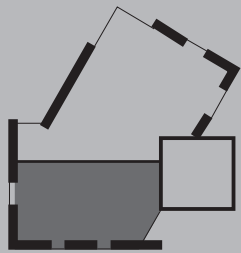
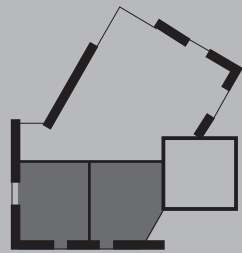


option 1 - studio



option 2 - one bedroom



option 3 - two bedroom

flexible floorplates

ground floor options - Open plan kitchen + living/dining

Option of large studio or 1 large or 2 medium bedrooms.

upper floor options - Open plan kitchen + dining + outdoor deck

Option of 1 large or 2 medium bedrooms

mezzanine options - open plan living or future bedroom

shared house options

upper level
+ mezzanine



family house options



lower level



“numbers

plot area | 355 sqm

gross floor area | 190 sqm

net area | 170 sqm

construction commenced | may 2009

completed | august 2011

contact

Project Architects and Owner Builders

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the vision

to create a compact and flexible house.

maximising space and flexibility of internal spaces whilst minimising overall building footprint.

to site this house in an urban setting

close to public transport, and amenities.

to construct a high quality contemporary building envelope

using sustainable concepts and materials.

passive solar

the design

- Unobstructed north facing windows with removable shade sails to maximise winter heat gain and summer shading
- Carefully balanced low E windows to the east and west facade with additional blinds and shade sails
- Minimised highly insulated window openings to the south
- Operable tilt and turn windows to maximise cross ventilation without compromising security
- Compact building design minimises external wall and roof area
- All external surface areas including windows are highly insulated
- **No heating and cooling** anticipated

“the outcome

The house is the first straw bale building that has been approved and built in the City of Stirling and one of the first in the metropolitan area.

The passive solar design and the high insulation of the straw bale walls, **insulated sandwich roof panels and double glazing make the house comfortable all year round without the need for any cooling or heating.**

Together with solar hot water and PV-cells, efficient lighting and appliances this house generates more power than is used by its five occupants.

234 a hancock street doubleview



construction

Aerated lightweight concrete blocks and prefabricated slabs for wet areas

- High thermal insulation (R 1.43m2K/W standalone, higher with cladding/insulation)
- Good acoustic insulation
- Low embodied energy
- Proven European technology

Charcoal coloured concrete floor

- Thermal mass for passive winter heating and summer cooling
- Highly durable floor finish
- Insulation under concrete floor and around perimeter footings
- Retains heat in winter

Laminated timber beam and column structure with steel bracing

- High strength
- Controlled forest plantation timbers
- Carbon storage

Straw bale infill walls

- Extremely high insulation value. 'R' Value around 8 m2K/W
- Excellent acoustic insulation properties
- Reuse of a farming waste product (carbon storage)

50mm thick Lime/sand render internal

- High thermal mass
- High strength and durability
- 'breathable' render system

50mm thick **external render** with clay/sand sublayer, lime/sand finishing coats and lime wash + breathable clear limestone sealer

- water repellent 'breathable' render system
- high weather exposed west walls additionally protected by colorbond cladding

Bondor Equideck insulated roof sandwich panels

- Very high insulation value from 250mm insulation. 'R' Value = 6.3m2K/W
- High strength and durability
- Self spanning panel minimises the need for support structure

Durra panel flooring and internal wall partitions

- Prefabricated strawboard panel using a farming waste product
- Good acoustic properties
- Self spanning for light traffic up to 1200mm, for use in residential flooring 600mm
- Recycled waste product from oversupply for the Albany Entertainment Centre (used as trafficable acoustic ceiling panel for the main auditorium)

Bamboo flooring on acoustic underlay

- Made from a sustainable fast growing resource
- Extremely durable and hard wearing

Argon filled double glazed timber windows made in Germany

- Extremely high insulation value (U-value 1.1 W/m2K)
- Highly sealed windows with outstanding acoustic insulation properties
- Standard European tilt and turn opening mechanism allowing cross ventilation without compromising security
- Multi locking keyed handles for excellent security

factfile

Commercial grade aluminium terrace bi-fold and sliding doors with **double glazing**

- High insulation value (U-value 1.9 W/m2K)
- Well sealed commercial door system with good acoustic properties

Insulated German window roller shutter to bedroom windows

- Further improved insulation value
- High additional security
- Protection from summer sun

Use of Alpolc off-cuts for wet area tower cladding

- Recycling of Aluminium composite panel off-cuts from commercial projects utilising 150mm to max 600mm high panels.
- Extremely high quality commercial facade product

water

Apricus evacuated tube solar hot water system with electric boosted 315 litre storage tank

- One of the most efficient solar hot water system on the market
- Boosting is only required during two to three months a year
- Timer and mobile app controlled electric booster minimises boosting, whilst allowing flexibility

4000 Litre in-ground rainwater storage for toilet flushing

- Reduced mains water usage

3000 Litre rainwater storage for irrigation

- Reduced mains water use for irrigation of vegetable and fruit plants

Greywater irrigation system

- Reduced mains water usage for irrigation
- Reduced waste water flow to sewer

Highly efficient low flow fixtures

- Reduced mains water usage

electricity

Energy efficient lighting

- LED lighting throughout the building minimises energy consumption
- Remaining fluorescent lighting to be replaced with LED for further energy reduction
- Motion sensor operated bath lights minimise energy wastage

Flexible electrical ducting with central out-of-house switch

- One centrally located switch per floor will turn off 80% of all power points and lights to minimise energy used by appliance or lights left on and stand-by usage of appliances
- Skirting ducting throughout the house allows flexible cabling which future proofs for later changes and new technology

Solar Power

- 2.3 KW Grid Connected monocrystalline Photovoltaic cell system.
- Energy generated by the system currently exceeds the energy consumed by all its six occupants.