90	SSE
Garage 2	2400	670	90	ENE
Garage 2	2400	2390	90	NNW
Garage 4	2400	3410	90	NNW
Garage 4	2400	770	90	SSE
LAUNDRY	2040	820	90	WSW

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	0.50	Medium	2.50	Yes
CONCBLOCK-190-FCF-EXP	Concrete Block 190mm Fully Core-Filled - Exposed	0.50	Medium	0.00	No
FC-REFL-CAV1	Custom Fibre-Cement Clad Battened (Refl Cavity) Stud Wall	0.50	Medium	2.00	Yes

* Refer to glossary.

External wall *type*

Wall ID	Wall Type	Solar absorptance	Wall Colour	Bulk insulation (R-value)	Reflective wall wrap*
MC-NOCAV	Metal Clad Direct-Fix (No Cavity) Stud Wall	0.50	Medium	2.00	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
BATH	MC-NOCAV	2700	1890	ENE		Yes
BATHROOM	CONCBLOCK-190-FCF-EXP	2800	1290	ENE		Yes
BATHROOM	CONCBLOCK-190-FCF-EXP	2800	3464	SSE		Yes
BATHROOM	CONCBLOCK-190-FCF-EXP	2800	93	ENE		Yes
BATHROOM	CONCBLOCK-190-FCF-EXP	2800	807	NNW	9146	Yes
BATHROOM	CONCBLOCK-190-FCF-EXP	2800	1194	NNW	9053	Yes
BED 2	MC-NOCAV	2700	4260	ENE		Yes
BED 2	FC-REFL-CAV1	2700	2989	SSE	873	Yes
BED 3	FC-REFL-CAV1	2700	2970	SSE	873	Yes
BED 3	MC-NOCAV	2700	2770	WSW	1842	Yes
BED 4	MC-NOCAV	2700	3380	WSW		Yes
ENS	MC-NOCAV	2700	1670	NNW		Yes
ENTRY HALL	FC-REFL-CAV1	2700	1811	SSE	3643	Yes
GARAGE	BV-REFL-CAV	2700	6000	SSE	946	Yes
GARAGE	BV-REFL-CAV	2700	6340	WSW		Yes
GARAGE	BV-REFL-CAV	2700	2470	ENE	1701	Yes
Garage 2	CONCBLOCK-190-FCF-EXP	2800	6409	ENE	2201	Yes
Garage 2	CONCBLOCK-190-FCF-EXP	2800	191	ENE		Yes
Garage 2	CONCBLOCK-190-FCF-EXP	2800	4423	SSE		Yes
Garage 2	CONCBLOCK-190-FCF-EXP	2800	5996	NNW	2546	Yes
Garage 2	CONCBLOCK-190-FCF-EXP	2800	110	SSE		Yes

* Refer to glossary.

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orient-ation	Horizontal shading feature* projection (mm)	Vertical shading feature
Garage 4	CONCBLOCK-190-FCF-EXP	2800	4222	NNW		Yes
Garage 4	BV-REFL-CAV	2800	1196	ENE		Yes
Garage 4	BV-REFL-CAV	2800	4222	SSE		Yes
Garage 4	BV-REFL-CAV	2800	9086	WSW		Yes
HOME THEATRE	MC-NOCAV	2500	4584	ENE	7069	Yes
HOME THEATRE	MC-NOCAV	2500	4584	WSW		Yes
HOME THEATRE	MC-NOCAV	2500	4400	NNW		Yes
KITCHEN/DINING /LIVING	MC-NOCAV	3000	3101	ENE		Yes
KITCHEN/DINING /LIVING	MC-NOCAV	3000	4601	WSW		Yes
KITCHEN/DINING /LIVING	MC-NOCAV	2800	6206	NNW	4709	Yes
LAUNDRY	MC-NOCAV	2700	3380	WSW		Yes
MASTER BED	MC-NOCAV	2700	3590	ENE		Yes
WC	MC-NOCAV	2700	1080	ENE		Yes
WIP	MC-NOCAV	3200	2210	ENE		Yes
WIP	MC-NOCAV	3200	1875	NNW		Yes

Internal wall *type*

Wall ID	Wall Type	Area (m^2)	Bulk insulation
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	14.6	2.50
BV-REFL-CAV	Brick Veneer Stud Wall with Reflective Sarking	6.7	0.00
INT-PB	Internal Plasterboard Stud Wall	201.1	0.00

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
BATH	TIMB-001: Suspended Timber Floor	5.9	Enclosed (Disc.)	6.00	Tile (10mm)
BATHROOM	CSOG-100: Concrete Slab on Ground (100mm)	4.7	N/A	0.00	Tile (10mm)

* Refer to glossary.

JOYCON

Drawn	Henry Joyce
Plot Date	19/3/2025
Project NO	3657
Project Status	Draft
Client	Bill Martin
BAL Rating	BAL 29
Lot	41 /-/ DP 226785
Site	9 Tropic Gardens Drive, Smiths Lake

DRAWING TITLE :
NatHERS

PROJECT NAME :
Proposed Dual Occupancy

REVISION NO.

DRAWING NO.
DA 902

Floor *type*

Location	Construction	Area (m^2)	Sub-floor ventilation	Added insulation (R-value)	Covering
BED 2	TIMB-001: Suspended Timber Floor	12.1	Enclosed (Disc.)	6.00	Carpet
BED 3	TIMB-001: Suspended Timber Floor	12.0	Enclosed (Disc.)	6.00	Carpet
BED 4	TIMB-001: Suspended Timber Floor	15.9	Enclosed (Disc.)	6.00	Carpet
ENS	TIMB-001: Suspended Timber Floor	7.5	Enclosed (Disc.)	6.00	Timber (12mm)
ENTRY HALL	TIMB-001: Suspended Timber Floor	29.6	Enclosed (Disc.)	6.00	Timber (12mm)
GARAGE	CSOG-100: Concrete Slab on Ground (100mm)	37.4	N/A	6.00	Exposed
Garage 2	CSOG-100: Concrete Slab on Ground (100mm)	45.0	N/A	0.00	Exposed
Garage 4	CSOG-100: Concrete Slab on Ground (100mm)	38.4	N/A	0.00	Exposed
HOME THEATRE	TIMB-001: Suspended Timber Floor	18.9	N/A	6.00	Carpet
HOME THEATRE	CSOG-100: Concrete Slab on Ground (100mm)	1.2	N/A	0.00	Timber (12mm)
KITCHEN/DINING/LIVING	TIMB-001: Suspended Timber Floor	45.6	N/A	6.00	Timber (12mm)
KITCHEN/DINING/LIVING	TIMB-001: Suspended Timber Floor	4.8	Enclosed (Disc.)	6.00	Timber (12mm)
LAUNDRY	TIMB-001: Suspended Timber Floor	12.3	Enclosed (Disc.)	6.00	Tile (10mm)
MASTER BED	TIMB-001: Suspended Timber Floor	32.1	Enclosed (Disc.)	6.00	Carpet
PDR	TIMB-001: Suspended Timber Floor	3.2	Enclosed (Disc.)	6.00	Tile (10mm)
WC	TIMB-001: Suspended Timber Floor	2.1	Enclosed (Disc.)	6.00	Tile (10mm)
WIP	TIMB-001: Suspended Timber Floor	2.4	N/A	6.00	Timber (12mm)
WIP	TIMB-001: Suspended Timber Floor	1.7	Enclosed (Disc.)	6.00	Timber (12mm)

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
BATH	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
BED 2	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
BED 3	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
BED 4	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes

* Refer to glossary.

Ceiling *type*

Location	Construction	Bulk insulation (R-value)	Reflective wrap*
ENS	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
ENTRY HALL	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
GARAGE	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
HOME THEATRE	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	7.00	Yes
KITCHEN/DINING/LIVING	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	7.00	Yes
LAUNDRY	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
MASTER BED	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
PDR	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
WC	ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	7.00	Yes
WIP	FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	7.00	Yes

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
BATH	1	Exhaust Fan	100	Sealed
BATH	1	Downlight	90	Sealed
BATHROOM	1	Downlight	90	Sealed
BATHROOM	1	Exhaust Fan	100	Sealed
BED 2	2	Downlight	90	Sealed
BED 3	2	Downlight	90	Sealed
BED 4	2	Downlight	90	Sealed
ENS	1	Downlight	90	Sealed
ENTRY HALL	4	Downlight	90	Sealed
HOME THEATRE	3	Downlight	90	Sealed
KITCHEN/DINING/LIVING	7	Downlight	90	Sealed
KITCHEN/DINING/LIVING	1	Exhaust Fan	100	Sealed
LAUNDRY	1	Exhaust Fan	100	Sealed

* Refer to glossary.

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed /unsealed
LAUNDRY	2	Downlight	90	Sealed
MASTER BED	5	Downlight	90	Sealed
PDR	1	Downlight	90	Sealed
PDR	1	Exhaust Fan	100	Sealed
WC	1	Exhaust Fan	100	Sealed
WC	1	Downlight	90	Sealed
WIP	1	Downlight	90	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
BED 2	1	1200
BED 3	1	1500
BED 4	1	1500
HOME THEATRE	1	1500
KITCHEN/DINING/LIVING	2	1500
MASTER BED	1	1200

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof Colour
ATTIC-METAL-01: Pitched / Attic Metal Roof (Roofspace) & Flat PB Ceiling	2.50	0.50	Medium
FLAT-01: Flat Framed / Skillion Metal Roof & Flat PB Ceiling	2.50	0.50	Medium

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)
None				

Appliance *schedule*

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

* Refer to glossary.

JOYCON

Drawn Henry Joyce
Plot Date 19/3/2025
Project NO 3657
Project Status Draft

Client Bill Martin
BAL Rating BAL 29
Lot 41 /-/ DP 226785
Site 9 Tropic Gardens Drive, Smiths Lake

DRAWING TITLE :
NatHERS

PROJECT NAME :
Proposed Dual Occupancy

REVISION NO.

DRAWING NO.
DA 903

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	

* Refer to glossary.

#HR-QEWJQC-01 NatHERS Certificate **7.3 Star Rating** as of 14 Feb 2025

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 homes 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 homes 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.

JOYCON

Drawn	Henry Joyce
Plot Date	19/3/2025
Project NO	3657
Project Status	Draft
Client	Bill Martin
BAL Rating	BAL 29
Lot	41 /-/ DP 226785
Site	9 Tropic Gardens Drive, Smiths Lake

DRAWING TITLE :
NatHERS

PROJECT NAME :
Proposed Dual Occupancy

REVISION NO.

DRAWING NO.
DA 904