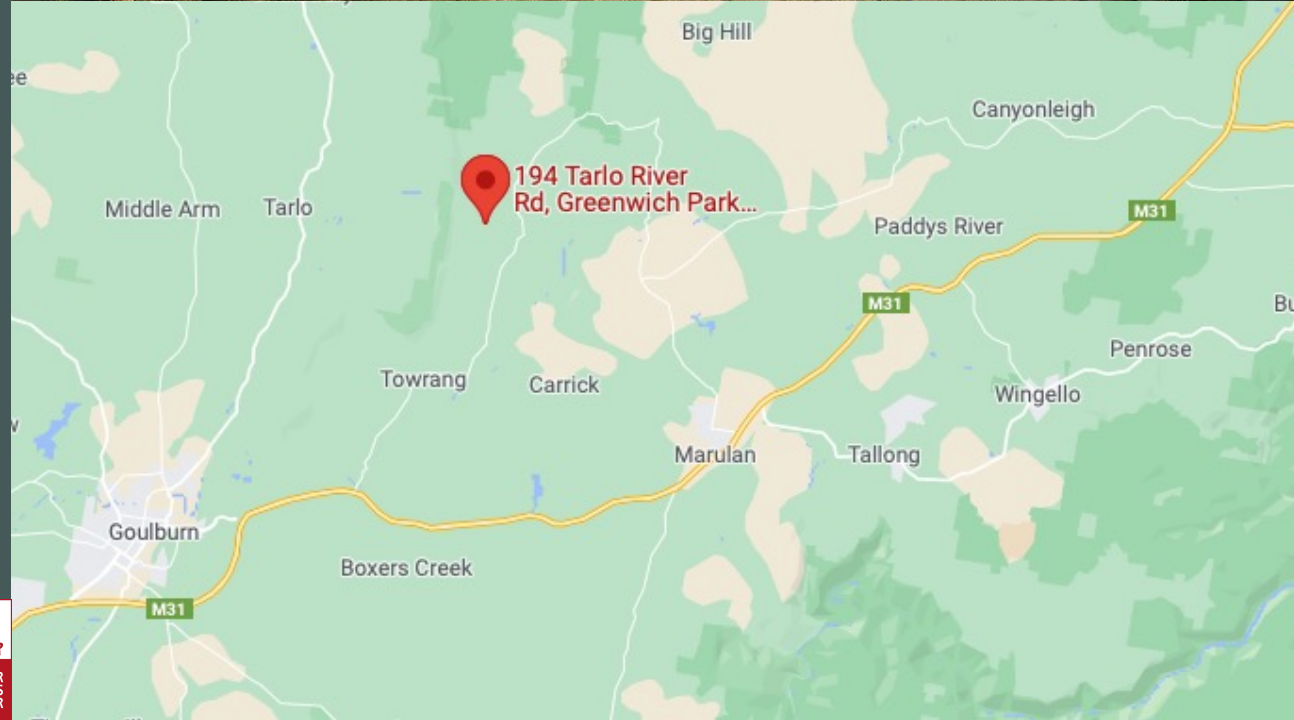


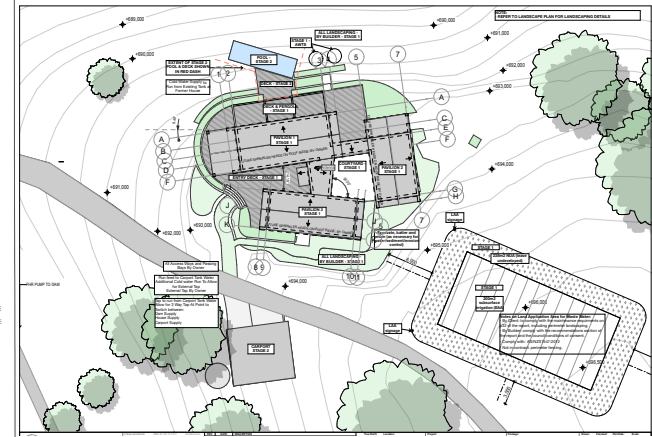
# PASSIVHAUS STANDARD IN THE AUSTRALIAN CONTEXT

## Tarlo River House GREENWICH PARK





ISOLATED - Off grid  
BUSHFIRE PRONE -  
Varying rainfall and temperatures (-0.8 -  
41.5 C).  
HEAVY FROST AND SNOW  
STUNNING VIEWS-  
North, NNW, NNE.  
River below, mountains beyond.





# PASSIVE HOUSE PREFABRICATED CONSTRUCTION SYSTEM

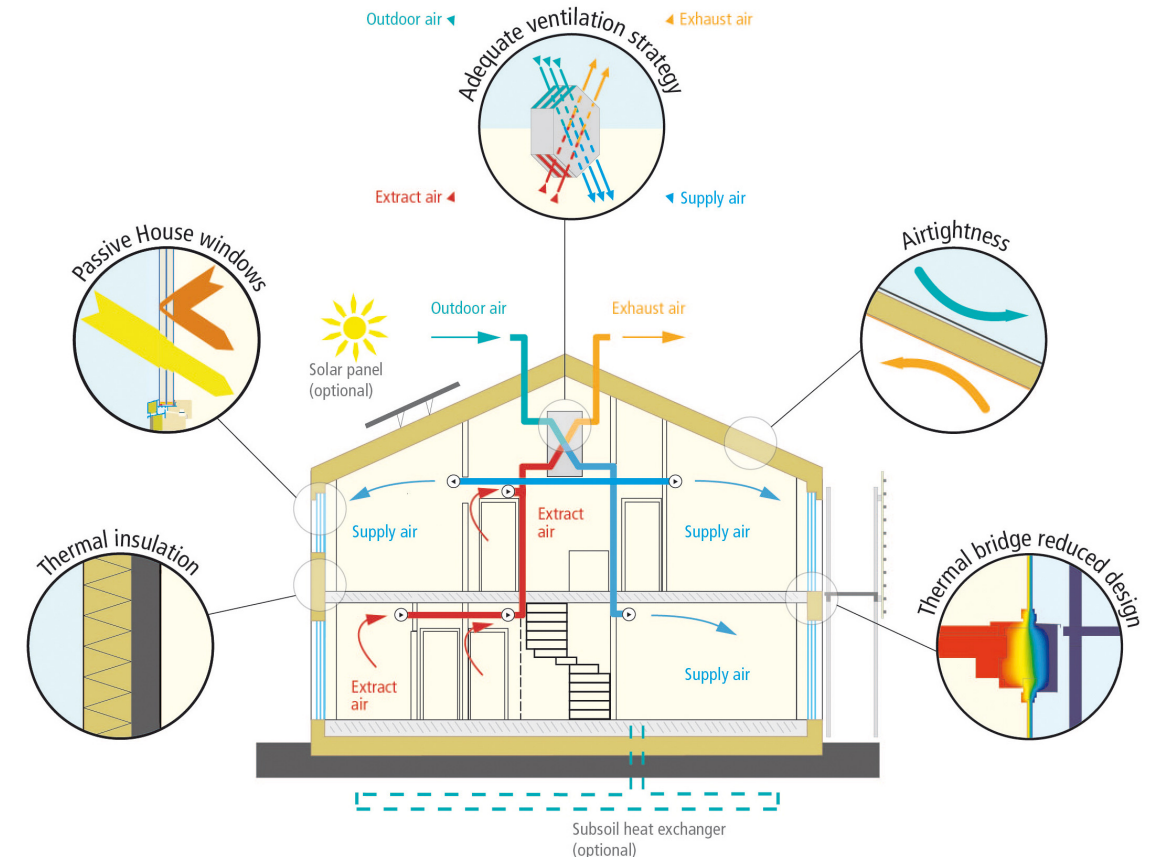
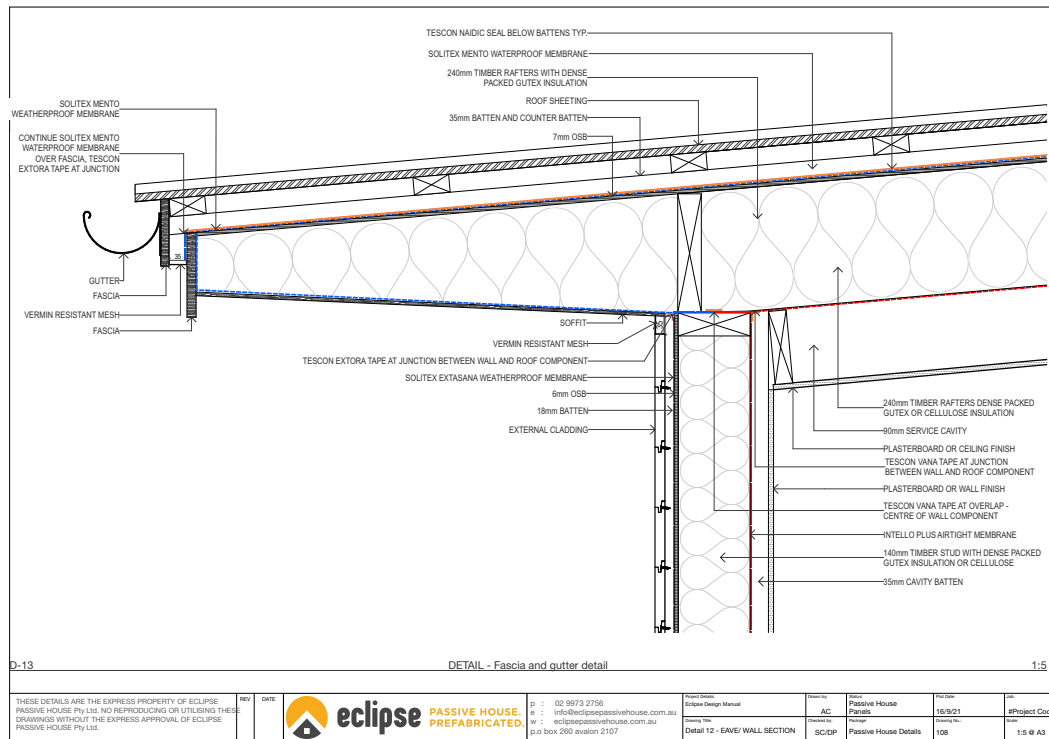
HEALTH – air quality, thermal comfort

SUSTAINABILITY – reduced greenhouse/CO2 emissions.

ECONOMICS – 80% less on heating and cooling, long lasting quality build

LOW CARBON- as timber cellulose insulation,–

PATHWAY TO NET ZERO BUILDING.





# DESIGN SOLUTION

PH doesn't mean it's a restricted the design solution  
3 Pavilions facing north (Passive Solar).  
Courtyards for micro-climates – Prevailing breezes, move around the building according to the season

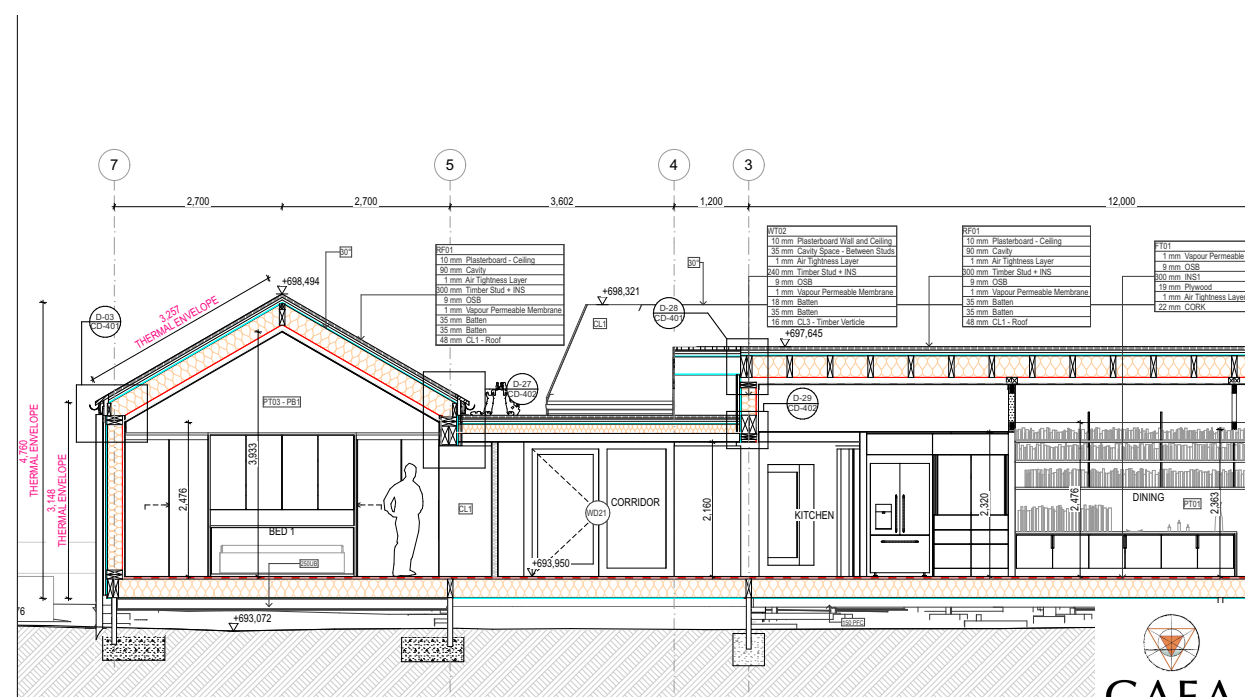


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# INSULATED AND WRAPPED FLOOR PANELS LIFTED IN.





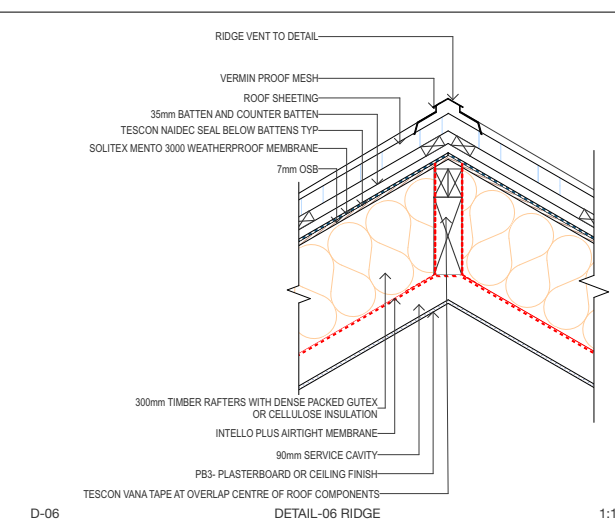
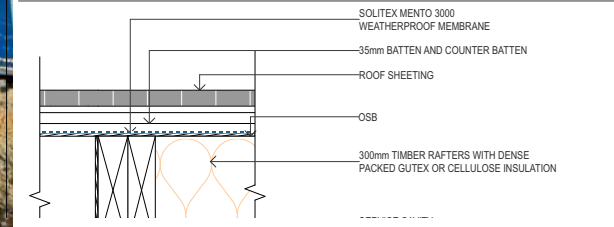
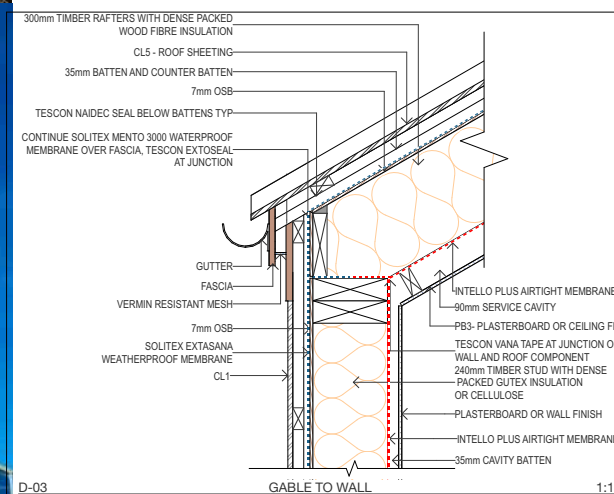






DAY 4 AND 5

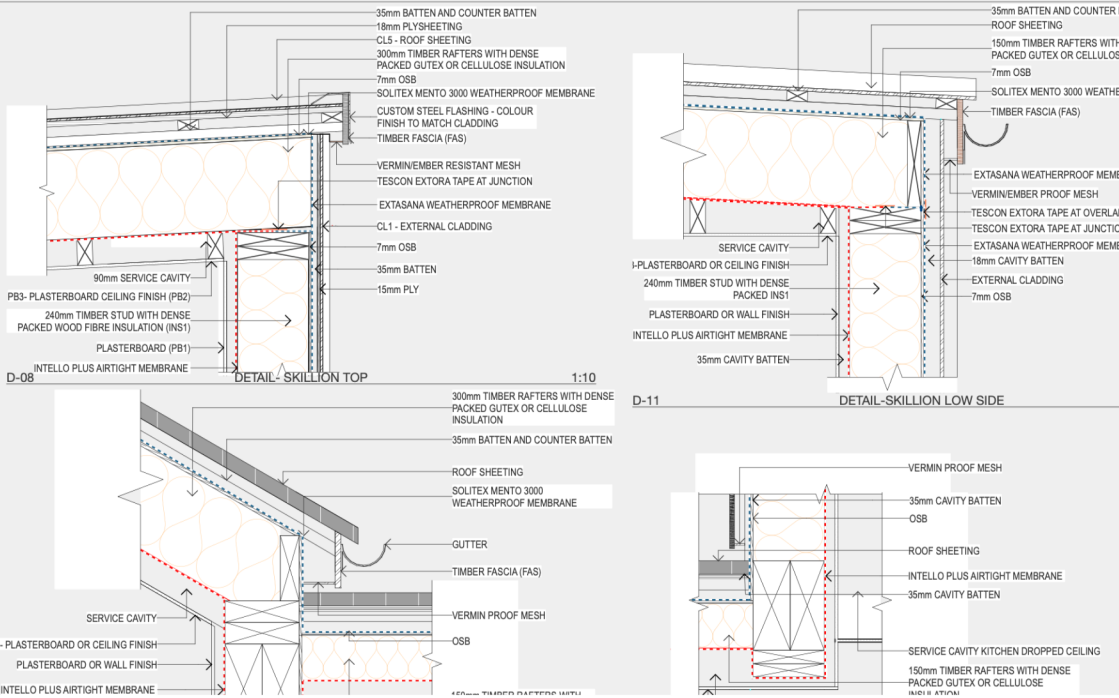
WALLS  
COMPLETED  
ROOF PANELS  
BEGIN.





DAY 6 AND 7

AIRTIGHT, THERMALLY INSULATED (190mm stud) WALLS WITH TRIPLE GLAZED TIMBER/ALUM WINDOW FRAMES

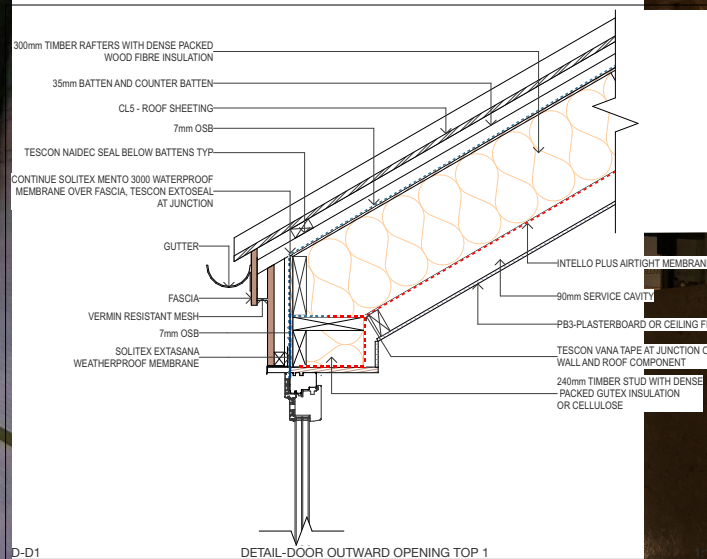






DAY 8 AND 9

LOCK UP  
COSY INSIDE



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# CLADDING AND ROOF SHEETING- colorbond steel and hardwood BAL 40 (Bushfire Standard)





# WEATHERPROOF LAYER, CLADDING, TRIPLE GLAZED WINDOWS (& SITE DOGS)





THERMAL COMFORT  
AIR QUALITY  
ENERGY EFFICIENCY

Airtightness – Blower door test =  $n_{50} \leq 0.6 \text{ h}$

Heating/Cooling Load =  $10 \text{ W/m}^2$

Comfort Zone =  $20 - 25 \text{ }^{\circ}\text{C}$

Relative Humidity = 30%–60%





**FITOUT/ MATERIALITY**  
Simple ethical natural  
(where possible local)  
No Vocs





Thanks to  
Kel & Duncan Handley  
Tarlo River



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