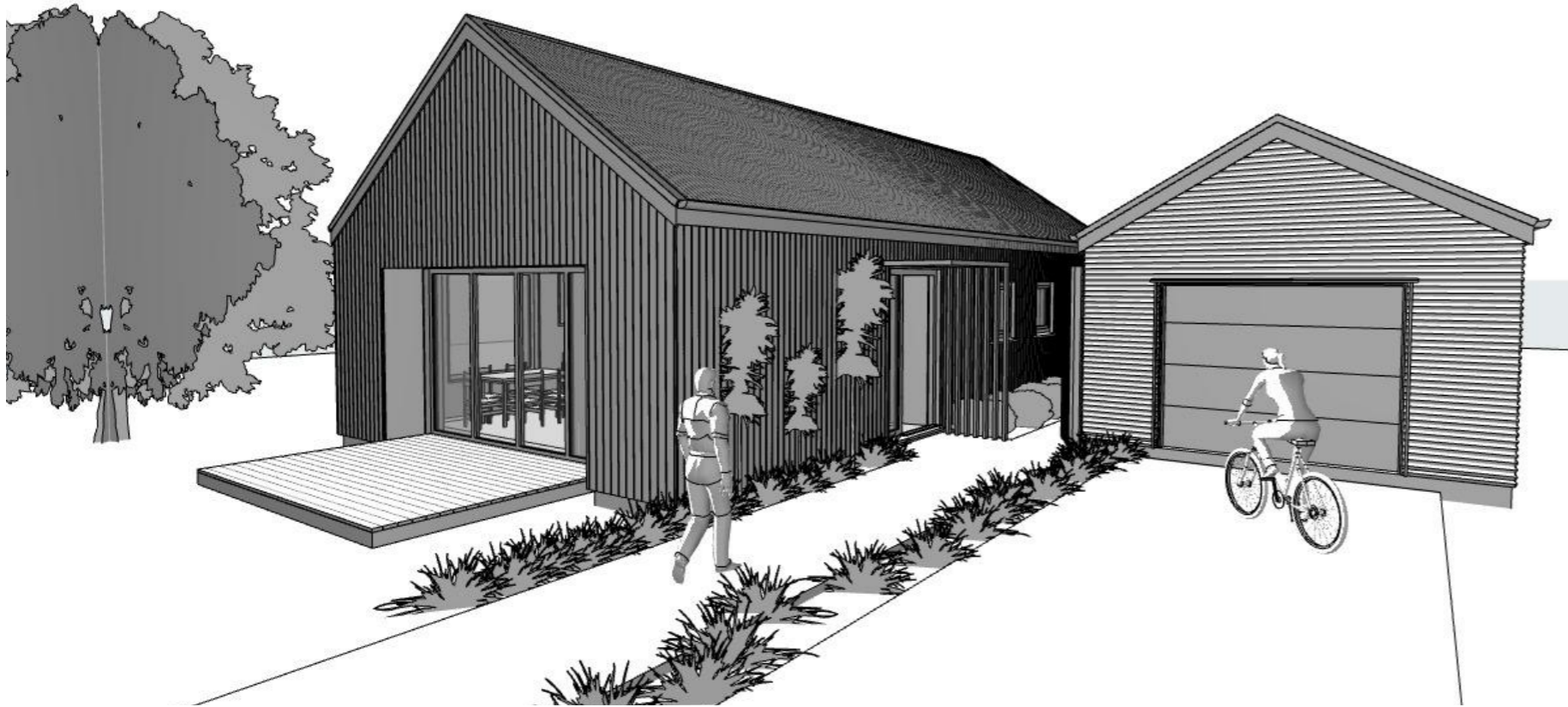


I SHEET INDEX - CONCEPT

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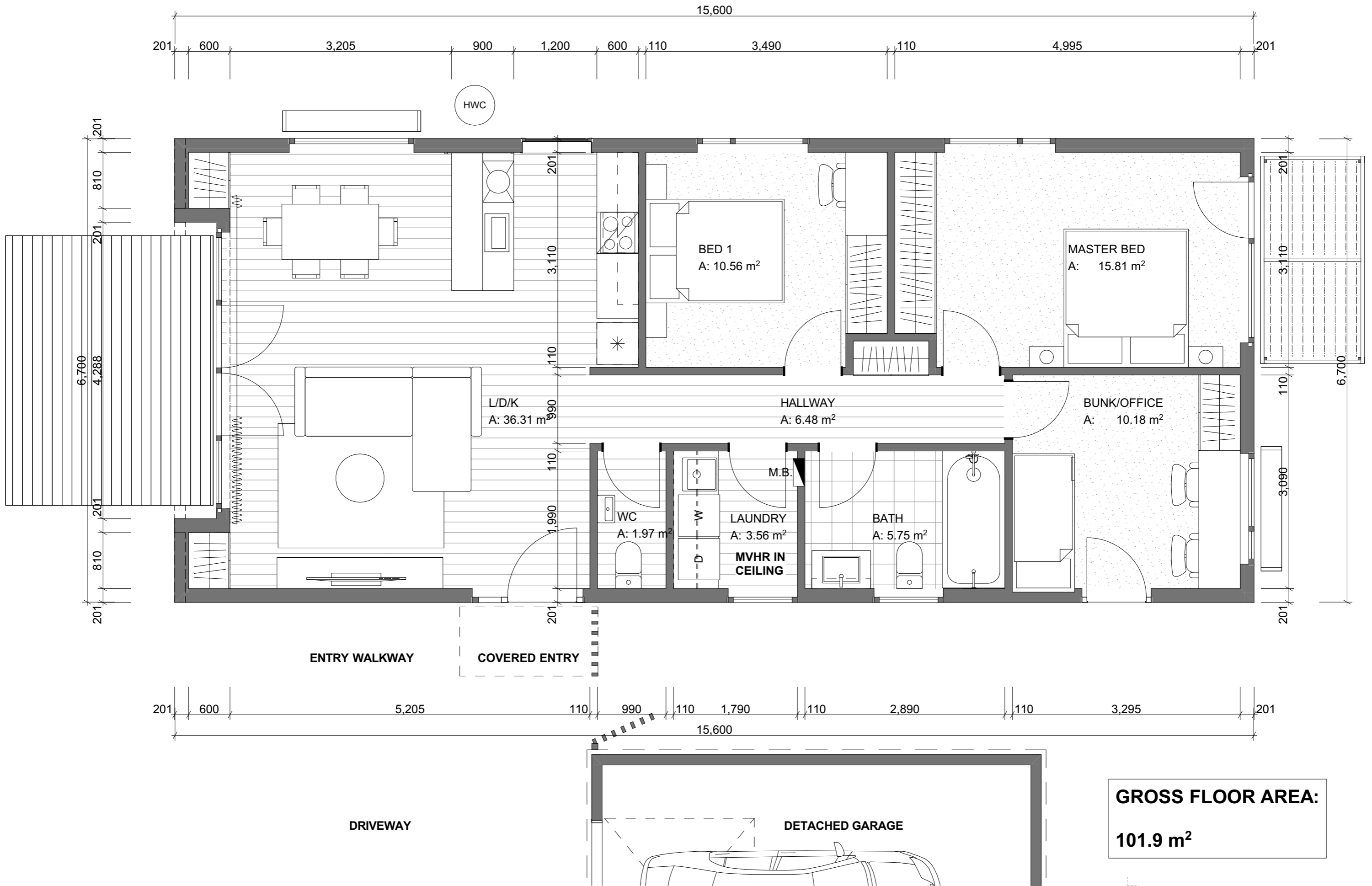


WARM HOUSE COMPANY SCHEME 1

AFFORDABLE HIGH PERFORMANCE PLANS FOR WARM HOUSE COMPANY

CONCEPT
JAN 2022

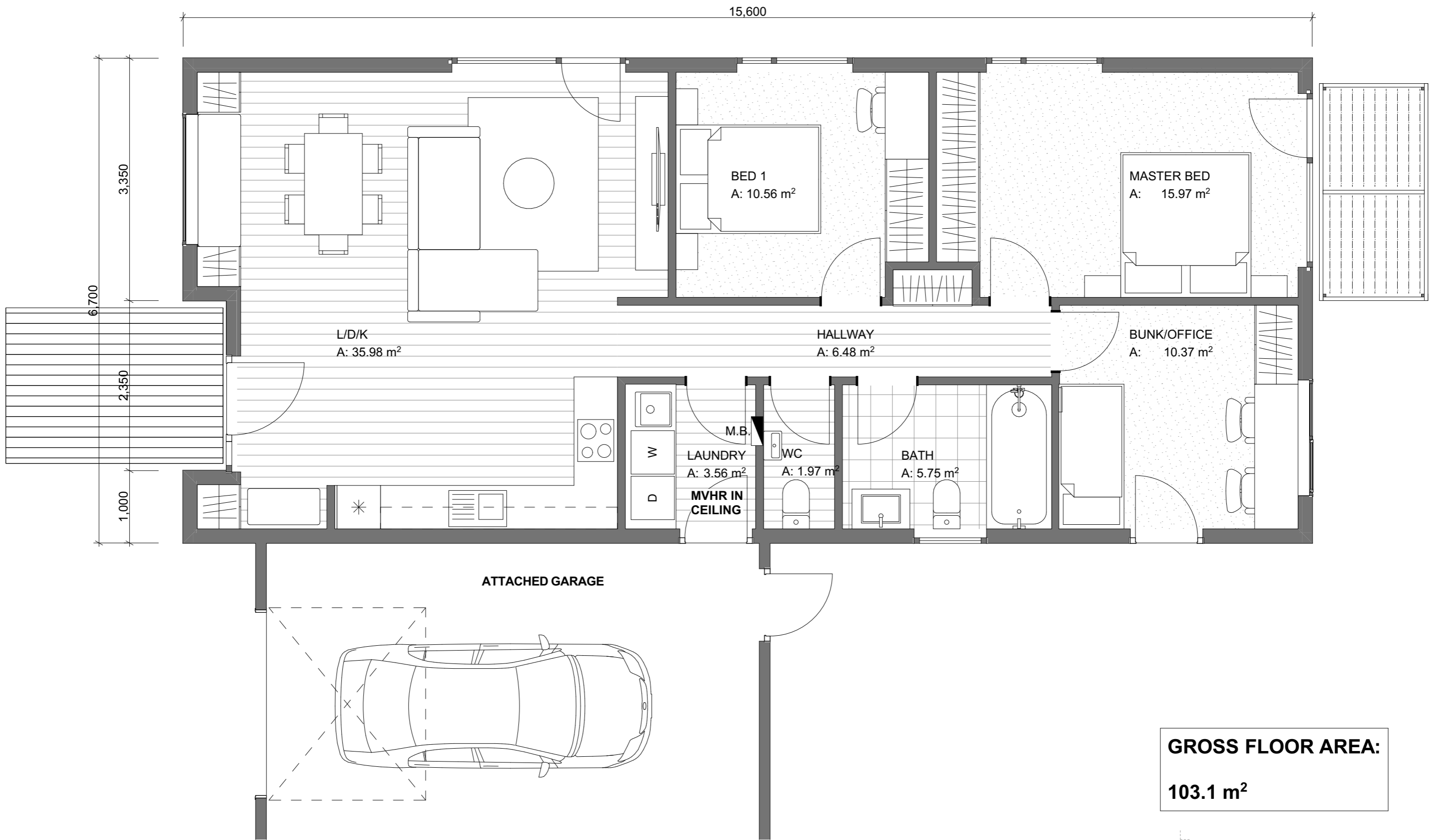
RESPOND — ARCHITECTS



GROSS FLOOR AREA:
101.9 m²

DWG NO. A01 REVISION C DATE 24/01/2022

CONCEPT DRAWINGS BY RESPOND ARCHITECTS
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GROSS FLOOR AREA:
103.1 m²



WARM HOUSE COMPANY SCHEME 1
ALTERNATIVE FLOOR PLAN FOR ATTACHED GARAGE

DWG NO. A02 REVISION C DATE 24/01/2022

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1 NORTH ELEVATION PROPOSED 1:100



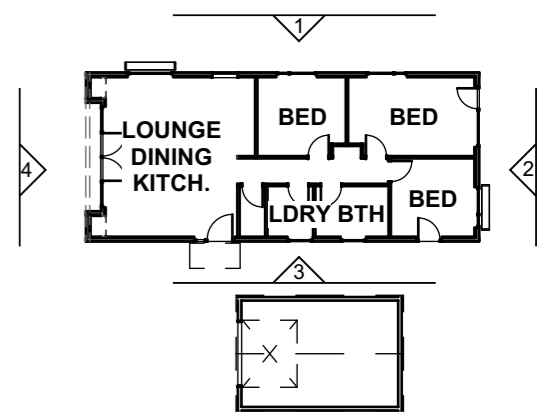
2 EAST ELEVATION PROPOSED 1:100



3 SOUTH ELEVATION PROPOSED 1:100

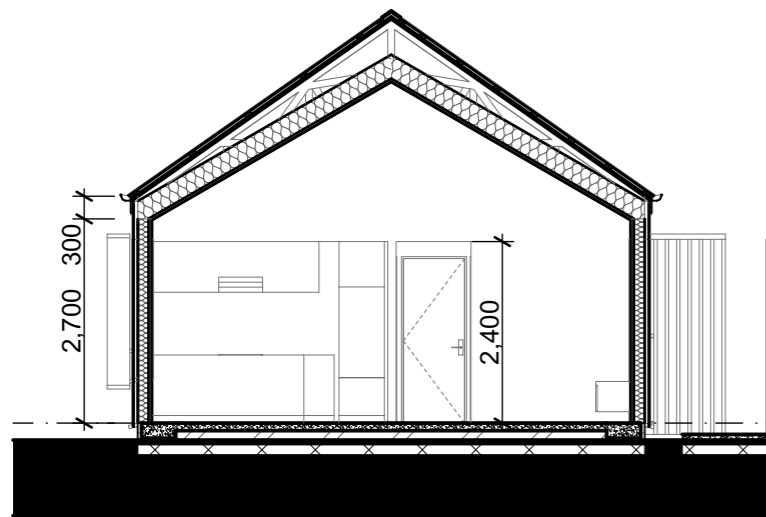


4 WEST ELEVATION PROPOSED 1:100

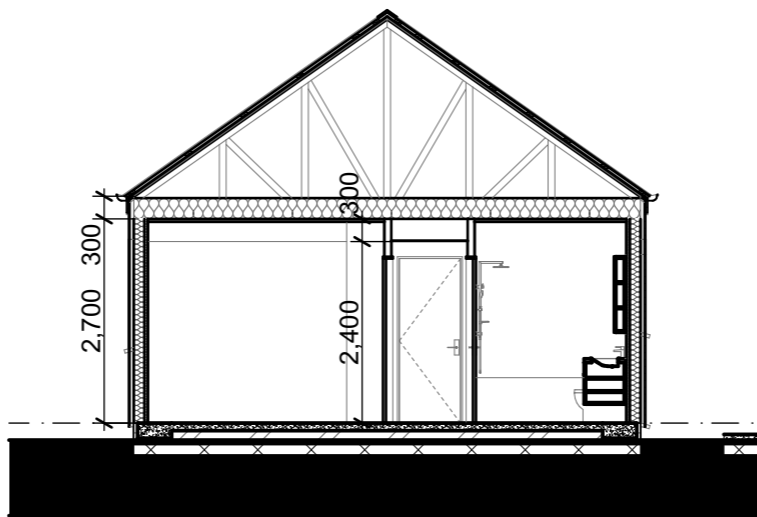


DWG NO. A03
 REVISION C
 DATE 24/01/2022

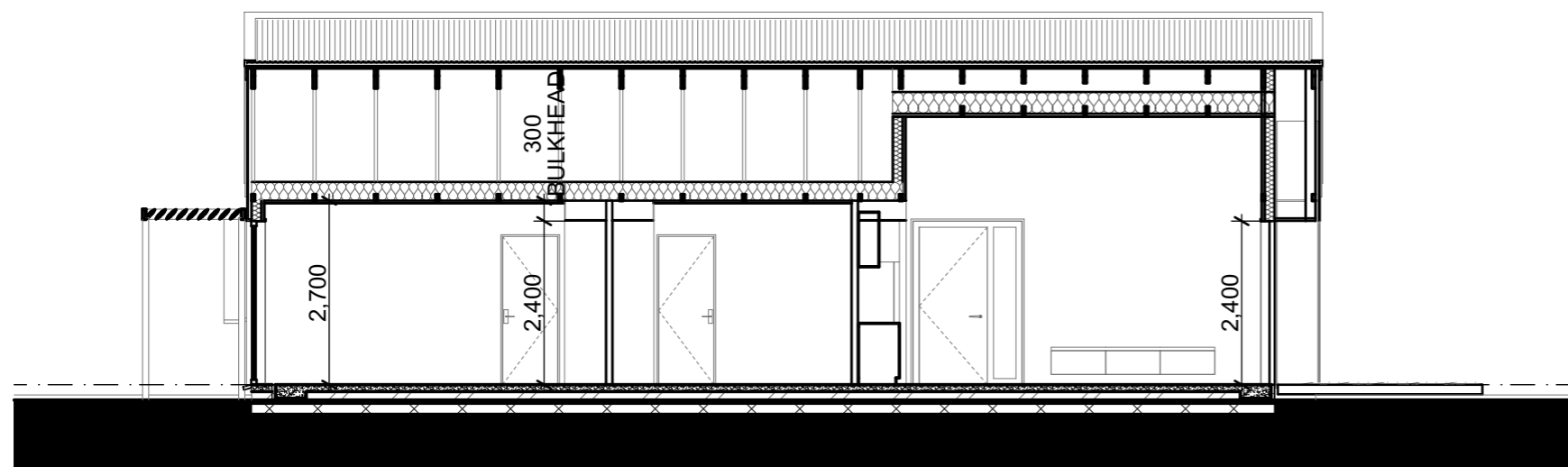
CONCEPT DRAWINGS BY RESPOND ARCHITECTS
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1 SECTION A 1:100



2 SECTION B 1:100



3 SECTION D 1:100

WD TOTAL AREA				
ID	QTY	W x H	VIEW FROM OUTSIDE	AREA
D01	1	1,600 x 2,400		3.84
D02	1	4,000 x 2,400		9.60
D03	1	1,000 x 2,400		2.40
W01	1	1,800 x 1,800		3.24
W02	1	1,000 x 2,400		2.40
W03	1	1,600 x 1,400		2.24
W04	1	1,600 x 1,400		2.24
W05	1	2,400 x 2,400		5.76
W06	1	1,600 x 1,400		2.24
W07	1	1,000 x 1,000		1.00
W08	1	1,000 x 1,000		1.00
				35.96 m ²

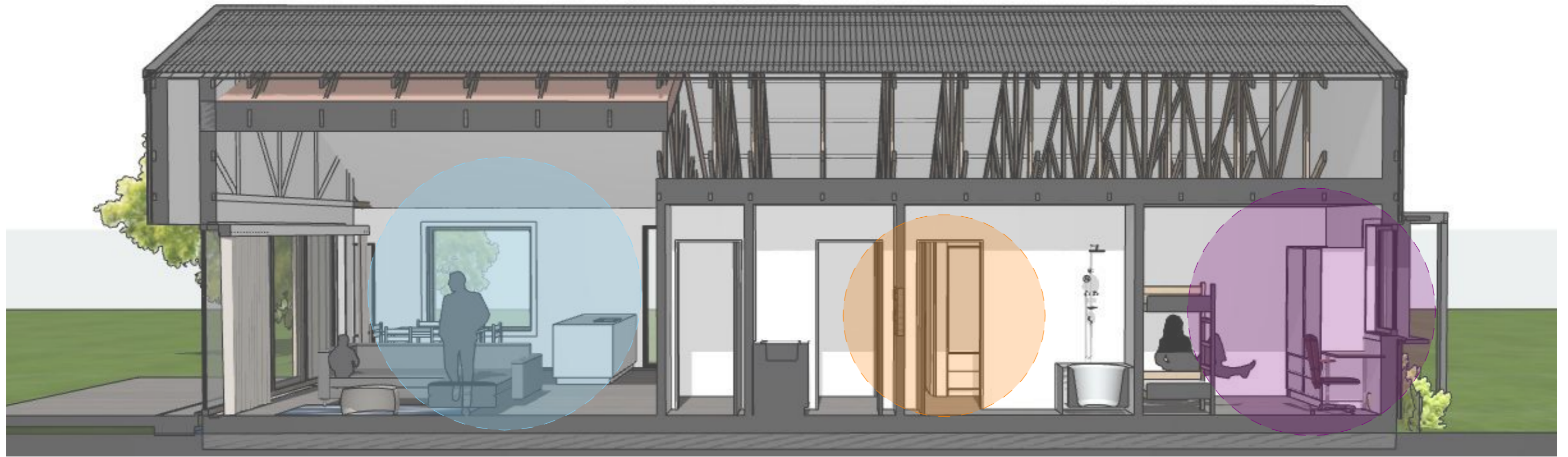
4 WD SCHEDULE 1:1



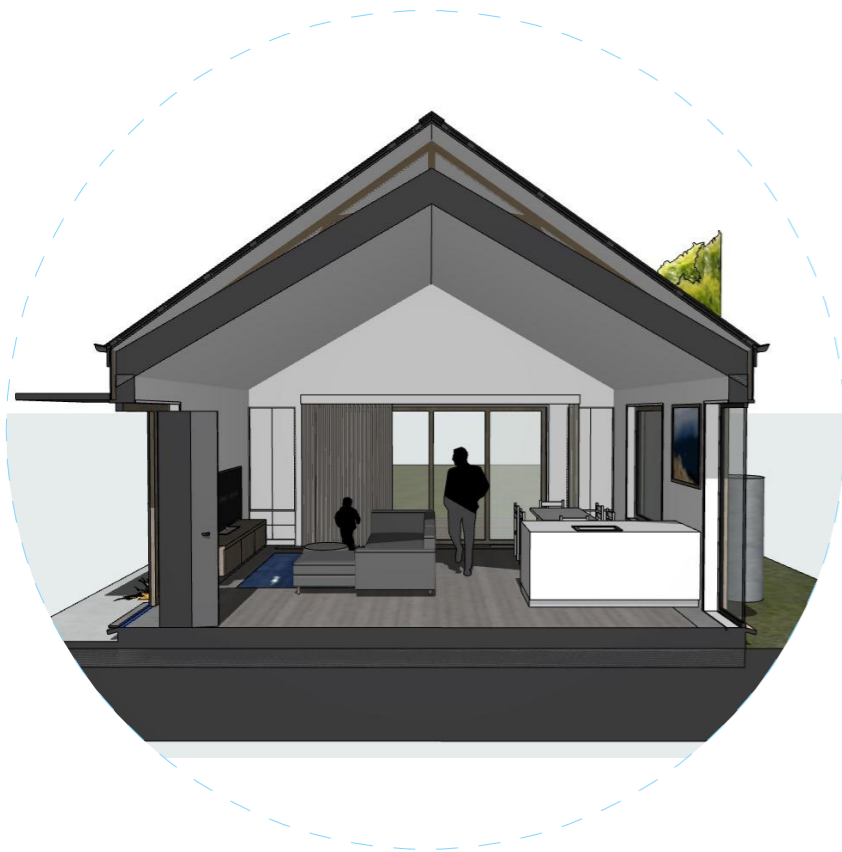
EXTERIOR 1



EXTERIOR 2



LONG SECTION



LIVING, DINING, KITCHEN



BATH & LAUNDRY

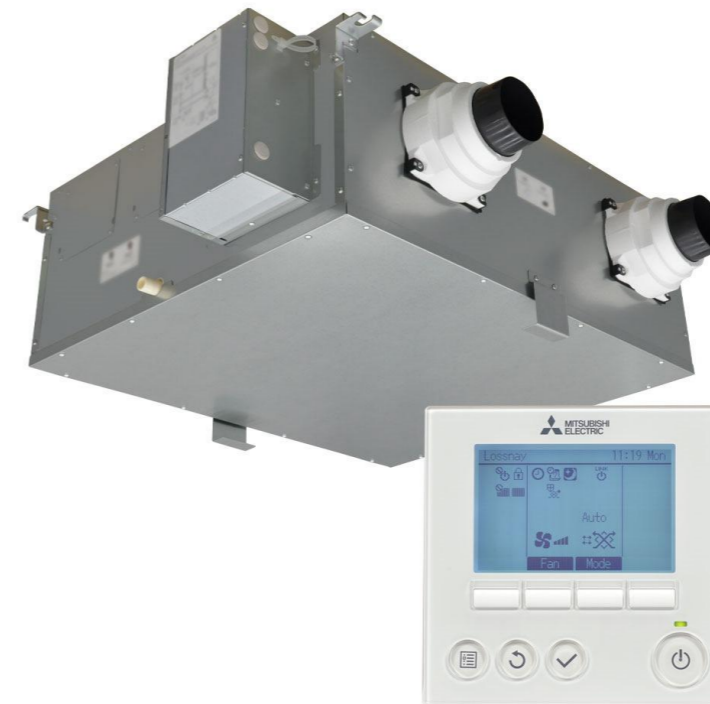


BEDROOMS

Timber Aluminium composite frame, triple glazed window



Mid-range centralised heat recovery ventilation system with smart control (In-line connection with heat pump optional)



Fully insulated slab and foundation



Air and vapour control membrane



ENERGY MODEL RESULT CHARTS

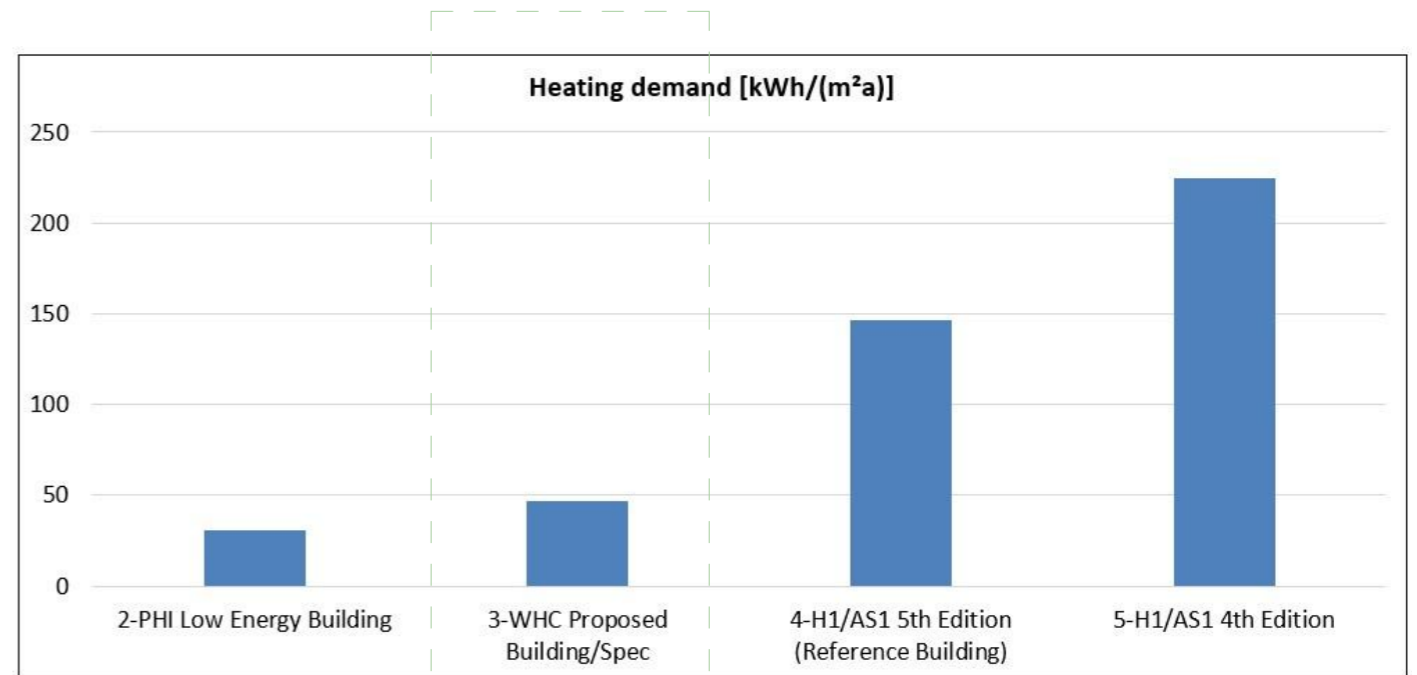
This building has been energy modelled in PHPP (Passive House Planning Package) software in 4 different building performance standards. They are:

1. PHI Low-energy building
2. WHC proposed building/spec
3. H1/AS1 5th edition (new building code)
4. H1/AS1 4th edition (old building code under transition.)

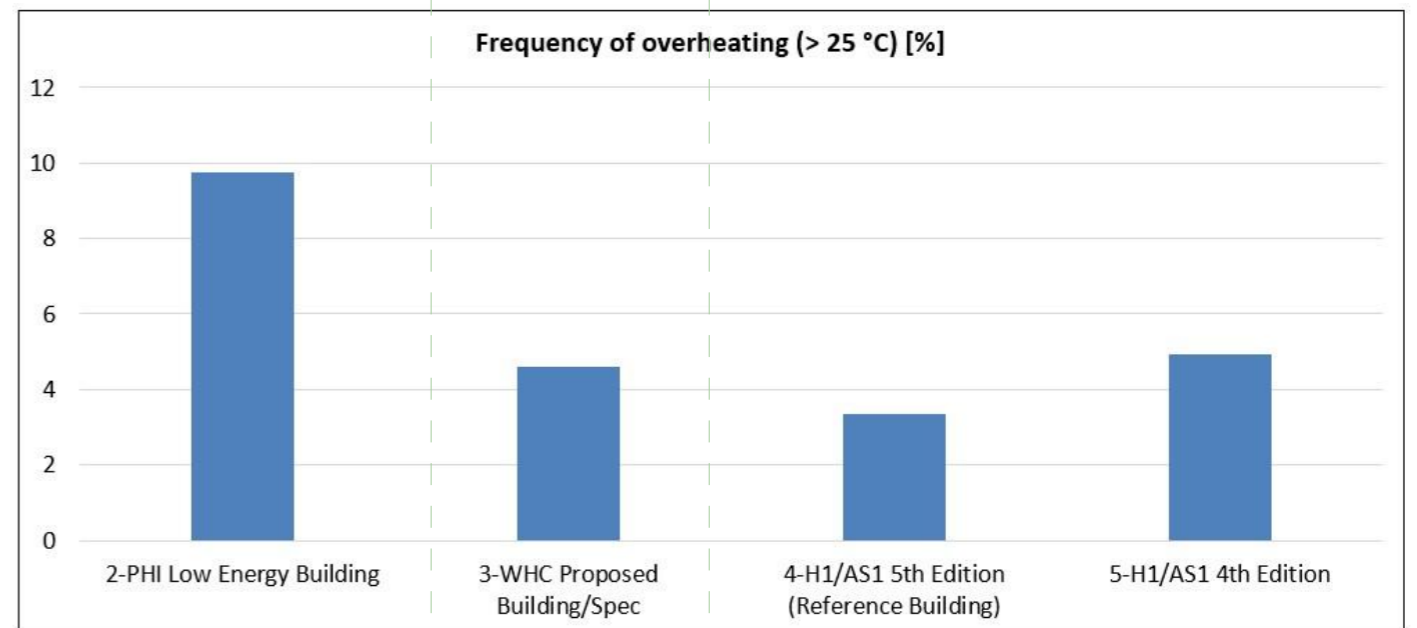
All 4 different orientations are also assessed with the assumption of neighbours on 3 sides like in a typical subdivision. With even distribution of windows in the current design, the differences are within 10% no matter how we orientate the building. The shading, however, must be assessed on project by project basis to guarantee optimal performance.

The performance comparison charts on the right will show you how easy to keep warm in winter and how the house naturally stay cool enough in summer.

Please refer to the next page for detailed break down of the results and specs.



The heating demand of the Warm House Company building consumes 3X less energy compared to the new building code and 4X+ vs the old building code.



The overheating potential in summer with adequate shading means our proposed building overheats less than 5% in a year. This is based on the worst case orientation scenario and all windows closed.

ENERGY MODEL RESULT TABLE AND SPEC

		Select the active variant here >>>>>>			
		PHI Low Energy Building	WHC Proposed Building/Spec	H1/AS1 5th Edition (Reference Building)	H1/AS1 4th Edition
	Units	2	3	4	5
Heating demand	kWh/(m ² a)	30.4	46.8	146.3	224.3
Frequency of overheating (> 25 °C)	%	9.7	4.6	3.3	4.9
Floor		The energy model reveals the difficulty of achieving a certified project without specific windows and doors design to optimise solar gain and essential shading on specific site.	R4.0 Fully insulated slab and edges	R1.7 Only edge insulation	R0.8-1.0 Uninsulated slab and edges
Wall		Therefore, the general spec reference is unavailable	R4.4 140+45mm counter insulated wall framing / insulation	R2 Insulated 90 framing with high timber content	R2 Insulated 90 framing with high timber content
Roof			R7.6 275+45mm counter insulated roof framing / insulation	R6.6 210+45mm counter insulated roof framing / insulation	R3.3 140mm insulation between framing
Windows			R1.0 Timber frame + Lowe triple glazing	R0.5 Thermally broken aluminium frame + Lowe double glazing	R0.26 Aluminium frame + low tech double glazing
Ventilation			Heat recovery ventilation system up to 72% efficiency	Opening window only	Opening window only
Airtightness			ACH 1 under blower door test with air/vapour control layer	ACH 4-5 under blower door test, air/vapour unregulated	ACH 4-5 under blower door test, air/vapour unregulated

