

ENERGY EFFICIENCY REPORT

BASIX® Thermal Comfort Simulation Assessment

SITE ADDRESS

Lot 1 (#150) Church Lane CRANEBROOK 2750

LOCAL GOVERNMENT AUTHORITY

Penrith City Council

CLIENT

Miranda and Mauro Steffan

COMMISSIONED BY

G.J. Gardner Homes

ASSESSMENT DATE

15/03/2021

DEPOSITED PLAN

1231299

DWELLING TYPE

Double Storey

REFERENCE NUMBER

:220444

Document Set ID: 9553476 Version: 1, Version Date: 20/04/2021

PROJECT CERTIFICATION SUMMARY

DESIGN AND APPROVED SOFTWARE INFORMATION

SIMULATION ENGINE Chenath Engine v3.21 Dwelling Areas (m²)

EXPOSURE Suburban INTERNAL AREAS (m²) 407.32
ORIENTATION: 202 OUTDOOR AREAS (m²) 80.07

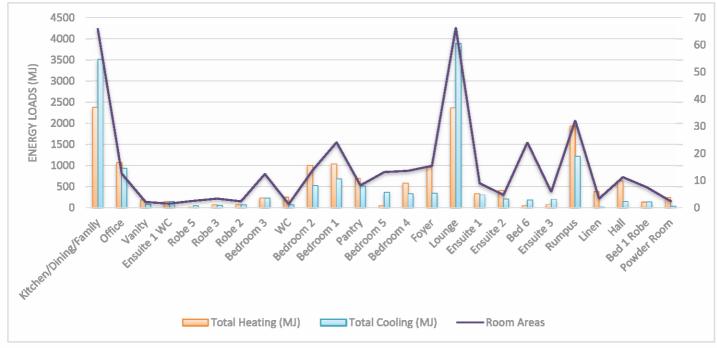
NatHERS CLIMATE ZONE: 28 GARAGE/CARPORT (m²) 63.44
BCA (NCC) CLIMATE ZONE: 6 TOTAL: 550.83

ASSESSMENT CALCULATIONS & SOFTWARE RESULTS

TARGET	(MJ/m².pa)	PROPOSED	(MJ/m².pa)	BUILD EFFICIENCY	BENCHMARK
Heating:	55.7	Heating:	55.6	PASS:	0.2%
Cooling:	56.2	Cooling:	51.8	PASS:	8.1%
Total:	111.9	Total:	107.4		

DWELLING THERMAL PERFORMANCE PER ZONED AREAS

The heating and cooling loads indicated are the simulated annual energy usages (MJ) for this home. The higher the load, the more energy needed to achieve thermal comfort.



STATEMENT OF COMPLIANCE

I / We certify that we are specialists in the relevant discipline and the following design documents comply with the relevant requirements of the National Construction Code (NCC Volume One/Two as applicable) in relation to thermal performance and the relevant Australian Standards specified in this report.

ASSESSOR NAME: SIGNATURE:

RELEVANT QUALIFICATION STATEMENT

Certifiicate IV in NatHERS Assessment (Credential Number: TRF0002560) Residential Building Thermal Performance Assessment (91318NSW) Course

Assessor Accrediting Organisation (AAO) Accreditation Number: VIC/BDAV/14/1662 | ABSA/61846



Reference Number: :220444

Assessment Date: 15/03/2021

Reference Number: :220444

BUILDING SPECIFICATION SUMMARY

EXTERNAL WALLS

	CONSTRUCTION TYPE	INSULATION	NOTES
	Brick Masonry	None	To the Front Elevation Garage wallS (as per drawings)
EXTERNAL WALLS	Brick Veneer	None	Location as per Drawings
EXTERNAL WALLS	Brick Veneer	R2.5 Batts	Location as per Drawings
	Framed	R2.5 batts (with wall wrap)	Location as per Drawings

ADDITIONAL NOTES

Location of Construction Materials as per drawings | Colours as per attached addenda | No insulation to external Garage walls

INTERNAL WALLS

	CONSTRUCTION TYPE	INSULATION	NOTES
INTERNAL WALLS	Framed	R2.5 Batts	To the Garage internal walls only
	Framed	None	Throughout the remaining internal walls

ADDITIONAL NOTES

R2.5 Batts to Internal Garage walls only

107.4 Power Power

ROOF AND CEILING

	CONSTRUCTION TYPE	INSULATION	NOTES
	Colorbond (un-ventilated)	R1.3 Roof Blanket	Approx. 5"0' Roof Pitch (location as per drawings)
ROOF	Colorbond (ventilated)	R1.3 Roof Blanket	Approx. 25"0' Roof Pitch (location as per drawings)
	Metal Deck	R1.3 Roof Blanket	Approx. 3"0' Roof Pitch (location as per drawings)
CEILING	Plasterboard	R6.0 Insulation	Main House Area Only
	Plasterboard	None	To the Garage Only

ADDITIONAL NOTES

FLOOR

	CONSTRUCTION TYPE	INSULATION	NOTES
FLOOR	300mm Waffle 85mm Slab	Integrated	Throughout Ground Floor
	Timber Suspended	R4.0 Batts	Throughout Upper Floor
ADDITIONAL MOTES		i	Annala I Clab IIIII Clara

ADDITIONAL NOTES

Floor Coverings modelled as per Drawings and NatHERS Protocols | Slab 'H1' Class

GLASS TYPE	COLOUR	FRAME	U _w VALUE	SHGC	NOTES
Standard	Clear	Aluminium	6.43	0.76	Bradnams Sliding Windows
Standard	Clear	Aluminium	6.34	0.75	Bradnams Sliding Doors
Standard	Clear	Aluminium	6.85	0.64	Bradnams Awning Windows
Standard	Clear	Aluminium	6.70	0.57	Laundry door: DG
Standard	Clear	Aluminium	6.15	0.74	Bradnams Fixed Windows
Standard	Clear	Aluminium	6.05	0.62	Bradnams Hinged Doors
Standard	Clear	Aluminium	6.07	0.60	Bradnams Louvre Windows
Double-Glazing	Clear	Aluminium	4.39	0.61	DG4

Note: Only a +/-5% SHGC tolerance is allowed with this rating. NB: This tolerance ONLY applies to SHGC, the U-value can always be lower but not higher than the values stated in the report. If any of the windows selected are outside the 5% tolerance then this certificate is no longer valid and the dwelling will need to be rerated to confirm compliance.



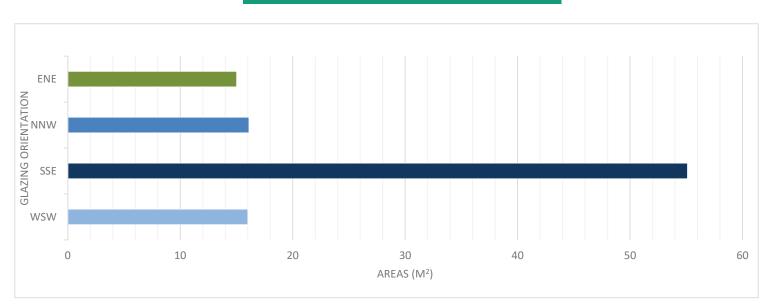
Document Set ID: 9553476

^{*}Roof has been modelled as unventilated as per NatHERS Tech Notes | Roof Colour: C/B Monument

Assessment Date: 15/03/2021

Reference Number: :220444

GLAZING AREA DIRECTIONS



The chart above indicates the direction of all glazed doors and windows on the external envelope of the dwelling. To increase the thermal performance of the dwelling:

- 1. Maximise unsheltered northern-aspect glazing.
- 2. Keep west-facing glazing as small as possible: total window area should be less than 5% of the home's total floor area.
- 3. Keep south-facing glazing reasonably small: total window area should be less than 5% of the home's total floor area. Maximise the openable area if possible.
- 4. Keep east-facing glazing to a modest size: total window area should be less than 8% of the home's total floor area

Refer to the floor and elevation plans for shading location

AREA WITHIN THE CLASS 1 BUILDING

AREA WITHIN THE OUTDOOR AREAS

LIGHTING/PENETRATION CALCULATIONS

ARTIFICIAL LIGHTING CALCULATION ALLOWANCES

Development Total	2036.6 Watts	Area Wattage Allowance 5.0 W/m ²
APEA WITHIN THE CLASS 10 BUILDING	63 44 m ²	

407 32 m²

Development Total 190.3 Watts Area Wattage Allowance 3.0 W/m²

80.07 m²

Development Total 320.3 Watts Area Wattage Allowance 4.0 W/m²

CEILING INSULATION PENETRATION ALLOWANCE

CLASS 1 MAXIMUM PENETRATION ALLOWANCE CLASS 1 MAXIMUM PENETRATION AREA (m²)

0.5% TOTAL INSULATED CEILING AREA 2.04

The clearance required around downlights by "Australian Standard AS/NZS 3000 – 2007 Electrical Installations" (AS/NZS 3000), introduces a significant area of uninsulated ceiling and therefore increases heat loss and gain through the ceiling.

If approved fireproof downlight covers, which can be fully covered by insulation, are specified and noted on the electrical plan by the building designer or architect, then there is no need to allow for the ceiling penetration



Document Set ID: 9553476

IVCAFDWZGC 16 Mar 2021

Assessment Date: 15/03/2021 Reference Number: :220444

NSW ADDITIONS: BUILDING FABRIC THERMAL INSULATION

NSW 3.12.1 APPLICATION OF NSW PART 3.12.1

- (a) Compliance with NSW 3.12.1.1 satisfies NSW P2.6.1(a) for thermal insulation and thermal breaks.
- (b) NSW PART 3.12.1 only applies to thermal insulation in a Class 1 or 10 building where a development consent specifies that the insulation is to be provided as part of the development.
- (c) In (b), the term development consent has the meaning given by the Environmental Planning and Assessment Act 1979.
- (d) The Deemed-to-Satisfy Provisions of this Part for thermal breaks apply to all Class 1 buildings and Class 10a buildings with a conditioned space.

NSW 3.12.1.1 COMPLIANCE WITH BCA PROVISIONS

- (a) Thermal insulation in a building must comply with the national BCA provisions of 3.12.1.1.
- (b) A thermal break must be provided between the external cladding and framing in accordance with national BCA provisions of—
 - (i) 3.12.1.2(c) for a metal framed roof; and
 - (ii) 3.12.1.4(b) for a metal framed wall.
- (c) Compensation for reduction in ceiling insulation must comply with the national BCA provisions of 3.12.1.2(e).
- (d) A floor with an in-slab or in-screed heating or cooling system must comply with the national BCA provisions of—
 - (i) 3.12.1.5(a)(ii), (iii) and (e) for a suspended floor; or
 - (ii) 3.12.1.5(c), (d) and (e) for a concrete slab-on-ground.

BUILDING SEALING & SERVICES

NSW 3.12.3 APPLICATION OF NSW PART 3.12.3

- (a) Compliance with NSW 3.12.3.1 satisfies NSW P2.6.1(b) for building sealing.
- (b) NSW Part 3.12.3 is not applicable to—
 - (i) existing buildings being relocated; or
 - (ii) Class 10a buildings-
- (A) without a conditioned space; or
- (B) for the accommodation of vehicles; or
- (iii) parts of buildings that cannot be fully enclosed; or
- (iv) a permanent building opening, in a space where a gas appliance is located, that is necessary for the safe operation of a gas appliance; or
- (v) a building in climate zones 2 and 5 where the only means of air-conditioning is by using an evaporative cooler.

NSW 3.12.3.1 COMPLIANCE WITH BCA PROVISIONS

The sealing of a building must comply with the national BCA provisions 3.12.3.1 to 3.12.3.6.

NSW 3.12.5 SERVICES: APPLICATION OF NSW PART 3.12.5

- (a) Compliance with NSW 3.12.5.1 satisfies NSW P2.6.2 for services.
- (b) NSW Part 3.12.5 is not applicable to existing services associated with existing buildings being relocated.

NSW 3.12.5.1 COMPLIANCE WITH BCA PROVISIONS

Services must comply with the national BCA provisions 3.12.5.0 to 3.12.5.3.





1300 850 228

Nationwide House Energy Rating Scheme NatHERS Certificate No. IVCAFDWZGC

Generated on 16 Mar 2021 using FirstRate5: 5.3.0a (3.21)

Property

Lot 1 (#150) Church Lane CRANEBROOK, Penrith City Council,

Address

NSW, 2750

Lot/DP

1/1231299

NCC Class*

Class 1a

Type

New Home

Plans

Main plan 220444 | 15/03/2021

Prepared by

G.J. Gardner Homes

Construction and environment

Assessed floor area (m²)* Exposure type
Conditioned* 319.4 suburban

Unconditioned* 12 **NatHERS climate zone**Total 386.9 28, Penrith City Council

Garage 55.5



Name Claude-Francois Sookloll

Business name Energy Advance

Email energy@energyadvance.com.au

Phone 1300 850 228

Accreditation No. DMN/14/1662

Assessor Accrediting Organisation

DMN

Declaration of interest Declaration completed: no conflicts



Thermal performance

Heating Cooling

55.6

51.8

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.

Verification

To verify this certificate, scan the QR code or visit https://www.fr5.com.au /QRCodeLanding?PublicId=IVCAFDWZGC 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?

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

BCA Climate Zone 6

Eaves indicated by the 'Horizontal shading feature* maximum projection (mm)' may not be directly opposing the respective wall (i.e. some eaves may be horizontally offset)

Perimeter Insulation has not been included in the modelling of this dwelling

Window and glazed door type and performance

Default* windows

				Substitution tolerance ranges		
Window ID	Window description	Maximum U-value*			SHGC upper limit	
ALM-001-01 A	Aluminium A SG Clear	6.7	0.57	0.54	0.6	

Custom* windows

				Substitution to	lerance ranges
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
BRD-081-16 A	Signature Awning Window 100 SG 4Clr	6.85	0.64	0.61	0.67
BRD-020-01 A	Al Sliding Door SG 4Clr	6.34	0.75	0.71	0.79
BRD-001-01 A	ESS Sliding Window (52mm) SG 3Clr	6.43	0.76	0.72	0.8
BRD-030-01 A	ESS Hinged Door (100mm) SG 4Clr	6.05	0.62	0.59	0.65
BRD-022-08 A	Al Sliding Door DG 4/6/4	4.39	0.61	0.58	0.64
BRD-041-01 A	SIG Fixed Lite Externally Glazed (125mm) SG 4Clr	6.15	0.74	0.7	0.78



BRD-043-01 A

SIG Louvre Window (125mm) SG 6Clr

6.07

0.6

0.57

0.63

Window and glazed door Schedule

	giazoa aooi		Haimbt	\A/: - 4 -				Window
Location	Window ID	Window no.	Height (mm)	Width (mm)	Window type	Opening %	Orientation	shading device*
Garage	BRD-081-16 A	W13	2050	850	awning	90.0	WSW	No
Garage	BRD-081-16 A	W14	2050	850	awning	90.0	WSW	No
Garage	BRD-020-01 A	DG6	2110	1810	sliding	45.0	SSE	No
Laundry	BRD-001-01 A	W12	1200	610	sliding	45.0	WSW	No
Laundry	ALM-001-01 A	DG - Glazing	800	820	casement	100.0	WSW	No
Foyer	BRD-081-16 A	W1 (Lower)	1700	750	awning	45.0	NNW	No
Office	BRD-081-16 A	W3	1800	750	awning	90.0	NNW	No
Office	BRD-081-16 A	W4	1800	750	awning	90.0	NNW	No
Office	BRD-081-16 A	W2	1800	750	awning	90.0	WSW	No
Ensuite 3	BRD-081-16 A	W5	1800	600	awning	60.0	NNW	No
Ensuite 3	BRD-081-16 A	W6	1460	600	awning	90.0	ENE	No
Bedroom 5	BRD-030-01 A	DG1	2340	1640	casement	100.0	ENE	No
Media	BRD-081-16 A	W7	600	2410	awning	90.0	ENE	No
Pantry	BRD-001-01 A	W11	1460	1570	sliding	45.0	WSW	No
Rumpus	BRD-081-16 A	W9	2050	850	awning	90.0	WSW	No
Rumpus	BRD-081-16 A	W10	2050	850	awning	9.0	WSW	No
Rumpus	BRD-022-08 A	DG4	2410	3216	sliding	60.0	SSE	No
Kitchen/Dining/- Family	BRD-081-16 A	W8	2040	2410	awning	60.0	ENE	No
Kitchen/Dining/- Family	BRD-020-01 A	DG3	2400	4300	sliding	45.0	SSE	No
Kitchen/Dining/- Family	BRD-020-01 A	DG2	2410	3216	sliding	60.0	SSE	No
Lounge	BRD-041-01 A	W1 (Upper)	1035	750	fixed	0.0	NNW	No
Lounge	BRD-041-01 A	W18	1100	750	fixed	0.0	NNW	No
Lounge	BRD-041-01 A	W19	1460	750	fixed	0.0	NNW	No
Lounge	BRD-041-01 A	W20	1100	750	fixed	0.0	NNW	No
Lounge	BRD-041-01 A	W17	600	1210	fixed	0.0	WSW	No
Lounge	BRD-043-01 A	W29	2400	1050	louvre	60.0	SSE	No
Lounge	BRD-043-01 A	W27	2400	1050	louvre	60.0	SSE	No
Lounge	BRD-041-01 A	W28	2400	2060	fixed	0.0	SSE	No
Bath	BRD-081-16 A	W24	1200	600	awning	90.0	ENE	No
Bath	BRD-081-16 A	W25	1200	600	awning	90.0	ENE	No
Bedroom 3	BRD-081-16 A	W21	1200	750	awning	90.0	NNW	No
Bedroom 3	BRD-081-16 A	W22	1200	750	awning	90.0	NNW	No
Bedroom 3	BRD-081-16 A	W23	600	1810	awning	90.0	ENE	No
Bedroom 2	BRD-081-16 A	W26	600	2410	awning	90.0	ENE	No

5.2 Star Rating as of 16 Mar 2021



Bedroom 2	BRD-020-01 A	DG7	2400	3216	sliding	60.0	SSE	No
Bedroom 4	BRD-030-01 A	DG9	2400	1640	casement	100.0	NNW	No
Bedroom 4	BRD-081-16 A	W16	1200	750	awning	90.0	NNW	No
Ensuite 2	BRD-081-16 A	W15	1200	750	awning	90.0	NNW	No
Ensuite 1	BRD-081-16 A	W31	600	1800	awning	90.0	WSW	No
Ensuite 1 WC	BRD-081-16 A	W32	600	1210	awning	90.0	WSW	No
Bedroom 1	BRD-081-16 A	W30	600	2410	awning	90.0	WSW	No
Bedroom 1	BRD-020-01 A	DG8	2400	3216	sliding	60.0	SSE	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

Custom 1001 windows				Substitution to	lerance ranges
Window ID	Window description	Maximum U-value*	SHGC*	SHGC lower limit	SHGC upper limit
No Data Available					

Roof window schedule

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

Skylight type and performance

Skylight ID Skylight description

No Data Available

Skylight schedule

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

External door schedule

Location	Height (mm)	Width (mm)	Opening %	Orientation	
Garage	2400	4990	100.0	NNW	
Garage	2400	2400	100.0	NNW	
Laundry	1240	820	100.0	WSW	
Foyer	2300	1200	100.0	NNW	

External wall type

Wall ID Wall type Solar Wall shade Reflective absorptance (colour) Bulk insulation (R-value) wall wrap*

5.2 Star Rating as of 16 Mar 2021

	9
HOUS	Е

1	STANDARD - Brick Veneer	0.5	Medium		No
2	STANDARD - Double Brick	0.5	Medium		No
3	STANDARD - Brick Veneer - R2.5 Batts	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	No
4	REFLECTIVE - Framed Slim (Render) - R2.5 Batts + Wrap	0.5	Medium	Glass fibre batt: R2.5 (R2.5)	Yes

External wall schedule

			1877 141		Horizontal shading	Vertical
Location	Wali	Height (mm)		Orientation	feature* maximum projection (mm)	shading feature (yes/no)
Garage	1	2920	5985	WSW	0	No
Garage	1	2920	3473	SSE	0	Yes
Garage	2	2920	2417	ENE	0	Yes
Garage	2	2920	5701	NNW	0	Yes
Garage	2	2920	607	WSW	0	Yes
Garage	2	2920	3580	NNW	0	Yes
Linen	3	2750	708	WSW	0	Yes
Laundry	3	2750	1697	WSW	0	Yes
Foyer	4	2750	4141	NNW	3850	Yes
Office	3	2750	2788	NNW	362	No
Office	3	2750	3393	WSW	1987	Yes
Office	3	2750	597	ENE	0	Yes
Ensuite 3	3	2750	1961	NNW	0	Yes
Ensuite 3	3	2750	2975	ENE	598	No
Bedroom 5	3	2750	3681	ENE	598	No
Media	3	2750	1507	SSE	0	Yes
Media	3	2750	4518	ENE	595	No
Pantry	3	2750	436	NNW	0	Yes
Pantry	3	2750	2155	WSW	0	Yes
Rumpus	3	2750	5825	WSW	595	Yes
Rumpus	3	2750	957	SSE	595	Yes
Rumpus	3	2750	4654	SSE	3476	Yes
Rumpus	3	2750	1170	NNW	595	Yes
Kitchen/Dining/Family	3	2750	4461	ENE	0	Yes
Kitchen/Dining/Family	3	2750	5182	SSE	3481	Yes
Kitchen/Dining/Family	3	2750	1700	ENE	4093	Yes
Kitchen/Dining/Family	3	2750	4091	SSE	1697	Yes
Lounge	4	2750	4139	NNW	0	No
Lounge	4	2750	3394	WSW	6489	Yes
Lounge	3	2750	5183	SSE	4043	Yes
Lounge	3	2750	1703	ENE	4696	Yes
Lounge	4	2750	1556	ENE	0	Yes

5.2 Star Rating as of 16 Mar 2021



Bath	3	2750	782	ENE	750	No
Bath	4	2750	2056	ENE	703	No
Robe 3	4	2750	1479	ENE	703	No
Bedroom 3	4	2750	3352	NNW	694	Yes
Bedroom 3	4	2750	3482	ENE	731	No
Bedroom 2	3	2750	3476	ENE	750	No
Bedroom 2	4	2750	3968	SSE	2370	Yes
Bedroom 4	4	2750	4129	NNW	2170	Yes
Ensuite 2	4	2750	3294	WSW	694	Yes
Ensuite 2	4	2750	1438	NNW	2163	Yes
Ensuite 1	3	2750	2106	WSW	0	No
Ensuite 1 WC	3	2750	1783	WSW	0	No
Ensuite 1 WC	3	2750	422	NNW	0	Yes
Bedroom 1	3	2750	5083	WSW	0	No
Bedroom 1	4	2750	4440	SSE	3039	No
Bedroom 1	4	2750	1099	ENE	5935	Yes

Internal wall type

W	/all ID	Wall type	Area (m²)	Bulk insulation
	1	STANDARD - Internal Stud Walls -R2.5 Batts	68.5	Glass fibre batt: R2.5 (R2.5)
	2	STANDARD - Internal Stud Walls	300.6	

Floor type

		Area	Sub-floor	Added insulation	
Location	Construction	(m²)	ventilation	(R-value)	Covering
Garage	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	1.3	Enclosed	R0.0	none
Garage	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	8.3	Enclosed	R0.0	none
Garage	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	45.9	Enclosed	R0.0	none
Linen	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	3.3	Enclosed	R0.0	Tiles
Laundry	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	5.7	Enclosed	R0.0	Tiles
Powder Room	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	2.4	Enclosed	R0.0	Tiles
Hall	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	11.2	Enclosed	R0.0	Tiles
Foyer	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	9.9	Enclosed	R0.0	Tiles
Foyer	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	5.5	Enclosed	R0.0	Carpet
Office	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	1	Enclosed	R0.0	Carpet
Office	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	11.5	Enclosed	R0.0	Carpet
Ensuite 3	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	5.8	Enclosed	R0.0	Tiles
Robe 5	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	2.5	Enclosed	R0.0	Carpet
Bedroom 5	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	5.4	Enclosed	R0.0	Carpet
Bedroom 5	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	7.8	Enclosed	R0.0	Carpet
Media	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	17.8	Enclosed	R0.0	Carpet
Media	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	6.4	Enclosed	R0.0	Carpet

5.2 Star Rating as of 16 Mar 2021



Pantry	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	8.2	Enclosed	R0.0	Tiles
Rumpus	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	26.4	Enclosed	R0.0	Tiles
Rumpus	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	5.7	Enclosed	R0.0	Tiles
Kitchen/Dining/F- amily	FR5 - 300mm waffle pod, 85mm concrete (R0.63)	65.7	Enclosed	R0.0	Tiles
Lounge	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	66.4	Enclosed	R4.0	Carpet
Vanity	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	2.1	Enclosed	R4.0	Tiles
WC	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	1.3	Enclosed	R4.0	Tiles
Bath	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	6.3	Enclosed	R4.0	Tiles
Robe 3	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	3.3	Enclosed	R4.0	Carpet
Robe 2	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	2.3	Enclosed	R4.0	Carpet
Bedroom 3	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	12.4	Enclosed	R4.0	Carpet
Bedroom 2	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	13.8	Enclosed	R4.0	Carpet
Bedroom 4	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	13.6	Enclosed	R4.0	Carpet
Ensuite 2	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	4.7	Enclosed	R4.0	Tiles
Bed 1 Robe	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	7.5	Enclosed	R4.0	Carpet
Ensuite 1	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	9	Enclosed	R4.0	Tiles
Ensuite 1 WC	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	1.5	Enclosed	R4.0	Tiles
Bedroom 1	FLOOR - Framed External Suspended Floor (R4.0 Insulation)	3.9	Elevated	R4.0	Carpet
Bedroom 1	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	20.3	Enclosed	R4.0	Carpet

Ceiling type

Location	Construction material/type	Bulk insulation R-value (may include edge batt values)	Reflective wrap*
Garage	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Garage	Plasterboard	R0.0	No
Garage	Plasterboard	R0.0	Yes
Linen	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Laundry	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No

5.2 Star Rating as of 16 Mar 2021



Powder Room	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Hall	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Foyer	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Foyer	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Office	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Office	Plasterboard	R6.0	Yes
Ensuite 3	Plasterboard	R6.0	Yes
Robe 5	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Bedroom 5	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Bedroom 5	Plasterboard	R6.0	Yes
Media	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Media	Plasterboard	R6.0	Yes
Pantry	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Rumpus	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Rumpus	Plasterboard	R6.0	Yes
Kitchen/Dining/F- amily	FLOOR - Framed Internal Suspended Floor (R4.0 Insulation)	R4.0	No
Lounge	Plasterboard	R6.0	Yes
Vanity	Plasterboard	R6.0	Yes
WC	Plasterboard	R6.0	Yes
Bath	Plasterboard	R6.0	Yes
Robe 3	Plasterboard	R6.0	Yes
Robe 2	Plasterboard	R6.0	Yes
Bedroom 3	Plasterboard	R6.0	Yes
Bedroom 2	Plasterboard	R6.0	Yes
Bedroom 4	Plasterboard	R6.0	Yes
Ensuite 2	Plasterboard	R6.0	Yes
Bed 1 Robe	Plasterboard	R6.0	Yes
Ensuite 1	Plasterboard	R6.0	Yes
Ensuite 1 WC	Plasterboard	R6.0	Yes
Bedroom 1	Plasterboard	R6.0	Yes
Bedroom 1	Plasterboard	R6.0	Yes

Ceiling penetrations*

Location Quantity Type Diameter (mm) Sealed/unsealed

5.2 Star Rating as of 16 Mar 2021



Powder Room	1	Exhaust Fans	250	Sealed	
Ensuite 3	1	Exhaust Fans	250	Sealed	
Kitchen/Dining/Family	1	Exhaust Fans	185	Sealed	
WC	1	Exhaust Fans	250	Sealed	
Bath	1	Exhaust Fans	250	Sealed	
Ensuite 2	1	Exhaust Fans	250	Sealed	
Ensuite 1	1	Exhaust Fans	250	Sealed	

Ceiling fans

LocationQuantityDiameter (mm)No Data Available

Roof type

Construction	Added insulation (R-value)	Solar absorptance	Roof shade
Ceil: Ceiling	0.0	0.5	Medium
Framed:Flat - Flat Framed (Metal Deck)	1.3	0.73	Dark
Cont:Attic-Continuous	1.3	0.73	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.

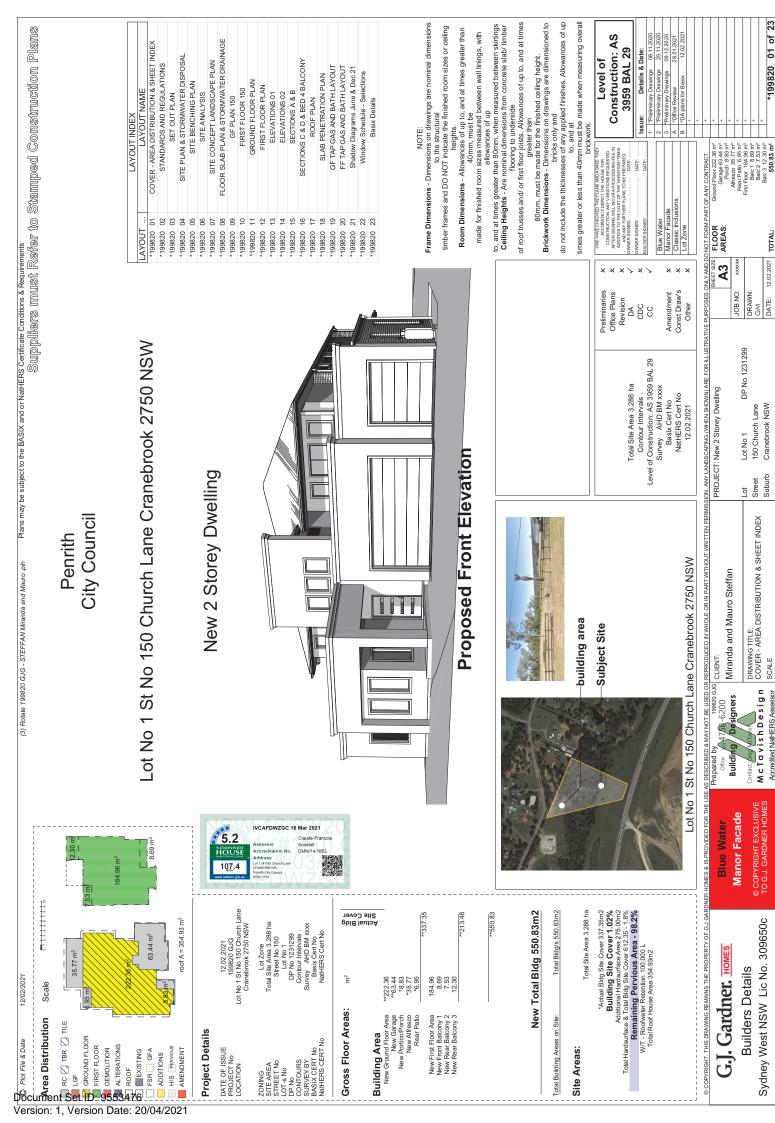
Glossary

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.

5.2 Star Rating as of 16 Mar 2021



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.
the openability percentage or operable (moveable) area of doors or windows that is used in ventilation calculations.
an assumed value that does not represent an actual value. For example, if the wall colour is unspecified in the documentation, a provisional 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
can be applied to walls, roofs and ceilings. When combined with an appropriate airgap and emissivity value, it provides insulative properties.
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.
a device fixed to windows that provides shading e.g. window awnings or screens but excludes eaves.
includes neighbouring buildings, fences, and wing walls, but excludes eaves.
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.
for NatHERS this is typically a moulded unit with flexible reflective tubing (light well) and a diffuser at ceiling level.
the rate of heat transfer through a window. The lower the U-value, the better the insulating ability.
a zone within a dwelling that is assumed to not require heating and cooling based on standard occupancy assumptions.
provides shading to the building in the vertical plane and can be parallel or perpendicular to the subject wall/window.



*199820 01 of 23

12.02.2021

JOB NO: DRAWN:

DP No 1231299

Cranebrook NSW 150 Church Lane Lot No 1

Suburb Lot Street

DRAWING TITLE: COVER - AREA DISTRIBUTION & SHEET INDEX

SCALE

Contact: Greg McTarish
McTavishDesign

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Sydney West NSW Lic No. 309650c

Builders Details

Suppliers must Refer to Stamped Construction Plans

Plans may be subject to the BASIX and or NatHERS Certificate Conditions & Requirements

Plot File & Date

NCC - Aus Standards & Regulations

Ventilation bca part 3.8.5

where an exhaust fan is required for ventilation the exhaust contaminated air must be extracted directly to outside the building by way of ducts.
a roof spaced may be used provided the roof space is ventilated

light bca part 3.8.41

artificial light per 16m2 of floor area

light bca part 3.8.4

skylights must provide at least 3% of floor area (if no other light source is provided)

Condensation Management 3.8.7.2 Pliable building membrane Where a pliable building membrane is installed in an external wall, it must comply with AS/NZS 4200.1; and

be a vapour permeable membrane for climate zones 6, 7 and 8; and

be installed in accordance with AS 4200.2; and

(iv) be located on the exterior side of the primary insulation layer of wall assemblies that form the external envelope of a building. Except for single skin masonny or single skin concrete, where a pilable building membrane is not installed in an external wall, the primary water control layer must be separated from water sensitive materials by a drained

installation of wall cladding in accordance with the NCC vol 2 3.8.7.2 Pliable building membranes

The installation of a free standing heating appliance must comply with the installation of a free standing. 3.10.7.5 Installation of free standing heating appliances Slow Combustion Fires

(a)The appliance must— (i)be installed with safety clearances determined by testing in accordance with AS/NZS 2918; or

(ii) be located not less than 1.2 m from adjoining walls (other than a

masonry wall); or [ii] have a heat shield between the adjoining wall (other than a masonry wall)

Insert Fire Unit

The insert fireplace must be tested and passed the tests required by AS/NZS 2918.

STAIR SETOUT BCA Part 3.9.1

STAIRS

AS 2870 RESIDENTIAL SLABS & FOOTINGS

AS 3959 BLD IN BUSHFIRE PRONE AREAS

AS 1684
RESIDENTIAL TIMBER
FRAMING
CONSTRUCTION-CODE

STANDARDS

AS/NZS

AS 4060 Wind Loads Construction to AUS Standards & NCC AS 1860 Install Particleboard AS 2780 Residential Slabs & Footings

AS 3959 Building in Bushfire Prone Āreas AS/NZS 4357 AS 1684 Laminated Veneer Lumber

AS 3600 Termite Management NCC 3.1.3.3,, 3.1.3.4. AS 2049-AS 2050 Installation of Roof Tiles AS 1562 Installation of Sheet Roof & Wall Cladding NCC Part 3.8.7.2. Condensation management AS 3700 Masonry

AS 1273 UPVC AS 2780 Residential Slabs & Footings AS 3500 National Plumbing Code

AS/NZ 2179 Spec for Rain Goods AS 3740 Water Proofing AS 3786 Smoke Alarms

safe work australia

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Blue Water

SITING OF WATER TANKS

POSITION OF WATER TANKS-INCL FIRE FIGHTING STORAGE TANKS ARE TO BE ASSESSED ON SITE.

EAST 1.2 M, MEASURED IN ACCORDANCE WITH JRE 3.8.3.3. BETWEEN THE CLOSET PAN WITHIN SANITARY COMPARTMENT AND THE DOORWAY.

ABOVE AND OR BELOW GROUND. AND CLEAR OF ALL SERVICES

A MIN: OF 1.0m FROM SITE BDRYS

ALL WATER TANKS ARE TO BE

WATER TANKS ARE TO BE LOCATED BEHIND THE FRONT BLDG SETBACK.-UNO.

ALL WATER TANKS ARE TO BE CONNECTED TO A SUITABLY LOCATED DISPOSAL SYSTEM TO COUNCIL REQUIREMENTS AS

5. REMOVE CONTROLS ONLY WHEN CONSTRUCTION IS COMPLETE

A FALL PROTECTION TO A WINDOW MUST BE PROVIDED WHERE A FLOOR LEVEL ABOVE THE SURFACE BENEATH IS MORE THAN 4.0m WHERE A PERSON CAN FALL

REMOVABLE HINGES -ON ALL WC WITH A INTERNAL LENGTH OF 1900mm OR LESS.

TO BE PROVIDED WITH TOIL FT DOORS

1200mm

CLEAR SPACE

THROUGH AN OPENABLE WINDOW. Where supplied & or installed

 CUT BRICK, TILE OR MASONRY ON PERVIOUS AREA, GRASS OR LOOSENED SOIL WITHIN THE BOUNDARIES. 3. REGULARLY MAINTAIN THESE CONTROLS AT NO LESS THAN 70% CAPACITY.

USE BARRIERS AT ALL POINTS WHERE STORMMATER LEAVES THE SITE, TO PREVENT WASHING INTO GUTTERS

WHERE THE LOWEST LEVEL OF THE WINDOW OPENING IS LESS THAN 1.7 M

ABOVE THE FLOOR. ADDITIONALLY

INSTALL SEDIMENT BARRIER DOWN SLOPE OF DISTURBED AREAAND RETURN UP HILL GEOTEXTILE FILTER FABRI

IISTURBED AREA

A WINDOW OPENING MUST BE PROVIDED WITH PROTECTION, IF THE FLOOR BELOW THE WINDOW IN A <u>BEDROOM</u> IS 2 M OR MORE ABOVE THE SURFACE BENEATH.

FALL PROTECTION REQUIREMENTS

6. DISPOSE OF SEDIMENT IN A SUITABLE LOCATION. 7. USE STABILIZED ENTRY CONTROL WHERE REQU: BY COUNCIL.

SEDIMENT CONTROL

BARRIER

SETOUT AND

A CHILD-RESISTANT DOORSET MUST NOT BE USED IN A BARRIER FOR AN OUTDOOR SWIMMING POOL. WHERE A SWIMMING POOL IS PROPOSED

ACCESS TO SWIMMING POOLS

BUILDING

FOR

ALWAYS USE IN GENERAL

STAMPED **PLANS**

APPROVAL

A CONTINUOUS BALLSTRADE MUST BE PROVIDED ALONG THE STORY MANNENG PROVIDING THE STORY BROWN THE ALLIAN A BLOOMY FERMAN HIS TO END WITH EACH STORY HALLIMY BALCONY FERMAN HIS BIDE OF MY PATH OF ACCESS TO A BULLING IF IT IS NOT BUT ON THE STORY AND ALONG THE ADJOINING THE STORY BROWN THE STORY THE STORY THE ADJOINING A 125mm DIA SPHERE MUST NOT PASS BETWEEN RAILS.

MUST BE LOCATED ALONG AT LEAST ONE SIDE OF THE STAIRWAY FLIGHT A HANDRAIL



A 125mm DIA SPHERE MUST NOT PASS BETWEEN RAILS.

BALUSTRADES

HANDRAILS WHERE INSTALLED MUST BE A MIN: OF 1.0m ABOVE A FLOOR OR LANDING AND A MIN: OF 865mm ABOVE THE NOSINGS OF A STAIR OR RAMP.

HANDRAILS

A HANDRAIL MUST BE LOCATED ALONG AT LEAST ONE

MAX MIN 355 240

115 M 115 RISER MAX 190 SLOPE RELATIONSHIP

2 x RISER + GOING Z

GOING

ALL WORK TO AUSTRALIAN STANDARDS.-TIMBER AS 1694 AS ADS NBV TIMBER FRAMING MANUAL.
STEELWORK AS 4100-FOUNDATIONS AS 2780CONCRETE AS 3600-MASONRY AS 3700-HANDRALLS TO (6CA)-SAMOKE ALARM TO (6CA). Z. AS 3780WATERRPOOFING AS 3740 AS4854 AS 4855-DAMP
COURSE TEACHMUSE S 2904-STANS AS 1657PLUMBING + DRAINAGE AS 3500 AS 1273-GLASA AS 1288-SWIMMING OCC.

or ceiling heights.

Room Dimensions - Allowances

of up to, and at times greater than 40mm, must be

indicate the finished room sizes

timber frames and DO NOT

structural

Dimensions on drawings are nominal dimensions to the

Frame Dimensions -

A HANDRAIL WOULD BE NOT REQUIRED WHERE THE FLIGHT CONSIST OF 5 RISERS OR LESS AS THE CHANGE IN ELEVATION IS LESS THAN 1.0m IN Ht.

AREA DESIGNATED SE BEING BUSHFIRE PRONE
ASSESSMENT REPORT TO DETERMINE THE LEVEL
OF RISK, EBRIG SO, WORK IS TO COMPLY WITH AS
3899) "CONSTRUCTION OF BUILDINGS IN BUSHFIRE
PRONE AREAS" IN BLATION TO LEVEL OF
CONSTRUCTION REAL/PION TO LEVEL OF

STORMWATER-DISPOSAL TO EXISTING SERVICES, GRAVEL PITS OR STREET DRAINAGE TO COUNCIL REQUIREMENTS.

SIDE OF THE STARBOYA FLIGHT OR RAMP AND BE COCATED ALONG THE FLULL ENGITH OF THE FLIGHT OR RAMP EXCEPT IN THE CASE OF A WIDER AND A NEWEL POST IS PROVIDED AND OR WHERE THE HANDRALL IS ASSOCIATED WITH A RALLUSTRADE.

Important Note - Reference should also be made to the NCC regarding condensation in buildings

timber flooring to underside of roof trusses and/ or first floor joists. Allowances of up to, and at

80mm, must be made for the Brickwork Dimensions -Dimensions on drawings are

times greater than

finished ceiling height.

dimensions from concrete slab

5.2

107.4

SERVICES: THE BUILDER IS TO VERIFY LOCATIONS OF EXISTING SERVICES PRIOR TO CONSTRUCTION

POOLS ACT 1992 AS 1926.1

Ceiling Heights - Are nominal

80mm, when measured betweer

skirtings

measured between wall linings,

with allowances of up

made for finished room sizes to, and at times greater than dimensioned to bricks only and do not include the thicknesses of

any applied finishes. Allowances of up to, and at times greater or less than 40mm

Mar 20. Claude-Francu Sookloll DMN/14/1662

must be made when measuring

overall brickwork.

Details & Date:



NCC 2019 Guide to Volume One

NCC 2019 Volume Two





AFTER SIGNING W ADDITION TO THE	AND ANY FURT ER SIGNED:		
۹.	AND ANY FURT OWNER SIGNED:	OWNER SIGNED:	BUILDER SIGNED:
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- 6	V.		

XED THE PLANS AND AGREE TO THE HOUSE FOR THE HOUSE REQUESTS WILL INCURA PROCESSING FE IE COST OF THE WARATTON IT STHER PLANS TO BE PREPAREE DATE

Ground Floor 222.36 m²
Grange 63.44 m²
Affresco 35.77 m²
Rear Patho 6.35 m²
First Froor 149.96 m²
Bato 2 7.53 m²
Bato 2 7.53 m²
Bato 3 12.30 m²
550.83 m² PART OF ANY CONTRACT FLOOR AREAS: 12.02.2021 **TOTAL**:

*199820 02 of 23

Sydney West NSW Lic No. 309650c G.J. Gardner. HOMES **Builders Details**

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DRAWING TITLE: STANDARDS AND REGULATIONS Miranda and Mauro Steffan Contact: Greg McTaylsM
McTavishDesign Building//Designers Accredited NatHERS Assessor M7/68-6200

BASIX

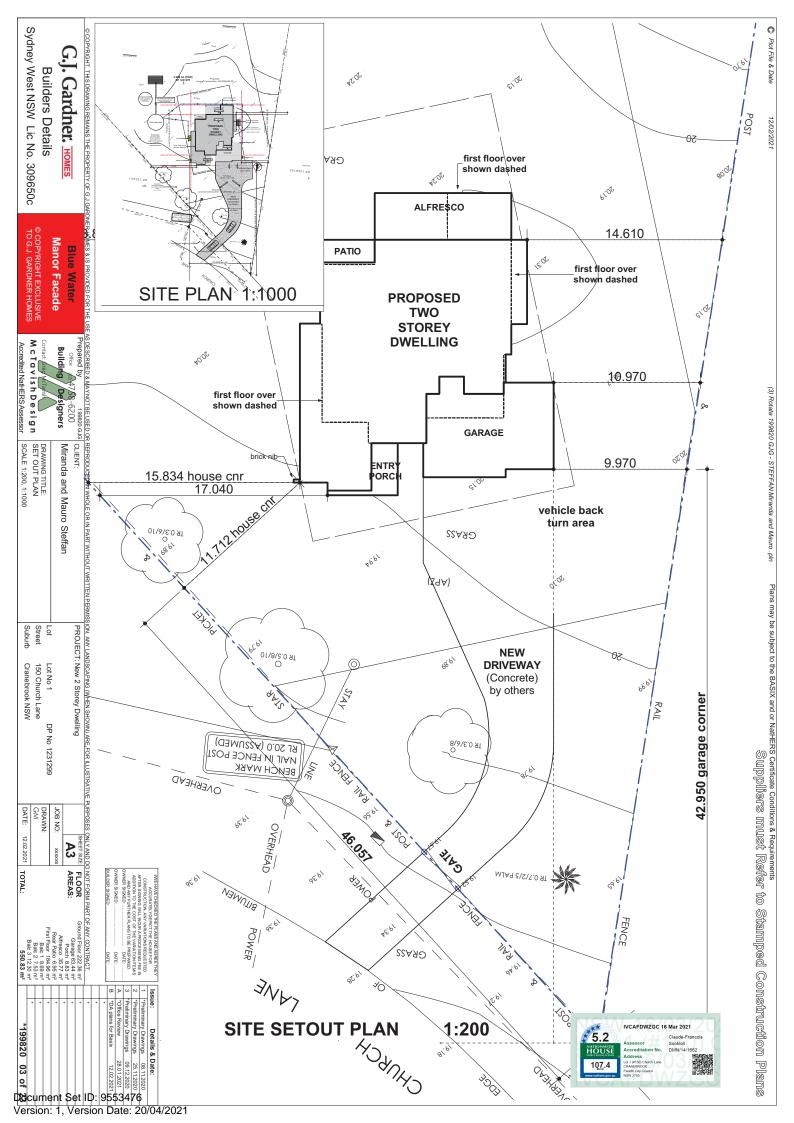
JSW SafeWork NSW

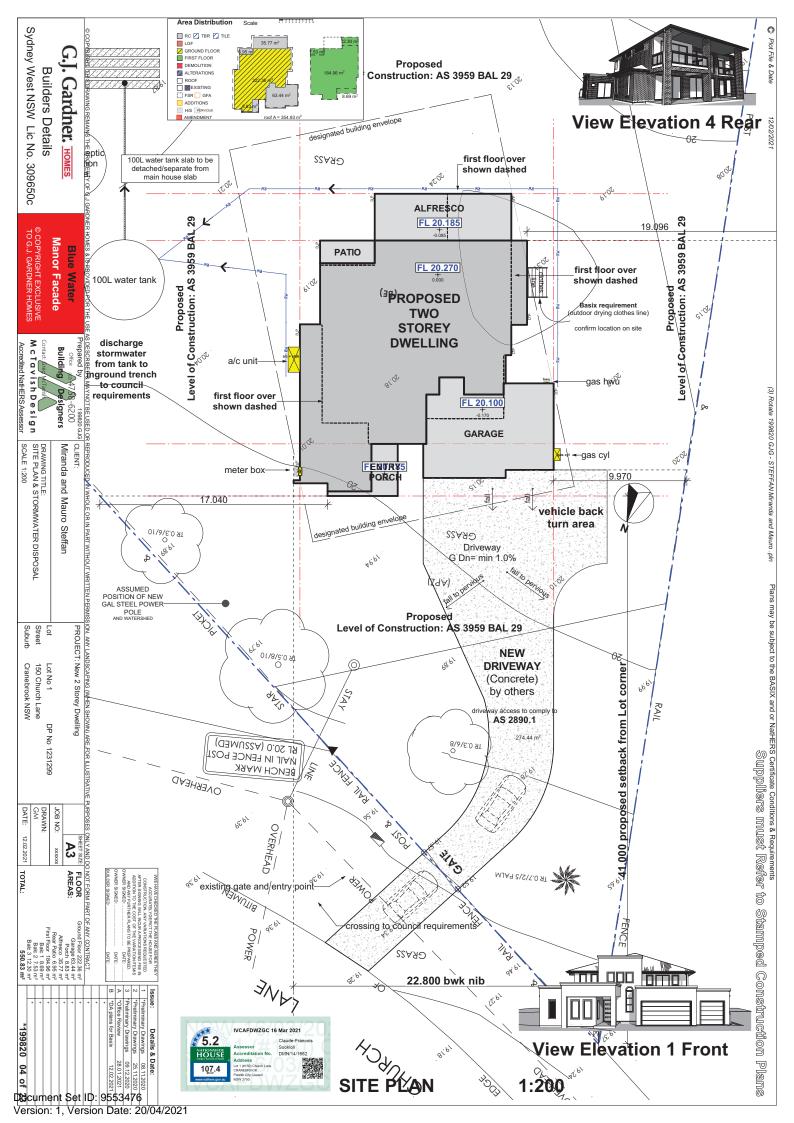
Cranebrook NSW 150 Church Lane Lot No 1 Suburb Street Ę

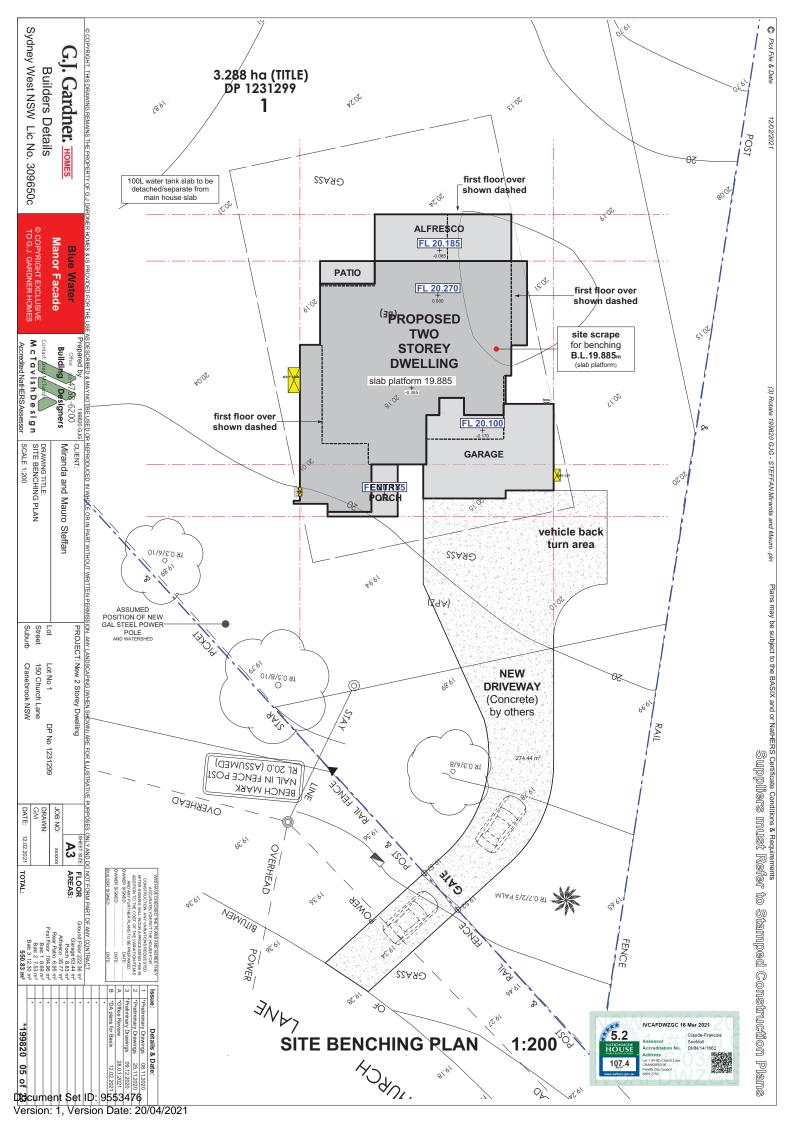
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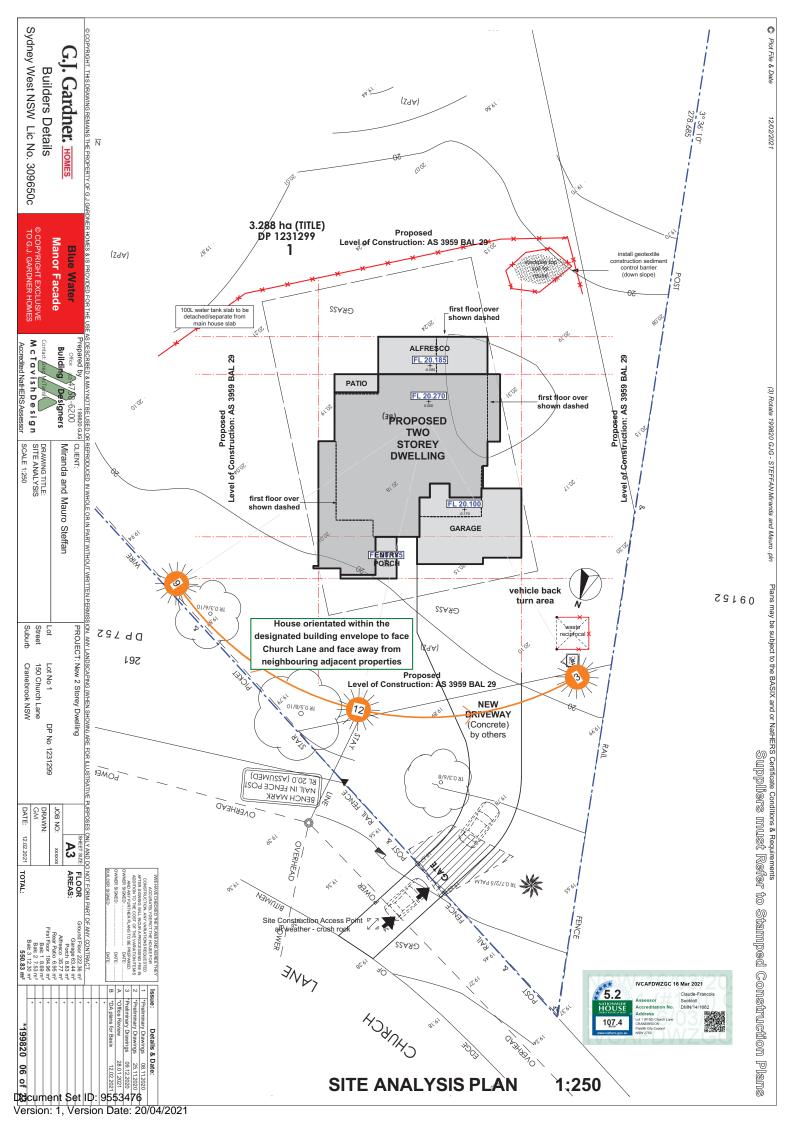
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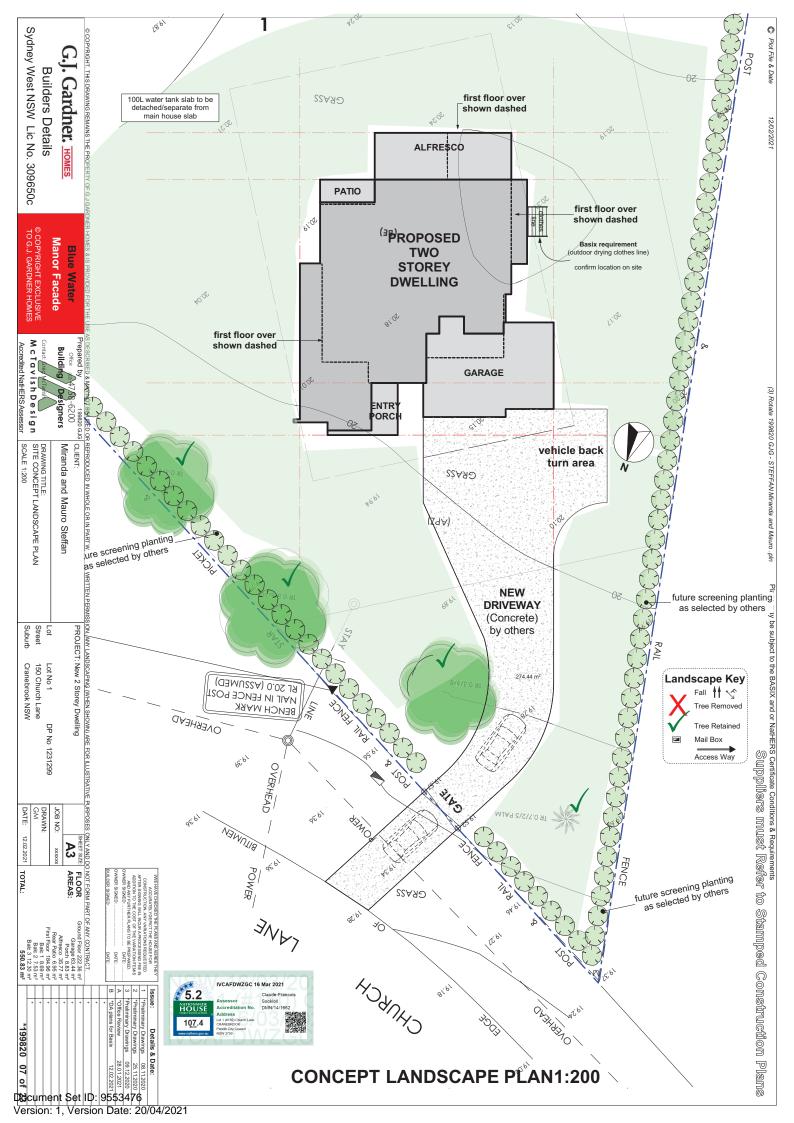
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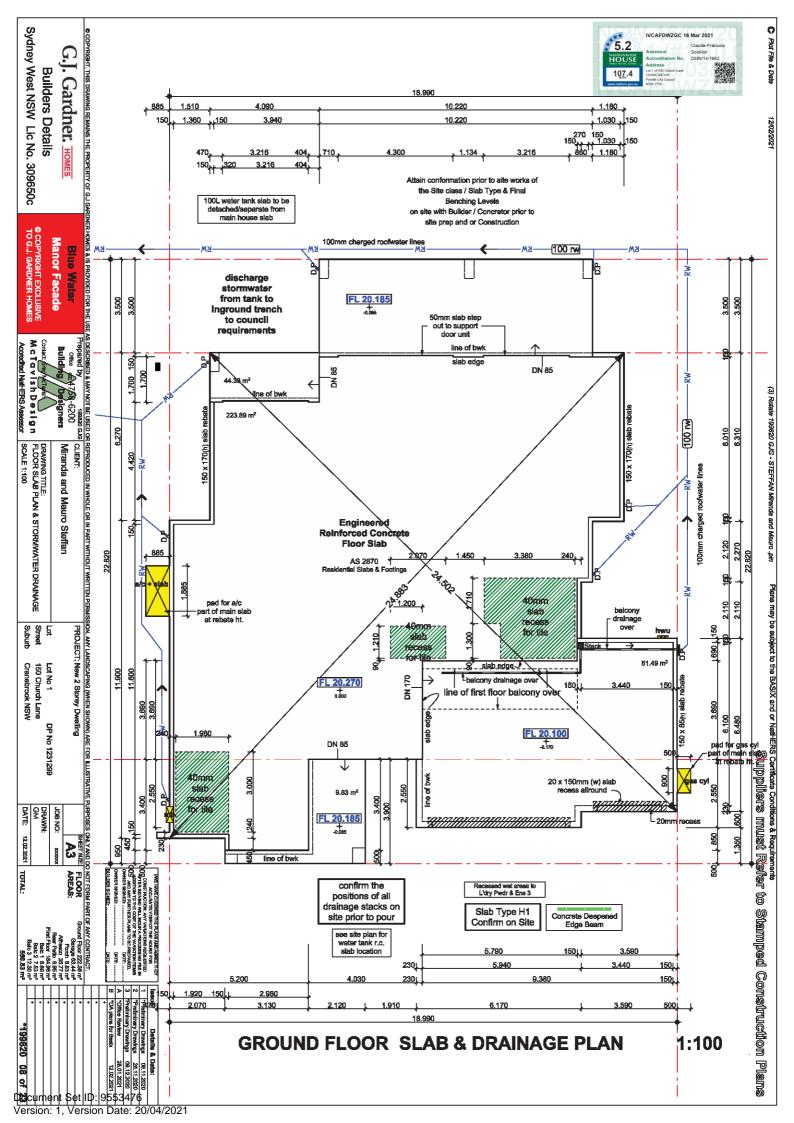


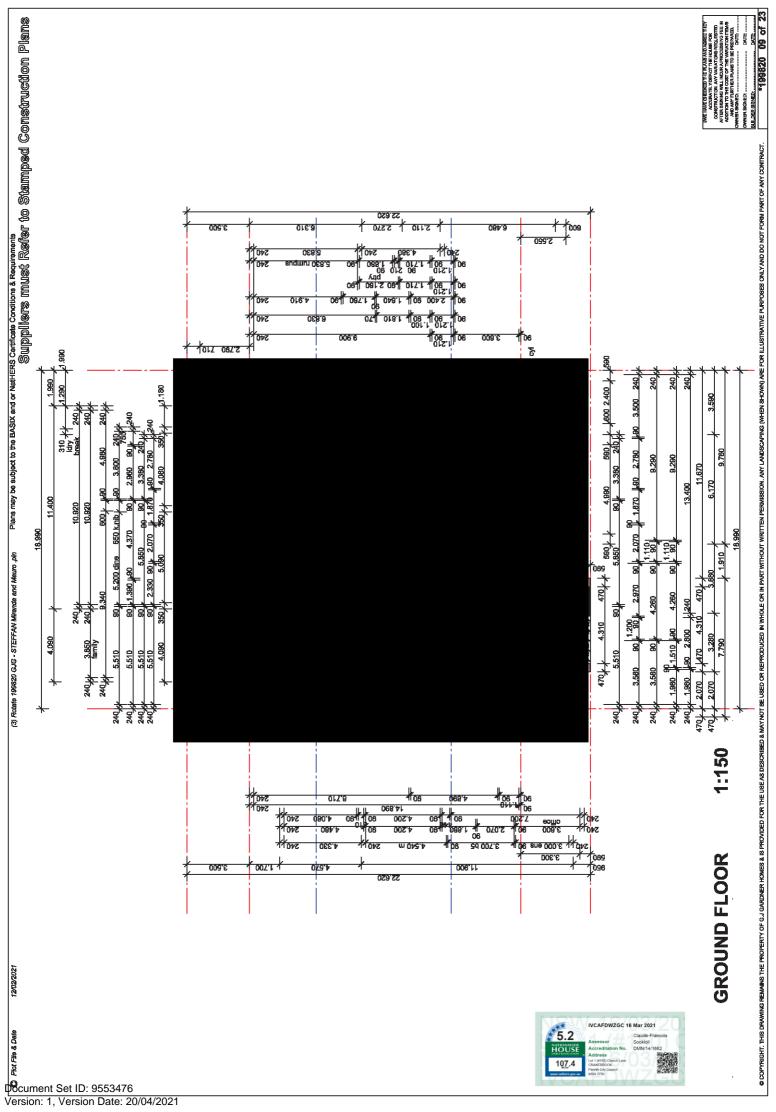


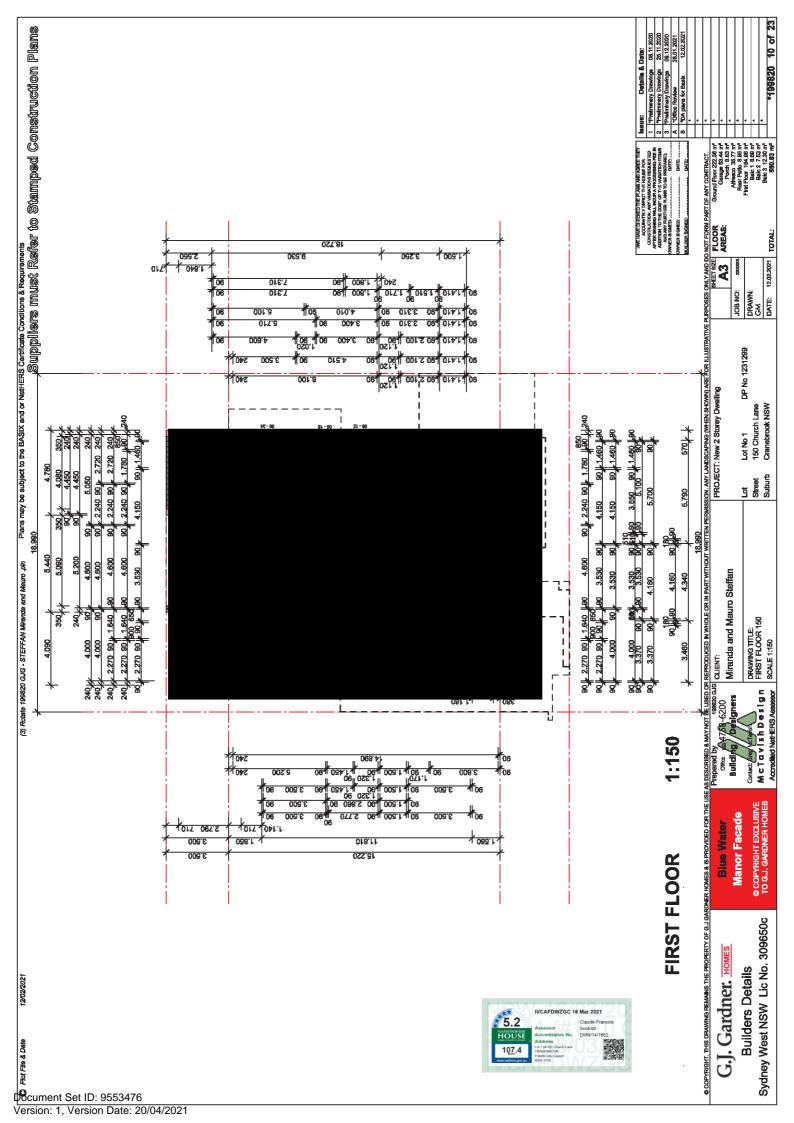


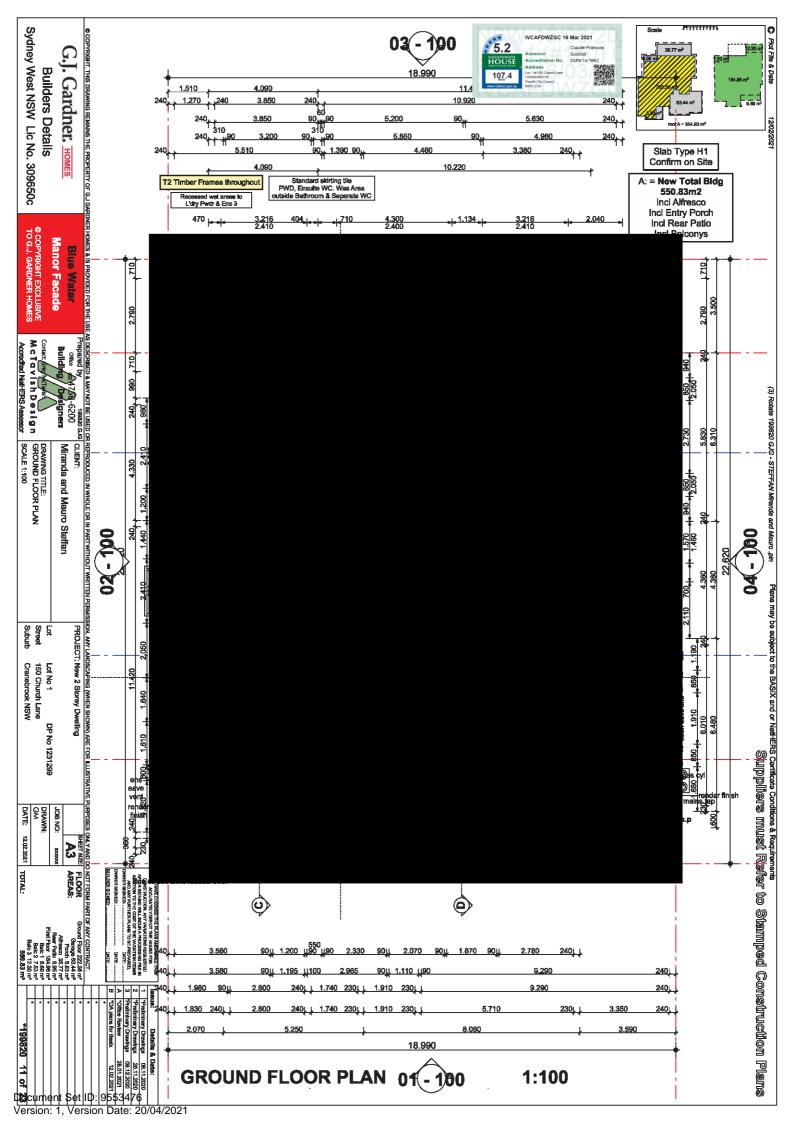


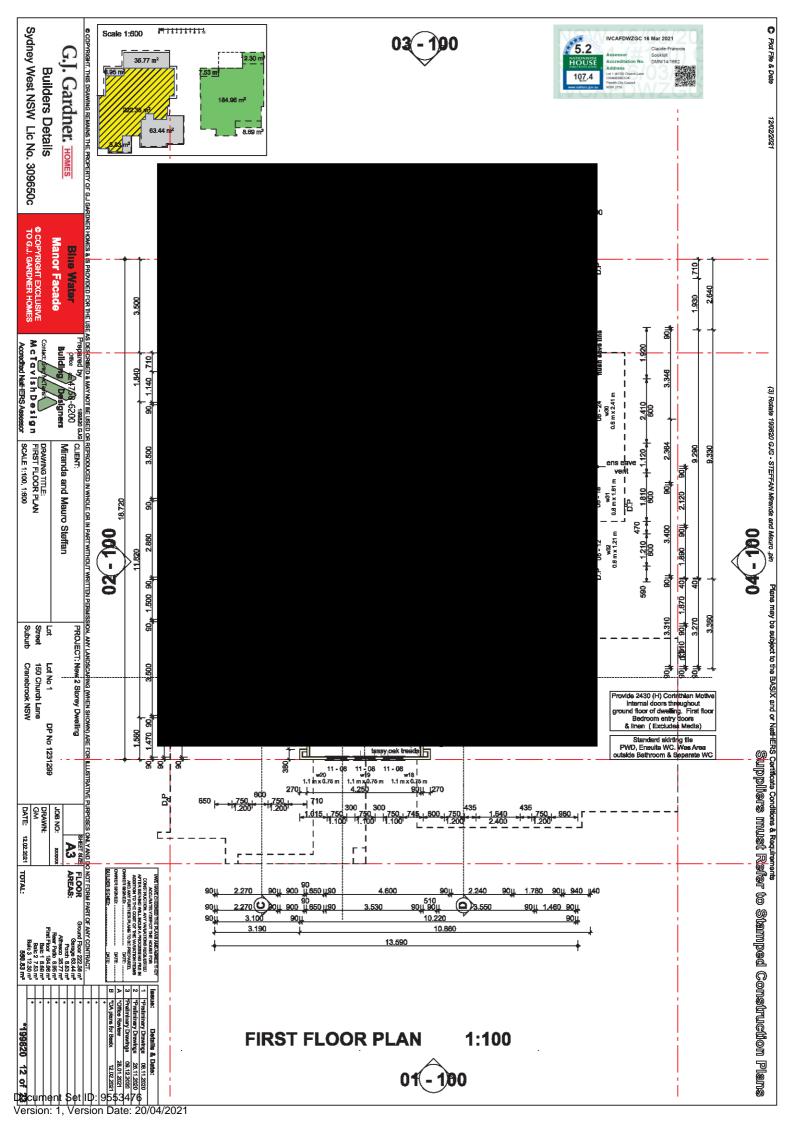


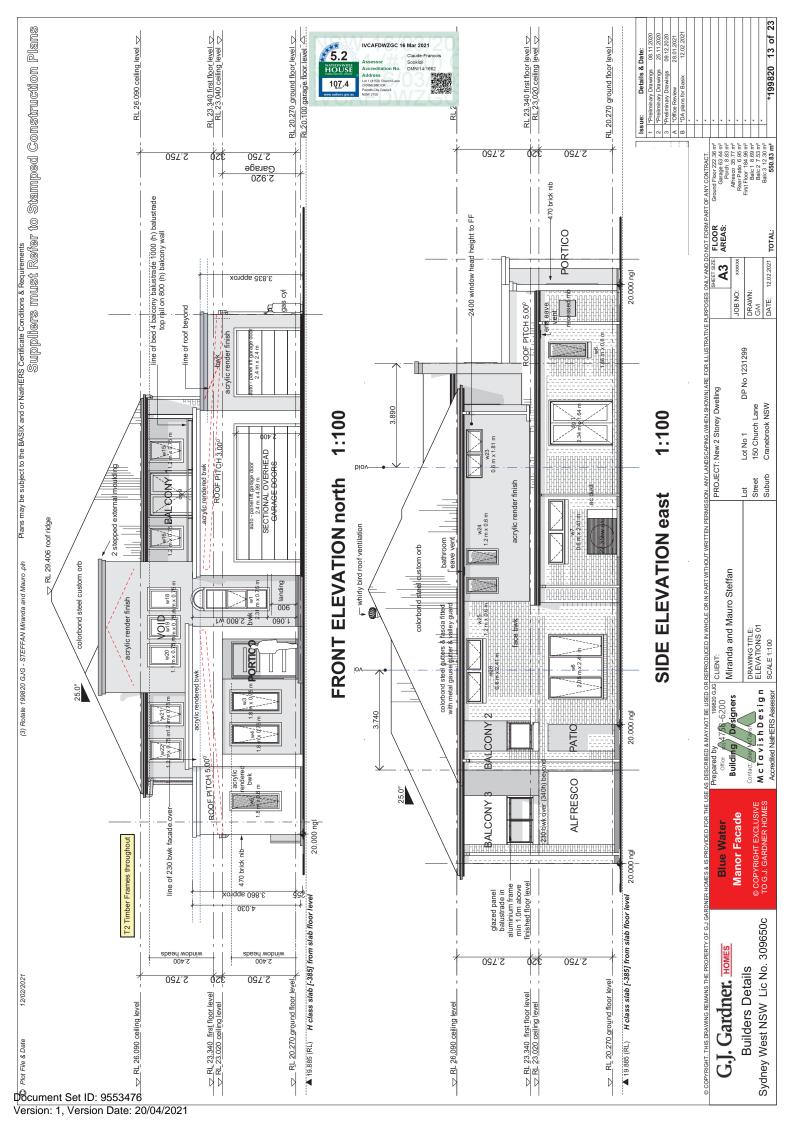


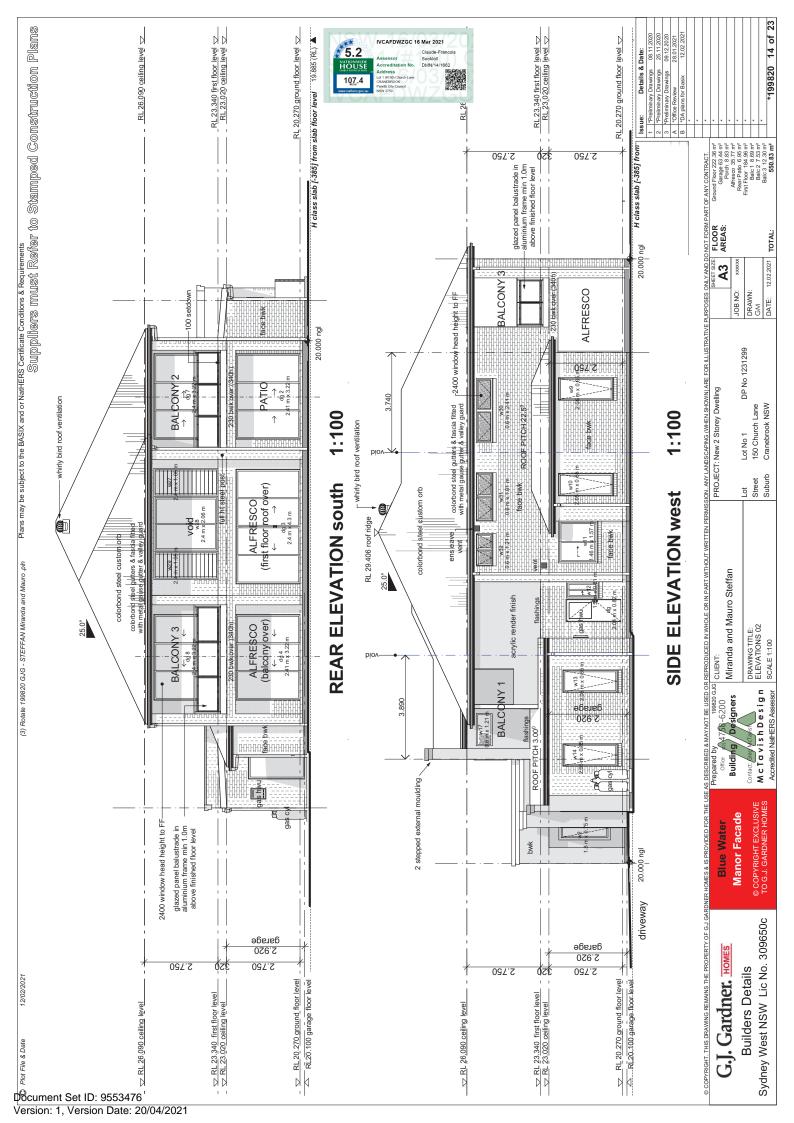


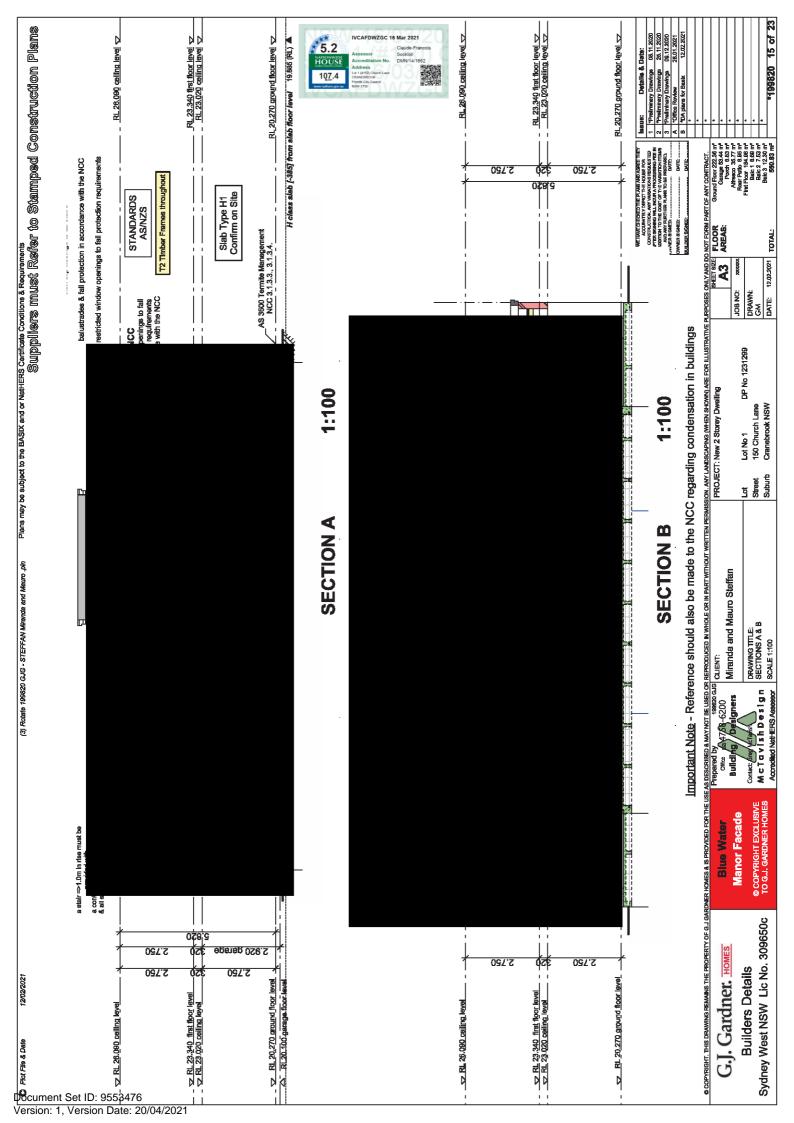


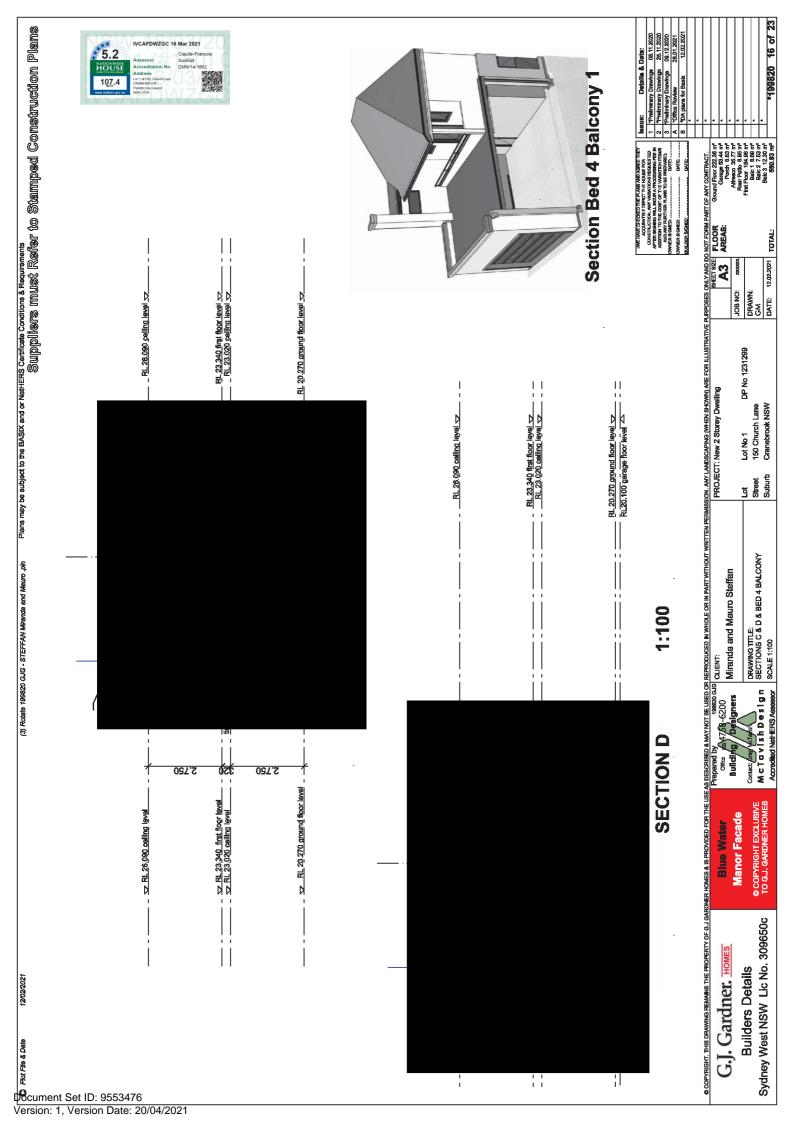




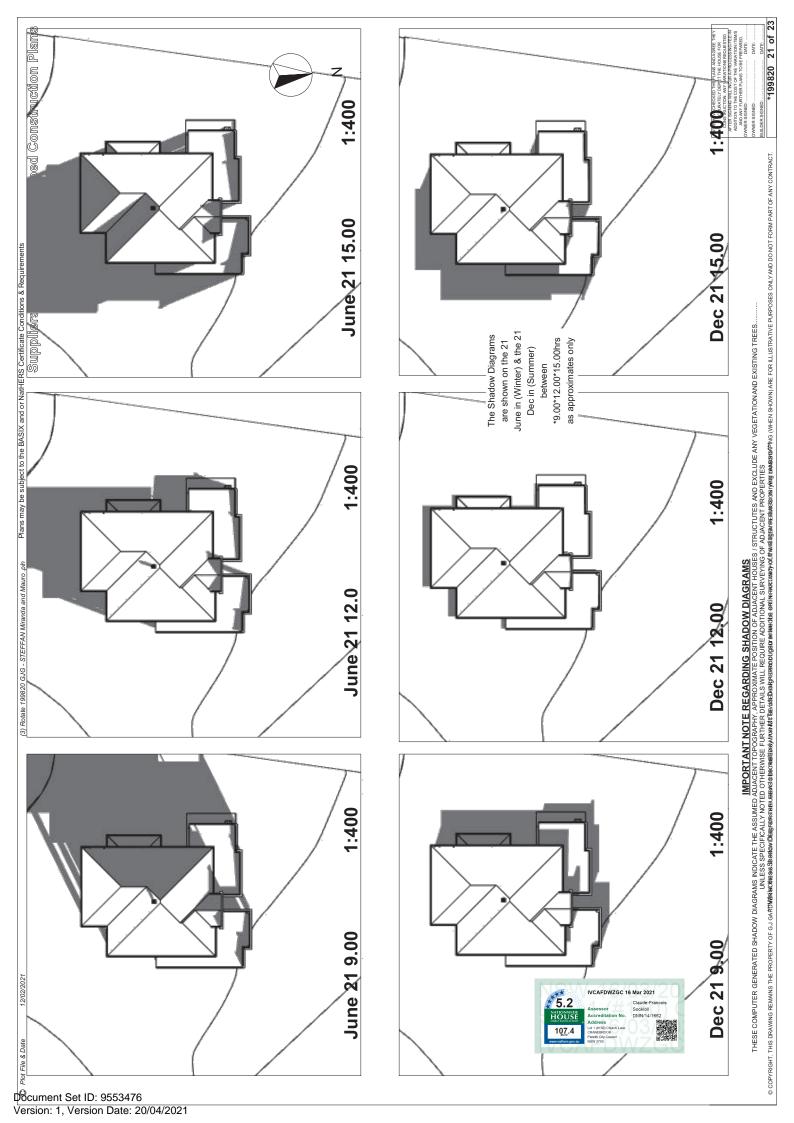








Plot File & Date Sydney West NSW Lic No. 309650c © COPYRIGHT. THIS DRAWING REMAINS THE PROPERTY OF G.J. GARDNER HOMES & IS PROVIDED FOR THE USE 5.2 Housi IVCAFDWZGC 16 Mar 2021 G.J. Gardner. HOMES **Builders Details** 107.4 12/02/2021 Manor Facade Blue Water M c Tavish De sign SIDESCRIBED 8 MAYNOT BE LISED OR REPRODUCED IN WHOLE OR IN PART WITHOUT WRITTEN PERMISSION. ANY LANDSCAPING (WHEN SHOWN) ARE FOR ILLUSTRATIVE PURPOSES ONLY AND DO NOT FORM PART OF ANY CONTRACT PURPOSES ONLY ANY CONTRACT PURPOSES ONLY AND DO NOT FORM PART OF ANY CONTRACT PURPOSES ONLY AND DO NOT FORM PART OF ANY CONTRACT PURPOSES ONLY AND DO NOT FORM PART OF ANY CONTRACT PURPOSES ONLY AND DO NOT FORM PART OF ANY CONTRACT PURPOSES ONLY AND DO NOT FORM PART OF ANY CONTRACT PURPOSES ONLY AND DO NOT FORM PART OF ANY CONTRACT PURPOSES ONLY AND DO NOT FORM PART OF ANY CONTRACT PURPOSES ONLY ANY CONTRACT PURPOSES ONLY AND DO NOT FORM PART OF ANY CONTRACT PURPOSES ONLY AND DO NOT FORM PART OF ANY CONTRACT PURPOSES ONLY Accredited NatHERS Assessor (3) Rotate 199820 GJG - STEFFAN Miranda and Mauro .pln DRAWING TITLE: ROOF PLAN Miranda and Mauro Steffan SCALE 1:100 whirly bird of ventilation 22.5 or V 0 25 ۵. ص Plans may be subject to the BASIX and or NatHERS Certificate Conditions & Requirements
Sulpplifiers must Refer to Stamped Construction Plans Street Cranebrook NSW Lot No 1 150 Church Lane DP No 1231299 3 DRAWN: GM DATE: JOB NO: ΡρΡ 12.02.2021 TOTAL: **ROOF PLAN** 1:100 | Details & Date: | In Details



Sy		® O						FULL WINDOW	/ LIST AREA	TYPE	н	W	View from Side Opposite to Opening	Glazing Type	Note
/dney \	GJ	OPYRIGHT.						w1	1.73		2.310	0.750	Side .	F	Plot File & Date
Builders Details Sydney West NSW Lic No. 309650c	. Gar	THIS DRAW!						w1 top	0.32		0.425	0.750	750	-	Date
's Det	Gardner.	DRAWING REMAINS						w2	1.35		1.800	0.750	750		12/02/2021
ails No. 30	HOMES	THE PROPERTY OF						w3	1.35		1.800	0.750	750		021
)9650c		dg dg	1.74	Custom	2.040	0.820	200	w4	1.35		1.800	0.750	750		
00 C	_	dg 1	3.84		2.340	1.640	1.840	w5	1.08		1.800	0.600	600		
© COPYRIGHT EXCLUSIVE TO G.J. GARDNER HOMES	Blue Water Manor Facade	R HOMES & dg 2	7.75	ASD-3	2.410	3.216		w6	0.88		1.460	0.600	600		
T EXCLUS	Blue Water lanor Facado	OVIDED FOR	10.32	ASD-4	2.400	4.300		w7	1.45		0.600	2.410	2.410		
	W	THE USE dg 4	7.75	ASD-3	2.410	3.216		w8	4.94		2.050	2.410	2410		
M c T a v Accredited	repared by office Building	dg 6	3.82	ASD-2	2.110	1.810		w9	1.74		2.050	0.850			
וצי חו	\$75	MAYNOT dg 7	7.72	ASD-3	2.400	3.216		w10	1.74		2.050	0.850			(3) Rot
sign ssessor	199820 GJG -6200 signers	SED OR dg 8	7.72	ASD-3	2.400	3.216		w11	0.73		1.460	0.610	1.570		ate 199820
DRAWING TITLE: Window Schedule - Selections SCALE	CLIENT: Miranda and Mauro Steffan	REPRODUCED dg 9	3.94		2.400	1.640	245	w12	1.74		2.050	0.850	610		(3) Rotate 199820 GJG - STEFFANMiranda and Mauro .pin
TITLE: chedule - \$	and Ma		loor	Glazin	a Sc	hadı	160	w14	1.74		2.050	0.850	Ma		FAN Miran
Selections	uro Steff	OR IN PART) 	Glazili	g oc	neat	A16	w15	0.90		1.200	0.750	M82		da and Mau
	an an	IN WHOLE OR IN PART WITHOUT WRITTEN						w16	0.90		1.200	0.750	750		ro .pln
		σ						w17	0.73		0.600	1.210	1.210		Plans ma
Street Suburb	PROJ	ERMISSION. AN						w18	0.83		1.100	0.750	750		Plans may be subject to the BASIX and or NatHERS Certificate Conditions & Requirements Suppliers must Refer to
	PROJECT: New 2 Storey Dwelling	ANY LANDSCAPING						w19	0.83		1.100	0.750	750		ect to the B
Lot No 1 150 Church Lane Cranebrook NSW	2 Storey D	WHEN THE						w20	0.83		1.100	0.750	750		SASIX and
	welling	SHOWN) ARE						w21	0.90		1.200	0.750	750		or NatHE
DP No 1231299		FOR ILLUSTRATIM						w22	0.90		1.200	0.750	750		Siding Siding
809		RATIVE PURF						w23	1.09		0.600	1.810	1.810		ate Conditi)]][@[78
	JOB NO: xxxx	OSES ONLY						w24	0.72		1.200	0.600	600		ons & Req
	8 10	0 2 2	AF C					w25	0.72		1.200	0.600	600		urements { Refie
TOTAL:	FLOOR AREAS:	ADDITION TO THE COUNTY FURTHER WAY FURTHER WHER SIGNED:	EHAVE CHECKED ACCURATELY ONSTRUCTION. A					w26	1.45		0.600	2.410	2.410		0 T(
First Flo. Ba Bala	Ground Flo Gara Po Alfres Rear P	OST OF THE VAR ER PLANS TO BE F	THE PLANS AND DEPICT THE HOU INY VARIATIONS F. INCUR A PROCE					w27	2.52		2.400	1.050	1.090		Stamped
or 184.96 m² alc 1 8.69 m² alc 2 7.53 m² lc 3 12.30 m² 550.83 m²	0 4 6 7 0	VARIATION ITEMS BE PREPARED. DATE: D	OAGREETHEY USEFOR REQUESTED		IVCAFDWZG	C 16 Mar 2021	201	w28	4.94		2.400	2.060			
		2 *Prelim 3 *Prelim B *DAph	Issue:	5.2 NATIONWIDE HOUSE HOUSE HOUSE 107.4	Assessor Accreditation I	Claude-Fra Sookloll No. DMN/14/16	62	w29	2.52		2.400	1.050	1,090		onstr
*19982		ellminary Drawings sliminary Drawings ffice Review 4 plans for Basix	Details	107, 4 www.nathers.gov.au	Lot 1 (#150) Church L CRANEBROOK Penrith City Council NSW 2750	WZ		w30	1.45		0.600	2.410	2.410		wetio.
*199820 22 of		98 25.11.2 98 09.12.20 28.01.20 12.02.2	Dat 08	Windo	w Gla	azin	g Schedule	w31	1.09		0.600	1.810	1.810		Construction Plans
D⊠ cume		ID: 9553476 sion Date: 2	5		010	4 6 1111	Jonicaule	w32	0.73		0.600	1.210	1.210 8		Me

Version: 1, Version Date: 20/04/2021

Suppliers must Refer to Stamped Construction Plans Plans may be subject to the BASIX and or NatHERS Certificate Conditions & Requirements (3) Rotate 199820 GJG - STEFFAN Miranda and Mauro .pln 12/02/2021

Ground Floor 222.36 m²

Ground Floor 222.36 m²

Porch 8.83 m²

Affresco 35.77 m²

Rear Patio 6.95 m²

First Floor 149.96 m²

Balc 18.69 m²

Balc 27.53 m²

Balc 27.53 m²

S50.83 m² FLOOR AREAS: **A**3 JOB NO: PROJECT: New 2 Storey Dwelling Miranda and Mauro Steffan CLIENT: 199820 GJG Building//Designers **Manor Facade** Blue Water

*199820 23 of 23

DRAWN: GM DATE: 12.02.2021 **TOTAL**:

DP No 1231299

Cranebrook NSW 150 Church Lane Lot No 1

Suburb Lot Street

DRAWING TITLE: Basix Details

Contact: Greg McTarish
McTavishDesign

Contact:

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Sydney West NSW Lic No. 309650c

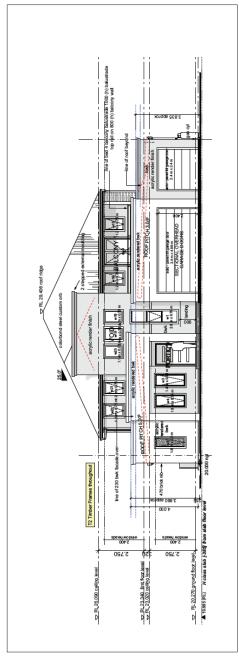
G.J. Gardner. HOMES **Builders Details**

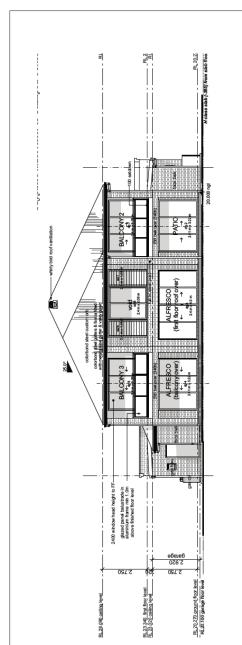
IVCAFDWZGC 16 Mar 2021 Claude-Francois Sookioll DMN/14/1662

5.2 HOUSE 107.4

Plot File & Date

EXTERNAL COLOUR PLAN







AUSTRAL BRICKS

San Selmo, Reclaimed Original Off White Mortar, Iron joint

Custom Orb, Colorbond Monument

METAL ROOFING



WINDOWS

Wideline, Monument

COLORBOND, MONUMENT Gutter, Fascia & Water Tank



Render to Front Facade of Dwelling DULUX, DIESKAU

Downpipes, Meter Box, Front Door & Railings DULUX, MONUMENT



DULUX, LEXICON QUARTER Eaves, Corbeling & Feature Mouldings

Grange, monument GARAGE DOOR

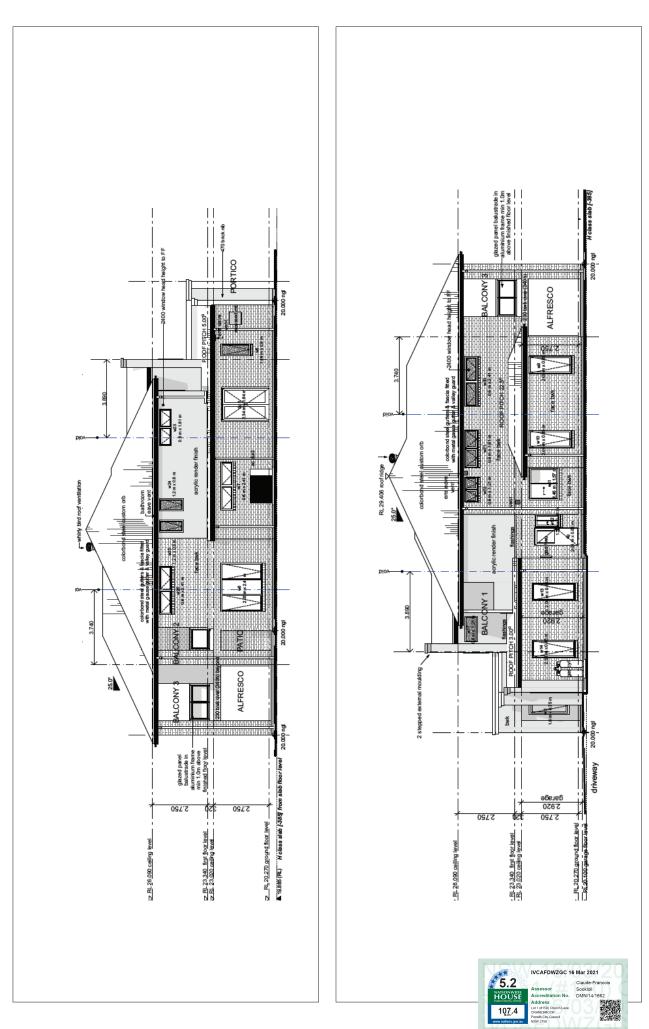




March Photo 222 8 mm
Canaga 63.44 mm
Alberto 83.3 mm
Alberto 84.5 mm
Rear Pale 6.65 mm
Rear Pale 6.65 mm
Rear 12.75 mm
Bales 1.25 mm
Bales 1.25 mm A3 JOB NO. DRAWNE GM DATE: 28 DP No 1231299 PROJECT: New 2 Storey Dwelling Lot No 1 D 150 Church Lane Cranebrook NSW Lot Street Suburb Wash out CLENT: 6200 Miranda and Mauro Steffan Builders Details Sydney West NSW Lic No. 309650c G.J. Gardner. HOMES 5.2 MATIONWIDE HOUSE 107.4 Mar 202, Claude-Francoi. Sookioil DMN/14/1662

IVCAFDWZGC 16 Mar 2021





EXTERNAL COLOUR SCHEDULE

With the extensive range of Brickworks products, you can create a beautiful, long lasting home that will give you great pleasure, comfort and durability for a lifetime.

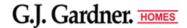
COLOUR CONSULTANT:	Ashley McCarren	STUDIO/CENTRE:	Colour Studio HPK
CLIENT NAME:	Miranda Steffan	TODAY'S DATE:	26/02/2021
EMAIL:	miranda.steffan1@bigpond.com	PHONE:	0403 749 242
PROJECT ADDRESS:	Lot 150 Church Lane, Cranebrook NSW 2749	BUILDER:	GJ Gardner Penrith
JOB NUMBER/ PACKAGE:	Classic Inclusions	BUILDING TYPE:	Double Storey

HOUSE DETAILS					
BRICK SUPPLIER:	Austral				
BRICK RANGE:	San Selmo (Builder to Raise Variation) (To Office Projection, Sides & Rear of Dwelling)				
BRICK COLOUR:	Reclaimed Original				
MORTAR:	Off White		JOINTS: Ironed		
FEATURE BRICK:	N/A				
MORTAR:	N/A		JOINTS: N/A		
ROOF SUPPLIER:	Metal				
ROOF PROFILE:	Custom Orb				
COLOUR:	Colorbond Monument				
PARAPET ROOF:	N/A	BARGE: N/A		N/A	
PARAPET	N/A	BA	RGE CAPPING:	N/A	
CAPPING:					
FASCIA:	Colorbond Monument				
GUTTER:	Colorbond Monument				
RAINWATER	Colorbond Monument				
TANK:					
BALCONY RAIL:	Glazed Balustrade with Aluminium Powdered Coated Handrail – Monument				
WINDOWS:	SUPPLIER: Bradnams	S	COLOUR: Monument		
PRIVACY SCREEN:	Aluminium Powder		COLOUR: N/A		
(if applicable)	Coated Finish: N/A		,		

GARAGE DOORS:	SUPPLER:	B & D Doors		
	PROFILE:	Grange Woodgrain		
	COLOUR:	Monument		
REAR GARAGE:	COLOUR:	N/A		
DRIVEWAY:	SUPPLIER:	To Be Discussed with Builder		
	FINISH:	To Be Discussed with Builder		
	COLOUR:	To Be Discussed with Builder		







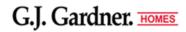
EXTERNAL PAINT	COLOUR SELECTION
FRONT DOOR & FRAME:	Dulux Monument
BALCONY DOOR & FRAME:	Aluminium Sliding & Hinged – Monument
LAUNDRY DOOR:	Dulux Monument
GUEST BED 5 HINGED DOOR:	Aluminium French Style – Monument
GARAGE SLIDING DOOR:	Aluminium Sliding – Monument
PVC DOWNPIPES:	Dulux Monument
METER BOX:	Dulux Monument
EAVES/VERANDAH CEILINGS:	Dulux Lexicon Quarter
AYCRLIC RENDER TO FRONT FAÇADE:	Dulux Dieskau
CORBELLING FEATURES TO FRONT PORCH, MAIN GARAGE & FIRST FLOOR VOID:	Dulux Lexicon Quarter
FEATURE MOULDINGS TO FAÇADE WINDOWS & GARAGE SURROUNDS:	Dulux Lexicon Quarter
OTHER:	-
OTHER:	-

EXTERNAL DOORS						
FRONT DOOR:	PROFILE:	Corinthian Doors – Lumina LUM1S	GLAZING:	Clear		
		(Builder to Raise Variation)				
LAUNDRY DOOR:	PROFILE:	Corinthian Doors – American Oak AWO21	GLAZING:	Clear		
		(Builder to Raise Variation)				
BALCONY DOOR:	PROFILE:	Aluminium Sliding	GLAZING:	Clear		
GARAGE HINGED	PROFILE:	Aluminium Sliding				
DOOR:		_				

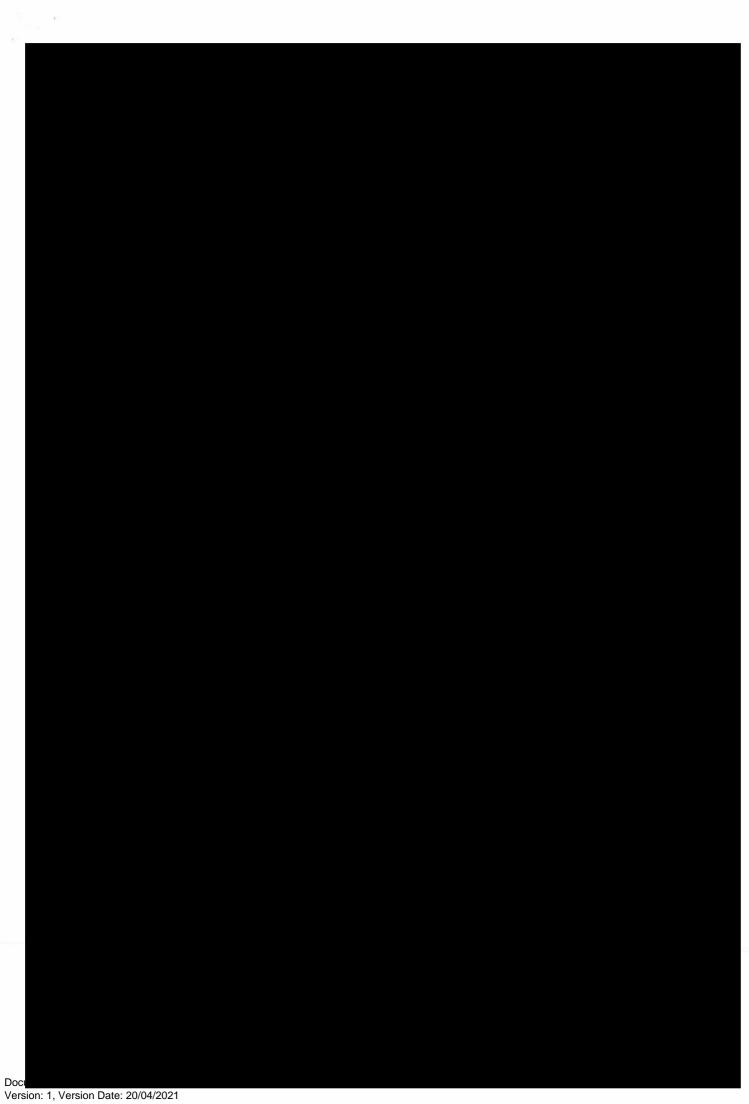
 $*please\ refer\ to\ your\ builder\ for\ final\ upgrade\ queries\ and\ costing*$

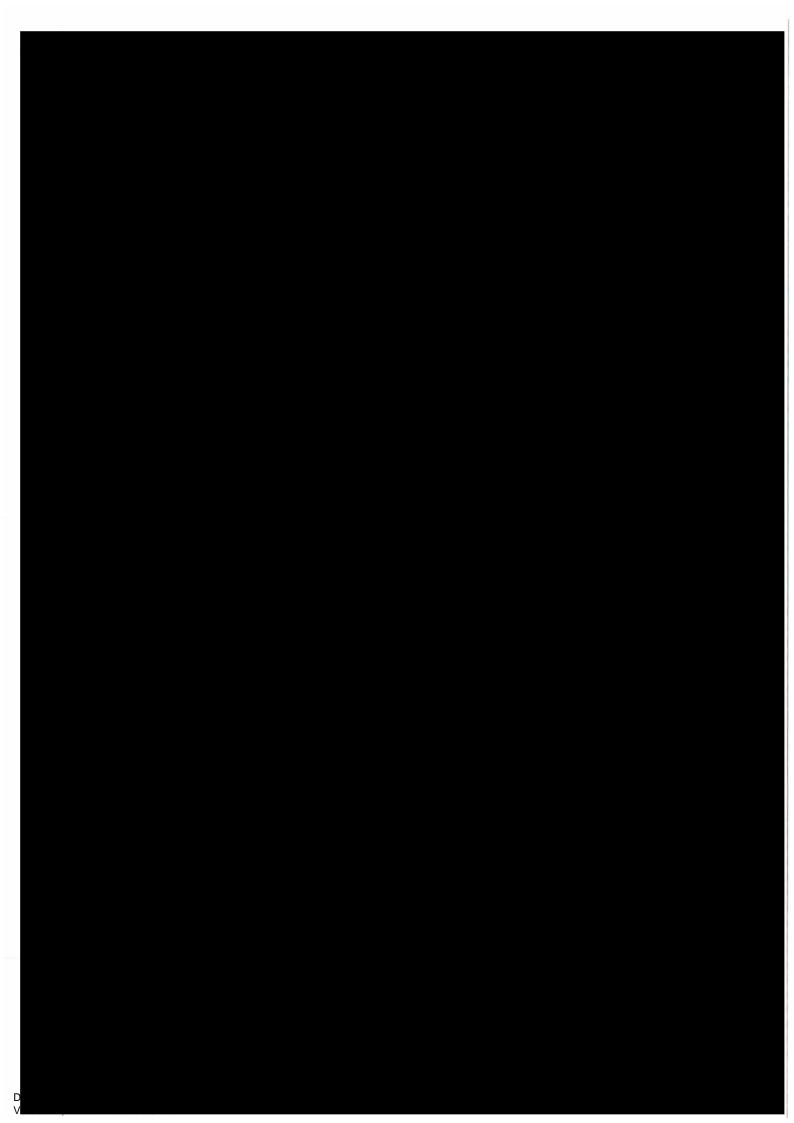


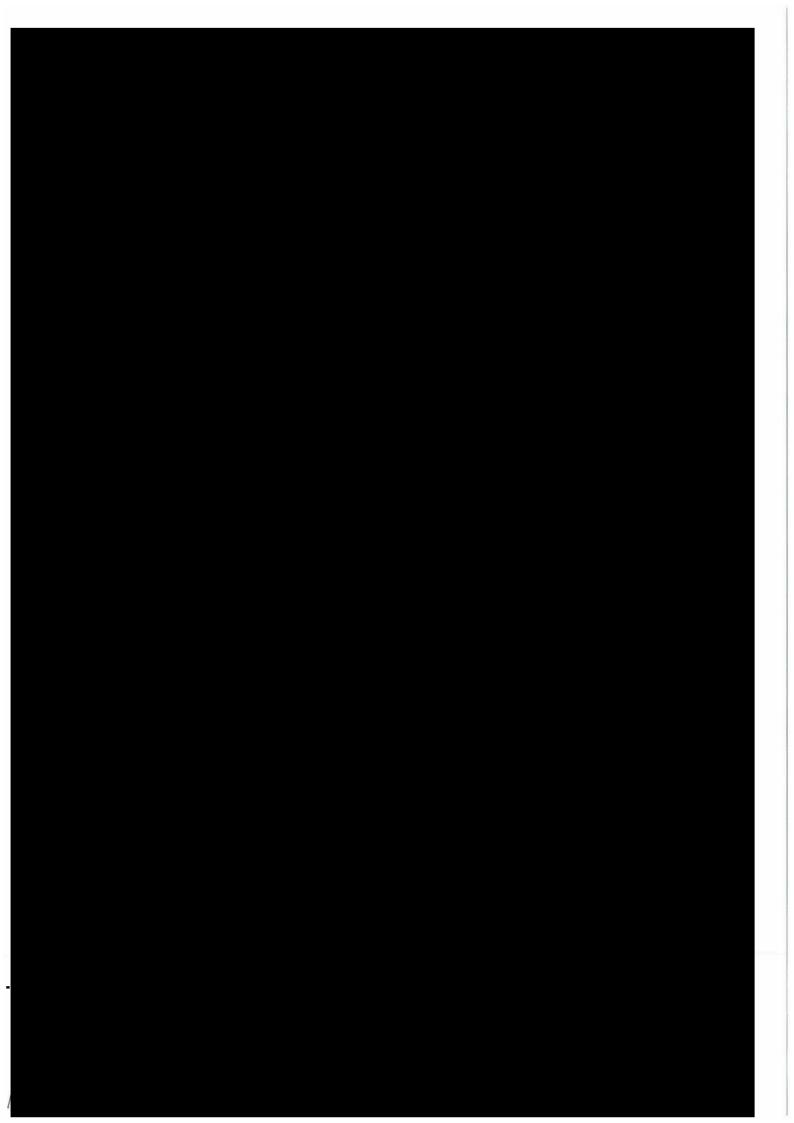


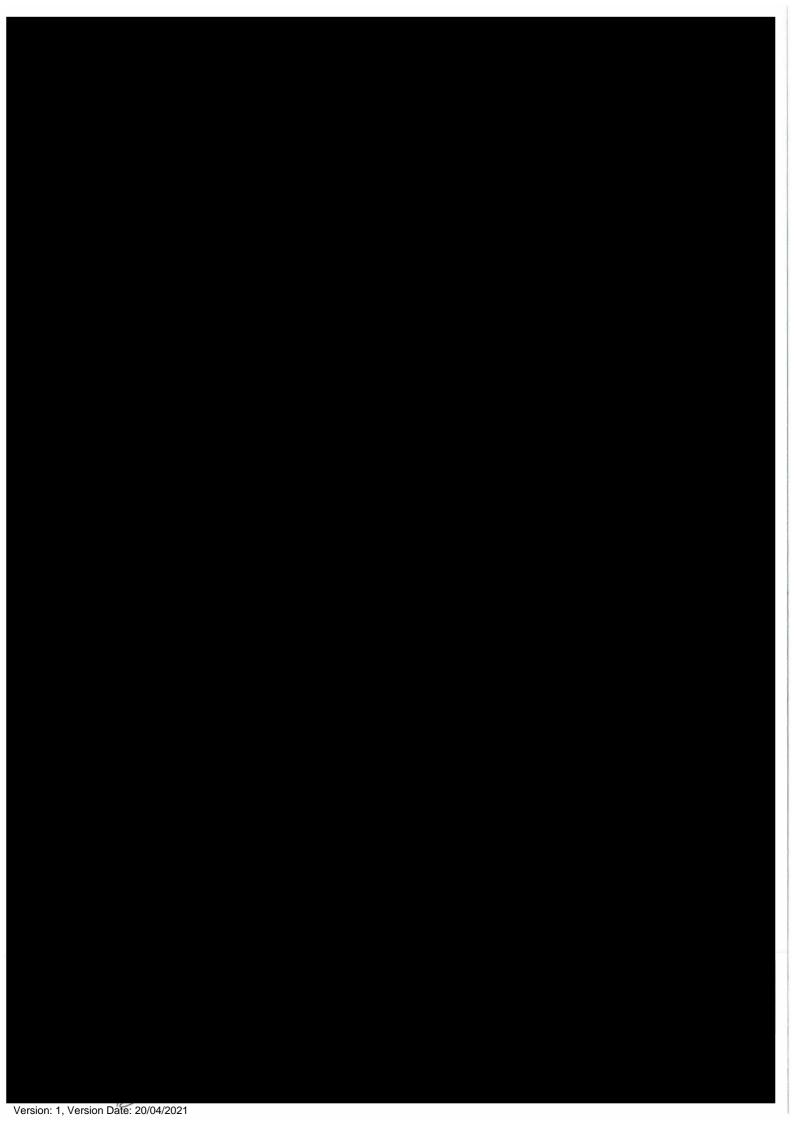


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