

Design 3: Suitable for South elevation block

The Intellect

City of
Cockburn



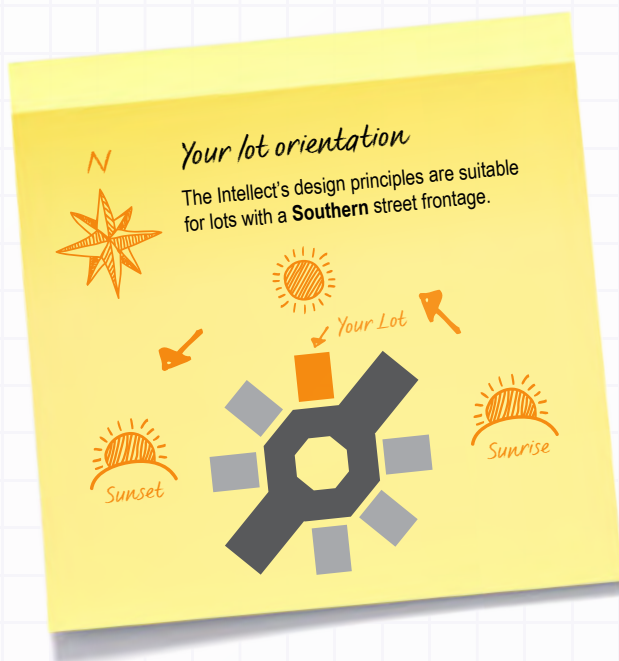
The Intellect

Concept designed by Ming Ho Wong

This barn style home features 4 bedrooms with built-in robes, a ground floor powder room and upstairs bathroom. The open-plan layout of the ground floor makes for great entertaining, connected to an expansive outdoor area.

The main living areas on the northern side make best use of the winter sun, while a solar pergola blocks the harsh summer sun. Smaller windows facing west help to minimise the impact of the afternoon sun while still allowing for natural cooling throughout the house.

Another clever design feature is the placement of the wet areas, such as the kitchen, laundry, powder room and upstairs bathroom which are grouped together to minimise plumbing and hot water running costs.

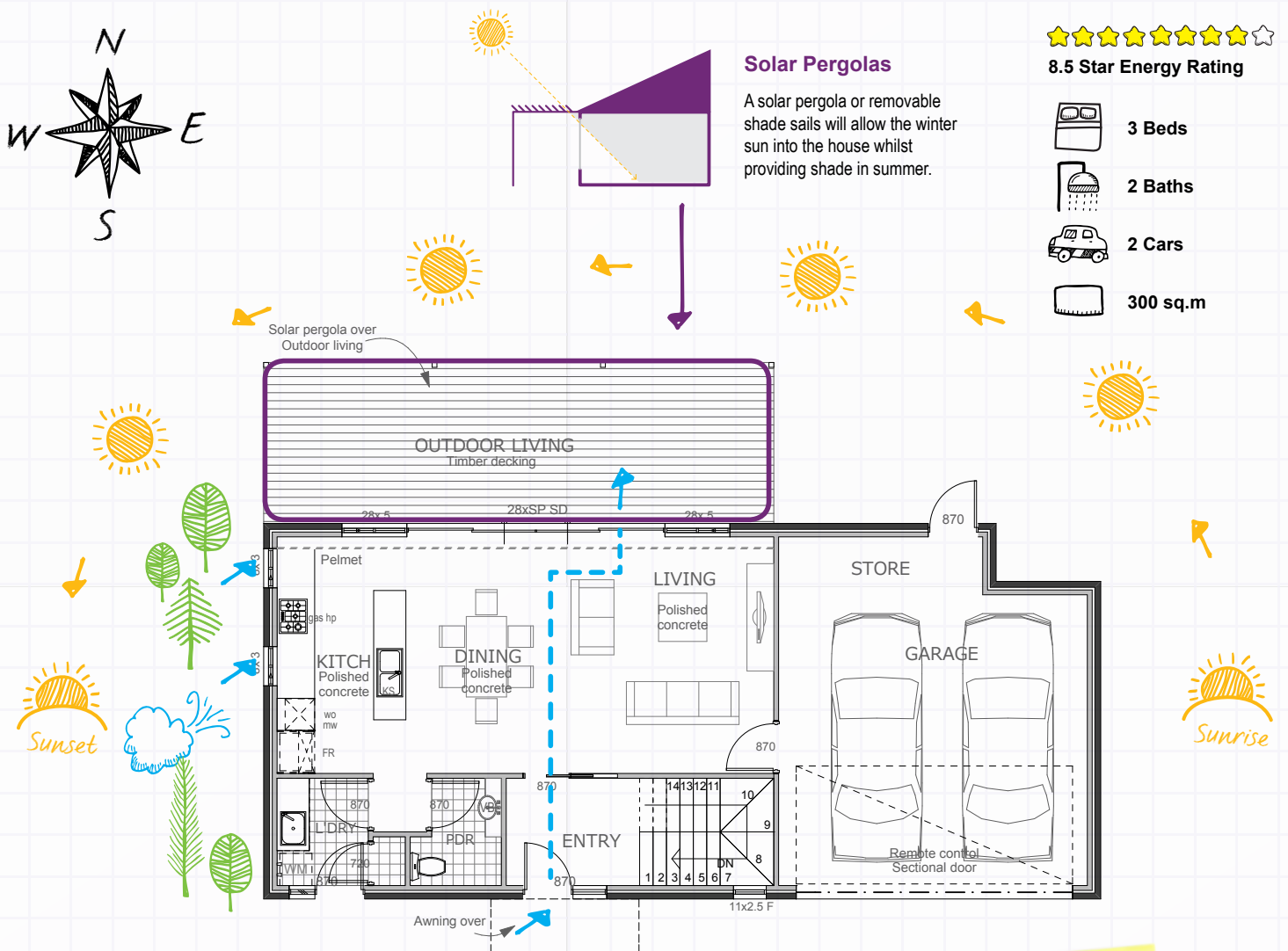


THE UNIVERSITY OF
WESTERN AUSTRALIA

How to use this concept design

This plan explains how sustainable design principles can be applied to a lot with a South elevation. You and your builder can draw upon this concept as a source of inspiration to design a more sustainable home with lower running costs and improved energy efficiency.

Ground Floor



Windows

Minimise windows on the East and West to reduce unwanted heat from the rising and setting sun.

Living rooms and windows facing North will allow the warm winter sun to enter the home during the colder months.

Heavy curtains with pelmets and/or double glazing help to regulate internal temperatures without spoiling the view.

Insulation

Insulate the ceiling and roof as well as the external walls.

Shading + Landscaping

Shading and landscaping on the east and west to reduce unwanted heat gain from the rising and setting sun.

Deciduous trees in the North will let the winter sun into your house, whilst providing shade in summer.

Eaves help the shade the windows and walls from the summer sun.

Southwest Sea Breeze

Strategic placement of windows and hallways allows the sea breeze to cool your home for free.

Think Ahead!

Using good design principles can save energy, water and money, while creating a more enjoyable and comfortable home.

Light Coloured Roof

Reflect unwanted light and heat, save money on cooling costs.

Design for universal accessibility

Minimum door width 820mm, Hallways 1000mm, plus an easy access toilet.

Exposed concrete or tiled floors

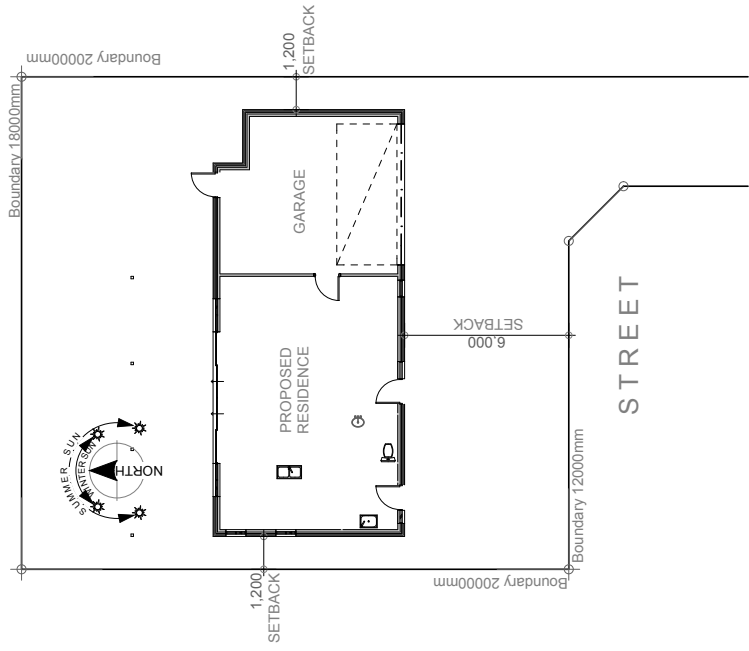
Help regulate internal temperatures by providing thermal mass, keeping the home cooler in summer and warmer in winter.

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First Floor





Site Plan
1:200

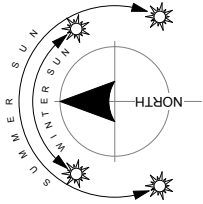
CONSTRUCTION NOTES:	
Flooring	Polished concrete to living areas Carpet to bedroom areas Ceramic tiles to bathroom, ensuite & laundry Concrete suspended slab to second storey
Walls	Reverse brick veneer with R2.5 insulation where shown Cavity brickwork with air-cel permicav to internal walls
Windows	Single low-e glazing with aluminium frames
Ceiling	Plasterboard with R4.0 bulk insulation
Doors	Solid timber doors
Other	Ceiling fans to living & bedroom areas
Roof	Metal deck (light colour) with 55mm anticon insulation Solar pergola's/shading devices to all northern windows



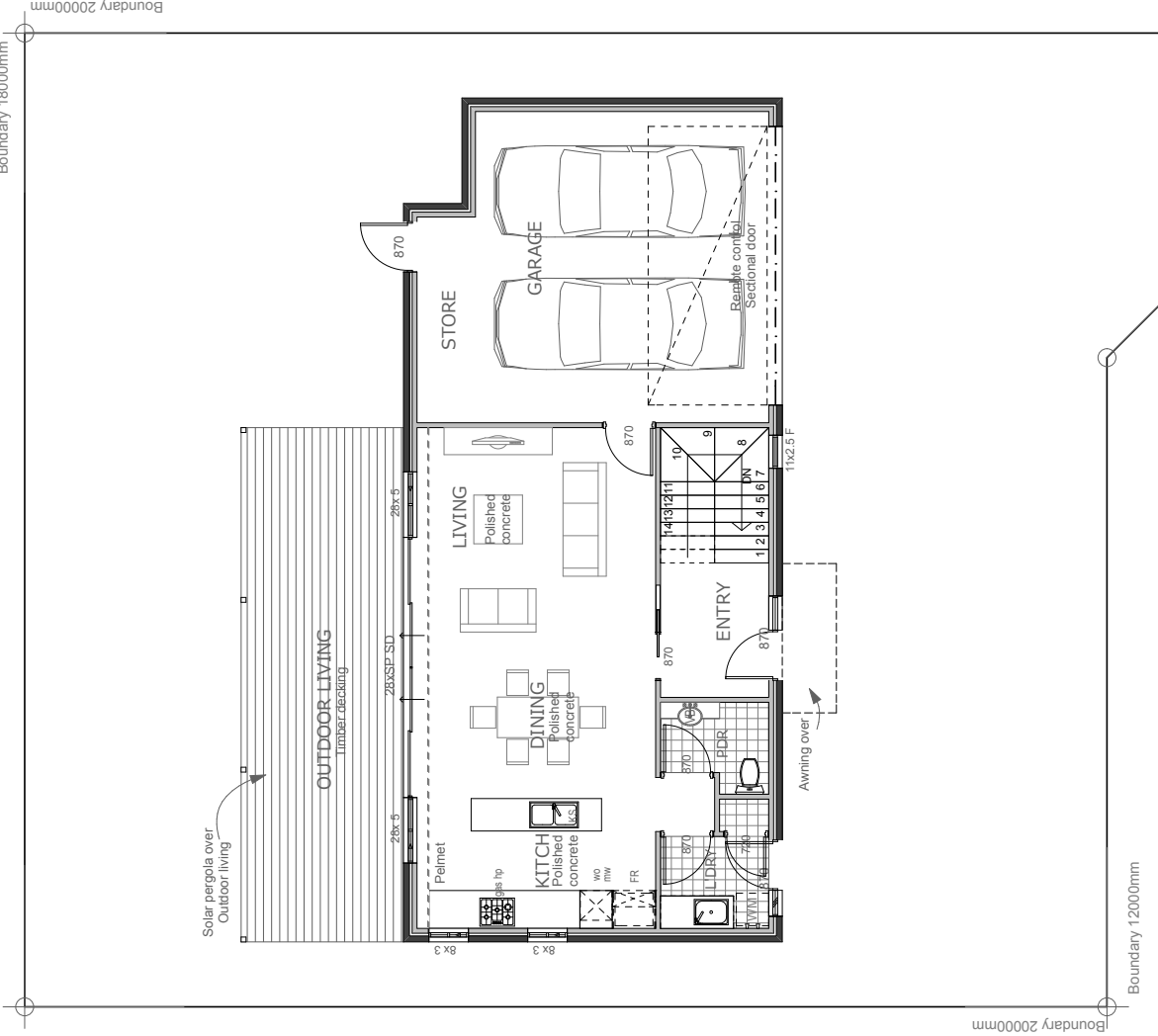
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TITLE: Site Plan	
©	PLOT A3 SCALE 1:200
Concept	

Ground Floor Areas	
Room Name	Area
Ground Floor Living	67.18
Garage	39.87
	107.05 m ²



Ground Floor Plan
1:100



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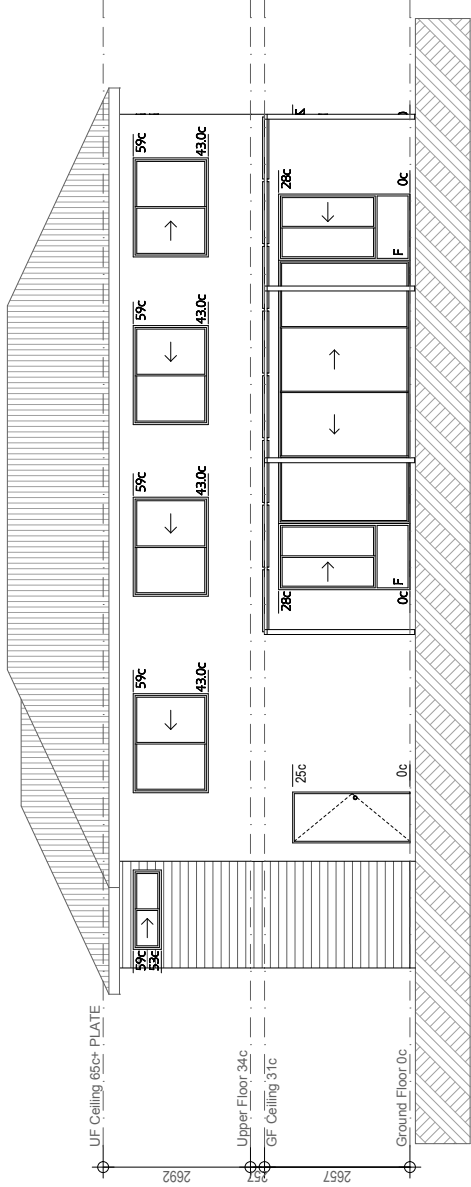


TITLE: Ground Floor Plan

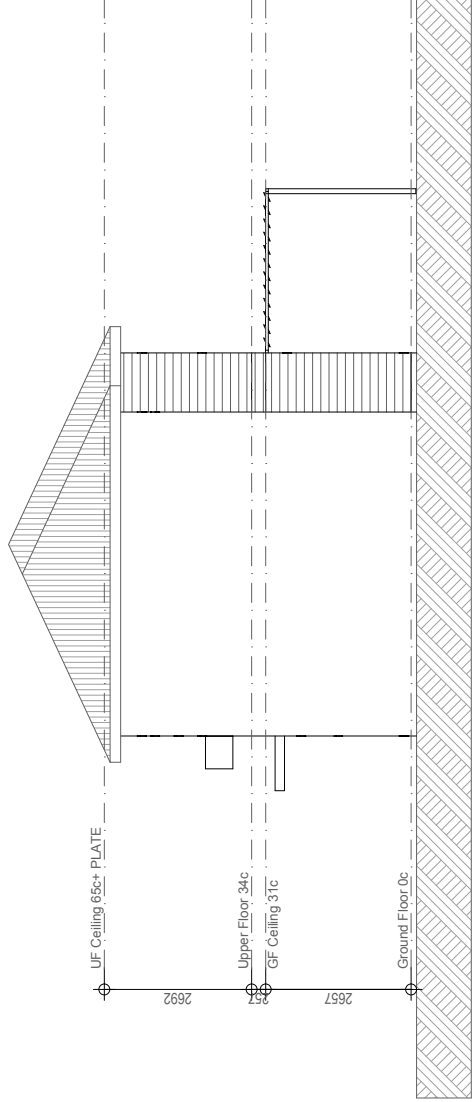
© PLOT A3

SCALE 1:100, 1:1

Concept



Elevation 1
1:100



Elevation 2
1:100

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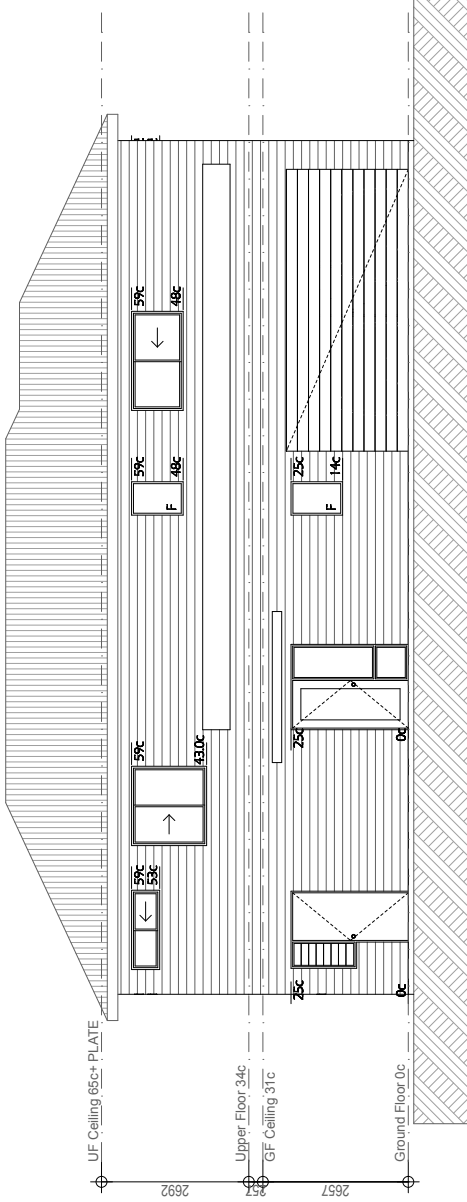
TITLE: Elevations 1

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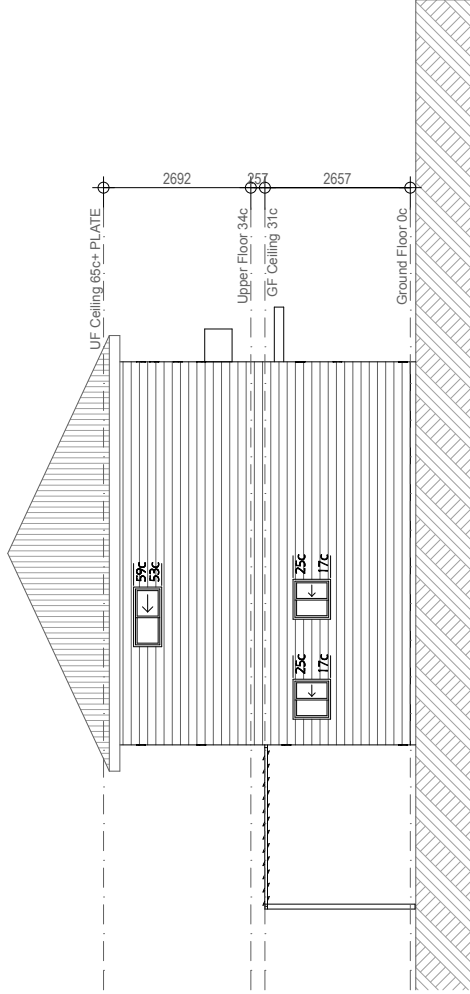
PLOT
SIZE
A3
1:100

SCALE
1:100

Concept



Elevation 3
1:100



Elevation 4
1:100

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TITLE: Elevations 2	
©	PLOT A3 SCALE 1:100 SIZE
Concept	