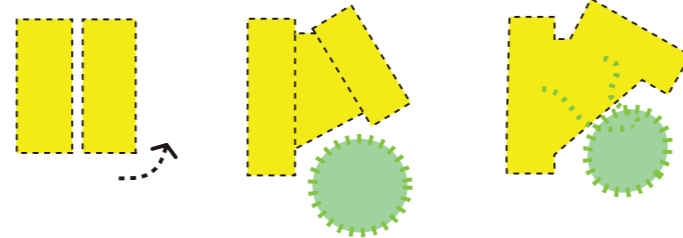











Generic configuration for sites adjoining an access road

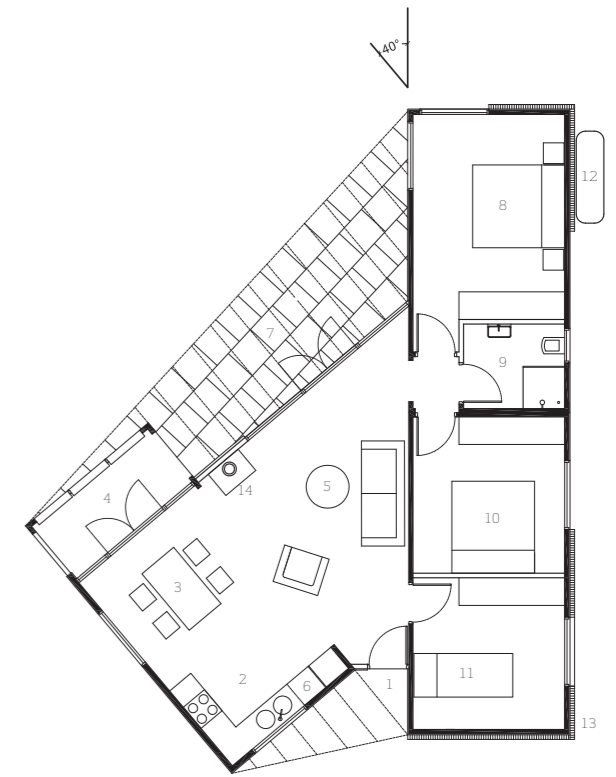


Building footprint splits to respond to site space between creates new open plan living internal/external shaded spaces with individual bedrooms orientated towards views and eastern sun

### Materials schedule

	WM	welded mesh 50 x 50 mm square mesh
	CR	natural cement render
	CS	Cement sheet screen
	CC	Colorbond type cladding clear zinc finish
	PT	Painted timber pergola
	GM	Glass + aluminium mesh
	PG	Edge perimeter gutter to collect fall off from roof & connect to rainwater
	ER	Extensive green roof  Minimum roof build up & maintenance Provides insulation from the summer heat whilst also retaining heat in winter
	WT	Slimline rainwater tank

These roofs ARE NOT intended for recreation or to accommodate the weight of people, larger shrubs or trees



40 degree house

### Sustainability

The use of passive sustainable design principals throughout the design encourages the reduction in use of power consumption via heating and lighting. Natural ventilation & fresh air is achieved without additional cost using the following

- Orientation to the sun to provide natural heating & daylighting
- Harnessing of natural breezes for ventilation to cool internal spaces and remove contaminants
- Using the thermal mass available in the building's structure in the concrete floor slab & green roof to moderate temperatures and provide heating
- Using correctly sized overhangs (pergola) and other forms of shading to cut out unwanted light and heat
- Carefully considered placement and sizes of windows and opening sashes

The material selection is focused on the reduction of toxic or harmful chemicals, such as plastics and glues to improve the indoor air quality including the use of inert, water and plant based materials. Internal linings are minimized to reduce maintenance, as well as reducing the material quantity required for the construction minimizing the building environmental footprint.





## Compliance with AS3959

### Section 3 : General

The building has been designed to comply with AS3959 for the dwelling in a BAL 40 zone. However the majority of the construction complies with construction requirements for a BAL FZ zone. The following summary outlines the areas of compliance and the relevant BAL rating achieved.

The building has been designed to reduce the likelihood of building ignition caused by embers and burning debris carried on the wind, heat radiation and direct flame contact. The use of concrete as a construction material has been used to maximise protection from combustibility of the building fabric caused by direct or radiant heat.

The use of the green roof design provides further insulation from radiant heat to assist in maintaining a comfortable temperature within the building interior. The perimeter of the building has been designed with minimal openings therefore minimising ignition due to ember attack. The seamless concrete structure reduces the need for weep holes, vents or seals which may be prone to failure in the event of a bushfire.

AS3959- Section 3.5 Reduction in construction requirements due to shielding.

The construction requirements for the next lower BAL determined for the site may be applied to an elevation of the building where the elevation is not exposed to the source of bushfire attack.

The design of the building allows for the building orientation to achieve 'shielding' from the source of attack therefore reducing the BAL requirement for the main glazed facade to eliminate the need for bushfire shutters in a BAL FZ zone.

AS3959- 9.2 Subfloor construction is of concrete, a non combustible material BAL FZ Compliant

AS3959- 9.3 Elevated floors are made of concrete, a non combustible material BAL FZ Compliant

AS3959- 9.4 External Walls made from concrete, a non combustible material BAL FZ Compliant

AS3959- 9.4.3 All Joints / vents / weepholes covered with a ember proof mesh BAL FZ Compliant

AS3959- 8.5 Windows shall be min 5mm toughened glass, screened with a corrosion resistant steel mesh, applicable to windows subject to 'shielding' in BALFZ zone BAL 40 Compliant

- Inclusion of fire curtains to 'non shielded' windows (section 9.5) BAL FZ Compliant
- Mesh required to operable portion of window only and to 400mm above ground applies to BAL40 zone windows subject to shielding (section 7.5) BAL 29 Compliant

AS3959- 8.5.3 External Doors are either non combustible or 6mm toughened glazing in non combustible framing with weather strips, draught excluders BAL 40 Compliant

- All External doors to be non combustible (section 9.5.3) BAL FZ Compliant

AS3959- 9.6 Roof structure is constructed from concrete + non combustible BAL FZ Compliant

AS3959- 9.8 Above ground exposed water & Gas supplies shall be metal BAL FZ Compliant

## Affordable Bushfire resistant home

### Design objective

Our aim has been to design a durable home that embraces the notion of living whilst engaging with the landscape surrounding it. A flexible design that can allow for the building to be located on any site to suit its orientation, topography and outlook.

The design also allows for expansion of the house as well as additional options for varying sizes of living spaces. There is an instinctive, biological bond between humans and other living systems. The idea is that people thrive best in environments that have other forms of life around, and flourish in spaces that are more like habitats, instead of our all-too-common, isolated, Cartesian cubes.

The floor plan takes the static elements necessary for living and arranges them as individual elements beneath the unifying green roof structure.

The buildings connection to the surrounding landscape is further enhanced by

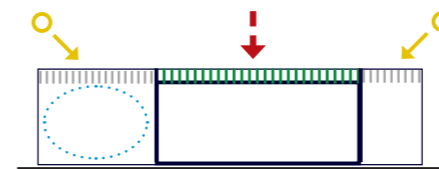
- Use of dynamic and diffuse daylight
- Ability to have frequent, spontaneous and repeated contact with nature throughout the building
- Connection between interior and exterior spaces and surfaces
- Natural ventilation, achieved through openable windows on opposing perimeter edge to allow for cross-ventilation
- Building form creates more sheltered external spaces with the primary living spaces looking out to surrounding landscape



### 40 degree house

exclusions:  
transport of modules to site, landscaping, consultant fees, HOW insurance, fencing, furniture & subject to specific site conditions

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