



5x4 Hayes Lane Project

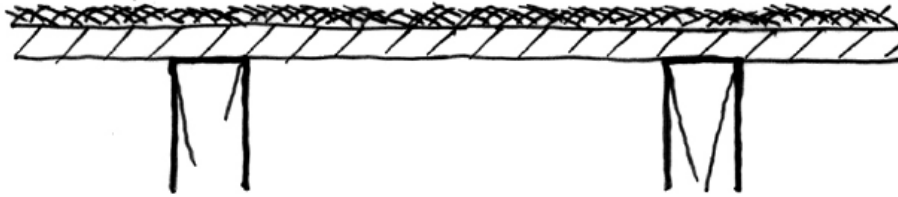
Embodied energy of assembly alternatives

Dr Robert Crawford
Faculty of Architecture, Building and Planning

msd

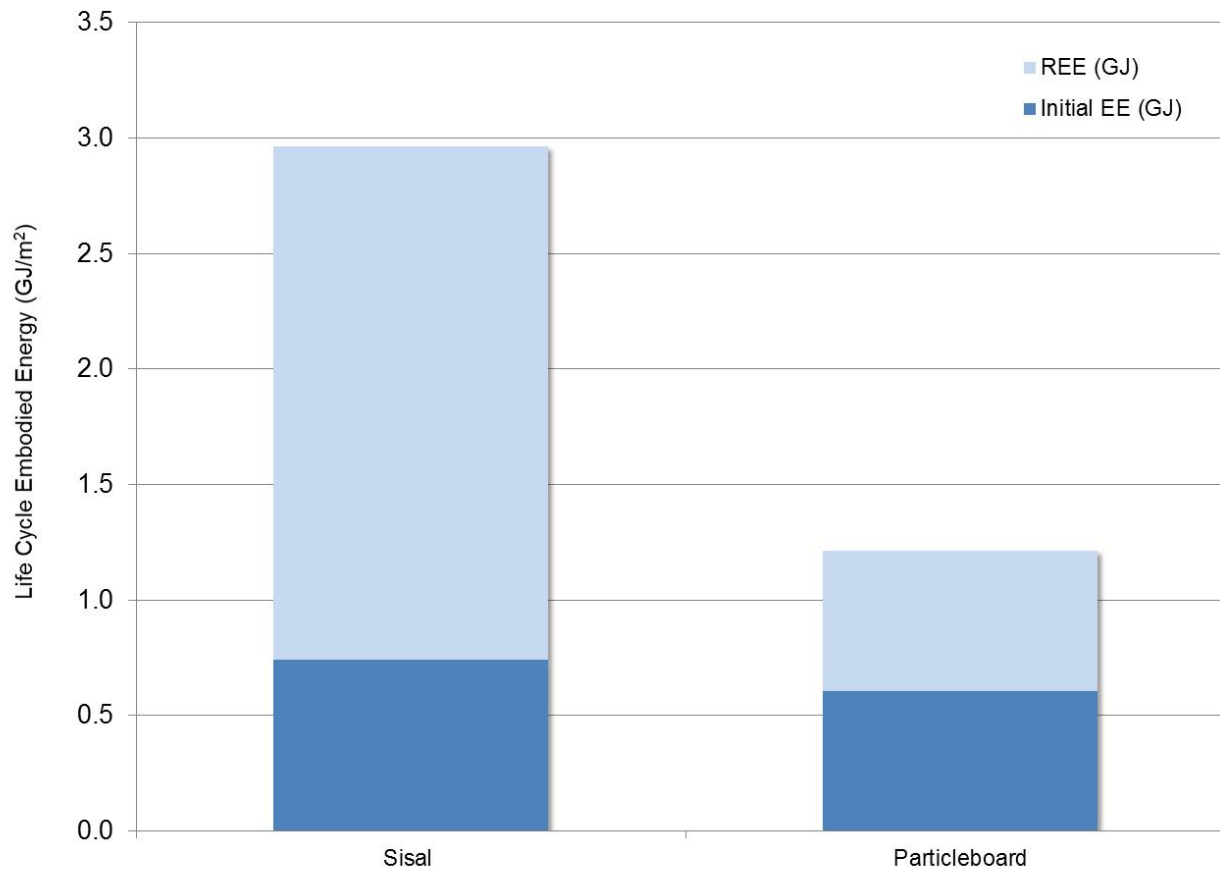
**Melbourne
School of Design**

FLOOR



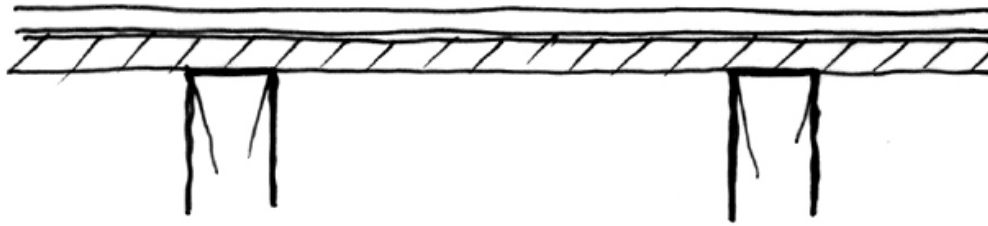
FLOOR TYPE 01: SISAL OVER PARTICLE-BOARD

- Sisal
- Particleboard

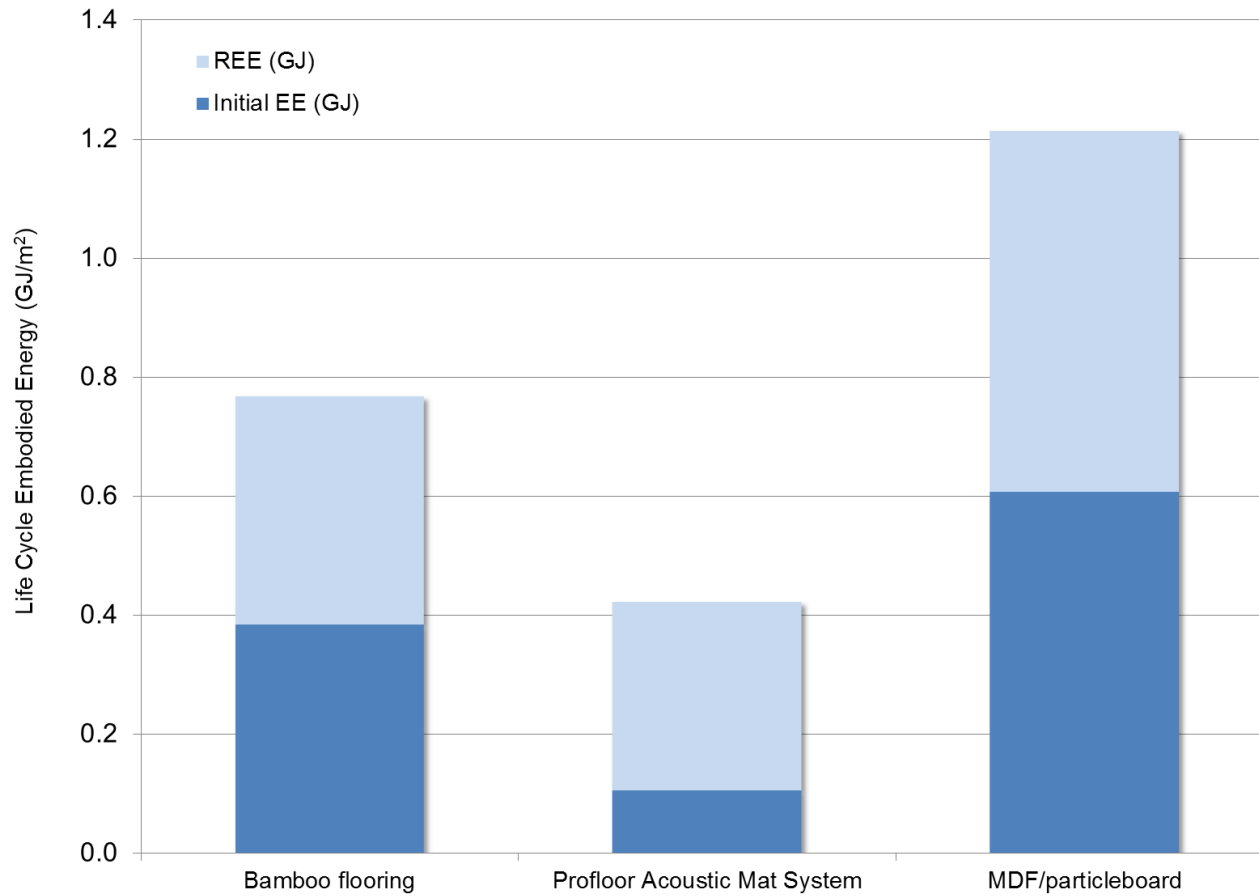


FLOOR

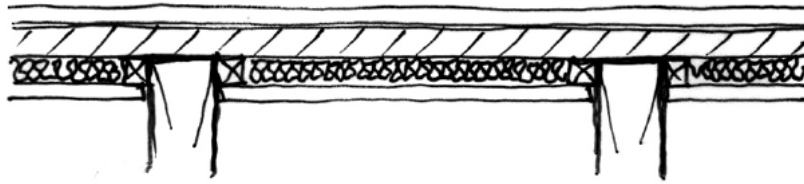
FLOOR TYPE 02:
BAMBOO OVER PARTICLE-BOARD



- Bamboo
- Sound insulation material
- 20mm particle board



FLOOR

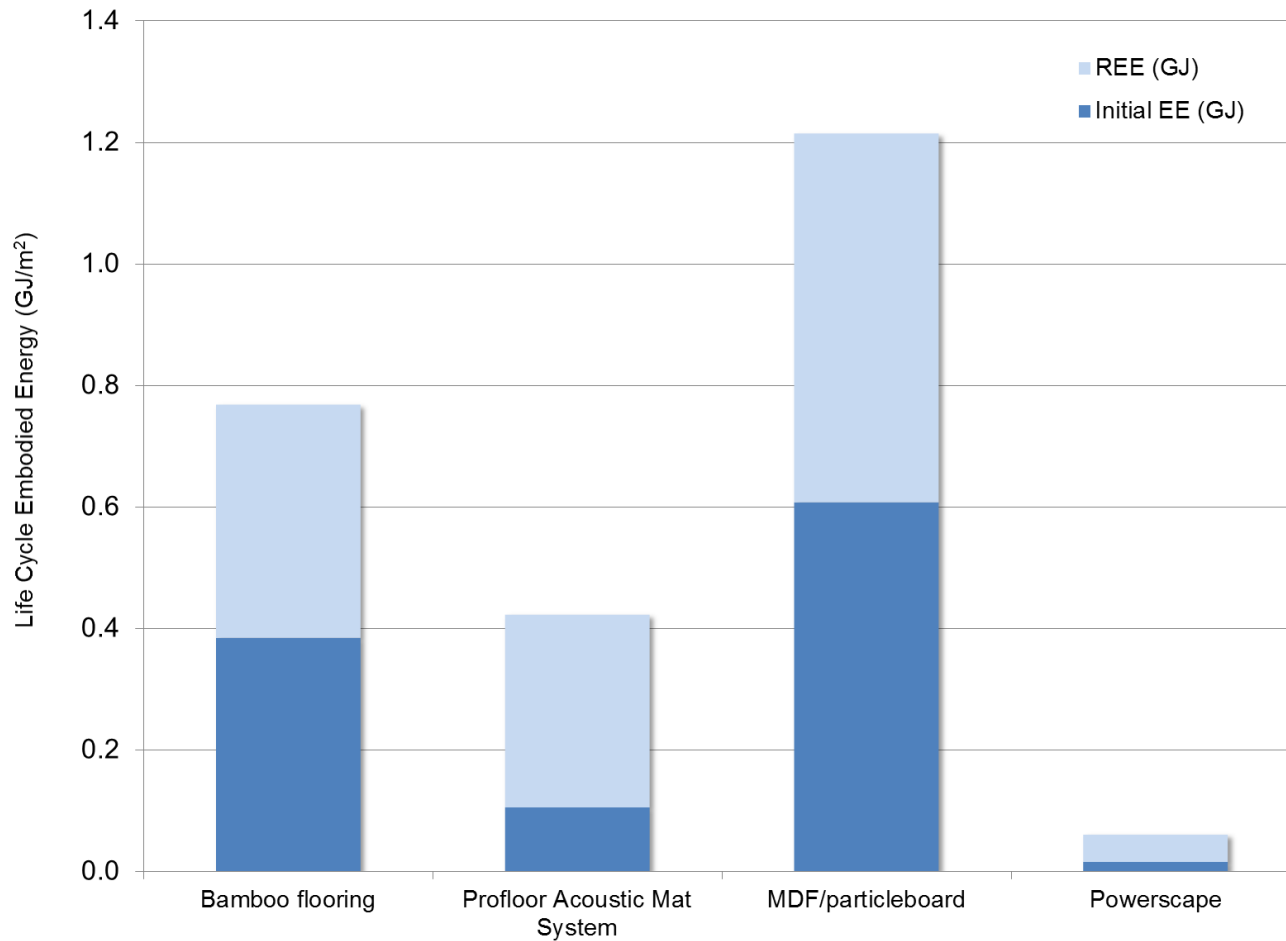


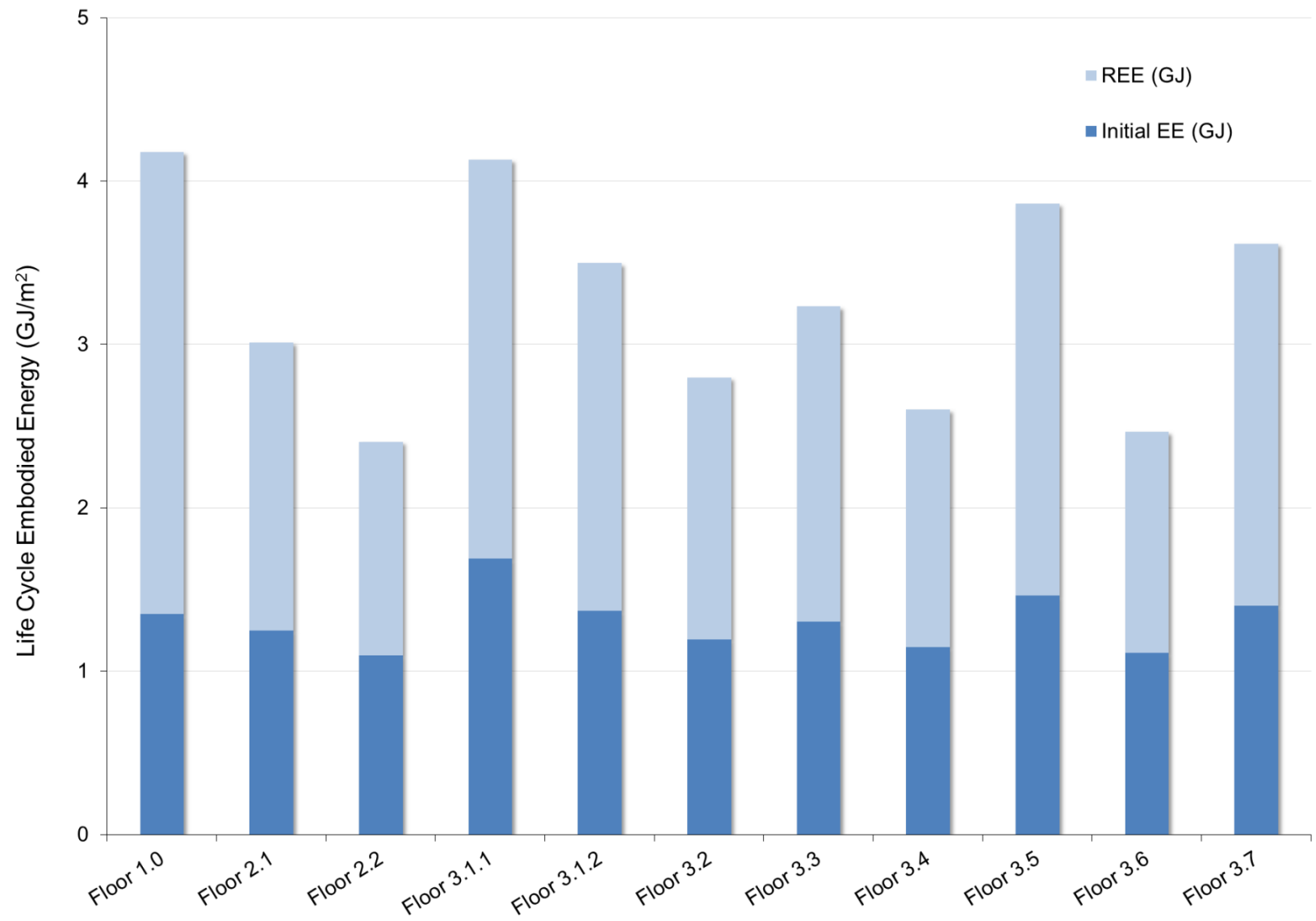
CEILING

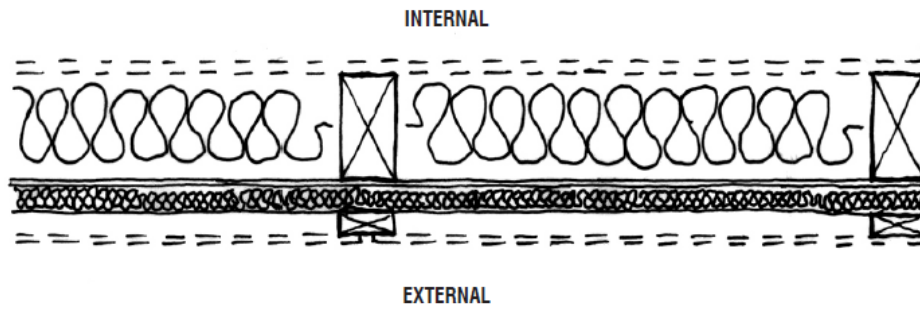
FLOOR TYPE 03:

BAMBOO OVER PARTICLE-BOARD WITH ADDITIONAL INSULATION

- Bamboo
- Sound insulation material
- 20mm particle board
- Optional:
 - A: foilboard
 - B: phase change material
- Ceiling lining; as per internal cladding options





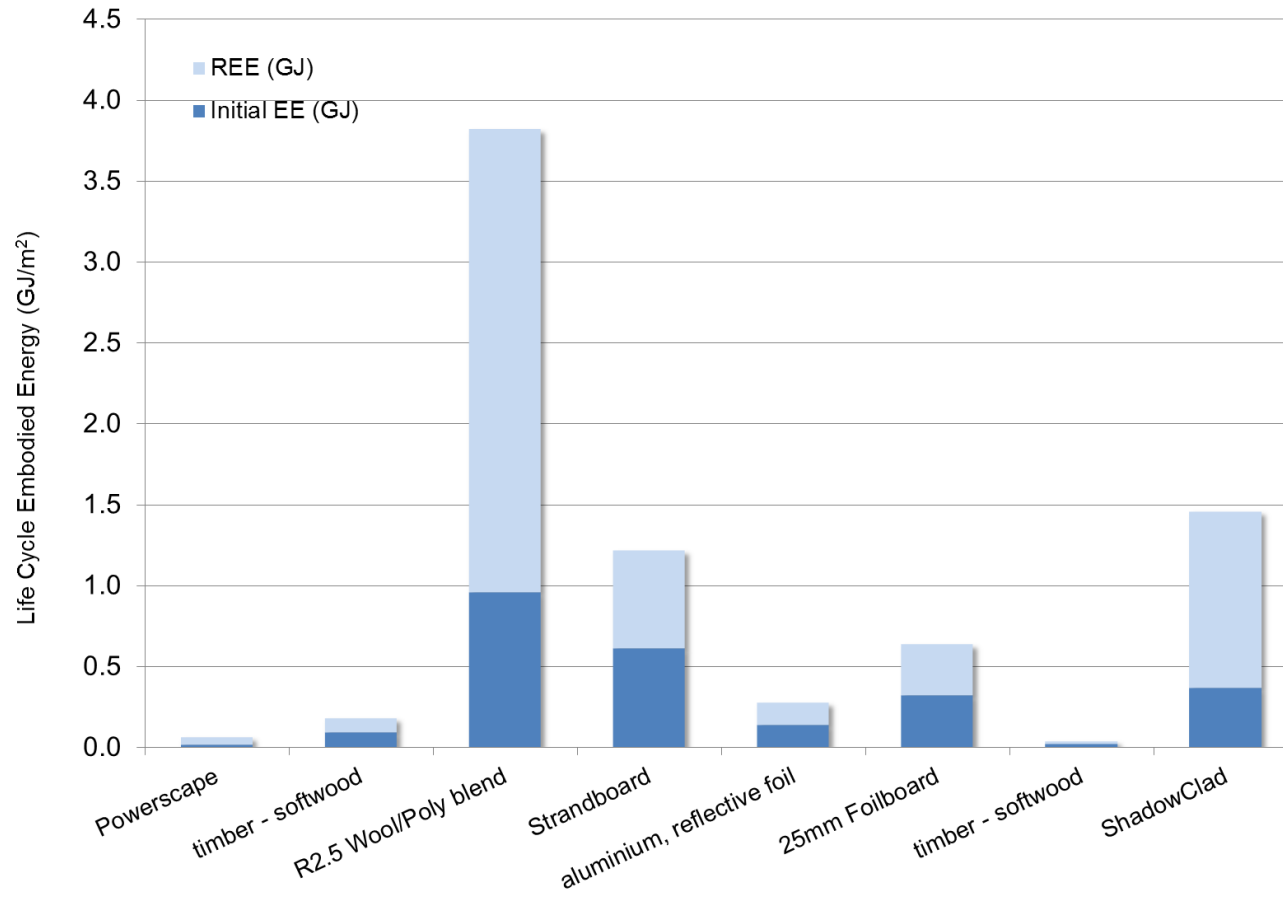


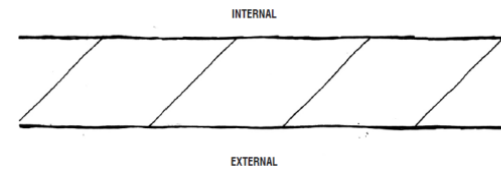
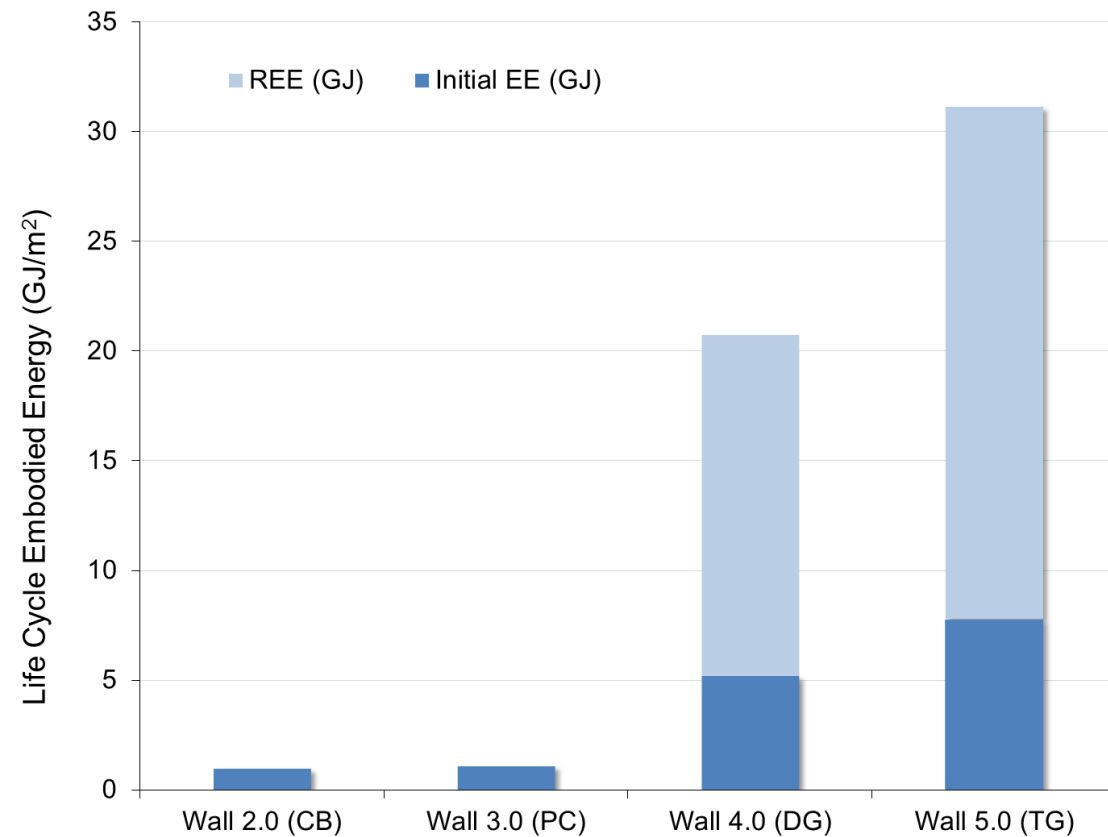
WALL TYPE 01:
LIGHTWEIGHT TIMBER FRAMED WALL WITH PANEL EXTERNAL CLADDING

- Internal lining
 - 90mm timber studwork
- Insulation batts R: 2.5
- Structural lining board
 - Foil breathable siltation
 - 25Mm thick foil board R:
 - 19mm vented cavity / 42 x 19mm acq treated battens
- External lining
- Applied finish

Wall Variation 1.7.2

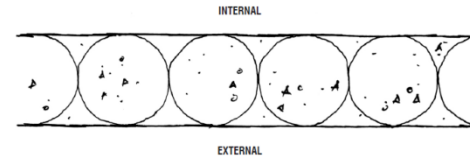
Lightweight timber framed wall with panel external cladding





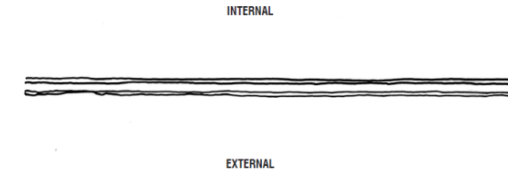
WALL TYPE 02:
140MM CONCRETE BLOCKWORK

- 140mm core filled concrete blockwork



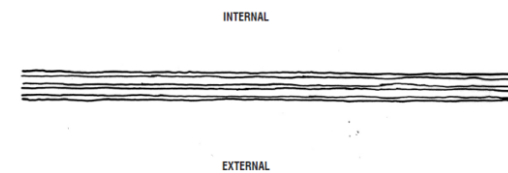
WALL TYPE 03:
150MM PRE-CAST CONCRETE PANEL

- 150mm steel reinforced pre-cast concrete panel



WALL TYPE 04:
DOUBLE GLAZING

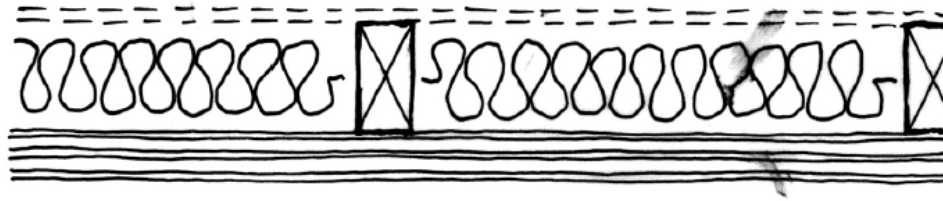
- 6-12-6 double glazing, argon filled



WALL TYPE 05:
TRIPLE GLAZING

- 6-12-6-12-6 triple glazing, argon filled

INTERNAL



WALL TYPE 06:
SPANDREL WALL WITH DOUBLE GLAZING

- Internal lining
 - 90mm timber studwork
- Insulation batts R: 2.5
- structural lining board
 - 10mm sealed air gap
 - 6-12-6 double glazing, argon filled

Wall Variation 6.7.3
Spandrel wall with double glazing and Powerscape

