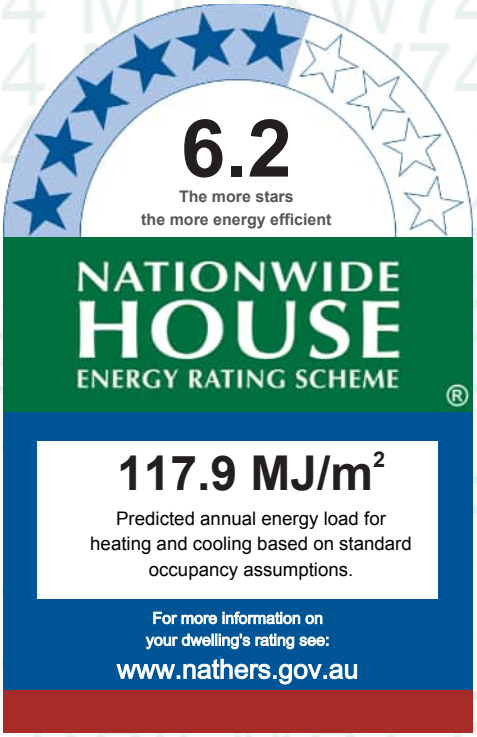
Nationwide House Energy Rating Scheme
NatHERS Certificate No. MTXXW74WIY

Generated on 29 May 2024 using FirstRate5: 5.3.2b (3.21)



Property

Address	1, 17 Railway Parade, Seaford, VIC, 3198
Lot/DP	Lot 1
NCC Class*	Class 1a
Type	New Home

Plans

Main plan	23-24/1S/29.05.24
Prepared by	Creative House Plans

Construction and environment

Assessed floor area (m²)*	
Conditioned*	142.4
Unconditioned*	29.7
Total	172.1
Garage	21

Exposure type
suburban

NatHERS climate zone
62 Moorabbin Airport

Thermal performance

Heating	Cooling
98.8	**19.1**
MJ/m²	MJ/m²

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

Accredited assessor

Name	Amy Gedge
Business name	Arrow Energy Ratings
Email	amy@arrowenergyratings.com.au
Phone	0412808258
Accreditation No.	DMN/21/2022
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

Verification

To verify this certificate, scan the QR code or visit https://www.fr5.com.au/QRCodeLanding?PublicId=MTXXW74WIY When using either link, ensure you are visiting www.FR5.com.au.

National Construction Code (NCC) requirements

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

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

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

Certificate Check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional Notes

Window and glazed door *type and performance*

Default* windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
ECO-109-01 A	Eco EcoTech Aluminium Sliding Door DG 4-12-4	3.76	0.62	0.59	0.65
ECO-101-01 A	Eco EcoTech Aluminium Awning Window DG 4-12-4	3.51	0.59	0.56	0.62
ECO-111-01 A	EcoEcoTech Standard Al Casement Window DG 4-12-4	3.69	0.53	0.5	0.56

Window and glazed door *Schedule*

Location	**Window ID**	**Window no.**	**Height (mm)**	**Width (mm)**	**Window type**	**Opening %**	**Orientation**	**Window shading device***
Kitchen/Living	ECO-109-01 A	Living Door	2400	2400	sliding	45.0	NE	No

* Refer to glossary.

Kitchen/Living	ECO-101-01 A	Living	2400	900	awning	60.0	NW	No
Kitchen/Living	ECO-101-01 A	Living	2400	900	awning	60.0	NW	No
Kitchen/Living	ECO-101-01 A	Opening 14	2400	900	awning	60.0	NE	No
Kitchen/Living	ECO-101-01 A	Meals	2400	2700	awning	20.0	NW	No
Bed 4	ECO-101-01 A	Bed 4	2400	2700	awning	20.0	SW	No
Laundry	ECO-111-01 A	Laundry Door	2340	820	casement	100.0	NW	No
Bed 1	ECO-101-01 A	Bed 1	1400	3000	awning	10.0	SW	No
Bed 1 WIR	ECO-101-01 A	Bed 1 WIR	1400	900	awning	90.0	NW	No
WC	ECO-101-01 A	WC	1200	900	awning	90.0	NW	No
Bath	ECO-101-01 A	Bath	1400	900	awning	90.0	NW	No
Bed 3	ECO-101-01 A	Bed 3	1400	2700	awning	10.0	NE	No
Bed 2	ECO-101-01 A	Bed 2	1400	2500	awning	10.0	NE	No

Roof window *type and performance value*

Default* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Area (m²)	Orientation	Outdoor shade	Indoor shade
No Data Available							

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Entry	2340	1020	100.0	SW
Garage	2400	2735	100.0	SW

* Refer to glossary.

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
1	1 - Linear Weather Boards FC	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No
2	1 - Brick Veneer	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No
3	1 - Parti wall	0.5	Medium	Glass fibre batt: R2.0 (R2.0);Glass fibre batt: R2.0 (R2.0)	No
4	1 - Brick Veneer Garage	0.5	Medium		No
5	1 - Parti wall	0.5	Medium		No
6	FR5 - 75mm Expanded Polystyrene Clad	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Entry	1	2700	1285	SW	1175	Yes
Entry	2	2700	1170	SE	0	Yes
Entry	2	2700	175	NE	0	Yes
Entry	2	2700	110	SE	0	Yes
Stairs	3	2700	2100	SE	0	No
Kitchen/Living	3	2700	8400	SE	0	No
Kitchen/Living	2	2700	4715	NE	0	Yes
Kitchen/Living	2	2700	4320	NW	0	Yes
Kitchen/Living	2	2700	1355	NE	0	Yes
Kitchen/Living	2	2700	4080	NW	0	Yes
Bed 4	1	2700	2985	SW	1150	Yes
Bed 4	2	2700	3770	NW	0	Yes
Bed 4 Ensuite	2	2700	1745	NE	0	Yes
Bed 4 Ensuite	2	2700	1700	NW	0	Yes
Powder	2	2700	2010	NW	0	Yes
Laundry	2	2700	1680	NW	0	Yes
Garage	4	2786	3500	SW	800	Yes
Garage	5	2786	6000	SE	0	No
Stairs/Landing	3	2550	2100	SE	0	No
Bed 1	1	1750	3652	SW	550	Yes
Bed 1	6	800	3652	SW	550	Yes
Bed 1	3	2550	4290	SE	0	No
Bed 1 Ensuite	3	2550	1600	SE	0	No
Bed 1 WIR	1	1750	2308	SW	550	No
Bed 1 WIR	6	800	2308	SW	550	No
Bed 1 WIR	6	2550	672	NW	484	No

* Refer to glossary.

Bed 1 WIR	1	1750	4118	NW	550	No
Bed 1 WIR	6	800	4118	NW	550	No
WC	6	2550	950	NW	484	No
Bath	6	2550	2750	NW	484	No
Bed 3	6	2550	3008	NE	550	Yes
Bed 3	6	2550	3580	NW	484	No
Bed 2	3	2550	4080	SE	0	No
Bed 2	6	2550	2952	NE	550	Yes

Internal wall *type*

Wall ID	Wall type	Area (m²)	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	143	
2	1 - Internal Garage Wall	25.7	Glass fibre batt: R2.0 (R2.0)

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Entry	FR5 - CSOG: Slab on Ground	8.8	Enclosed	R0.0	Carpet
Entry	FR5 - CSOG: Slab on Ground	1.6	Enclosed	R0.0	Carpet
Linen	FR5 - CSOG: Slab on Ground	0.6	Enclosed	R0.0	Carpet
Stairs	FR5 - CSOG: Slab on Ground	6.2	Enclosed	R0.0	Carpet
Kitchen/Living	FR5 - CSOG: Slab on Ground	10.6	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - CSOG: Slab on Ground	20.4	Enclosed	R0.0	Carpet
Kitchen/Living	FR5 - CSOG: Slab on Ground	14.8	Enclosed	R0.0	Carpet
Bed 4	FR5 - CSOG: Slab on Ground	3.1	Enclosed	R0.0	Carpet
Bed 4	FR5 - CSOG: Slab on Ground	8.2	Enclosed	R0.0	Carpet
Bed 4 Ensuite	FR5 - CSOG: Slab on Ground	3	Enclosed	R0.0	Tiles
Bed 4 Ensuite	FR5 - CSOG: Slab on Ground	2.1	Enclosed	R0.0	Tiles
Powder	FR5 - CSOG: Slab on Ground	2.5	Enclosed	R0.0	Tiles
Laundry	FR5 - CSOG: Slab on Ground	2.1	Enclosed	R0.0	Tiles
Garage	FR5 - CSOG: Slab on Ground	21	Enclosed	R0.0	none
Stairs/Landing	FR5 - Timber Lined	11.3	Enclosed	R0.0	Carpet
Bed 1	FR5 - Timber Lined	15.3	Enclosed	R2.0	Carpet
Bed 1	FR5 - Timber Lined	1.3	Enclosed	R0.0	Carpet
Bed 1 Ensuite	FR5 - Timber Lined	4.7	Enclosed	R2.0	Tiles
Bed 1 WIR	FR5 - Timber Lined	10.5	Enclosed	R0.0	Carpet
WC	FR5 - Timber Lined	1.7	Enclosed	R0.0	Tiles
Bath	FR5 - Timber Lined	5	Enclosed	R0.0	Tiles
Bed 3	FR5 - Timber Lined	10	Enclosed	R0.0	Carpet
Bed 2	FR5 - Timber Lined	12	Enclosed	R0.0	Carpet

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Entry	FR5 - Timber Lined	R0.0	No
Entry	Plasterboard	R3.5	Yes
Linen	FR5 - Timber Lined	R0.0	No
Stairs	FR5 - Timber Lined	R0.0	No
Kitchen/Living	FR5 - Timber Lined	R0.0	No
Kitchen/Living	Plasterboard	R3.5	Yes
Kitchen/Living	FR5 - Timber Lined	R0.0	No
Bed 4	FR5 - Timber Lined	R0.0	No
Bed 4	FR5 - Timber Lined	R0.0	No
Bed 4	Plasterboard	R3.5	Yes
Bed 4 Ensuite	FR5 - Timber Lined	R0.0	No
Bed 4 Ensuite	Plasterboard	R3.5	Yes
Bed 4 Ensuite	FR5 - Timber Lined	R0.0	No
Powder	FR5 - Timber Lined	R0.0	No
Laundry	FR5 - Timber Lined	R0.0	No
Garage	FR5 - Timber Lined	R0.0	No
Garage	FR5 - Timber Lined	R2.0	No
Stairs/Landing	Plasterboard	R3.5	Yes
Bed 1	Plasterboard	R3.5	Yes
Bed 1	Plasterboard	R3.5	Yes
Bed 1 Ensuite	Plasterboard	R3.5	Yes
Bed 1 WIR	Plasterboard	R3.5	Yes
WC	Plasterboard	R3.5	Yes
Bath	Plasterboard	R3.5	Yes
Bed 3	Plasterboard	R3.5	Yes
Bed 2	Plasterboard	R3.5	Yes

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Entry	3	Downlights	75	Sealed
Kitchen/Living	10	Downlights	75	Sealed
Kitchen/Living	1	Exhaust Fans	200	Sealed
Bed 4	2	Downlights	75	Sealed
Bed 4 Ensuite	1	Downlights	75	Sealed
Bed 4 Ensuite	1	Exhaust Fans	250	Sealed
Powder	1	Downlights	75	Sealed
Powder	1	Exhaust Fans	250	Sealed
Laundry	1	Downlights	75	Sealed
Stairs/Landing	2	Downlights	75	Sealed
Bed 1	4	Downlights	75	Sealed

* Refer to glossary.

Bed 1 Ensuite	1	Downlights	75	Sealed
Bed 1 Ensuite	1	Exhaust Fans	250	Sealed
Bed 1 WIR	3	Downlights	75	Sealed
WC	1	Downlights	75	Sealed
WC	1	Exhaust Fans	250	Sealed
Bath	1	Downlights	75	Sealed
Bath	1	Exhaust Fans	250	Sealed
Bed 3	2	Downlights	75	Sealed
Bed 2	2	Downlights	75	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Framed:Flat - Flat Framed (Metal Deck)	0.0	0.6	Dark
Cont:Attic-Continuous	0.0	0.6	Dark

Explanatory Notes

About this report

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

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

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

Accredited assessors

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

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

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

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

Disclaimer

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

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way. Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

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

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, 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.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 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.
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
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 device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

FirstRate® Provisional Diagnostic Information

Project Information

Mode	New Home
Climate	62 Moorabbin Airport
Site Exposure	suburban
Client Name	Bekim & Fatime Qaniu
Rated Address	17 Railway Parade Seaford
Accredited Rater	Amy Gedge
Date	29/05/2024
Reference	0017RAIL-1

Energy Usage

Type	**Energy MJ/m²**
Total	117.9
Heating	98.8
Cooling	19.1

Areas

Area	**Size (m²)**
Net Conditioned Floor Area (NCFA)	142.4
Unconditioned Room Area	29.7
Garage Area	21.0
Basement Car Park Area	0.0
Glazed Common Area	0.0

Zones

Zone	**Area (m²)**	**Conditioning Type**	**Conditioned**
Entry	10.5	dayTime	Y
Linen	0.6	dayTime	Y
Stairs	6.2	dayTime	Y
Kitchen/Living	45.8	kitchen	Y
Bed 4	11.3	bedroom	Y
Bed 4 Ensuite	5.1	nightTime	Y
Powder	2.5	dayTime	Y
Laundry	2.1	unconditioned	N
Garage	21.0	garage	N
Stairs/Landing	11.3	dayTime	Y
Bed 1	16.5	bedroom	Y

Bed 1 Ensuite	4.7	nightTime	Y
Bed 1 WIR	10.5	nightTime	Y
WC	1.7	unconditioned	N
Bath	5.0	unconditioned	N
Bed 3	10.0	bedroom	Y
Bed 2	12.0	bedroom	Y

Walls

Type	Bulk Insulation (R)	Num Reflective Airgaps	Area (m²)
Linear Weather Boards FC	2.0	0	29.2
Brick Veneer	2.0	0	72.4
Internal Plasterboard Stud Wall	0.0	0	143.3
Parti wall	4.0	0	59.1
Brick Veneer Garage	0.0	0	9.8
Parti wall	0.0	0	16.7
Internal Garage Wall	2.0	0	25.7
75mm Expanded Polystyrene Clad	3.9	0	43.5

Floors

Type	Bulk Insulation (R)	Slab edge insulation (R)	Ventilation	Area (m²)
CSOG: Slab on Ground	0.0	0.0	encl	105.0
Timber Lined	0.0	0.0	encl	51.8
Timber Lined	2.0	0.0	encl	20.0

Roofs/Ceilings

Type	Bulk Ceiling Insulation (R)	Bulk Roof Insulation (R)	Area (m²)
Ceil: Ceiling	0.0	0.0	71.9
Framed:Flat - Flat Framed (Metal Deck)	3.5	0.0	33.1
Cont:Attic-Continuous	3.5	0.0	71.8

Windows

Type	U-Value	SHGC	Area (m²)
ECO-109-01 A Eco EcoTech Aluminium Sliding Door DG 4-12-4	3.76	0.62	5.76
ECO-101-01 A Eco EcoTech Aluminium Awning Window DG 4-12-4	3.51	0.59	34.52
ECO-111-01 A EcoEcoTech Standard Al Casement Window DG 4-12-4	3.69	0.53	1.92

Window Directions

Direction	Area (m²)
NE	15.2
NW	16.3
SW	10.7

Air leakage

Item	Sealed	Unsealed
Generic Vent	-	0
Unflued Gas Heater	-	0
Exhaust Fan	6	0
Downlight	34	0
Chimney	0	0
Heater Flue	-	0

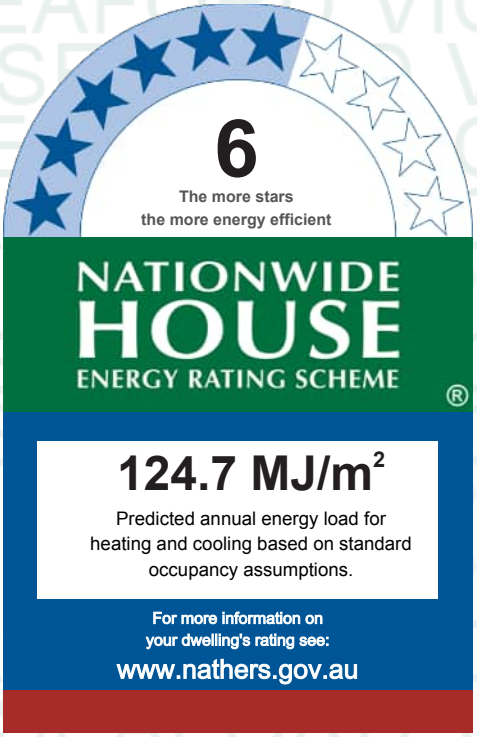
Zone Energy Loads

Zone	Heating (MJ/m2)	Total Heating (MJ)	Cooling (MJ/m2)	Total Cooling (MJ)
Powder (Z012)	445.0	1109.0	4.1	10.2
Bed 1 WIR (Z004)	86.1	905.1	14.5	152.5
Bed 1 (Z003)	62.7	1035.3	17.3	285.6
Bed 4 (Z014)	106.3	1195.8	18.4	207.0
Linen (Z009)	129.7	81.1	0.3	0.2
Bed 2 (Z017)	26.2	315.4	24.6	296.8
Kitchen/Living (Z010)	96.4	4413.6	34.7	1588.7
Bed 3 (Z016)	64.5	647.5	19.3	193.3
Stairs (Z008)	135.6	845.7	0.2	1.4
Bed 4 Ensuite (Z013)	55.5	281.7	0.8	4.2
Entry (Z001)	240.4	2514.8	6.8	71.0
Bed 1 Ensuite (Z018)	33.0	155.9	3.8	17.9
Stairs/Landing (Z002)	141.7	1599.0	8.2	92.2

Provisional Diagnostic Information 29-05-2024 11:51:04 Ver:5.3.2b (3.21) Engine Ver:3.21 Accredited Rater:Amy Gedge Assessor's Accreditation Number:DMN/21/2022

Nationwide House Energy Rating Scheme
NatHERS Certificate No. 57TLGUTDXK

Generated on 29 May 2024 using FirstRate5: 5.3.2b (3.21)



Property

Address	2, 17 Railway Parade, Seaford, VIC, 3198
Lot/DP	Lot 1
NCC Class*	Class 1a
Type	New Home

Plans

Main plan	23-24/1S/29.05.24
Prepared by	Creative House Plans

Construction and environment

Assessed floor area (m²)*	
Conditioned*	135.5
Unconditioned*	30.9
Total	166.4
Garage	21

Exposure type
suburban

NatHERS climate zone
62 Moorabbin Airport

Thermal performance

Heating	Cooling
108.5 MJ/m²	**16.2** MJ/m²

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

Accredited assessor

Name	Amy Gedge
Business name	Arrow Energy Ratings
Email	amy@arrowenergyratings.com.au
Phone	0412808258
Accreditation No.	DMN/21/2022
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

Verification

To verify this certificate, scan the QR code or visit https://www.fr5.com.au/QRCodeLanding?PublicId=57TLGUTDXK When using either link, ensure you are visiting www.FR5.com.au.

National Construction Code (NCC) requirements

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

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

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

* Refer to glossary.

Certificate Check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional Notes

Note: Custom windows have been used as one window type - worst case scenario.

The non-reflective wraps do not appear in the wall description but have been modelled in the energy calculation all the same as air gaps.

Insulate internal walls to garage R2.0.

External wall insulation excludes garage external walls.

Ceiling insulation excludes garage ceiling.

Window and glazed door *type and performance*

Default* windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
ECO-101-01 A	Eco EcoTech Aluminium Awning Window DG 4-12-4	3.51	0.59	0.56	0.62
ECO-109-01 A	Eco EcoTech Aluminium Sliding Door DG 4-12-4	3.76	0.62	0.59	0.65

* Refer to glossary.

ECO-111-01 A	EcoEcoTech Standard Al Casement Window DG 4-12-4	3.69	0.53	0.5	0.56

Window and glazed door *Schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Kitchen/Living	ECO-101-01 A	Meals	2400	2700	awning	20.0	SE	No
Kitchen/Living	ECO-101-01 A	Opening 14	2400	900	awning	60.0	NE	No
Kitchen/Living	ECO-101-01 A	Living	2400	900	awning	60.0	SE	No
Kitchen/Living	ECO-101-01 A	Living	2400	900	awning	60.0	SE	No
Kitchen/Living	ECO-109-01 A	Living Door	2400	2400	sliding	45.0	NE	No
Bed 4	ECO-101-01 A	Bed 4	2400	2700	awning	20.0	SW	No
Laundry	ECO-111-01 A	Laundry Door	2340	820	casement	100.0	SE	No
Bed 1	ECO-101-01 A	Bed 1	1400	3500	awning	10.0	SW	No
Bed 1 WIR	ECO-101-01 A	Bed 1 WIR	1400	900	awning	90.0	SE	No
WC	ECO-101-01 A	Bed 1 Ensuite	1400	900	awning	90.0	NE	No
Bed 2	ECO-101-01 A	Bed 2	1400	2700	awning	10.0	NE	No

Roof window *type and performance value*

Default* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Area (m²)	Orientation	Outdoor shade	Indoor shade
No Data Available							

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

* Refer to glossary.

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Entry	2340	1020	100.0	SW
Garage	2400	2735	100.0	SW

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
1	1 - Brick Veneer	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No
2	1 - Brick Veneer	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No
3	1 - Linear Weather Boards FC	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No
4	1 - Parti wall	0.5	Medium	Glass fibre batt: R2.0 (R2.0);Glass fibre batt: R2.0 (R2.0)	No
5	1 - Parti wall	0.5	Medium		No
6	1 - Brick Veneer Garage	0.5	Medium		No
7	FR5 - 75mm Expanded Polystyrene Clad	0.5	Medium	Glass fibre batt: R2.0 (R2.0)	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Entry	1	2400	895	SE	0	Yes
Entry	2	2700	110	NW	0	Yes
Entry	2	2700	175	NE	0	Yes
Entry	2	2700	1170	NW	0	Yes
Entry	3	2700	1285	SW	1175	Yes
Stairs	4	2700	2100	NW	0	No
Kitchen/Living	2	2700	4080	SE	0	Yes
Kitchen/Living	2	2700	2002	NE	0	Yes
Kitchen/Living	2	2700	4320	SE	0	Yes
Kitchen/Living	2	2700	4715	NE	0	Yes
Kitchen/Living	4	2700	8400	NW	0	No
Bed 4	2	2700	3770	SE	0	Yes
Bed 4	3	2700	2985	SW	1150	Yes
Bed 4 Ensuite	2	2700	1700	SE	0	Yes
Bed 4 Ensuite	2	2700	1085	NE	0	Yes
Powder	2	2700	1009	SE	0	Yes
Laundry	2	2700	1680	SE	0	Yes
Garage	5	2786	6000	NW	0	No
Garage	6	2786	3500	SW	800	Yes
Stairs/Landing	7	2550	2206	SE	565	Yes
Stairs/Landing	4	2550	2100	NW	0	No

* Refer to glossary.

Bed 1	4	2550	4290	NW	0	No
Bed 1	7	800	3652	SW	550	No
Bed 1	3	1750	4151	SW	550	Yes
Bath	4	2550	1600	NW	0	No
Bed 1 WIR	7	800	4118	NW	550	No
Bed 1 WIR	3	1750	1699	SE	550	No
Bed 1 WIR	7	2550	609	SE	516	No
Bed 1 WIR	7	800	2308	SW	550	No
Bed 1 WIR	3	1750	1868	SW	552	No
WC	7	2550	3598	SE	501	No
WC	7	2550	1863	NE	552	Yes
Bed 2	7	2550	3338	SE	553	Yes
Bed 2	7	2550	4153	NE	550	Yes
Bed 2	4	2550	3344	NW	0	No

Internal wall *type*

Wall ID	Wall type	Area (m²)	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	121.8	
2	1 - Internal Garage Wall	25.7	Glass fibre batt: R2.0 (R2.0)

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Entry	FR5 - CSOG: Slab on Ground	2.2	Enclosed	R0.0	Carpet
Entry	FR5 - CSOG: Slab on Ground	8.4	Enclosed	R0.0	Carpet
Entry	FR5 - CSOG: Slab on Ground	1.6	Enclosed	R0.0	Carpet
Linen	FR5 - CSOG: Slab on Ground	0.6	Enclosed	R0.0	Carpet
Stairs	FR5 - CSOG: Slab on Ground	6.2	Enclosed	R0.0	Carpet
Kitchen/Living	FR5 - CSOG: Slab on Ground	10.6	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - CSOG: Slab on Ground	34	Enclosed	R0.0	Carpet
Kitchen/Living	FR5 - CSOG: Slab on Ground	3.8	Enclosed	R0.0	Carpet
Bed 4	FR5 - CSOG: Slab on Ground	3.2	Enclosed	R0.0	Carpet
Bed 4	FR5 - CSOG: Slab on Ground	8	Enclosed	R0.0	Carpet
Bed 4 Ensuite	FR5 - CSOG: Slab on Ground	2.9	Enclosed	R0.0	Tiles
Bed 4 Ensuite	FR5 - CSOG: Slab on Ground	2.2	Enclosed	R0.0	Tiles
Powder	FR5 - CSOG: Slab on Ground	1.3	Enclosed	R0.0	Tiles
Powder	FR5 - CSOG: Slab on Ground	0.6	Enclosed	R0.0	Tiles
Laundry	FR5 - CSOG: Slab on Ground	3.2	Enclosed	R0.0	Tiles
Garage	FR5 - CSOG: Slab on Ground	21	Enclosed	R0.0	none
Stairs/Landing	FR5 - Timber Lined	1.5	Enclosed	R2.0	Carpet
Stairs/Landing	FR5 - Timber Lined	10	Enclosed	R0.0	Carpet
Bed 1	FR5 - Timber Lined	15	Enclosed	R2.0	Carpet

Bed 1	FR5 - Timber Lined	2.8	Enclosed	R0.0	Carpet
Bath	FR5 - Timber Lined	3.9	Enclosed	R2.0	Tiles
Bed 1 WIR	FR5 - Timber Lined	4.3	Enclosed	R0.0	Carpet
WC	FR5 - Timber Lined	6.7	Enclosed	R0.0	Tiles
Bed 2	FR5 - Timber Lined	13.9	Enclosed	R0.0	Carpet

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Entry	FR5 - Timber Lined	R0.0	No
Entry	Plasterboard	R5.0	Yes
Entry	FR5 - Timber Lined	R0.0	No
Entry	FR5 - Timber Lined	R0.0	No
Entry	Plasterboard	R5.0	Yes
Linen	FR5 - Timber Lined	R0.0	No
Stairs	FR5 - Timber Lined	R0.0	No
Kitchen/Living	FR5 - Timber Lined	R0.0	No
Kitchen/Living	Plasterboard	R5.0	Yes
Kitchen/Living	FR5 - Timber Lined	R0.0	No
Bed 4	FR5 - Timber Lined	R0.0	No
Bed 4	FR5 - Timber Lined	R0.0	No
Bed 4	Plasterboard	R5.0	Yes
Bed 4 Ensuite	FR5 - Timber Lined	R0.0	No
Bed 4 Ensuite	Plasterboard	R5.0	Yes
Bed 4 Ensuite	FR5 - Timber Lined	R0.0	No
Powder	FR5 - Timber Lined	R0.0	No
Powder	Plasterboard	R5.0	Yes
Laundry	Plasterboard	R5.0	Yes
Garage	FR5 - Timber Lined	R2.0	No
Garage	FR5 - Timber Lined	R0.0	No
Stairs/Landing	Plasterboard	R5.0	Yes
Stairs/Landing	Plasterboard	R5.0	Yes
Bed 1	Plasterboard	R5.0	Yes
Bed 1	Plasterboard	R5.0	Yes
Bath	Plasterboard	R5.0	Yes
Bed 1 WIR	Plasterboard	R5.0	Yes
WC	Plasterboard	R5.0	Yes
Bed 2	Plasterboard	R5.0	Yes

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Entry	4	Downlights	75	Sealed

* Refer to glossary.

Kitchen/Living	10	Downlights	75	Sealed
Kitchen/Living	1	Exhaust Fans	200	Sealed
Bed 4	2	Downlights	75	Sealed
Bed 4 Ensuite	1	Downlights	75	Sealed
Bed 4 Ensuite	1	Exhaust Fans	250	Sealed
Powder	1	Downlights	75	Sealed
Powder	1	Exhaust Fans	250	Sealed
Laundry	1	Downlights	75	Sealed
Stairs/Landing	3	Downlights	75	Sealed
Bed 1	4	Downlights	75	Sealed
Bath	1	Downlights	75	Sealed
Bath	1	Exhaust Fans	250	Sealed
Bed 1 WIR	1	Downlights	75	Sealed
WC	1	Downlights	75	Sealed
WC	1	Exhaust Fans	250	Sealed
Bed 2	2	Downlights	75	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Framed:Flat - Flat Framed (Metal Deck)	0.0	0.6	Dark
Cont:Attic-Continuous	0.0	0.6	Dark

Explanatory Notes

About this report

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

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

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

Accredited assessors

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

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

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

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

Disclaimer

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

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way. Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

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

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, 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.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 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.
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
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 device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

FirstRate® Provisional Diagnostic Information

Project Information

Mode	New Home
Climate	62 Moorabbin Airport
Site Exposure	suburban
Client Name	Bekim & Fatime Qaniu
Rated Address	17 Railway Parade Seaford
Accredited Rater	Amy Gedge
Date	29/05/2024
Reference	0017RAIL-2

Energy Usage

Type	**Energy MJ/m²**
Total	124.7
Heating	108.5
Cooling	16.2

Areas

Area	**Size (m²)**
Net Conditioned Floor Area (NCFA)	135.5
Unconditioned Room Area	30.9
Garage Area	21.0
Basement Car Park Area	0.0
Glazed Common Area	0.0

Zones

Zone	**Area (m²)**	**Conditioning Type**	**Conditioned**
Entry	12.2	dayTime	Y
Linen	0.6	dayTime	Y
Stairs	6.2	dayTime	Y
Kitchen/Living	48.4	kitchen	Y
Bed 4	11.3	bedroom	Y
Bed 4 Ensuite	5.1	nightTime	Y
Powder	1.9	dayTime	Y
Laundry	3.2	unconditioned	N
Garage	21.0	garage	N
Stairs/Landing	11.5	dayTime	Y
Bed 1	17.9	bedroom	Y

Bath	3.9	dayTime	Y
Bed 1 WIR	4.3	nightTime	Y
WC	6.7	unconditioned	N
Bed 2	13.9	bedroom	Y

Walls

Type	Bulk Insulation (R)	Num Reflective Airgaps	Area (m²)
Brick Veneer	2.5	0	2.1
Brick Veneer	2.0	0	69.7
Linear Weather Boards FC	2.0	0	25.0
Internal Plasterboard Stud Wall	0.0	0	122.0
Parti wall	4.0	0	57.3
Internal Garage Wall	2.0	0	25.7
Parti wall	0.0	0	16.7
Brick Veneer Garage	0.0	0	9.8
75mm Expanded Polystyrene Clad	3.9	0	48.3

Floors

Type	Bulk Insulation (R)	Slab edge insulation (R)	Ventilation	Area (m²)
CSOG: Slab on Ground	0.0	0.0	encl	109.8
Timber Lined	2.0	0.0	encl	20.5
Timber Lined	0.0	0.0	encl	37.7

Roofs/Ceilings

Type	Bulk Ceiling Insulation (R)	Bulk Roof Insulation (R)	Area (m²)
Framed:Flat - Flat Framed (Metal Deck)	5.0	0.0	52.5
Ceil: Ceiling	0.0	0.0	57.4
Cont:Attic-Continuous	5.0	0.0	58.1

Windows

Type	U-Value	SHGC	Area (m²)
ECO-101-01 A Eco EcoTech Aluminium Awning Window DG 4-12-4	3.51	0.59	30.64
ECO-109-01 A Eco EcoTech Aluminium Sliding Door DG 4-12-4	3.76	0.62	5.76
ECO-111-01 A EcoEcoTech Standard Al Casement Window DG 4-12-4	3.69	0.53	1.92

Window Directions

Direction	Area (m²)
SE	14.0
NE	13.0
SW	11.4

Air leakage

Item	Sealed	Unsealed
Generic Vent	-	0
Unflued Gas Heater	-	0
Exhaust Fan	5	0
Downlight	31	0
Chimney	0	0
Heater Flue	-	0

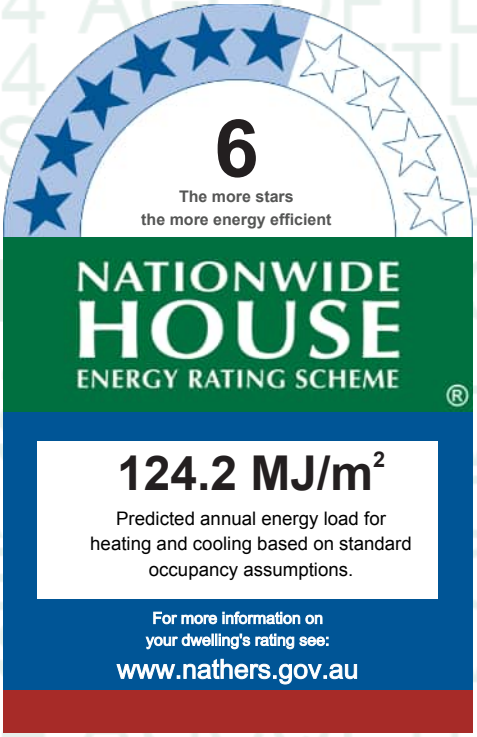
Zone Energy Loads

Zone	Heating (MJ/m2)	Total Heating (MJ)	Cooling (MJ/m2)	Total Cooling (MJ)
Bed 1 WIR (Z005)	129.0	556.3	20.8	89.8
Bed 2 (Z015)	30.3	419.9	27.2	377.2
Entry (Z001)	254.3	3107.4	4.5	55.5
Stairs (Z012)	145.3	906.5	0.3	1.7
Stairs/Landing (Z002)	120.8	1384.1	6.0	68.9
Bed 4 (Z006)	107.9	1214.7	26.0	292.4
Bed 1 (Z004)	54.3	970.4	14.8	265.0
Kitchen/Living (Z010)	107.7	5216.5	25.0	1208.2
Bath (Z016)	236.5	922.9	7.4	28.9
Bed 4 Ensuite (Z007)	49.3	250.0	0.8	4.2
Powder (Z008)	504.2	964.4	1.0	1.9
Linen (Z011)	136.5	85.4	0.2	0.1

Provisional Diagnostic Information 29-05-2024 11:59:47 Ver:5.3.2b (3.21) Engine Ver:3.21 Accredited Rater:Amy Gedge Assessor's Accreditation Number:DMN/21/2022

Nationwide House Energy Rating Scheme
NatHERS Certificate No. AGCQFTLB6N

Generated on 29 May 2024 using FirstRate5: 5.3.2b (3.21)



Property

Address	3, 17 Railway Parade, Seaford, VIC, 3198
Lot/DP	Lot 1
NCC Class*	Class 1a
Type	New Home

Plans

Main plan	23-24/1S/29.05.24
Prepared by	Creative House Plans

Construction and environment

Assessed floor area (m²)*		**Exposure type**
Conditioned*	149.4	suburban
Unconditioned*	60	**NatHERS climate zone**
Total	209.4	62 Moorabbin Airport
Garage	42.9	

Thermal performance

Heating	Cooling
102.1	**22.1**
MJ/m²	MJ/m²

About the rating

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

Accredited assessor

Name	Amy Gedge
Business name	Arrow Energy Ratings
Email	amy@arrowenergyratings.com.au
Phone	0412808258
Accreditation No.	DMN/21/2022
Assessor Accrediting Organisation	Design Matters National
Declaration of interest	Declaration completed: no conflicts

Verification

To verify this certificate, scan the QR code or visit https://www.fr5.com.au/QRCodeLanding?PublicId=AGCQFTLB6N When using either link, ensure you are visiting www.FR5.com.au.

National Construction Code (NCC) requirements

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

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

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

* Refer to glossary.

Certificate Check

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

Genuine certificate

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

Ceiling penetrations*

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

Windows

Does the installed window meet the substitution tolerances (SHGC and U-value) and window type, of the window shown on this Certificate? Substituted values must be based on the Australian Fenestration Rating Council (AFRC) protocol.

Apartment entrance doors

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

Exposure*

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

Provisional* values

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

Additional Notes

Note: Custom windows have been used as one window type - worst case scenario.

The non-reflective wraps do not appear in the wall description but have been modelled in the energy calculation all the same as air gaps.

Insulate internal walls to garage, laundry, powder & bath R2.5.

External wall insulation excludes garage external walls.

Ceiling insulation excludes garage ceiling.

Window and glazed door *type and performance*

Default* windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
No Data Available					

Custom* windows

				Substitution tolerance ranges	
Window ID	**Window description**	**Maximum U-value***	**SHGC***	SHGC lower limit	SHGC upper limit
ECO-111-03 A	EcoEcoTech Standard Al Casement Window DG 4-12Ar-4	3.59	0.53	0.5	0.56
ECO-101-03 A	Eco EcoTech Aluminium Awning Window DG 4-12Ar-4	3.4	0.59	0.56	0.62

* Refer to glossary.

ECO-109-03 A	Eco EcoTech Aluminium Sliding Door DG 4-12Ar-4	3.64	0.62	0.59	0.65
ECO-101-04 A	Eco EcoTech Aluminium Awning Window DG 4ET-12Ar-4	2.77	0.5	0.48	0.53
ECO-115-03 A	EcoEcoTech Aluminium Fixed Window DG 4-12Ar-4	3.07	0.64	0.61	0.67

Window and glazed door *Schedule*

Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	Window shading device*
Laundry	ECO-111-03 A	Laundry Door	2340	820	casement	100.0	SW	No
Powder	ECO-101-03 A	Powder	2400	900	awning	60.0	SW	No
Bed 4	ECO-101-03 A	Bed 4	2400	2400	awning	30.0	SW	No
Bed 4 Ensuite	ECO-101-03 A	Ensuite	2400	900	awning	60.0	SW	No
Kitchen/Living	ECO-109-03 A	Living Door	2400	2400	sliding	45.0	NE	No
Kitchen/Living	ECO-101-04 A	Kitchen	2400	900	awning	60.0	NE	No
Kitchen/Living	ECO-101-04 A	Living	2400	2700	awning	20.0	NE	No
Pantry	ECO-101-03 A	Pantry	2400	900	awning	60.0	SW	No
Stairs/Landing	ECO-115-03 A	Stairs	2100	1800	fixed	0.0	SW	No
Bed 1	ECO-101-03 A	Bed 1	1400	2700	awning	10.0	NE	No
Bed 1 WIR	ECO-101-03 A	Bed 1 WIR	1400	900	awning	90.0	NW	No
Bed 3	ECO-101-03 A	Bed 3	1400	2700	awning	10.0	NE	No
Bed 2	ECO-101-03 A	Bed 2	2100	2400	awning	30.0	SW	No

Roof window *type and performance value*

Default* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Custom* roof windows

Window ID	Window description	Maximum U-value*	SHGC*	Substitution tolerance ranges	
				SHGC lower limit	SHGC upper limit
No Data Available					

Roof window *schedule*

Location	Window ID	Window no.	Opening %	Area (m²)	Orientation	Outdoor shade	Indoor shade
No Data Available							

Skylight *type and performance*

Skylight ID	Skylight description
No Data Available	

* Refer to glossary.

Skylight *schedule*

Location	Skylight ID	Skylight No.	Skylight shaft length (mm)	Area (m²)	Orient-ation	Outdoor shade	Diffuser	Skylight shaft reflectance
No Data Available								

External door *schedule*

Location	Height (mm)	Width (mm)	Opening %	Orientation
Entry	2340	920	100.0	SW
Garage	2408	4800	100.0	NE

External wall *type*

Wall ID	Wall type	Solar absorptance	Wall shade (colour)	Bulk insulation (R-value)	Reflective wall wrap*
1	1 - Brick Veneer	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No
2	1 - Linear Weather Boards FC	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No
3	FR5 - Concrete Block Solid/Core Filled	0.5	Medium		No
4	1 - Brick Veneer Garage	0.5	Medium		No
5	FR5 - 75mm Expanded Polystyrene Clad	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No

External wall *schedule*

Location	Wall ID	Height (mm)	Width (mm)	Orientation	Horizontal shading feature* maximum projection (mm)	Vertical shading feature (yes/no)
Entry	1	2700	1570	SW	1176	Yes
Entry	1	2700	3195	SE	0	Yes
Laundry	1	2700	2332	SW	0	Yes
Laundry	1	2700	1090	SE	980	Yes
Powder	1	2700	1780	SW	0	Yes
Powder	1	2700	1010	NW	0	Yes
Stairs	2	2700	2090	SW	0	Yes
Bed 4	1	2700	3185	SW	0	Yes
Bed 4	1	2700	1010	SE	0	Yes
Bed 4	1	2700	1010	NW	0	Yes
Bed 4 Ensuite	1	2700	2390	SW	0	Yes
Kitchen/Living	1	2700	8282	NE	0	Yes
Kitchen/Living	1	2700	4930	NW	0	Yes
Pantry	1	2700	1675	SW	0	Yes
Pantry	1	2700	3385	NW	0	Yes
Garage	3	1360	7180	SW	0	No
Garage	4	2700	5980	SE	0	Yes
Garage	3	1360	5980	SE	0	No
Garage	4	4060	7180	NE	0	Yes
Garage	4	4060	1050	NW	0	Yes

* Refer to glossary.

Garage	3	1360	4930	NW	0	No
Stairs/Landing	5	2550	2090	SW	550	Yes
Bed 1	5	2550	4585	NE	550	No
Bed 1	5	2550	4160	NW	550	No
Bed 1 WIR	5	2550	2885	SW	550	Yes
Bed 1 WIR	5	2550	2060	NW	550	No
Bed 1 Ensuite	5	2550	2690	SW	550	Yes
Bath	5	2550	3400	NE	550	No
Bed 3	5	2550	3110	SE	550	No
Bed 3	5	2550	3667	NE	550	No
Bed 2	5	2550	3867	SW	550	Yes
Bed 2	5	2550	3110	SE	550	No

Internal wall *type*

Wall ID	Wall type	Area (m²)	Bulk insulation
1	FR5 - Internal Plasterboard Stud Wall	47.5	Glass fibre batt: R2.5 (R2.5)
2	FR5 - Internal Plasterboard Stud Wall	119.5	
3	1 - Internal Garage Wall	32.7	Glass fibre batt: R2.5 (R2.5)

Floor *type*

Location	Construction	Area (m²)	Sub-floor ventilation	Added insulation (R-value)	Covering
Entry	FR5 - CSOG: Slab on Ground	6.2	Enclosed	R0.0	Carpet
Entry	FR5 - CSOG: Slab on Ground	9.1	Enclosed	R0.0	Carpet
Laundry	FR5 - CSOG: Slab on Ground	4.2	Enclosed	R0.0	Tiles
Laundry	FR5 - CSOG: Slab on Ground	2.4	Enclosed	R0.0	Tiles
Powder	FR5 - CSOG: Slab on Ground	2	Enclosed	R0.0	Tiles
Powder	FR5 - CSOG: Slab on Ground	1.8	Enclosed	R0.0	Tiles
Stairs	FR5 - CSOG: Slab on Ground	5	Enclosed	R0.0	Carpet
Bed 4	FR5 - CSOG: Slab on Ground	13.4	Enclosed	R0.0	Carpet
Bed 4	FR5 - CSOG: Slab on Ground	3.2	Enclosed	R0.0	Carpet
Bed 4 Ensuite	FR5 - CSOG: Slab on Ground	4.3	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - CSOG: Slab on Ground	2.8	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - CSOG: Slab on Ground	10.8	Enclosed	R0.0	Tiles
Kitchen/Living	FR5 - CSOG: Slab on Ground	11.6	Enclosed	R0.0	Carpet
Kitchen/Living	FR5 - CSOG: Slab on Ground	15.6	Enclosed	R0.0	Carpet
Pantry	FR5 - CSOG: Slab on Ground	5.7	Enclosed	R0.0	Tiles
Garage	FR5 - CSOG: Slab on Ground	28	Enclosed	R0.0	none
Garage	FR5 - CSOG: Slab on Ground	14.9	Enclosed	R0.0	none
Stairs/Landing	FR5 - Timber Lined	1.7	Enclosed	R2.0	Carpet
Stairs/Landing	FR5 - Timber Lined	9.3	Enclosed	R2.0	Carpet
Linen	FR5 - Timber Lined	1	Enclosed	R2.0	Carpet

* Refer to glossary.

Bed 1	FR5 - Timber Lined	19.1	Enclosed	R2.0	Carpet
Bed 1 WIR	FR5 - Timber Lined	5.9	Enclosed	R2.0	Carpet
Bed 1 Ensuite	FR5 - Timber Lined	5.5	Enclosed	R2.0	Tiles
Bath	FR5 - Timber Lined	3	Enclosed	R2.0	Timber (Mountain ash)
Bath	FR5 - Timber Lined	3.8	Enclosed	R2.0	Timber (Mountain ash)
Bed 3	FR5 - Timber Lined	0.8	Enclosed	R2.0	Carpet
Bed 3	FR5 - Timber Lined	9.7	Enclosed	R2.0	Carpet
Bed 2	FR5 - Timber Lined	12	Enclosed	R2.0	Carpet

Ceiling *type*

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Entry	Plasterboard	R6.0	Yes
Entry	FR5 - Timber Lined	R2.0	No
Laundry	FR5 - Timber Lined	R2.0	No
Laundry	Plasterboard	R6.0	Yes
Powder	FR5 - Timber Lined	R2.0	No
Powder	Plasterboard	R6.0	Yes
Stairs	FR5 - Timber Lined	R2.0	No
Bed 4	FR5 - Timber Lined	R2.0	No
Bed 4	Plasterboard	R6.0	Yes
Bed 4 Ensuite	FR5 - Timber Lined	R2.0	No
Kitchen/Living	FR5 - Timber Lined	R2.0	No
Kitchen/Living	FR5 - Timber Lined	R2.0	No
Kitchen/Living	Plasterboard	R6.0	Yes
Kitchen/Living	FR5 - Timber Lined	R2.0	No
Kitchen/Living	Plasterboard	R6.0	Yes
Kitchen/Living	FR5 - Timber Lined	R2.0	No
Pantry	Plasterboard	R6.0	Yes
Garage	FR5 - Timber Lined	R2.0	No
Garage	Plasterboard	R0.0	No
Garage	FR5 - Timber Lined	R2.0	No
Stairs/Landing	Plasterboard	R6.0	Yes
Stairs/Landing	Plasterboard	R6.0	Yes
Linen	Plasterboard	R6.0	Yes
Bed 1	Plasterboard	R6.0	Yes
Bed 1 WIR	Plasterboard	R6.0	Yes
Bed 1 Ensuite	Plasterboard	R6.0	Yes
Bath	Plasterboard	R6.0	Yes

* Refer to glossary.

Bath	Plasterboard	R6.0	Yes
Bed 3	Plasterboard	R6.0	Yes
Bed 3	Plasterboard	R6.0	Yes
Bed 2	Plasterboard	R6.0	Yes

Ceiling *penetrations**

Location	Quantity	Type	Diameter (mm)	Sealed/unsealed
Entry	3	Downlights	75	Sealed
Laundry	2	Downlights	75	Sealed
Powder	1	Downlights	75	Sealed
Bed 4	4	Downlights	75	Sealed
Bed 4 Ensuite	1	Downlights	75	Sealed
Bed 4 Ensuite	1	Exhaust Fans	250	Sealed
Kitchen/Living	8	Downlights	75	Sealed
Kitchen/Living	1	Exhaust Fans	200	Sealed
Pantry	2	Downlights	75	Sealed
Stairs/Landing	2	Downlights	75	Sealed
Bed 1	4	Downlights	75	Sealed
Bed 1 WIR	1	Downlights	75	Sealed
Bed 1 Ensuite	1	Downlights	75	Sealed
Bed 1 Ensuite	1	Exhaust Fans	250	Sealed
Bath	2	Downlights	75	Sealed
Bath	1	Exhaust Fans	250	Sealed
Bed 3	2	Downlights	75	Sealed
Bed 2	2	Downlights	75	Sealed

Ceiling *fans*

Location	Quantity	Diameter (mm)
No Data Available		

Roof *type*

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Framed:Flat - Flat Framed (Metal Deck)	0.0	0.6	Dark
Framed:Flat - Flat Framed (Metal Deck)	0.0	0.5	Medium
Cont:Attic-Continuous	0.0	0.6	Dark

* Refer to glossary.

Explanatory Notes

About this report

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

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

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

Accredited assessors

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

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

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

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

Disclaimer

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

The predicted annual energy load in this NatHERS Certificate is an estimate based on an assessment of the building by the assessor. It is not a prediction of actual energy use, but may be used to compare how other buildings are likely to perform when used in a similar way. Information presented in this report relies on a range of standard assumptions (both embedded in NatHERS accredited software and made by the assessor who prepared this report), including assumptions about occupancy, indoor air temperature and local climate.

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

Glossary

Annual energy load	the predicted amount of energy required for heating and cooling, based on standard occupancy assumptions.
Assessed floor area	the floor area modelled in the software for the purpose of the NatHERS assessment. Note, this may not be consistent with the floor area in the design documents.
Ceiling penetrations	features that require a penetration to the ceiling, including downlights, vents, exhaust fans, rangehoods, 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.
Custom windows	windows listed in NatHERS software that are available on the market in Australia and have a WERS (Window Energy Rating Scheme) rating.
Default windows	windows that are representative of a specific type of window product and whose properties have been derived by statistical methods.
Entrance door	these signify ventilation benefits in the modelling software and must not be modelled as a door when opening to a minimally ventilated corridor in a Class 2 building.
Exposure category - exposed	terrain with no obstructions e.g. flat grazing land, ocean-frontage, desert, exposed high-rise unit (usually above 10 floors).
Exposure category - open	terrain with few obstructions at a similar height e.g. grasslands with few well scattered obstructions below 10m, farmland with scattered sheds, lightly vegetated bush blocks, elevated units (e.g. above 3 floors).
Exposure category - suburban	terrain with numerous, closely spaced obstructions below 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.
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
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 device	a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
Shading features	includes neighbouring buildings, fences, and wing walls, but excludes eaves.
Solar heat gain coefficient (SHGC)	the fraction of incident solar radiation admitted through a window, both directly transmitted as well as absorbed and subsequently released inward. SHGC is expressed as a number between 0 and 1. The lower a window's SHGC, the less solar heat it transmits.
Skylight (also known as roof lights)	for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
U-value	the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
Unconditioned	a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
Vertical shading features	provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window. Includes privacy screens, other walls in the building (wing walls), fences, other buildings, vegetation (protected or listed heritage trees).

FirstRate® Provisional Diagnostic Information

Project Information

Mode	New Home
Climate	62 Moorabbin Airport
Site Exposure	suburban
Client Name	Bekim & Fatime Qaniu
Rated Address	17 Railway Parade Seaford
Accredited Rater	Amy Gedge
Date	29/05/2024
Reference	0017RAIL-3

Energy Usage

Type	**Energy MJ/m²**
Total	124.2
Heating	102.1
Cooling	22.1

Areas

Area	**Size (m²)**
Net Conditioned Floor Area (NCFA)	149.4
Unconditioned Room Area	60.0
Garage Area	42.9
Basement Car Park Area	0.0
Glazed Common Area	0.0

Zones

Zone	**Area (m²)**	**Conditioning Type**	**Conditioned**
Entry	15.2	dayTime	Y
Laundry	6.5	unconditioned	N
Powder	3.7	unconditioned	N
Stairs	5.0	dayTime	Y
Bed 4	16.6	bedroom	Y
Bed 4 Ensuite	4.3	nightTime	Y
Kitchen/Living	40.8	kitchen	Y
Pantry	5.7	dayTime	Y
Garage	42.9	garage	N
Stairs/Landing	11.0	dayTime	Y
Linen	1.0	dayTime	Y

Bed 1	19.1	bedroom	Y
Bed 1 WIR	5.9	nightTime	Y
Bed 1 Ensuite	5.5	nightTime	Y
Bath	6.8	unconditioned	N
Bed 3	10.5	bedroom	Y
Bed 2	12.0	bedroom	Y

Walls

Type	Bulk Insulation (R)	Num Reflective Airgaps	Area (m²)
Brick Veneer	2.5	0	99.5
Internal Plasterboard Stud Wall	2.5	0	47.4
Linear Weather Boards FC	2.5	0	5.6
Internal Plasterboard Stud Wall	0.0	0	119.4
Internal Garage Wall	2.5	0	32.7
Concrete Block Solid/Core Filled	0.0	0	24.6
Brick Veneer Garage	0.0	0	49.6
75mm Expanded Polystyrene Clad	4.4	0	90.8

Floors

Type	Bulk Insulation (R)	Slab edge insulation (R)	Ventilation	Area (m²)
CSOG: Slab on Ground	0.0	0.0	encl	140.8
Timber Lined	2.0	0.0	encl	71.8

Roofs/Ceilings

Type	Bulk Ceiling Insulation (R)	Bulk Roof Insulation (R)	Area (m²)
Framed:Flat - Flat Framed (Metal Deck)	6.0	0.0	41.6
Ceil: Ceiling	0.0	0.0	71.2
Framed:Flat - Flat Framed (Metal Deck)	0.0	0.0	28.0
Cont:Attic-Continuous	6.0	0.0	71.8

Windows

Type	U-Value	SHGC	Area (m²)
ECO-111-03 A EcoEcoTech Standard Al Casement Window DG 4-12Ar-4	3.59	0.53	1.92
ECO-101-03 A Eco EcoTech Aluminium Awning Window DG 4-12Ar-4	3.40	0.59	26.10
ECO-109-03 A Eco EcoTech Aluminium Sliding Door DG 4-12Ar-4	3.64	0.62	5.76
ECO-101-04 A Eco EcoTech Aluminium Awning Window DG 4ET-12Ar-4	2.77	0.50	8.64
ECO-115-03 A EcoEcoTech Aluminium Fixed Window DG 4-12Ar-4	3.07	0.64	3.78

Window Directions

Direction	Area (m²)
SW	23.0

NE	22.0
NW	1.3

Air leakage

Item	Sealed	Unsealed
Generic Vent	-	0
Unflued Gas Heater	-	0
Exhaust Fan	4	0
Downlight	35	0
Chimney	0	0
Heater Flue	-	0

Zone Energy Loads

Zone	Heating (MJ/m2)	Total Heating (MJ)	Cooling (MJ/m2)	Total Cooling (MJ)
Bed 4 (Z011)	47.9	794.3	5.6	93.7
Linen (Z005)	228.4	225.9	13.1	13.0
Pantry (Z024)	415.5	2356.0	15.2	86.4
Bed 1 (Z019)	30.8	587.9	18.0	344.1
Bed 3 (Z006)	65.5	684.9	41.3	432.5
Bed 2 (Z007)	67.6	813.3	32.4	389.8
Kitchen/Living (Z010)	90.4	3689.9	37.2	1520.3
Bed 1 WIR (Z020)	64.7	384.3	15.1	90.0
Bed 4 Ensuite (Z025)	124.4	530.8	12.6	53.8
Entry (Z001)	216.4	3297.8	3.4	52.1
Stairs/Landing (Z004)	168.8	1853.8	44.6	489.3
Stairs (Z012)	239.2	1197.1	1.1	5.7
Bed 1 Ensuite (Z021)	39.7	220.2	5.9	32.8

GENERAL NOTES

INTELLECTUAL PROPERTY AND USE OF THIS DOCUMENT

- This document has been prepared for the exclusive use of the client of Creative House Plans (the designer), for the purpose expressly notified to the designer. Any other person who uses or relies on these plans without the designer's written consent does so at their own risk and no responsibility is accepted by the designer for such use and/or reliance.
- This document is to be read in conjunction with all drawings, details and information provided by the consultants named herein, and with any other written instructions issued in the course of the contract.
- A building permit is required prior to the commencement of these works. The release of this document is conditional on the client obtaining the required building permit.

MATERIALS AND TRADE PRACTICES

- All materials, construction and work practices shall comply with but not be limited to the current issue of NCC 2022 01-05-23, National Construction Code 2022 Building Code Of Australia Vol. 2 (hereafter referred to as BCA), and all relevant current Australian Standards referred to therein.
- Work and site management practices shall comply with all relevant laws and by-laws.
- If any performance solution is proposed, it shall be assessed and approved by the [relevant building surveyor/building certifier] as meeting BCA performance requirements prior to implementation or installation.
- Installation of all services shall comply with the respective supply authority's requirements.

MEASUREMENTS

- Figured dimensions take precedence over scaled dimensions.
- All measurements are in millimetres, unless noted otherwise.
- Unless noted otherwise, dimensions on floor plans, sections and external elevations represent timber frame and structural members, not finished linings/cladding.
- Window sizes are nominal only. Actual size may vary according to manufacturer.
- The builder and subcontractors shall check and verify all dimensions, setbacks, levels, specifications, and all other relevant documentation prior to the commencement of any works. Report all discrepancies to the designer for clarification.

SITE CLASSIFICATIONS & PROPERTY INFORMATION

Site Classification as Class "P"
Wind Speed Class : N1
BAL Level : Low
Refer Soil Report No : 2240435-1
By:ResCom Dated: 23-02-24

SUPPLEMENTARY NOTES

SITE PROTECTION DURING THE CONSTRUCTION PERIOD

- Protective outriggers, fences, awnings, hoarding, barricades and the like shall be installed where necessary to guard against danger to life or property or when required by the relevant building surveyor and/or council.
- Where required by council, the builder shall construct a temporary crossing placed over the footpath.
- All practicable measures shall be implemented to minimise waste to landfill. The builder may use a construction waste recovery service, or sort and transport recyclable materials to the appropriate registered recycler. Materials shall not be burned on site.
- A site management plan shall be implemented from the commencement of works, to control sediment run-off in accordance with [insert relevant state/council guidelines or regulation]. Silt fences shall be provided to the low side of the allotment and around all soil stockpiles and storm water inlet pits/sumps and 'silt stop' filter bags or equivalent shall be placed over all storm water entry pits. Erosion control fabric shall be placed over garden beds to prevent surface erosion.
- Dust-creating material shall be kept sprayed with water so as to prevent any nuisance from dust.
- Waste materials shall not be placed in any street, road or right of way.
- Earthworks (unretained) shall not exceed 2m.
- Cut and fill batters shall comply with BCA Table 3.2.1.

PROTECTION OF THE BUILDING FABRIC

- The builder shall take all steps necessary to ensure the stability and general water tightness of all new and/or existing structures during all works.
- Windows, doors and service penetrations shall be flashed all around.
- All pliable membranes shall be installed to comply and be in accordance with BCA 10.8.1
- Gutters and drainage shall be supplied and installed in accordance with AS3500.3.
- Anti-ponding devices/boards shall be installed according to BCA 7.3.5.
- Dampcourses with weepholes and cavity flashings shall be installed in accordance with AS4773.2.
- Surfaces around the perimeter of a residential slab shall fall away from that slab by not less than 50mm over the first 1m. Where not stipulated in the geotechnical report, freeboard shall be not less than 50mm from an impermeable surface or 150mm from a permeable surface.
- Subfloor vents shall be located >600mm from corners and be installed below bearers. Such vents shall provide a rate per 1000mm run of external or internal cross walls of:
  7,500mm² clear ventilation where particle board flooring is used; or
  6,000mm² for other subfloor types.
- [Where a building other than detached class 10 is located in a termite-prone area] the building shall be provided with a termite management system compliant with AS3660.1 or AS3660.2.
- In saline or industrial environments, masonry units, mortar, and all built-in components shall comply with the durability requirements of Table 4.1 of AS4773.1, Part 1: Design.
- Building tie-downs shall be appropriate for the site wind classification and provided in accordance with BCA 5.6.6.
- Corrosion protection shall be suited to the site context and provided for built-in structural steel members such as steel lintels, shelf angles, connectors, accessories (other than wall ties) in accordance with Table 4.1 of AS4773.1 Masonry in Small Buildings, Part 1: Design.
- Sheet roofing shall be protected from corrosion in a manner appropriate to the site context, in accordance with BCA Table 7.2.2a.
- Single leaf masonry walls shall be weatherproofed per BCA 5.7.6.
- [In climate zones 6, 7 and 8] Unless excluded by BCA 10.8.3(2) roofs shall be provided with ventilation openings per BCA 10.8.3.
- External waterproofing for on flat roofs, roof terraces, balconies and terraces and other similar horizontal surfaces located above internal spaces of a building shall comply with BCA H2D8.
- Waterproofing of wet areas - being bathrooms, showers, shower rooms, laundries, sanitary compartments and the like - shall be provided in accordance with BCA 10.2.
- Balcony waterproofing shall be installed in accordance with AS4654.1 & AS4654.2.

GLAZING

- Glazed units shall be installed in accordance with BCA 8.3.2.
- Fully framed glazing installed in the perimeter of buildings shall comply with BCA 8.3.3.
- Glass - including, but not limited to, windows, doors, screens, panels, splashbacks and barriers - shall comply with BCA 3.3.3.
- Glazing subject to human impact shall comply with BCA 8.4.

FOOTINGS

- Footings shall not, under any circumstance, encroach over title boundaries or easement lines.
- Where concrete stumps are to be used, these shall be:
  100 x 100mm (1x 5mm HD wire) if up to 1400mm long
  100 x 100mm (2x 5mm HD wires) if 1401mm to 1800mm long
  125 x 125mm (2x 5mm HD wires) if 1801mm to 3000mm long.
- 100mm x 100mm stumps that exceed 1200mm above ground level shall be braced where no perimeter base brickwork is provided.
- All concrete footings shall be founded at a depth to a minimum required bearing capacity and/or in accordance with recommendations contained in soil report (or otherwise at engineer's discretion).

STORMWATER & SEWERS

- 100mm dia. Class 6 UPVC stormwater line min grade 1:100 shall be connected to the legal point of discharge to the relevant authority's approval. Provide inspection openings at 9m centres and at each change of direction.
- Covers to underground stormwater drains shall be not less than:
  100mm under soil
  50mm under paved or concrete areas
  100mm under unreinforced concrete or paved driveways
  75mm under reinforced concrete driveways
- The builder and subcontractor shall ensure that all stormwater drains, sewer pipes and the like are located at a sufficient distance from any buildings, footing and/or slab edge beams so as to prevent general moisture penetration, dampness, weakening and undermining of any building and its footing system.

·SAFETY OF BUILDING USERS

- Where stairs, ramps and balustrades are to be constructed, these shall comply with all provisions of BCA 11.2.
- Other than spiral stairs:
  Risers shall be 190mm max and 115mm min
  Goings shall be 355mm max and 240mm min
  2r+g shall be 700mm max and 550mm min
  There shall be less than 125mm gap between open treads.
- All treads, landings and the like shall have a slip resistance classification of P3 or R10 for dry surface conditions and P4 or R11 for wet surface conditions, or a nosing strip with a slip-resistance classification of P3 for dry surface conditions and P4 for wet surface conditions.
- Barriers shall be provided where it is possible to fall 1m or more from the level of the trafficable surface to the surface beneath. Such barriers (other than tensioned wire barriers) shall be:
  1000mm min above finished stair level (FSL) of balconies, landings etc; and
  865mm min above FSL of stair nosing or ramp; and
  vertical, with gaps of no more than 125mm.
- Where the floor below a bedroom window is 2m or more above the surface beneath, the window shall comply with BCA Clause 11.3.7.
- Where the floor below a window other than in a bedroom is 4m or more above the surface beneath, the window shall comply with BCA Clause 11.3.8.
- Where a bedroom window is 2m or more above the surface beneath, or it is possible to fall 4m or more from the level of any trafficable surface to the surface beneath, any horizontal element within a barrier between 150mm and 760mm above the floor shall not facilitate climbing.
- Handrails shall be continuous, with tops set >865mm vertically above stair nosing and floor surface of ramps.
- Wire barriers shall comply with BCA 11.3.4 and 11.3.6.
- A glass barrier or window serving as a barrier shall comply with BCA H1D8.
- Class 1 buildings with air permeability of not more than 5 $m^3/hr.m^2$ at 50 Pa shall be provided with a mechanical ventilation system complying with H6V3.Inward-opening swing doors to fully enclosed sanitary compartments shall comply with BCA Clause 10.4.2.
- Flooring in wet areas, laundry and kitchen shall be slip resistant.
- Door hardware shall be installed 900mm - 1100mm above the finished floor.
- There shall be a level transition between abutting internal surfaces (a maximum vertical tolerance of 5mm between abutting surfaces is allowable provided the lip is rounded or bevelled).

SERVICES

- Solar collector panel locations are indicative only. Location and size are dependent on manufacturer's/installer's recommendation.
- Ductwork for heating and cooling systems shall comply with AS4254 & AS/NZS 4859.1 in accordance with climate zone requirements set down in BCA Table 3.

TIMBER FRAMING

·Standard timber roofing and wall framing shall be provided in accordance with AS1684 (Residential Timber-Framed Construction) and all relevant supplements.

ELECTRICAL

- Smoke detectors shall be fitted where none are present, or where existing are non-compliant with AS3786.
- New smoke detectors shall be interconnected; mains-powered; and located and installed per BCA 9.5.2 and 9.5.4.
- In a Class 10a private garage, an alternative alarm may be installed per BCA 9.5.1(b).
- Light switches shall be positioned in a consistent location 900mm - 1100mm above the finished floor level; horizontally aligned with the door handle at the entrance to a room.
- Power points shall not be installed lower than 300mm above finished floor level.
- All electrical penetrations shall be sealed using material appropriate to the rating of the cable and/or device.
- Only stamped IC4-rated downlights shall be installed and insulation shall not be penetrated for downlights.
- Ductwork for exhaust fans and heating and cooling systems shall comply with AS4254 & AS/NZS 4859.1 in accordance with climate zone requirements set down in BCA 13.7.4.
- Exhaust from a bathroom, sanitary compartment or laundry shall be discharged directly via an insulated shaft or R1 insulated ducting to outdoor air. Minimum flow rates shall be:
  40 l/s for kitchen & laundry
  25 l/s for bathroom or sanitary compartment.
- An exhaust system that is not run continuously and is serving a bathroom or sanitary compartment that is not ventilated in accordance with BCA 10.6.2(a) shall be interlocked with the room's light switch; and include a 10 minute run-on timer.
- Exhaust fans, rangehoods and the like shall be installed with self-closing dampers.

BUILDING THERMAL PERFORMANCE

- Works shall be constructed in accordance with the stamped plans endorsed by, accredited thermal performance assessor, without alteration.
- The NatHERS energy rating contains inbuilt assumptions about the integrity of the building fabric with regards insulation, draughtproofing and glazing. Works shall comply with the following measures, to ensure that the as-built performance corresponds to that modelled in the energy rating.
- Insulation as per thermal performance Report shall be installed in accordance with BCA 13.2.2
- Insulation shall be installed tight and continuous, without gaps and cracks, hard up against internal linings (including subfloor). There shall be no air gap between an internal lining and insulation. Junctions between internal and external walls shall be insulated.
- Insulation shall not be crushed or compressed.
- Box gutters and manhole covers shall be insulated to the same R-value as the roof, using insulation batts or blanket or closed-cell foam.
- Downlights shall be stamped as IC4 rated, airtight and covered by insulation.
- [in climate zones 6, 7 and 8] a vapour permeable layer shall be installed per manufacturer's instructions in all new external walls. The material shall be overlapped and fully taped on the external side to ensure a tight seal. All penetrations in the membrane shall be sealed, ensuring that the material covers gaps between studs and doors and window frames. Any flashing around windows shall be taped over the building wrap.
- Where a foil-backed membrane is used, timber battens shall be used to minimise thermal conduction.
- All trades shall be instructed to replace any insulation they have removed in the course of their work and to tape any cuts/penetrations in building wrap. All penetrations shall be caulked using a fit-for-purpose flexible sealant.
- Caulking products shall be appropriate for the intended application.
- Where it is not possible to insulate under an existing timber floor, gaps between floorboards shall be sealed before applying finishes or coverings.
- External doors and windows shall be draughtproofed per BCA 13.4.4 using a durable, fit-for-purpose seal.
- Cavity slider pockets shall be sealed before installation, either by wrapping with vapour permeable membrane, or by screwing plaster securely to the frame and applying a silicon bead.
- Conditioned Class 1 and unconditioned Class 10a spaces shall be separated by insulation. Any openings between such spaces shall be weather-stripped.
- Window sizes nominated are nominal. Actual size may vary minimally according to manufacturer; however, opening styles, overall size, U-value and SHGC values are inbuilt into the energy rating and may not be altered without the express approval of the project's energy rater.
- Glazed doors and windows shall beN1 wind rated, weather-stripped and flashed all around.

AREA ANALYSIS

	Proposed Unit 1	Proposed Unit 2	Proposed Unit
Ground Floor	96.56 m²	101.65 m²	113.76 m²
First Floor	81.43 m²	66.35 m²	81.58 m²
Porch	5.61 m²	5.60 m²	1.20 m²
Garage	22.74 m²	22.74 m²	46.68 m²
TOTAL	206.34m² OR 22.21 SQ	196.34m² OR 21.13 SQ	196.54m² OR 21.16 SQ

INDEX

Creative house plans
E & U Bafto Corporation Pty Ltd T/As Creative House Plans
ABN 51 295 918 936
Elvir Bafto DP-AD 17703 DBU-20052
Address: 2B Desmond Court BEACONSFIELD VIC 3807
P 0422 422 448 | E mail@baftocorp.com.au |
W www.creativehp.com.au

CLIENT : BEKIM QANIU & FATIME QANIU

SITE ADDRESS : Lot 1 No 17 Railway Parade SEAFORD 3198

PROJECT :
3 Double Storey Dwellings

DRAWING TITLE :
General Notes & Perspectives

Drawing Ref: Jobs/23-24/1S

Date:29/05/2024

1:100 unless shown otherwise on A3:

REGISTERED Building Practitioner

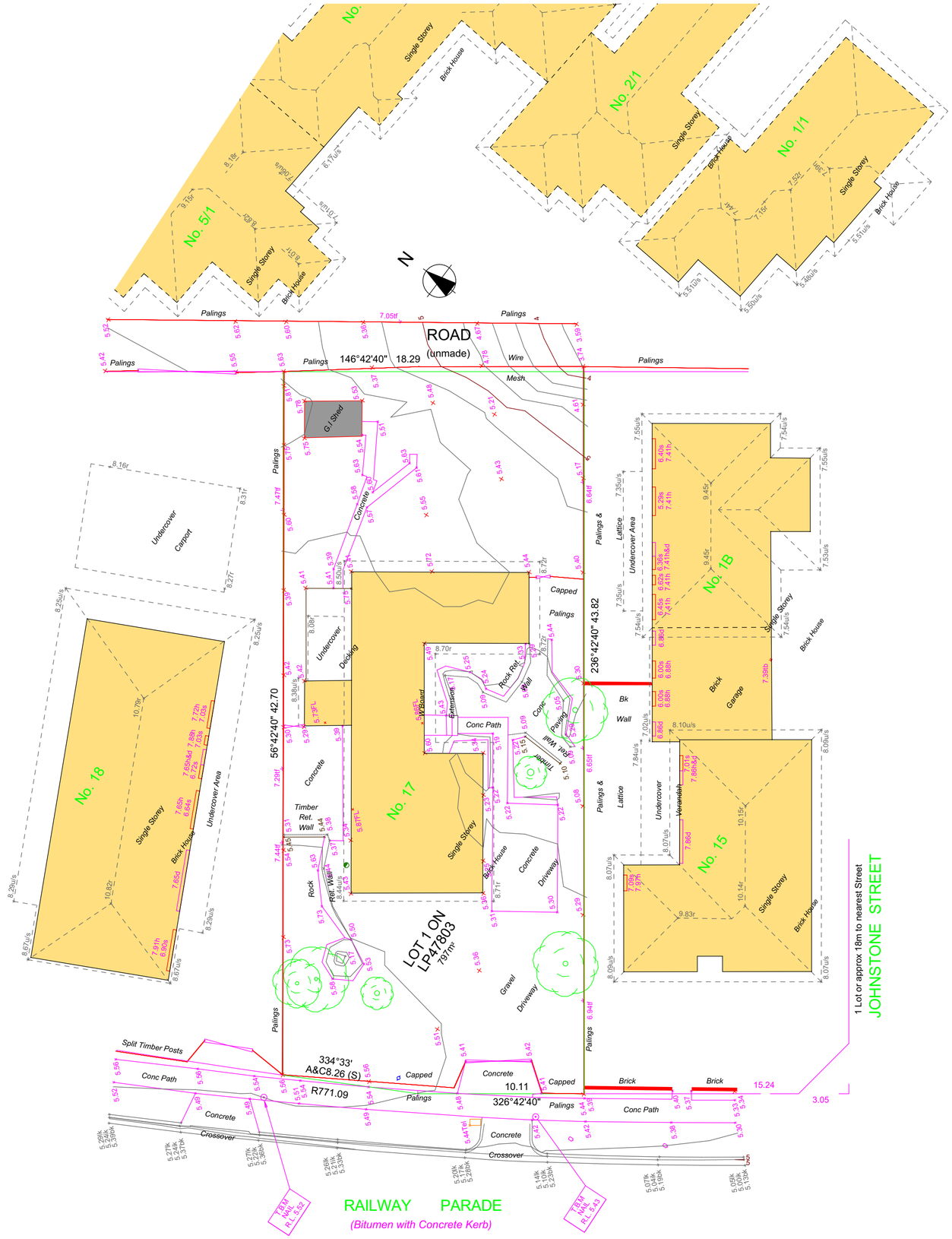
Design Matters Member

RevID	Description	Date
A	Energy Rating Details Added	20-05-24

Revision: A

DRAWING NO. **WD01**

Aerial Photograph 11-01-24



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CLIENT : BEKIM QANIU & FATIME QANIU

SITE ADDRESS : Lot 1 No 17 Railway Parade SEAFORD 3198

PROJECT :
3 Double Storey Dwellings

DRAWING TITLE :
Existing Site Layout

Drawing Ref: Jobs/23-24/1S

Date:29/05/2024

1:100 unless shown otherwise on A3:

REGISTERED Building Practitioner

Design Matters Member

Revision: A

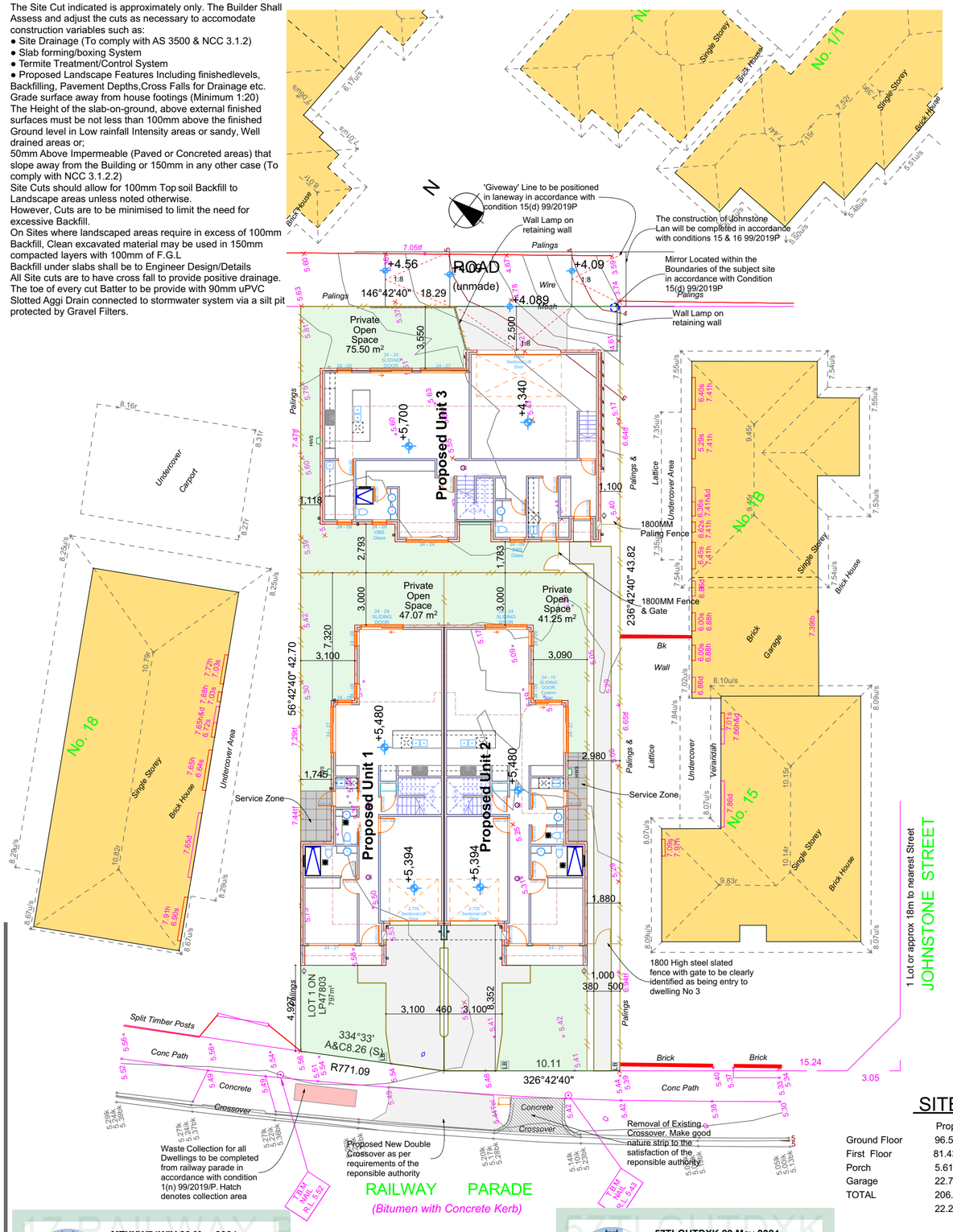
DRAWING NO.
WD02

The Site Cut indicated is approximately only. The Builder Shall Assess and adjust the cuts as necessary to accomodate construction variables such as:
- Site Drainage (To comply with AS 3500 & NCC 3.1.2)
- Slab forming/boxing System
- Termite Treatment/Control System
- Proposed Landscape Features Including finishedlevels, Backfilling, Pavement Depths,Cross Falls for Drainage etc. Grade surface away from house footings (Minimum 1:20)

The Height of the slab-on-ground, above external finished surfaces must be not less than 100mm above the finished Ground level in Low rainfall Intensity areas or sandy, Well drained areas or;
50mm Above Impermeable (Paved or Concreted areas) that slope away from the Building or 150mm in any other case (To comply with NCC 3.1.2.2)
Site Cuts should allow for 100mm Top soil Backfill to Landscape areas unless noted otherwise.
However, Cuts are to be minimised to limit the need for excessive Backfill.
On Sites where landscaped areas require in excess of 100mm Backfill, Clean excavated material may be used in 150mm compacted layers with 100mm of F.G.L
Backfill under slabs shall be to Engineer Design/Details
All Site cuts are to have cross fall to provide positive drainage.
The toe of every cut Batter to be provide with 90mm uPVC Slotted Aggi Drain connected to stormwater system via a silt pit protected by Gravel Filters.

Notes

- Site Drainage shall comply with NCC 3.1.2 'Drainage' and AS3500 National Plumbing Drainage Code
- Sites should be drained so that water cannot pond against or near the house. The ground immediately adjacent to the house should be graded to fall 50mm over the first metre. Where this is Impractical, use A.G.Drains adjacent to footings where the ground falls towards the building.
- Agricultural (AG) cut-off drains must be installed at the base of all excavations and along the high side of a sloping site and be connected to the storm water drainage system via a 300mm x 300mm silt pit
- AG drains must be laid a minimum of 400mm into the soil and 100mm below any adjacent footing or pavement
- Contractor to connect to Existing Legal Point of Discharge to the standard & satisfaction of the responsible authority. Contractor to confirm location & depth of legal point of discharge prior to construction to ensure design intent is achievable
- Stormwater Drains are indicative only. Drainer may connect to LPD at their discretion.
- Downpipes shall be minimum 100mm x 50mm, must not be located more than 12m apart and securely fixed to walls with approved brackets at maximum 2.2m centres
- Small Immature trees located in Nature strip or adjoining properties may affect the structure of the building if allowed to grow in excess of 6m in Height. It is recommended that the owner monitors the tree(s) growth & restrict their height to 6M max.
- A rainwater tank installed in a new Class 1 building in order to comply with the requirements of the building regulations must:
  · be installed in such a way that it receives the rainfall from a minimum catchment area of 50 square metres;and
  · have a minimum capacity of 2000 litres; and
  · be connected to all toilets in the building for the purpose of sanitary flushing.



SITE AREA ANALYSIS

	Proposed Unit 1	Proposed Unit 2	Proposed Unit 3
Ground Floor	96.56 m²	101.65 m²	113.76 m²
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Porch	5.61 m²	5.60 m²	1.20 m²
Garage	22.74 m²	22.74 m²	46.68 m²
TOTAL	206.34m² OR 22.21 SQ	196.34m² OR 21.13 SQ	196.54m² OR 21.16 SQ

Site Area	**797m2**
Site Coverage Total	**416.54m² OR 52.3% OF SITE**
Drive & Path Total	**102 m² OR 12.8% OF SITE**
Permeability Total	**278.46m² OR 34.9% OF SITE**

SITE LAYOUT GROUND FLOOR
Scale 1:200

SITE LAYOUT FIRST FLOOR
Scale 1:200

Creative house plans
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CLIENT : BEKIM QANIU & FATIME QANIU

SITE ADDRESS : Lot 1 No 17 Railway Parade SEAFORD 3198

PROJECT :
3 Double Storey Dwellings

DRAWING TITLE :
Proposed Site Layout

Drawing Ref: Jobs/23-24/1S

Date:29/05/2024

1:100 unless shown otherwise on A3:

REGISTERED Building Practitioner

Design Matters Member

Revision: A

DRAWING NO.
WD03

Sanitary Compartment Notes

- Where there is no window to W/C, Mechanical Ventilation Must be provided with a minimum 35Ltr per Second clean Air simultaneously with Artificial Light Source.
  Exhaust Fan
- Removable Hinges are to be provided to all W/C without a minimum 1.2m clear space between the toilet Pan and the closest part of the doorway.

General Electrical Notes

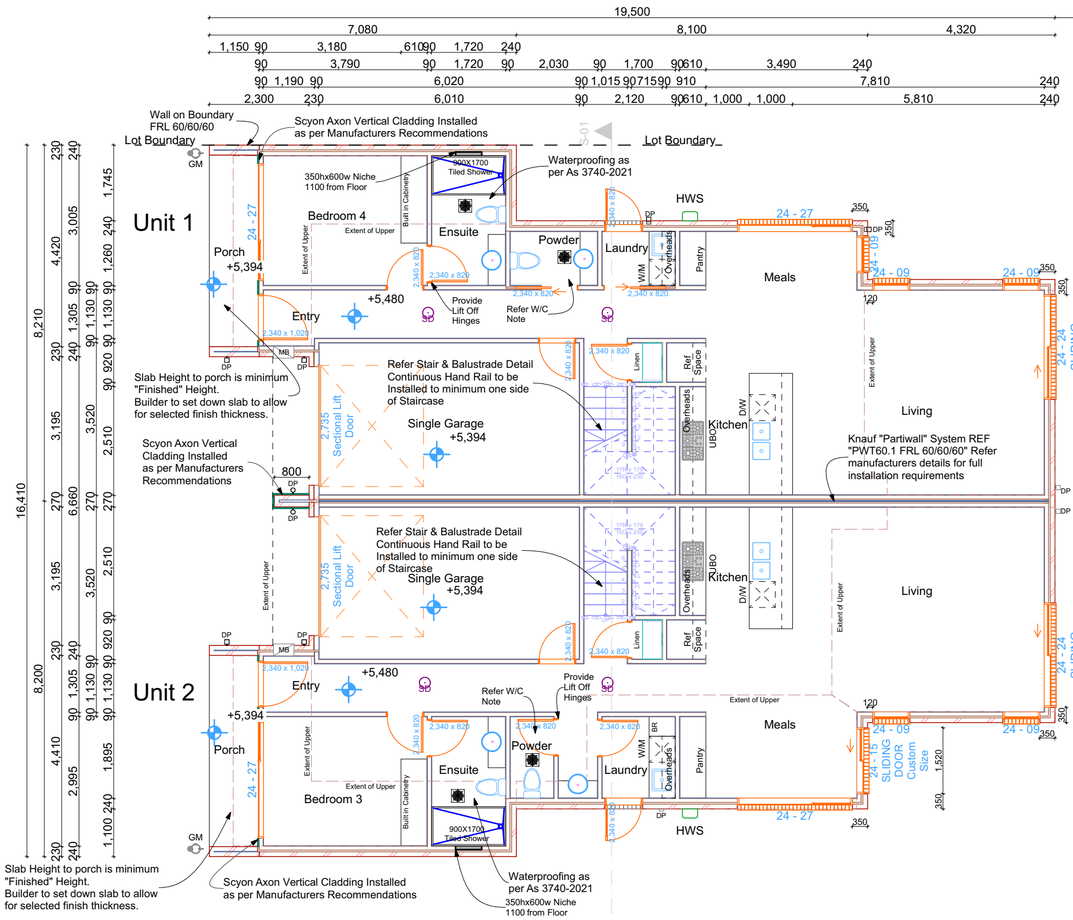
All Light Fittings are to be Energy Saving type - (CFLs) Compact Florescent Lamp & Downlights are to be of (LED) Light Emitting Diode Type

Artificial Lighting Requirements

Max 5W/m² Class 1 Building
Max 4W/m² Verandah, Balcony or the like attached to a Class 1
Max 3W/m² in a Class 10A Building associated with a Class 1

Artificial Lighting Around the perimeter of a building must:
A) Be controlled by a daylight Sensor
B) Have an average light source efficiency of not less than 40 Lumens per Watt

SD Smoke Detector - Where there is more than one, Smoke detectors must be interconnected



FRL
LB 60/60/60
From both sides

SYSTEM DESCRIPTION

Side 1:
- Non fire resistant lining (refer to table)
- Timber framing
- 20mm min gap between timber frame and Fire Barrier
- Insulation (refer to table)

Fire Barrier:
- 1 x 25mm SHAFTLINER™ MOULDSTOP between 25mm H-studs @ 600mm centres

Side 2:
- Non fire resistant lining (refer to table)
- Timber framing
- 20mm min gap between timber framing and Fire Barrier
- Insulation (refer to table).

MTXXW74WIY 29 May 2024
NATIONWIDE HOUSE ENERGY RATING SCHEME 6.2 117.9 MJ/m² www.nathers.gov.au
Assessor Amy Gedge
Accreditation No. DMN/21/2022
Address 1, 17 Railway Parade Seaford VIC 3198
https://www.fr5.com.au/QRCodeLanding?PublicId=MTXXW74WIY

57TLGUTDXK 29 May 2024
NATIONWIDE HOUSE ENERGY RATING SCHEME 6 124.7 MJ/m² www.nathers.gov.au
Assessor Amy Gedge
Accreditation No. DMN/21/2022
Address 2, 17 Railway Parade Seaford VIC 3198
https://www.fr5.com.au/QRCodeLanding?PublicId=57TLGUTDXK

AGCQFTLB6N 29 May 2024
NATIONWIDE HOUSE ENERGY RATING SCHEME 6 124.2 MJ/m² www.nathers.gov.au
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Accreditation No. DMN/21/2022
Address 3, 17 Railway Parade Seaford VIC 3198
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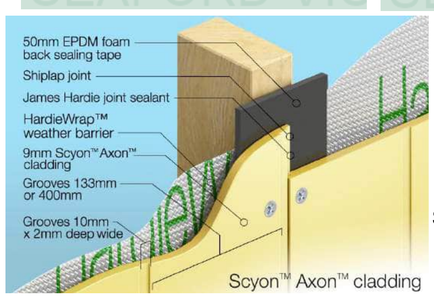
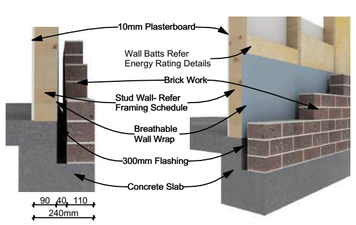
Scan QR Code for full Installation Details of Knauf Partiwall Incl Full Junction Details



Scyon Axon Installation Details
Scan QR Code for full Installation Details



Typical External Wall Detail -Brick Veneer

Part 3.9.2.4 Handrails
(a)Handrails to a stairway or ramp must—
(i)be located along at least one side of the stairway flight or ramp; and
(ii)be located along the full length of the stairway flight or ramp, except in the case where a handrail is associated with a barrier the handrail may terminate where the barrier terminates; and
(iii)have the top surface of the handrail not less than 865 mm vertically above the nosings of the stair treads or the floor surface of the ramp (see Figure 3.9.2.4); and
(iv)be continuous and have no obstruction on or above them that will tend to break a handhold, except for newel posts, ball type stanchions, or the like.

Part 3.8.7 Condensation management
Appropriate Performance Requirements
Where an alternative *condensation* management system is proposed as a *Performance Solution* to that described in Part 3.8.7, that proposal must comply with-
(a)*Performance Requirement* P2.4.7; and
(b)the relevant *Performance Requirements* determined in accordance with A2.2(3) and A2.4(3) as applicable.
3.8.7.1 Application
Compliance with this Acceptable Construction Practice satisfies *Performance Requirement* P2.4.7.
3.8.7.2 Pliable building membrane
(a)Where a *pliable building membrane* is installed in an *external wall*, it must-
(i)comply with AS/NZS 4200.1; and
(ii)be installed in accordance with AS 4200.2; and
(iii)be a vapour permeable membrane for *climate zones* 6, 7 and 8; and
(iv)be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelopeof a building.
(b)Except for single skin masonry or single skin concrete, where a *pliable building membrane* is not installed in an*external wall*, the primary *water control layer* must be separated from *water sensitive materials* by a drained cavity.
3.8.7.3 Flow rate and discharge of exhaust systems
(a)An exhaust system installed in a kitchen, bathroom, *sanitary compartment* or laundry must have a minimum flowrate of-
(i)25 L/s for a bathroom or *sanitary compartment*; and
(ii)40 L/s for a kitchen or laundry.
(b)Exhaust from a bathroom, *sanitary compartment*, or laundry must be discharged-
(i)directly or via a shaft or duct to *outdoor air*; or
(ii)to a roof space that is ventilated in accordance with 3.8.7.4.
3.8.7.4 Ventilation of roof spaces
(a)Where an exhaust system covered by 3.8.7.3 discharges into a roof space, the roof space must be ventilated to*outdoor air* through evenly distributed openings.
(b)Openings *required* by (a) must have a total unobstructed area of 1/300 of the respective ceiling area if the roof pitchis more than 22°, or 1/150 of the respective ceiling area if the roof pitch is not more than 22°.
(c)30% of the total unobstructed area *required* by (b) must be located not more than 900 mm below the ridge or highestpoint of the roof space, measured vertically, with the remaining *required* area provided by eave vents.

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W www.creativehp.com.au

CLIENT : BEKIM QANIU & FATIME QANIU

SITE ADDRESS : Lot 1 No 17 Railway Parade SEAFORD 3198

PROJECT :
3 Double Storey Dwellings

DRAWING TITLE :
Ground Floor Plan

Drawing Ref: Jobs/23-24/1S

Date:29/05/2024

1:100 unless shown otherwise on A3:

REGISTERED Building Practitioner
Design Matters Member

Revision: A

DRAWING NO.
WD04

Sanitary Compartment Notes

- Where there is no window to W/C, Mechanical Ventilation Must be provided with a minimum 35Ltr per Second clean Air simultaneously with Artificial Light Source.
  Exhaust Fan

- Removable Hinges are to be provided to all W/C without a minimum 1.2m clear space between the toilet Pan and the closest part of the doorway.

General Electrical Notes

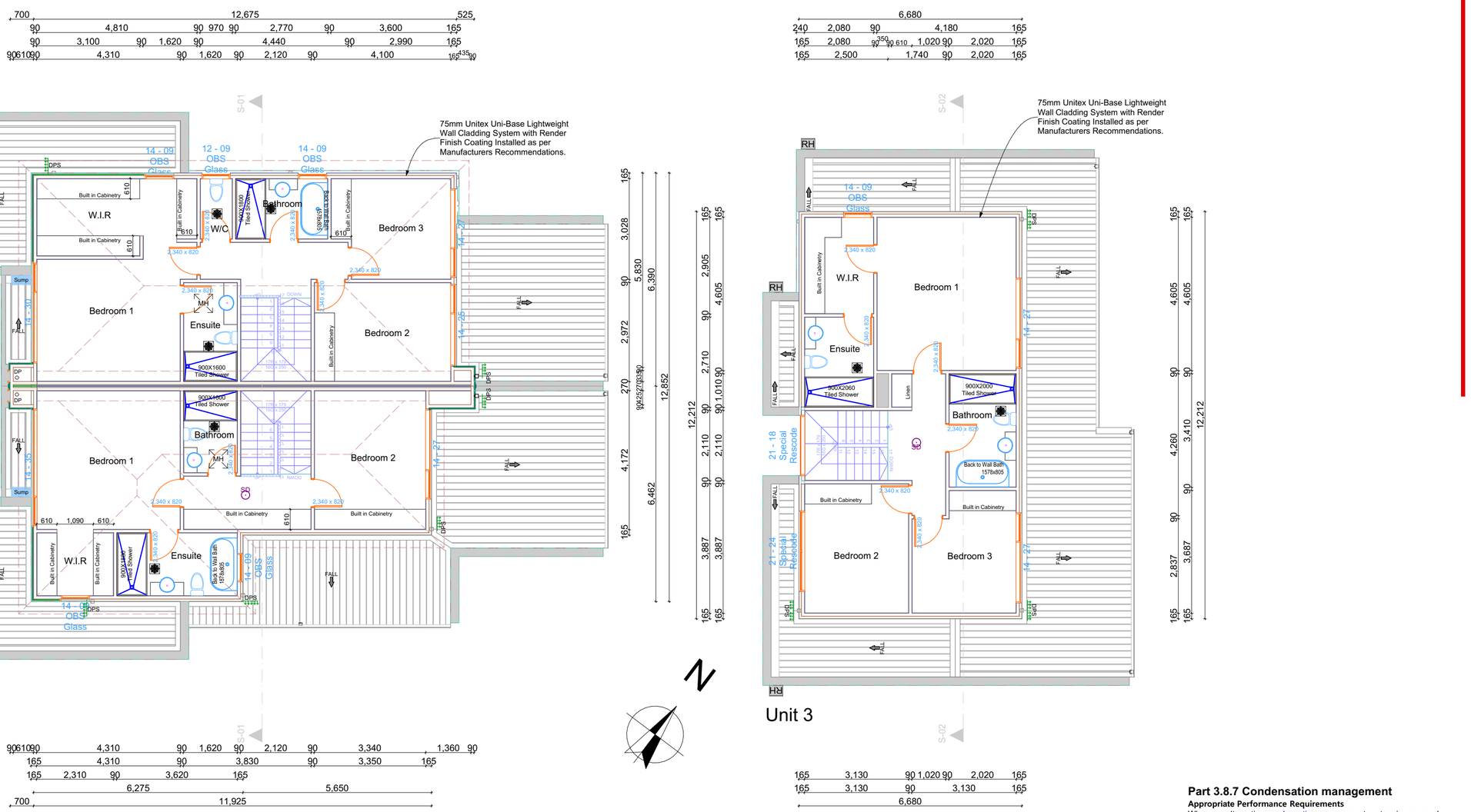
All Light Fittings are to be Energy Saving type - (CFLs) Compact Florescent Lamp & Downlights are to be of (LED) Light Emitting Diode Type

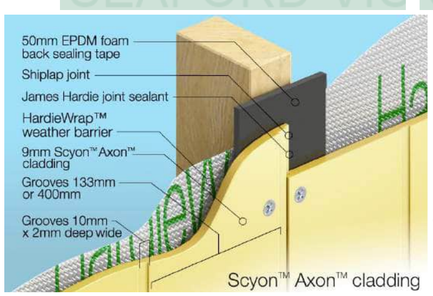
Artificial Lighting Requirements

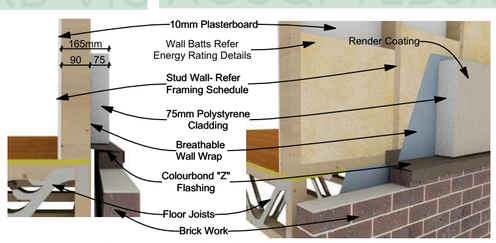
Max 5W/m² Class 1 Building
Max 4W/m² Verandah, Balcony or the like attached to a Class 1
Max 3W/m² in a Class 10A Building associated with a Class 1

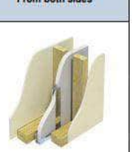
Artificial Lighting Around the perimeter of a building must:
A) Be controlled by a daylight Sensor
B) Have an average light source efficiency of not less than 40 Lumens per Watt

SD Smoke Detector - Where there is more than one, Smoke detectors must be interconnected









FRL
LB 60/60/60
From both sides

SYSTEM DESCRIPTION

Side 1:
- Non fire resistant lining (refer to table)
- Timber framing
- 20mm min gap between timber frame and Fire Barrier
- Insulation (refer to table)

Fire Barrier:
- 1 x 25mm SHAFTLINER™ MOULDSTOP between 25mm H-studs @ 600mm centres

Side 2:
- Non fire resistant lining (refer to table)
- Timber framing
- 20mm min gap between timber framing and Fire Barrier
- Insulation (refer to table).

Scan QR Code for full Installation Details of Knauf Partiwall Incl Full Junction Details

Scyon Axon Installation Details
Scan QR Code for full Installation Details

Unitex Render Installation Details
Scan QR Code for full Installation Details

Must be Installed as per Manufacturers Details to comply with BCA Accreditation # V11/03

75mm UNITEX Uni-Base Board Light Weight Wall Cladding System

MTXXW74WIY 29 May 2024
6.2 NATIONWIDE HOUSE ENERGY RATING SCHEME 117.9 MJ/m² www.nathers.gov.au
Assessor Amy Gedge
Accreditation No. DMN/21/2022
Address 1, 17 Railway Parade Seaford VIC 3198
https://www.fr5.com.au/QRCodeLanding?PublicId=MTXXW74WIY

57TLGUTDXK 29 May 2024
6 NATIONWIDE HOUSE ENERGY RATING SCHEME 124.7 MJ/m² www.nathers.gov.au
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AGCQFTLB6N 29 May 2024
6 NATIONWIDE HOUSE ENERGY RATING SCHEME 124.2 MJ/m² www.nathers.gov.au
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Accreditation No. DMN/21/2022
Address 3, 17 Railway Parade Seaford VIC 3198
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Part 3.8.7 Condensation management

Appropriate Performance Requirements
Where an alternative *condensation* management system is proposed as a *Performance Solution* to that described in Part 3.8.7, that proposal must comply with-
(a) *Performance Requirement* P2.4.7; and
(b) the relevant *Performance Requirements* determined in accordance with A2.2(3) and A2.4(3) as applicable.

3.8.7.1 Application
Compliance with this Acceptable Construction Practice satisfies *Performance Requirement* P2.4.7.

3.8.7.2 Pliable building membrane
(a) Where a *pliable building membrane* is installed in an *external wall*, it must-
(i) comply with AS/NZS 4200.1; and
(ii) be installed in accordance with AS 4200.2; and
(iii) be a vapour permeable membrane for *climate zones* 6, 7 and 8; and
(iv) be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelopeof a building.
(b) Except for single skin masonry or single skin concrete, where a *pliable building membrane* is not installed in an *external wall*, the primary *water control layer* must be separated from *water sensitive materials* by a drained cavity.

3.8.7.3 Flow rate and discharge of exhaust systems
(a) An exhaust system installed in a kitchen, bathroom, *sanitary compartment* or laundry must have a minimum flowrate of-
(i) 25 L/s for a bathroom or *sanitary compartment*; and
(ii) 40 L/s for a kitchen or laundry.
(b) Exhaust from a bathroom, *sanitary compartment*, or laundry must be discharged-
(i) directly or via a shaft or duct to *outdoor air*; or
(ii) to a roof space that is ventilated in accordance with 3.8.7.4.

3.8.7.4 Ventilation of roof spaces
(a) Where an exhaust system covered by 3.8.7.3 discharges into a roof space, the roof space must be ventilated to *outdoor air* through evenly distributed openings.
(b) Openings *required* by (a) must have a total unobstructed area of 1/300 of the respective ceiling area if the roof pitchis more than 22°, or 1/150 of the respective ceiling area if the roof pitch is not more than 22°.
(c) 30% of the total unobstructed area *required* by (b) must be located not more than 900 mm below the ridge or highestpoint of the roof space, measured vertically, with the remaining *required* area provided by eave vents.

Part 3.9.2.4 Handrails
(a) Handrails to a stairway or ramp must—
(i) be located along at least one side of the stairway flight or ramp; and
(ii) be located along the full length of the stairway flight or ramp, except in the case where a handrail is associated with a barrier the handrail may terminate where the barrier terminates; and
(iii) have the top surface of the handrail not less than 865 mm vertically above the nosings of the stair treads or the floor surface of the ramp (see Figure 3.9.2.4); and
(iv) be continuous and have no obstruction on or above them that will tend to break a handhold, except for newel posts, ball type stanchions, or the like.

Creative house plans
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P 0422 422 448 | E mail@baftocorp.com.au |
W www.creativehp.com.au

CLIENT : BEKIM QANIU & FATIME QANIU

SITE ADDRESS : Lot 1 No 17 Railway Parade SEAFORD 3198

PROJECT :
3 Double Storey Dwellings

DRAWING TITLE :
First Floor Plan

Drawing Ref: Jobs/23-24/1S

Date: 29/05/2024

1:100 unless shown otherwise on A3:

REGISTERED Building Practitioner
Design Matters Member

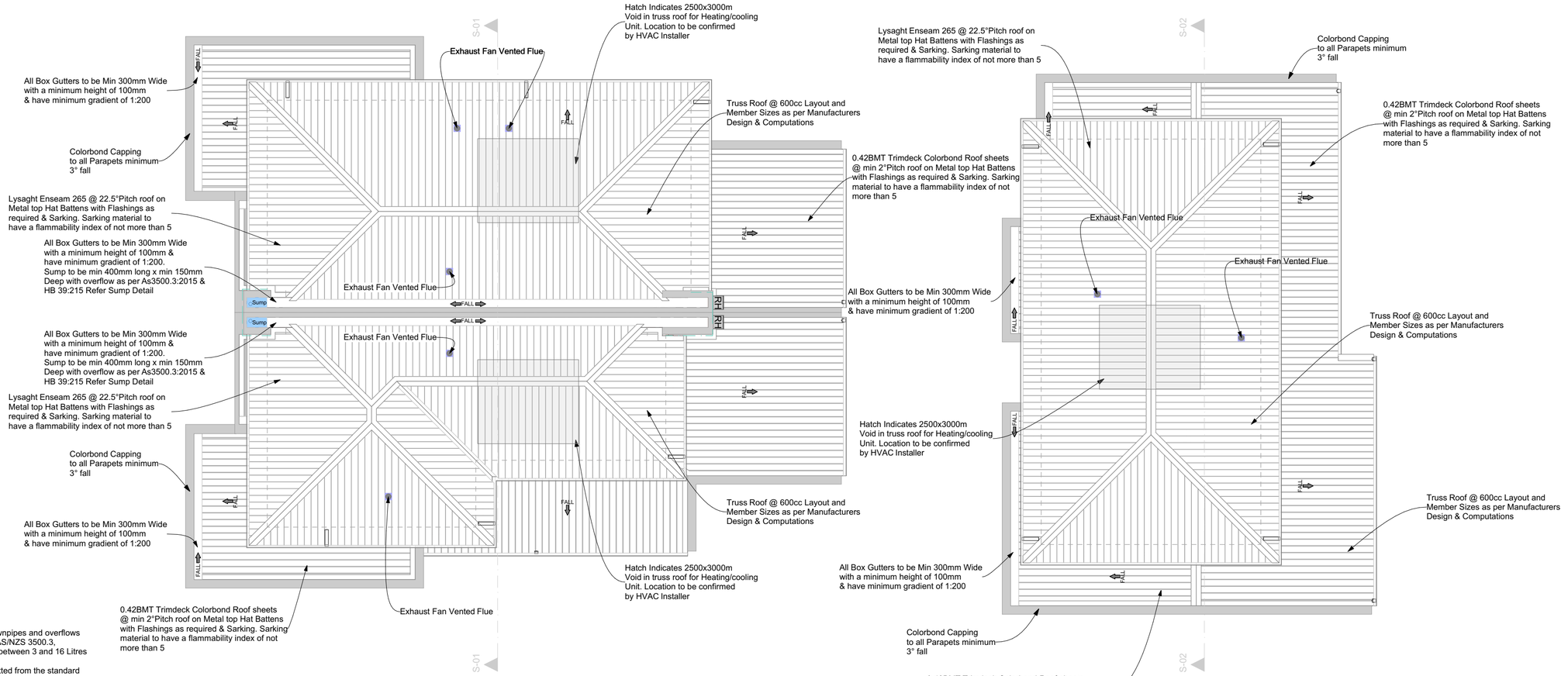
Revision: A

DRAWING NO.
WD05

Part 3.8.7 Condensation management

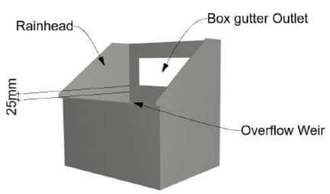
3.8.7.3 Flow rate and discharge of exhaust systems

(a)An exhaust system installed in a kitchen, bathroom, *sanitary compartment* or laundry must have a minimum flowrate of-
(i)25 L/s for a bathroom or *sanitary compartment*; and
(ii)40 L/s for a kitchen or laundry.
(b)Exhaust from a bathroom, *sanitary compartment*, or laundry must be discharged-
(i)directly or via a shaft or duct to *outdoor air*; or
(ii)to a roof space that is ventilated in accordance with 3.8.7.4.



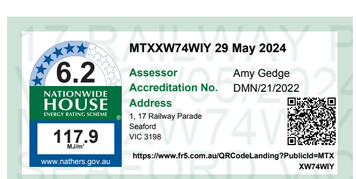
Box Gutter Notes

- The depth of box gutters and sizing of sumps, rainheads, downpipes and overflows must be designed using the general methods specified in the AS/NZS 3500.3,
- The maximum design flow per downpipe can only be plotted between 3 and 16 Litres per second,
- 100mm x 50mm downpipes are not an option that can be plotted from the standard for use with a sump,
- The minimum width of any box gutter: Domestic 200 mm and Commercial 300 mm,
- Grade of box gutters can be plotted at 1:200,1:150, 1:100 and 1:40,
- Length of a sump with a side overflow device shall not be less than 400mm,
- The width of any sump shall be equal to the width of the box gutter,
- Rainheads shall be left open above the overflow weir, inverted pops, Ned Kelly slots, round holes and vertical chutes or ducts are not deemed-to-satisfy solutions,
- Overflow devices must discharge to the atmosphere and be clear of neighbouring properties and public areas,
- Box gutters must be straight without a change of direction and discharge at the downstream end without a change in direction (i.e. not to the side),
- The box gutter sole width must not be reduced towards the outlet without a proportional increase in depth, the width of the gutter must not reduce to less than the minimum width at which it was designed (i.e. if designed at 200 mm sole width, gutter must not reduce to less than 200mm in width),
- Sumps and rainheads must be fixed and fully sealed to the box gutter,
- All box gutters must incorporate provision for expansion; where the distance between fixed points exceeds 6 metres; and at appropriate intervals for the material and situation as prescribed by the standard,
- No part of the outlet is above the sole of the sump or rainhead, and
- Lap joints of box gutters to have 25mm laps sealed and fastened in the direction of fall.



To ensure that adequate overflow provision is made, and any surcharge is accommodated, the overflow weir of the rainhead must be the full width of the rainhead with the height of the weir positioned 25mm below the box gutter sole, and be fully open above the weir at the front of the rainhead.

Typical Rainhead Detail with Overflow



Creative house plans

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W www.creativehp.com.au

CLIENT : BEKIM QANIU & FATIME QANIU

SITE ADDRESS : Lot 1 No 17 Railway Parade SEAFORD 3198

PROJECT :
3 Double Storey Dwellings

DRAWING TITLE :
Roof Plan

Drawing Ref: Jobs/23-24/1S

Date:29/05/2024

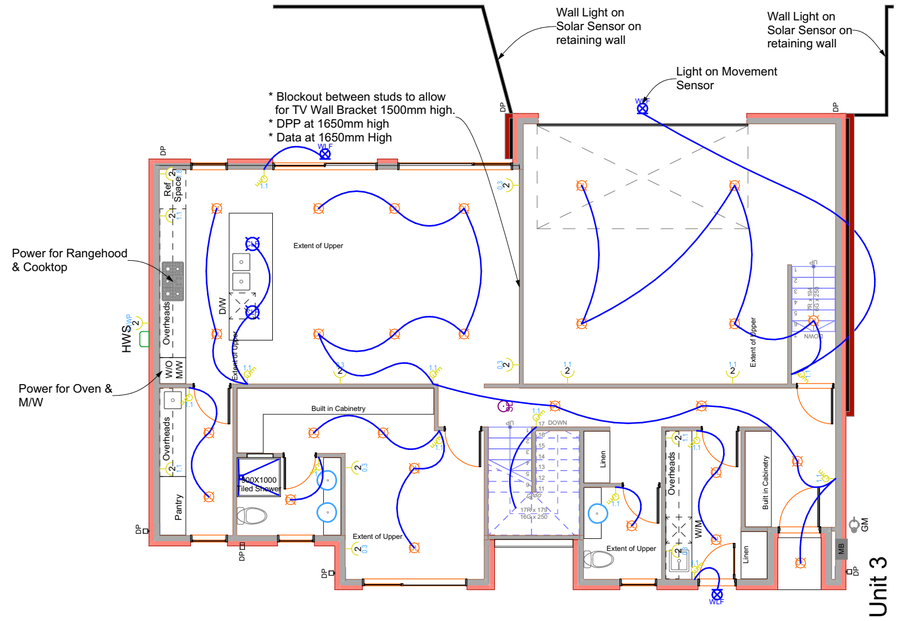
1:100 unless shown otherwise on A3:

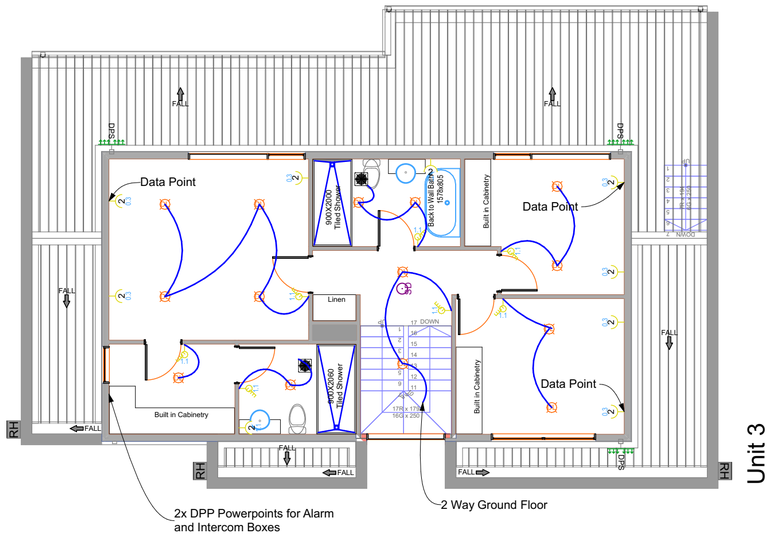
REGISTERED Building Practitioner

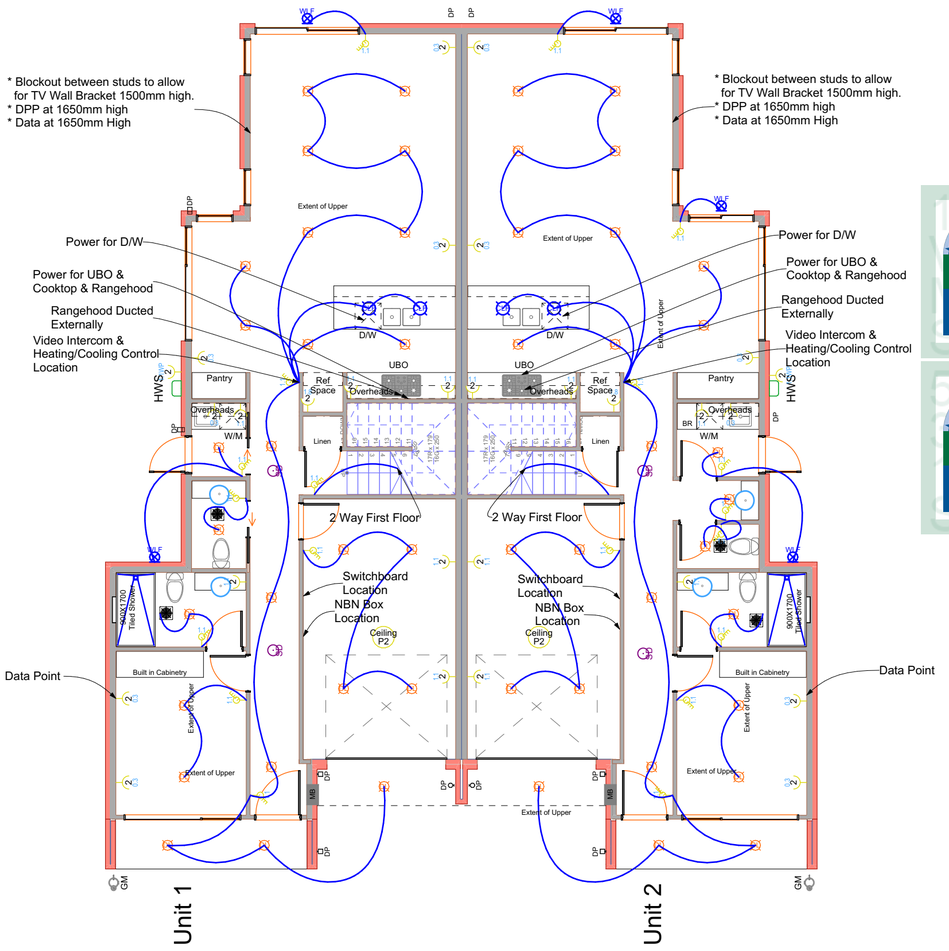
Design Matters Member

Revision: A

DRAWING NO.
WD06







POWER LEGEND	
0.3	300mm Single Power Point
0.3 2	300mm Double Power Point
0.3 WP 2	300mm Double Power Point Water Proof
1.1 2	1100mm Double Power Point
1.1 WP 2	1100mm Double Power Point Water Proof
1.8 2	1800mm Double Power Point
Ceiling P2	Double Power Point Ceiling Mounted
Data/0.4	400mm Data Point
Data/1.5	1500mm Data Point
0.4 TV	400mm TV Point
1.5 TV	1500mm TV Point
	Wall Switch Point
SD	Smoke Detector

LIGHTING LEGEND	
	Light Point Batten with Shade Cowl
	10W LED Downlight
	Ceiling Light Fixture
WLF	Wall Light Fixture
WLB	Wall Light Batten
Single Fluro	Single Fluro Light
Double Fluro	Double Fluro Light
	Ceiling Fan
	Ceiling Exhaust Fan
	Ceiling Speaker

ELECTRICAL NOTES

* Electrician to allow Powerfor Heating & Cooling system. Electrician to liase with HVAC installer for requirements
* Allow for Light in Roof Space within 1m of Man hole
* NBN box to be located in garage
* Electrician to allow and Install Telstra lead in Conduits
* Power for Dishwasher & Microwave if applicable to be installed in adjacent cabinet with 50mm whole drilled through at rear of cabinet for cable.

Sanitary Compartment Notes

- Where there is no window to W/C, Mechanical Ventilation Must be provided with a minimum 35Ltr per Second clean Air simultaneously with Artificial Light Source.
  Exhaust Fan
- Removable Hinges are to be provided to all W/C without a minimum 1.2m clear space between the toilet Pan and the closest part of the doorway.

General Electrical Notes

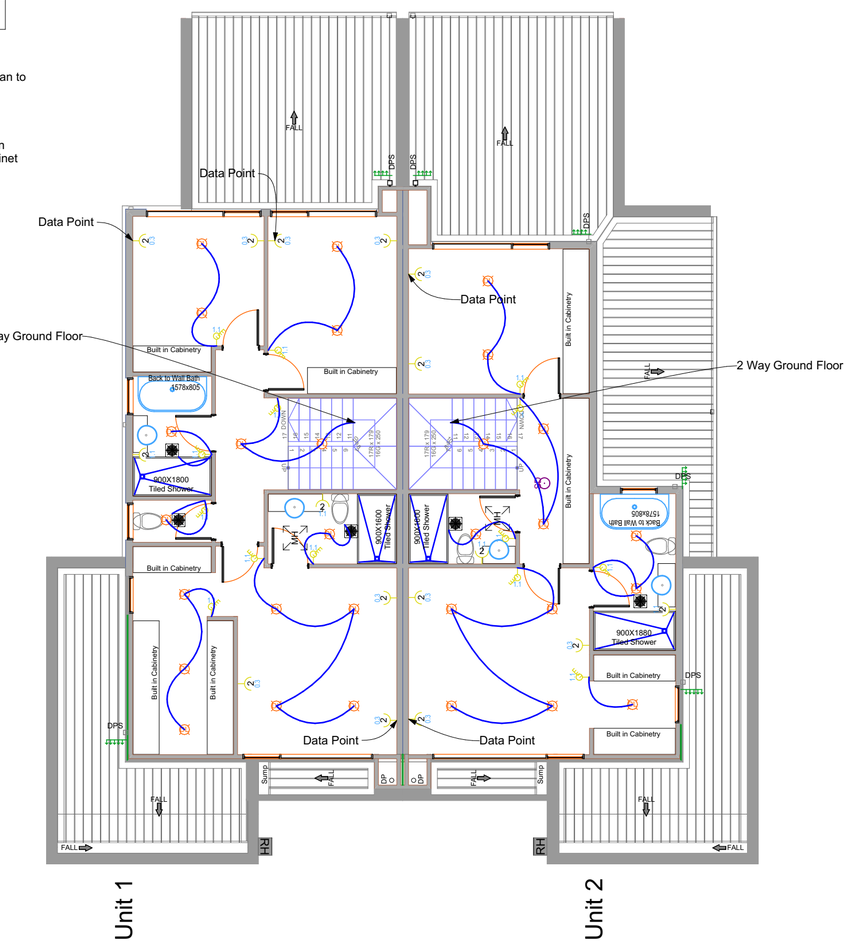
All Light Fittings are to be Energy Saving type - (CFLs) Compact Florescent Lamp & Downlights are to be of (LED) Light Emitting Diode Type

Artificial Lighting Requirements

Max 5W/m² Class 1 Building
Max 4W/m² Verandah, Balcony or the like attached to a Class 1
Max 3W/m² in a Class 10A Building associated with a Class 1

Artificial Lighting Around the perimeter of a building must:
A) Be controlled by a daylight Sensor
B) Have an average light source efficiency of not less than 40 Lumens per Watt

SD Smoke Detector - Where there is more than one, Smoke detectors must be interconnected



0. Ground Floor 1:100

1. First Floor 1:100

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CLIENT : BEKIM QANIU & FATIME QANIU

SITE ADDRESS : Lot 1 No 17 Railway Parade SEAFORD 3198

PROJECT :
3 Double Storey Dwellings

DRAWING TITLE :
Electrical Layout

Drawing Ref: Jobs/23-24/1S

Date:29/05/2024

1:100 unless shown otherwise on A3:

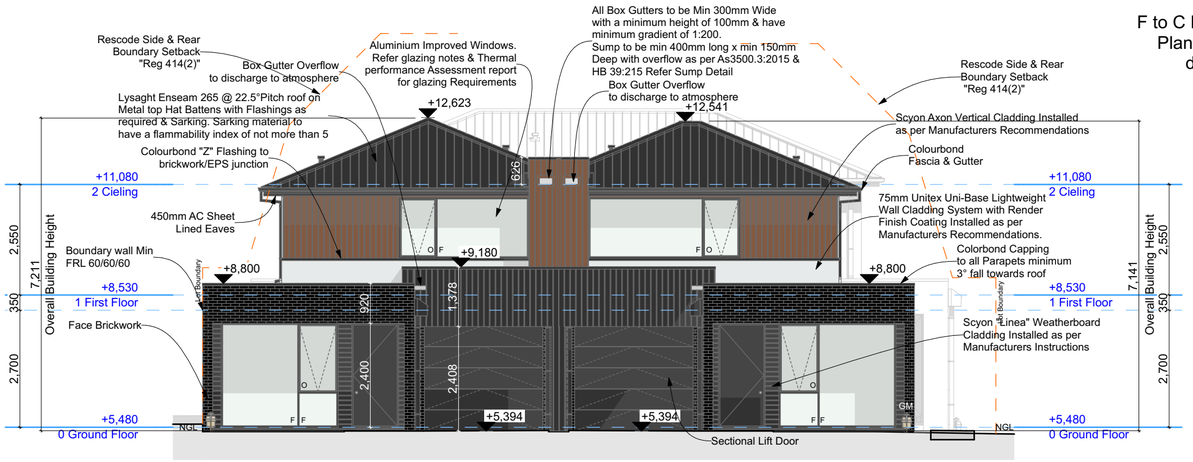
REGISTERED Building Practitioner

Design Matters Member

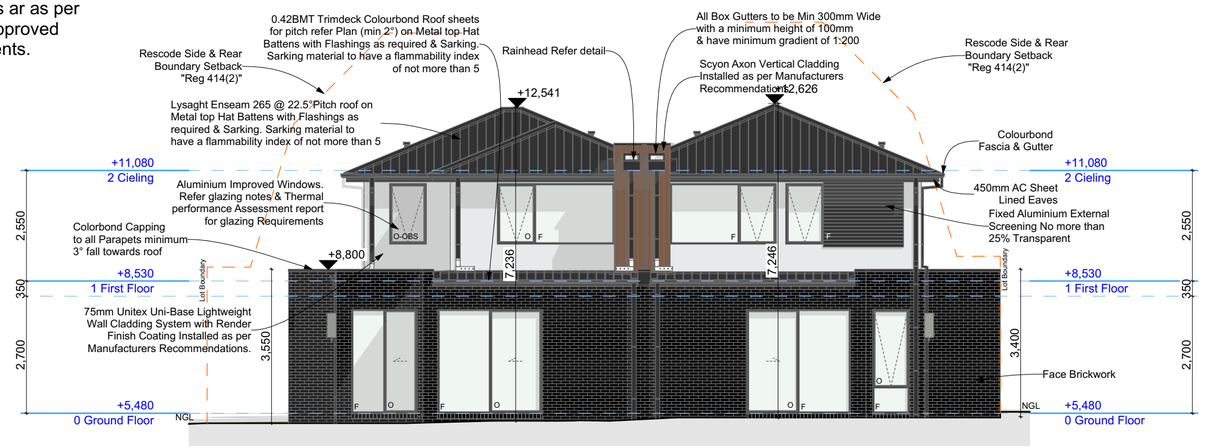
Revision: A

DRAWING NO. **WD07**

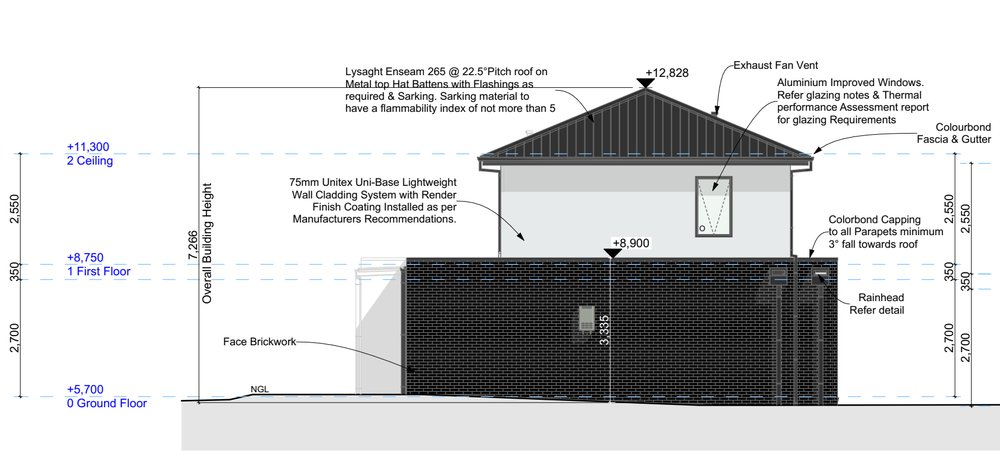
F to C Heights ar as per Planning approved documents.

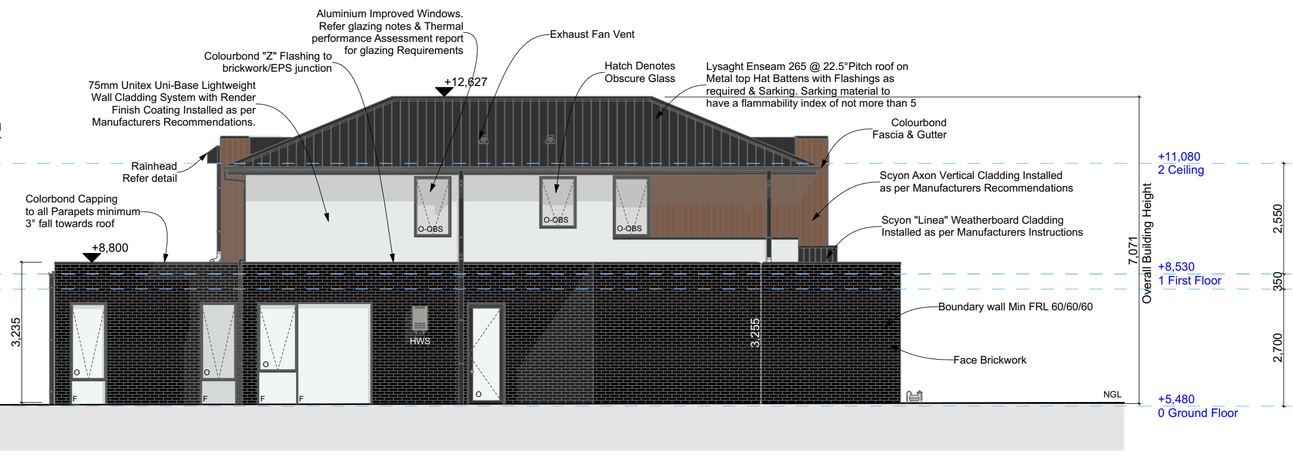


South West Elevation Unit 1 & Unit 2 1:100

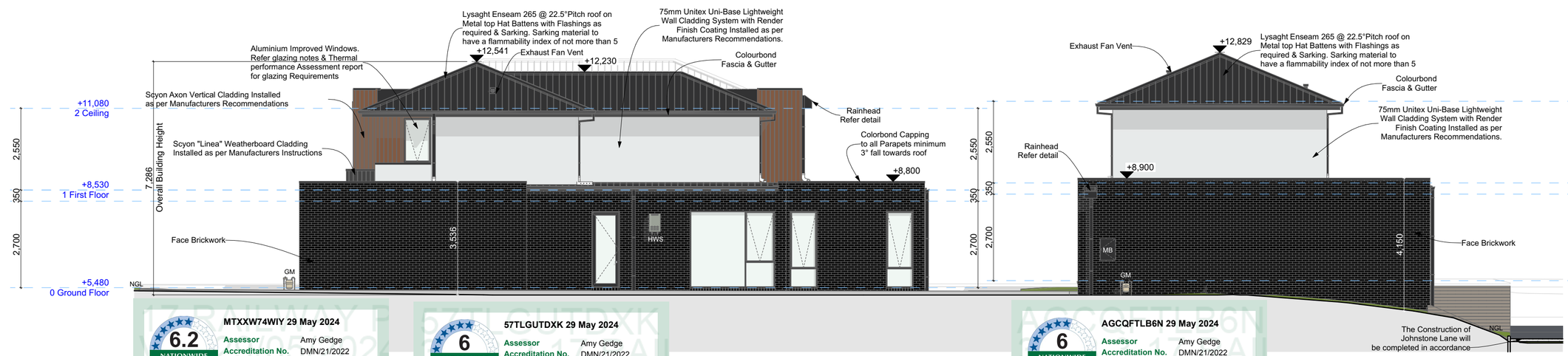


North East Elevation Unit 2 & Unit 1 1:100





North West Elevation Unit 3 and Unit 1 1:100



South East Elevation Unit 2 & Unit 3 1:100

MTXXW74WIY 29 May 2024
Assessor Amy Gedge
Accreditation No. DMN/21/2022
Address 1, 17 Railway Parade Seaford VIC 3198
6.2 Stars 117.9 MJ/m² www.nathers.gov.au
https://www.fr5.com.au/QRCodeLanding?PublicId=MTXXW74WIY

57TLGUTDXK 29 May 2024
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Address 2, 17 Railway Parade Seaford VIC 3198
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Accreditation No. DMN/21/2022
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CLIENT : BEKIM QANIU & FATIME QANIU

SITE ADDRESS : Lot 1 No 17 Railway Parade SEAFORD 3198

PROJECT : **3 Double Storey Dwellings**

DRAWING TITLE : **Elevations**

Drawing Ref: Jobs/23-24/1S

Date:29/05/2024

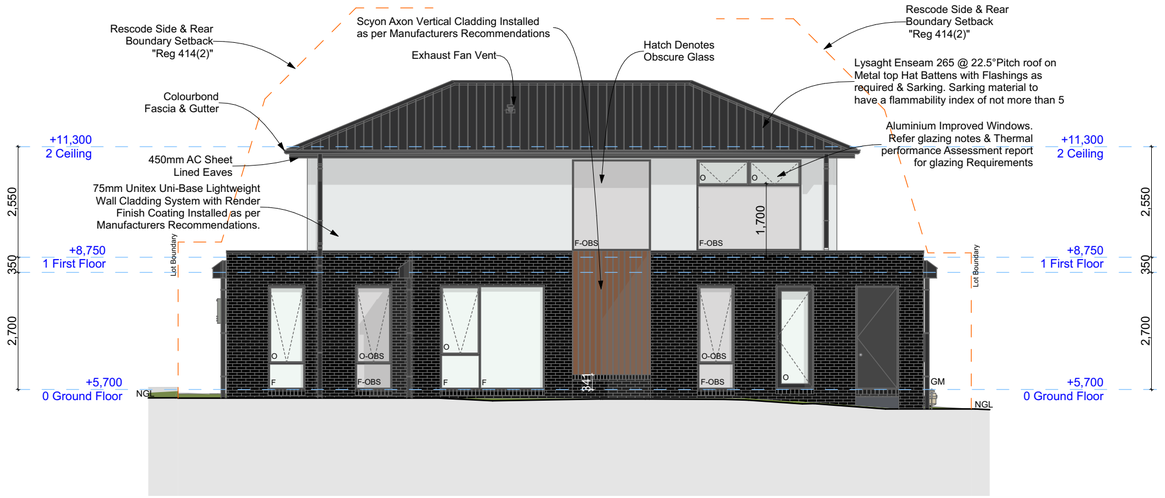
1:100 unless shown otherwise on A3:

REGISTERED Building Practitioner

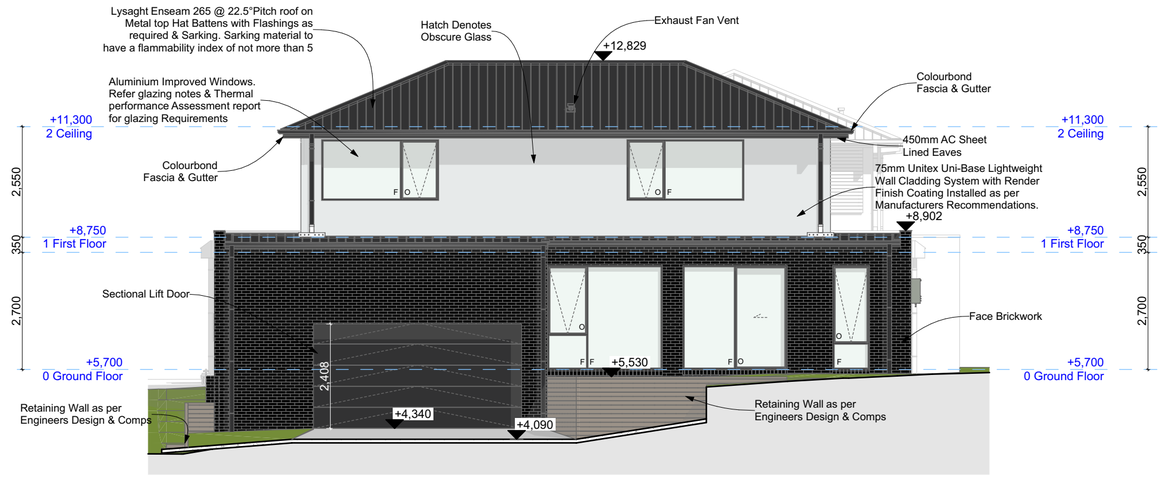
Design Matters Member

Revision: A

DRAWING NO. **WD08**



South West Elevation Unit 3 1:100



North East Elevation Unit 3 1:100

Timber Framing Specification

Member	Stress Grade	Size	Max Spacing	Max Span	Note:
Single Storey/Upper Storey					
Bottom Plates	MgP10	90x45			Untrenched
Top Plates	MgP10	90x45			Untrenched
External Ribbon Plate	MgP10	90x35			All Load Bearing Walls
Wall Studs	MgP10	90x35	600cc		
Lower Storey of a Double Storey					
Bottom Plates	MgP10	90x45			Untrenched
Top Plates	MgP10	2x90x45			Untrenched
Wall Studs	MgP10	90x45	450cc		All Load Bearing Walls
General Specifications					
External Jamb Studs	MgP10	90x45		1200	
	MgP10	2x90x45		2700	
	LVL	2x90x45		2700+	
Internal Jamb Studs	MgP10	90x45			
Lintels	Refer Span Tables and Engineering				
Noggings	Merch	70x35	1350cc		
Wall Bracing	Refer Engineering				
Roof Battens	F8	50x25	330cc		

Notes:
1. All work to be carried out in strict accordance with AS1684 "Residential Timber Framed Construction" and supplementary Tables.
2. Truss Roofs and/or Floor Trusses to be designed and installed as per Manufactures Recommendations.

HOUSE ENERGY RATING

Dwelling Address: UNIT 1, 17 Railway Parade, Seaford
Report By: Amy Gedge Accreditation: DMN/21/2022
DWELLING ENERGY RATING ACHIEVES

★★★★★★ 6.2

Climate Zone:	62	Moorabbin Airport	
Heating Load Limit:	115	Heating Load Actual:	98.8
Cooling Load Limit:	24	Cooling Load Actual:	19.1

ENERGY ASSESSMENT REPORT

	Type	Insulation Added
EXTERNAL WALLS	BRICK VENEER (MEDIUM)	R2.0 (EX GARAGE)
	RENDERED 75MM EPS (MEDIUM)	R2.0
	JH AXON CLAD (MEDIUM)	R2.0
	PARTIWALL	R2.0
INTERNAL WALLS	GARAGE	R2.0
GROUND FLOOR	SLAB ON GROUND	NIL
FIRST FLOOR	TIMBER JOISTS OVER GARAGE	R2.0
ROOF / CEILING	METAL CLAD (DARK)	R3.5 (EX GARAGE)

WINDOWS (COLOUR: MEDIUM)

WERS CODE	DESCRIPTION	U Value	SHGC
ECO-109-01	Al Sliding Door DG 4-12-4	3.76	0.62
ECO-101-01	Al Awning Window DG 4-12-4	3.51	0.59
ECO-111-01	Al Casement Window DG 4-12-4	3.69	0.53

SELF CLOSING EXHAUST FANS (INCLUDING IXL'S AND RANGEHOOD)
RECESSED DOWNLIGHTS ARE TO BE SEALED (EITHER BY FITTING OR APPROVED COVER)
SEAL ALL EXTERNAL DOORS, WINDOWS, GAPS, CRACKS, PLUMBING PENETRATIONS ETC
MINIMUM 2000L RAINWATER TANK CONNECTED TO ALL SANITARY FLUSHING SYSTEMS (MINIMUM ROOF CATCHMENT 50M2) OR AN APPROVED SOLAR HOT WATER SYSTEM.

HOUSE ENERGY RATING

Dwelling Address: UNIT 2, 17 Railway Parade, Seaford
Report By: Amy Gedge Accreditation: DMN/21/2022
DWELLING ENERGY RATING ACHIEVES

★★★★★★ 6.0

Climate Zone:	62	Moorabbin Airport	
Heating Load Limit:	115	Heating Load Actual:	108.5
Cooling Load Limit:	24	Cooling Load Actual:	16.2

ENERGY ASSESSMENT REPORT

	Type	Insulation Added
EXTERNAL WALLS	BRICK VENEER (MEDIUM)	R2.0 (EX GARAGE)
	RENDERED 75MM EPS (MEDIUM)	R2.0
	JH AXON CLAD (MEDIUM)	R2.0
	PARTIWALL	R2.0
INTERNAL WALLS	GARAGE	R2.0
GROUND FLOOR	SLAB ON GROUND	NIL
FIRST FLOOR	TIMBER JOISTS OVER GARAGE	R2.0
ROOF / CEILING	METAL CLAD (DARK)	R5.0 (EX GARAGE)

WINDOWS (COLOUR: MEDIUM)

WERS CODE	DESCRIPTION	U Value	SHGC
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RECESSED DOWNLIGHTS ARE TO BE SEALED (EITHER BY FITTING OR APPROVED COVER)
SEAL ALL EXTERNAL DOORS, WINDOWS, GAPS, CRACKS, PLUMBING PENETRATIONS ETC
MINIMUM 2000L RAINWATER TANK CONNECTED TO ALL SANITARY FLUSHING SYSTEMS (MINIMUM ROOF CATCHMENT 50M2) OR AN APPROVED SOLAR HOT WATER SYSTEM.

HOUSE ENERGY RATING

Dwelling Address: UNIT 3, 17 Railway Parade, Seaford
Report By: Amy Gedge Accreditation: DMN/21/2022
DWELLING ENERGY RATING ACHIEVES

★★★★★★ 6.0

Climate Zone:	62	Moorabbin Airport	
Heating Load Limit:	115	Heating Load Actual:	102.1
Cooling Load Limit:	24	Cooling Load Actual:	22.1

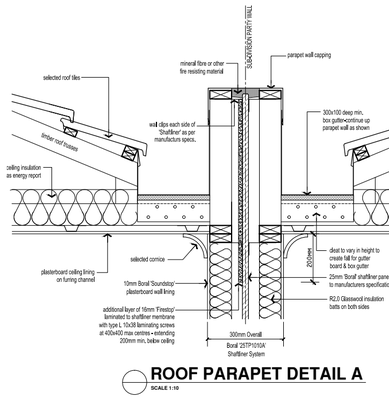
ENERGY ASSESSMENT REPORT

	Type	Insulation Added
EXTERNAL WALLS	BRICK VENEER (MEDIUM)	R2.5 (EX GARAGE)
	RENDERED 75MM EPS (MEDIUM)	R2.5
	JH AXON CLAD (MEDIUM)	R2.5
INTERNAL WALLS	GARAGE, LAUNDRY, POWDER & BATH	R2.5
GROUND FLOOR	SLAB ON GROUND	NIL
FIRST FLOOR	TIMBER JOISTS OVER LOWER	R2.0
ROOF / CEILING	METAL CLAD (DARK)	R6.0 (EX GARAGE)

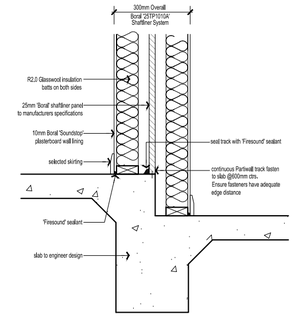
WINDOWS (COLOUR: MEDIUM)

WERS CODE	DESCRIPTION	U Value	SHGC
ECO-111-03	Al Casement Window DG 4-12Ar-4	3.59	0.53
ECO-101-03	Al Awning Window DG 4-12Ar-4	3.40	0.59
ECO-109-03	Al Sliding Door DG 4-12Ar-4	3.44	0.62
ECO-101-04	Al Awning Window DG 4ET-12Ar-4 (kitchen/living)	2.77	0.50
ECO-115-03	Al Fixed Window DG 4-12Ar-4	3.07	0.64

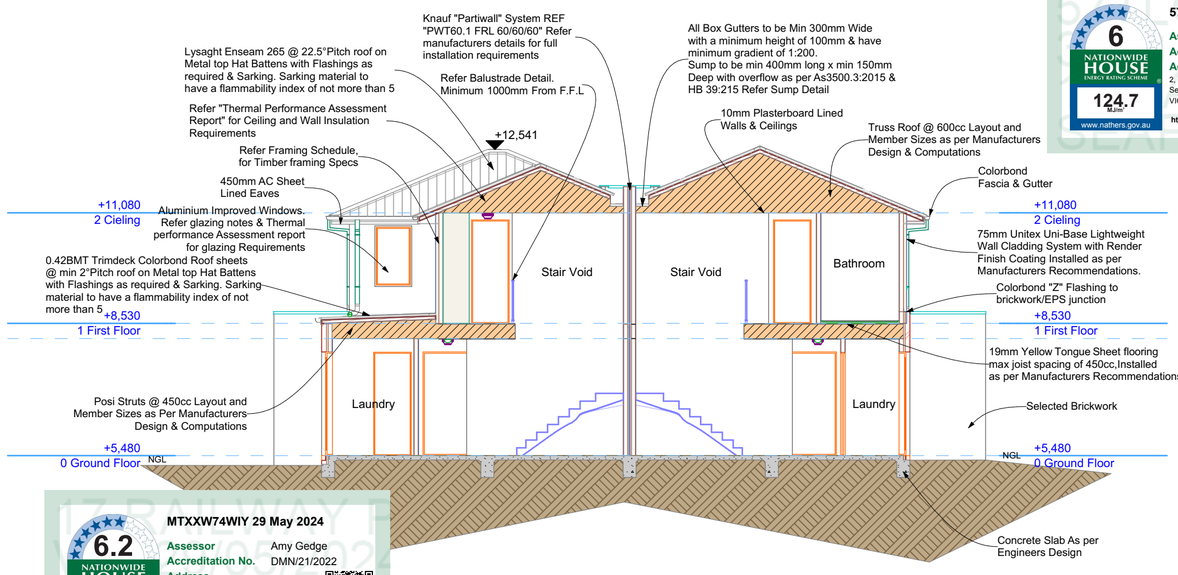
SELF CLOSING EXHAUST FANS (INCLUDING IXL'S AND RANGEHOOD)
RECESSED DOWNLIGHTS ARE TO BE SEALED (EITHER BY FITTING OR APPROVED COVER)
SEAL ALL EXTERNAL DOORS, WINDOWS, GAPS, CRACKS, PLUMBING PENETRATIONS ETC
MINIMUM 2000L RAINWATER TANK CONNECTED TO ALL SANITARY FLUSHING SYSTEMS
(MINIMUM ROOF CATCHMENT 50M2) OR AN APPROVED SOLAR HOT WATER SYSTEM.



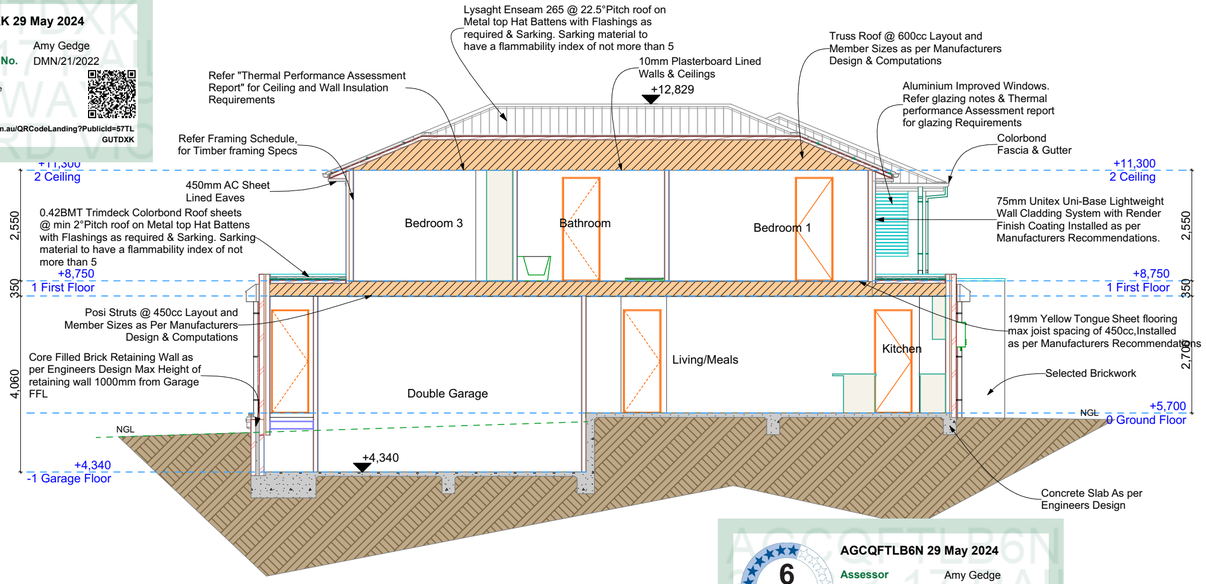
ROOF PARAPET DETAIL A
SCALE 1:10



STEP IN SLAB DETAIL B
SCALE 1:10



S-01 Building Section Unit 2 & Unit 1 1:100



S-02 Building Section Unit 3 1:100

NATIONWIDE HOUSE ENERGY RATING SCHEME
6
124.7 MJ/m²
www.nathers.gov.au

57TLGUTDXK 29 May 2024
Assessor Amy Gedge
Accreditation No. DMN/21/2022
Address 2, 17 Railway Parade Seaford VIC 3198
https://www.fr5.com.au/QRCodeLanding?PublicId=57TLGUTDXK

NATIONWIDE HOUSE ENERGY RATING SCHEME
6.2
117.9 MJ/m²
www.nathers.gov.au

MTXXW74WIY 29 May 2024
Assessor Amy Gedge
Accreditation No. DMN/21/2022
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NATIONWIDE HOUSE ENERGY RATING SCHEME
6
124.2 MJ/m²
www.nathers.gov.au

AGCQFTLB6N 29 May 2024
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E & U Bafto Corporation Pty Ltd T/As Creative House Plans

CLIENT : BEKIM QANIU & FATIME QANIU

SITE ADDRESS : Lot 1 No 17 Railway Parade SEAFORD 3198

PROJECT :
3 Double Storey Dwellings

DRAWING TITLE :
Elevations & Sections

Drawing Ref: Jobs/23-24/1S

Date:29/05/2024

1:100 unless shown otherwise on A3:

REGISTERED Building Practitioner

Design Matters Member

Revision: A

DRAWING NO.
WD09

FRL
LB 60/60/60
From both sides

SYSTEM DESCRIPTION

Side 1:
- Non fire resistant lining (refer to table)
- Timber framing
- 20mm min gap between timber frame and Fire Barrier
- Insulation (refer to table)

Fire Barrier:
- 1 x 25mm SHAFTLINER™ MOULDSTOP between 25mm H-studs @ 600mm centres

Side 2:
- Non fire resistant lining (refer to table)
- Timber framing
- 20mm min gap between timber framing and Fire Barrier
- Insulation (refer to table).

Figure 9: Concrete Slab Base

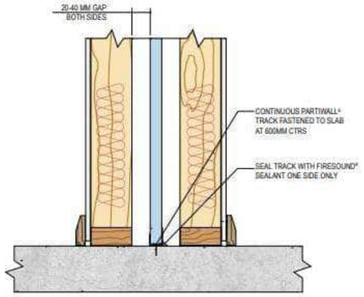


Figure 11: Step in Slab - Parallel 1

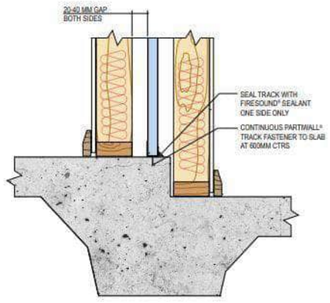


Figure 12: Step in Slab - Parallel 2

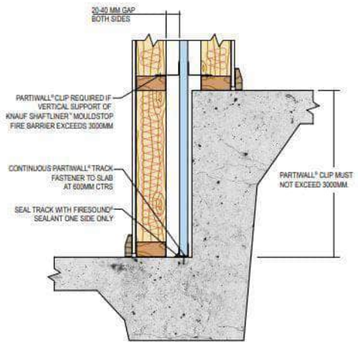


Figure 14: Floor/Wall Junction

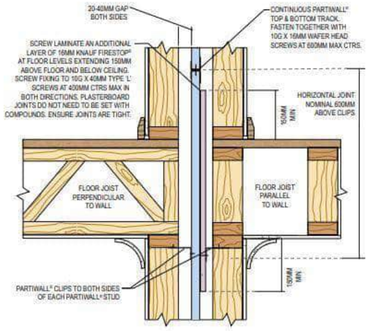
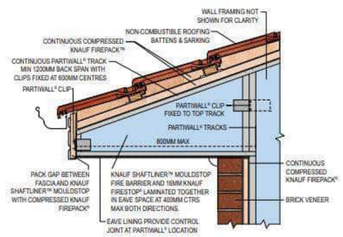


Figure 22: Eave Closure – Section View



Scan QR Code for full Installation Details of Knauf Partiwall Incl Full Junction Details

Figure 15: Pitched Roof Junction

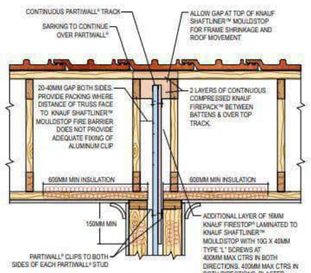


Figure 16: Parapet Roof Junction

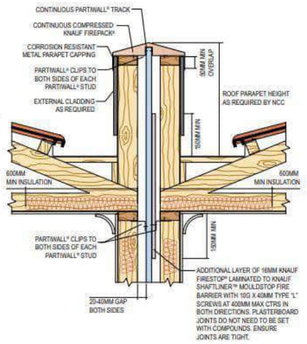


Figure 29: External to Internal PARTIWALL – Plan View

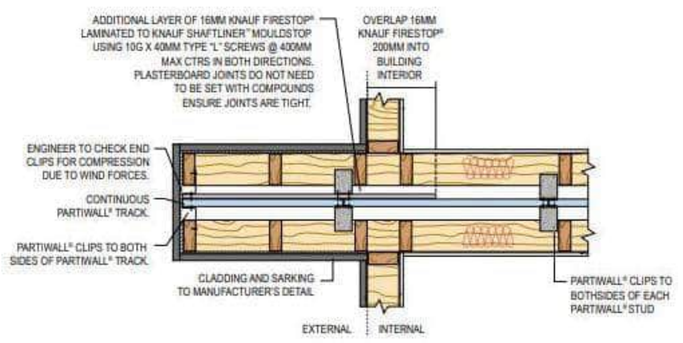
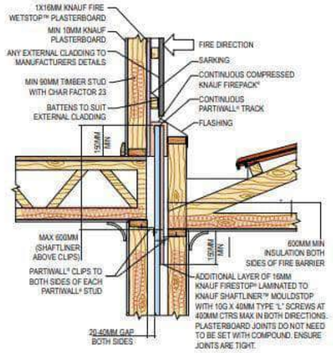
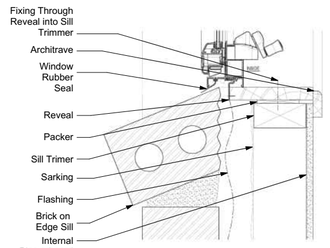
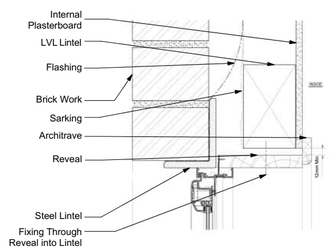


Figure 24: OUTRWALL Vertical Transition – Any Cladding

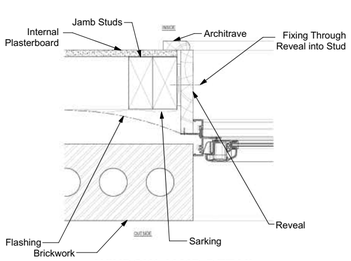




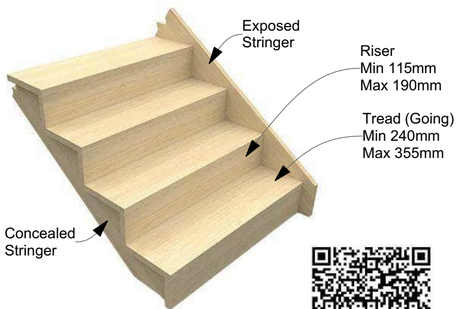
WINDOW SILL DETAIL BRICK VENEER- TYPICAL



WINDOW HEAD DETAIL BRICK VENEER-TYPICAL



WINDOW JAMB DETAIL BRICK VENEER- TYPICAL



Scan QR code full Full NCC Stair details and Figures

NCC Part11.2 Stairway Construction

(1) A stairway must be designed to take loading forces in accordance with AS/NZS 1170.1 and must have—
- a) not more than 18 and not less than 2 risers in each flight; and
- b) goings (G), risers (R) and a slope relationship quantity (2R + G) in accordance with Table 11.2.2a, except as permitted by (2) and 3); and
- c) constant goings and risers throughout each flight, except as permitted by (3) and (4), and the dimensions of goings (G) and risers (R) in accordance with (1), (2) and (3) are considered constant if the variation between —
  - i)adjacent risers, or between adjacent goings, is not more than 5 mm; and
  - ii)the largest and smallest riser within a flight, or the largest and smallest going within a flight, is not more than 10mm; and
- d) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and
- e)treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 storeys.

(2) In the case of a stairway serving only non-habitable rooms, such as attics, storerooms and the like that are not used on a regular or daily basis—
- a) the going (G), riser (R) and slope relationship quantity (2R + G) in accordance with Table 11.2.2a may be substituted with those inTable 11.2.2b; and
- b) need not comply with (1)(d).

(3)In the case of a stairway with winders—
- a) a maximum of 3 consecutive winders in lieu of a quarter landing in a flight and a maximum of 6 consecutive winders in lieu of a half landing in a flight; and
- b) the going (G) of all winders in lieu of a quarter or half landing may vary from the going of the straight treads within the same flight provided that the going (G) of such winders is constant.

(4) The point of measurement of the going (G) in the slope relationship quantity (2R + G) for tapered treads and treads in spiral stairways as described in Table 11.2.2a (see Figure 11.2.2a, Figure 11.2.2b and Figure 11.2.2c) must be—
- a) for tapered treads, other than treads in a spiral stairway—
  - i) not more than 1 m in width, the middle of the unobstructed width of the stairway (see Figure 11.2.2b); and
  - ii) more than 1 m in width, 400 mm from the unobstructed width of each side of the stairway (see Figure 11.2.2c); and
- b) for treads in spiral stairways, the point seven tenths of the unobstructed width from the face of the centre pole or support towards the handrail side (see Figure 11.2.2d and Figure 11.2.2e).

(5) Riser and going dimensions must be measured in accordance with Figure 11.2.2f.

Table 11.2.2a Riser and going dimensions (mm)

Stair type	Riser (R) (see Figure 11.2.2f)		Going (G) (see Figure 11.2.2f)		Slope relationship (2R+G)	
	Max	Min	Max	Min	Max	Min
Stairs (other than spiral)	190	115	355	240	700	550
Spiral	220	140	370	210	680	590

Table 11.2.2b Riser and going dimensions (mm) — stairways serving non-habitable rooms used infrequently

Riser (R)		Going (G)		Slope relationship (2R+G)	
Max	Min	Max	Min	Max	Min
225	130	355	215	700	540

Window Notes

* All windows where the floor level is higher than 2m above the surface beneath require the affected window to be fitted with either a device to restrict the window opening, or a suitable screen, so a 125 mm diameter sphere (representing the size of a young child's head) cannot pass through. The device or screen must also be able to withstand an outward horizontal force of 250 N.
* All Window sizes are nominal only. Actual sizes will vary according to each Manufacturer. Sizes noted on these plans are not to be used for stud openings, Manufacturer is to supply stud opening schedules to Builder/Carpenter.
* Obscure & Safety Glass as noted on plans and hatched on elevations.
* All glazing to refer to NatHERS certificate for minimum U & SHGC Values

MTXXW74WIY 29 May 2024
Assessor: Amy Gedge
Accreditation No.: DMN/21/2022
Address: 1, 17 Railway Parade Seaford VIC 3198
6.2 MJ/m² — 117.9 MJ/m² — www.nathers.gov.au
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Accreditation No.: DMN/21/2022
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AGCQFTLB6N 29 May 2024
Assessor: Amy Gedge
Accreditation No.: DMN/21/2022
Address: 3, 17 Railway Parade Seaford VIC 3198
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https://www.fr5.com.au/QRCodeLanding?PublicId=AGCQFTLB6N

BAL 12.5 CONSTRUCTION SUMMARY

Refer Section 5 As3959-2009 for Detailed Bal 12.5 Construction Methods and additional construction options

SUBFLOOR SUPPORTS
No Special Construction Requirements

FLOORS
No Special Construction Requirements

EXTERNAL WALLS
Parts of Walls less than 400mm Above Ground or Decks to be of Non-Combustible Material, 6mm Fibre Cement Clad or Bushfire Resistance/Naturally Resistant Timber

VENTS & WEEPHOLES
Vents & Weepholes in external walls shall be screened with a mesh with a maximum aperture of 2mm, made of corrosion resistant steel, Bronze or Aluminum, except where the vents and Weepholes are less than 3mm or are located in an external wall of a subfloor space.

EXTERNAL WINDOWS
- All Openings must be screened internally or externally with corrosion resistant metal screens with max aperture of 2mm.
- Exposed external window hardware to be made from metal.
- Minimum 4mm Grad A Safety Glass for all Glazing within 400mm of ground window frames less than 400mm from the ground or other structure to be made from Bushfire-Resisting Timber, Timber with a Density of 650Kg/M³ of greater or metal.

EXTERNAL DOORS
- All side hung doors must be of solid Bushfire resisting timber min 35mm thickness for the first 400mm above ground Level.
- Side hung doors shall be tight fitting to the door frame.
- Side hung doors shall have weather strips and draught excluders and seals fitted.
- Glass sliding doors as per window requirements excluding the need for screens to the openable portion.
- Panel lift, tilt doors or side-hung doors shall be fitted with suitable weather strips, draught excluders, draught seals or guide tracks, as appropriate to the door type, with a maximum gap no greater than 3mm.
- Roller doors shall have guide tracks with a maximum gap no greater than 3mm and shall be fitted with a nylon brush that is in contact with the door (see Figure D4, Appendix D).

ROOFS
- Must be of Non Combustible tiles or sheets
- All roofs must be fully sarked with a flammability index of not more than 5

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CLIENT : BEKIM QANIU & FATIME QANIU

SITE ADDRESS : Lot 1 No 17 Railway Parade SEAFORD 3198

PROJECT : **3 Double Storey Dwellings**

DRAWING TITLE : **Notes**

Drawing Ref: Jobs/23-24/1S

Date:29/05/2024

1:100 unless shown otherwise on A3:

REGISTERED Building Practitioner

Design Matters Member

Revision: A

DRAWING NO. **WD10**

AS3740- Internal Waterproofing as it applies to Melbourne Class 1 Buildings

AS3740 – Internal Wet areas Waterproofing as it applies to Melbourne, Class 1 buildings

Structure Movement and Waterproofing
Generally movement in the wall and floor structure is caused by contraction, expansion or settlement. Anticipation that structural movement will occur from frame, masonry and panel movement, particularly at joints, which should be catered for in the design. The waterproofing should cover the structural movement, preventing water damage to substrate, adjoining walls, or flooring. Providing a secure 'envelope' to protect the wet area.

1. Materials
Materials used in the construction and waterproofing of bathrooms and laundries must be suitable for purpose.

Membranes
Liquid applied waterproofing membranes refer to Class ii and Class iii membranes and approved to requirements of AS4858
Liquid applied membranes must be adequately cured for their intended use.

Water- resistant Substrates
Concrete AS3600, Fibre Cement Sheeting AS2908.2, Water-resistant Plasterboard sheeting AS2588, Masonry AS3700 and Structural Plywood AS2269 for use on walls and floors to comply with Australian Standards. Particle board flooring is no longer allowable as a substrate under the N.C.C 2022 or AS 3740:2021

Water- resistant Surface materials
Product surfaces deemed to be water resistant for walls and floors include; Thermosetting laminated sheet AS2924.1, Pre-decorated fibre cement sheeting AS2908.2, Water-resistant flexible sheet (vinyl or linoleum) and tiles used in conjunction with water- resistant Substrates (above), plus Sanitary Grade acrylic wall linings.

Preformed Shower Bases and enclosures
Materials used in the manufacture of prefinished shower bases and enclosures must render the finished product waterproof.

Sealants, Adhesives and Sheet Fastenings
All products need to be compatible with adjacent materials, mould-resistant, waterproof and appropriately flexible.

2. Installation
These notes outline the details for installation of waterproof and water-resistant materials in bathrooms and laundries.

Shower Floor Falls
Category 1 -Fall to the floor waste in a shower area, the minimum shall be 1:80 both Enclosed and Unclosed shower areas
Category 2 -Floor waste is installed adjacent to a shower area. Minimum fall shall be 1:80
Category 3 -Bathroom outside of the enclosed shower withno floor waste in the wet area. No requirements for fall and water shall be retained inside the wet area.

Preformed Shower Bases
Installation of preformed shower bases need to be adequately supported to prevent distortion or cracking and be sufficiently recessed into the wall to allow the water-resistant surface materials to pass down inside the perimeter rebate.

Edge detail for baths with showers over them
Baths with an integral vertical upstand lip along the side of the bath walls require to be recessed to enable the junction to be waterproofed. Baths without an integral edge require full waterproofing of the walls and floor area around and under the bath.

Baths and Spas
Installation of baths and spas need to be adequately supported to prevent distortion or cracking and be sufficiently recessed into the wall to allow the water-resistant surface materials to pass down inside the rim.

Perimeter Flashing
A junction where waterproofing to waterproofing surfaces meet, the waterproofing is to be continuous across the junction and incorporate an appropriate bond breaker. Where the perimeter flashing to wall/floor surfaces they should be continuously sealed (usually with bond breaker), having the vertical leg a minimum of 25mm above the finished tile level or 150mm above the substructure (except doorways) and horizontal leg a minimum width of 40mm. A water stop with a vertical leg finishing flush with the finished floor level is to be installed at floor level openings. Protecting water migrating to non-wet areas. Where the shower rose is ceiling mounted it shall be applied to the junctions and terminate to the full height of the wall.

Vertical flashing for shower wall junctions
Vertical flashing can be external or internal, with a requirement to terminate a minimum of 1800mm above the finished floor level.

Penetrations in Shower Areas
Typical penetrations like taps, shower nozzles, recess soap holder etc. are to be waterproofed by sealing with proprietary flange system or sealant.

Shower Area Step Down
The highest finished floor level in the shower area is to be stepped down lower than the finished floor level outside the shower. Figure 4.8.2(c)

Shower Area Hob Construction
Suitable materials for the hob construction. Installation starts with all gaps, joints and intersections of the hob substrate to be made flush before application of the membrane system. Figure 4.6.2

Enclosed Shower Area without Hobs or set-down
At the extremity of the shower area:
* Where a shower screen is to be installed a water stop is to be installed with a vertical leg finishing a minimum of 5mm above the finished floor level
*Where the water stop meets the wall, the junction is to be waterproofed.

Shower Area unenclosed
Unenclosed showers are to have a water stop installed with the vertical leg finishing flush with the finished surface of the floor, having junctions waterproofed, in two scenarios:
* When the shower device restricts splashing (shower screen), it is advisable to have a membrane installed below and above the screed to fall.
*When a shower has no restricting splashing (example disabled shower) the water stop is required to be a minimum of 1500mm from the wall connection of the shower rose.

Bond Breaker Application
Installation of bond breakers of liquid applied membranes should be included at all wall/floor, hob/wall, and movement joints where the membrane is bonded to the substrate.

Class II Membranes: (medium extensibility) Either the membrane will not bond to the tape or the tape will have elastic properties similar to the membrane. Minimum bond breaker tape to bridge joint opening up to 5mm is 35mm.

Class III Membranes (high extensibility) allow the membrane to have even thickness. Minimum bond breaker tape to bridge joint opening up to 5mm is 12mm Figure 4.10

Vertical membrane termination
The liquid applied membrane is to be applied over the floor substrate and up the vertical face of the wall:
*Showers with hobs and step downs a minimum height of 150mm above the finished floor level
* Hobless Showers, a minimum height of 150mm above the finished floor level

Termination to Drainage flange
The drainage flange is to be installed with the waterproofing membrane termination into the flange to provide a waterproof connection. Figures 4.3.1(b)

Termination to Drainage Channel
The waterproof drainage should be continuous, with the liquid applied membrane covering the drainage channel, with a minimum horizontal termination of 50mm on the horizontal surface. Figures 4.3.2

Inspection and Acceptance Test
On completion of the installation of a membrane system, inspection and acceptance testing must be conducted. In addition to the visual inspection, either the dry film thickness test (DFT) by non-destructive means or a controlled water test for a minimum of 24 hours duration is required.

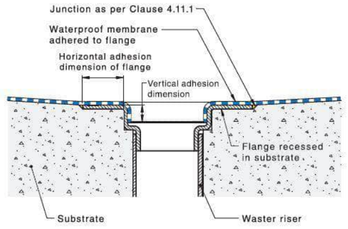
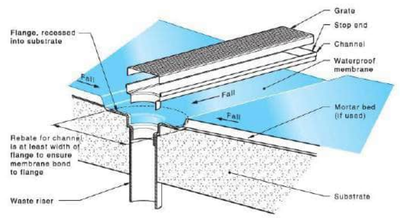


Figure 4.3.1(B) — Typical membrane termination at leak control flange with down leg



NOTE Trim should not restrict substrate drainage at linear drain.

Figure 4.3.2 — Linear drain single outlet centrally located

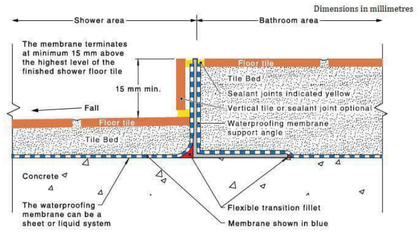


Figure 4.8.2(C) — Step-down shower waterstop and cover angle

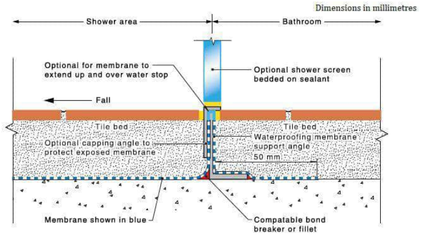
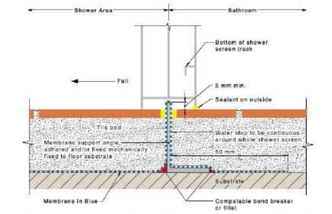


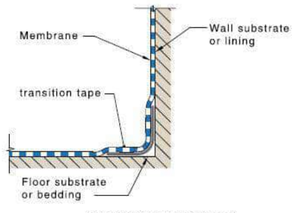
Figure 4.8.2(D) — Shower waterstop and cover angle



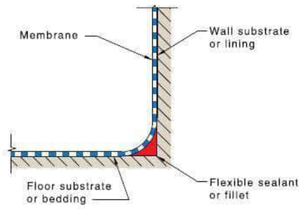
NOTE 1 Some shower screen extrusions do not permit the waterstop extending into a rebate, A channel section may be needed to be installed over the waterstop angle with the shower screen placed on top of the channel including return panels.

NOTE 2 The application of sealant is intended to prevent water from leaving the shower area. The application may be on the inside *and/or* outside face.

Figure 4.8.4 — Typical hobless construction

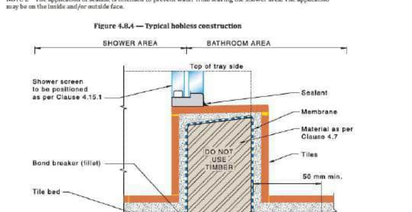


(a) Class I or II membrane



(b) Class III membrane

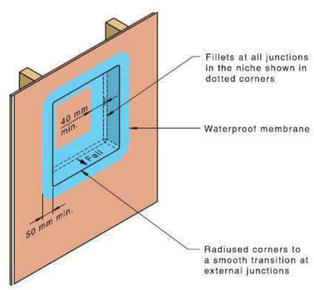
Figure 4.10 — Typical transition tape details



NOTE 1 The area outside the shower area should be designed as a Category 3.

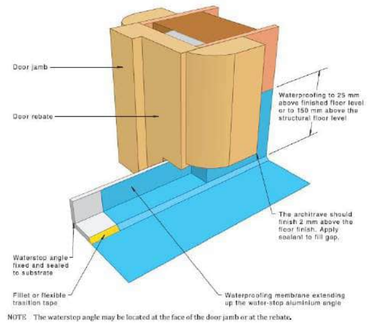
NOTE 2 If the area outside the shower area is a Category 2 wet area, consideration should be given to extending the membrane across the whole of the floor.

Figure 4.6.2 — Shower with a hob liquid membrane



NOTE Bond breaker or fillet to suit the membrane at all internal junctions in the niche shown in yellow.

Figure 4.12.4 — Niche in shower wall framework



NOTE The waterstop angle may be located at the face of the door jamb or at the rebate.

Figure 4.9.1(A) — Example of liquid waterproofing at door opening framework

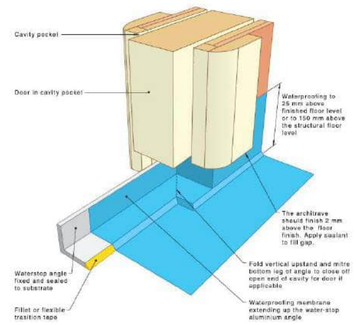


Figure 4.9.1(B) — Waterproofing at door opening cavity slider

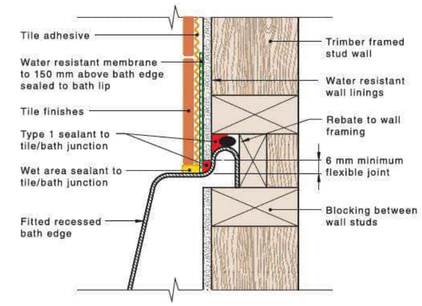


Figure 4.13.2.2(D) — Bath with no shower over it — Fitted bath — Timber-framed wall

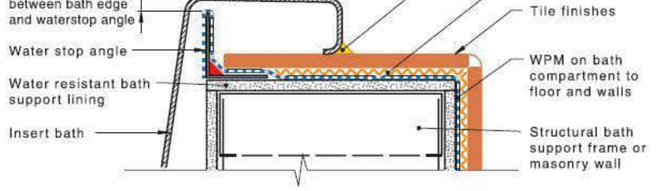


Figure 4.13.3(E) — Shower over bath — Insert bath — Bath compartment wall

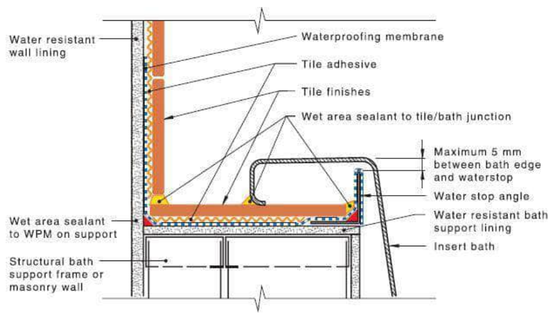


Figure 4.13.3(D) — Insert bath — Tile surround

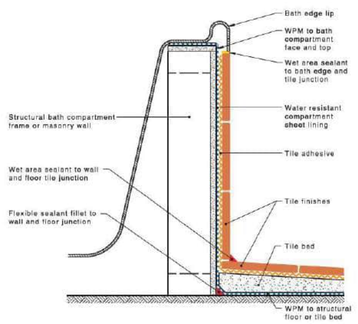


Figure 4.13.6 — Spa and bath compartment detail at bath face

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SITE ADDRESS : Lot 1 No 17 Railway Parade SEAFORD 3198

PROJECT :
3 Double Storey Dwellings

DRAWING TITLE :
Waterproofing Details

Drawing Ref: Jobs/23-24/1S

Date:29/05/2024

1:100 unless shown otherwise on A3:

REGISTERED Building Practitioner
Design Matters Member

Revision: A

DRAWING NO.
WD11