ATTACHED HOUSING DIVISION

Project Rest Recover Empower

By Safelink
TEAM SAFELINK
DESIGN CONSTRAINTS

TARGET MARKET AND OCCUPANT PROFILE

Kara House
DESIGN CONSTRAINTS

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SETTINGS AND LOCATION

- Refuge
- Hospital
- Police Station
- School
- Centrelink (Government Services)
- Grocery Shops
- Library
- Park
- Train Station
- Bus Stop
- Monash University
DESIGN GOALS

PURPOSE-BUILT SPACE

Rest

APPEAL TO STAKEHOLDERS

Recover

FLEXIBILITY

Empower

SECURITY & PRIVACY

EASE OF OPERATIONS
Rest
PURPOSE-BUILT SPACE

- Block A - 4 standard units
- Block B - 3 standard units
- Block B - accessible unit
- Block C - multipurpose space + staff area
- Covered carparking space
- Main entrance (reception)
- Corridor
- Accessible pathway
- Communal garden - teen area
- Communal garden - kids play area
- Communal garden - sensory garden
- Garbage and recycling bins
- Private backyard space
- Battery storage
PURPOSE-BUILT SPACE
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Vapour Permeable Air and Water Barrier

Vapour Impermeable Rigid Insulation

Vapour Impermeable Air and Water Barrier

Vapour Profile
Recover

BY SAFELINK
### BuildingCircularity

#### Material Recovered
- Virgin: 73.3%
- Renewable: 10.6%
- Recycled: 16.2%
- Reused: 0%

#### Material Returned
- Reuse as material: 7.5%
- Recycling: 29.1%
- Downcycling ½*: 38.4%
- Use as energy ½*: 14.2%
- Disposal: 10.9%

45%
APPEAL TO STAKEHOLDERS

CONTRIBUTIONS TO GLOBAL WARMING

- Electricity: 50%
- Energy prod. systems: 9%
- Laminate floors: 4%
- Paints & coatings: 10%
- Fibre cement: 1%
- Plastic membranes: 5%
- OSB: 3%
- EPS: 11%
- Gypsum board: 2%
- Ready-mix, foundations: 1%
- Water: 1%
- Glass wool: 2%
- Timber: 0%
APPEAL TO STAKEHOLDERS
Energy Performance Optimisation

- Total site energy consumption
- Energy produced on site
- Net site energy
- Heating loads
- Cooling loads

Minimally Code Compliant Refuge
First Iteration Model
Final Optimised Model

HERS® Index
- More Energy
- Existing Homes
- Standard New Home
- Zero Energy Home
- Less Energy
- MULTIPURPOSE SPACE
APPEAL TO STAKEHOLDERS

Block A natural lighting diagram

First story

Second story

Block B natural lighting diagram

First story

Second story
FLEXIBILITY
FLEXIBILITY

Floor 1

Ground

Floor 1 (accessible unit)

Ground (accessible unit)

- Standard 2 Bedroom - Women, infant and 2 kids
- 1 Bedroom - Single woman or woman and one infant
- 3 Bedroom - Woman and 4 kids
- 4 Bedroom - Woman, infant and 6 kids
- 2 Bedroom Accessible Unit - Woman and 2 kids
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SECURITY AND PRIVACY
EASE OF OPERATIONS

PROJECT RRE COST BREAKDOWN

- Appliances ($AUD 37,995)
  - USD 28,975
  - 1%
- Water Systems ($AUD 159,192)
  - USD 121,400
  - 5%
- HVAC ($AUD 84,780)
  - USD 64,653
  - 3%
- Energy Systems ($AUD 478,147)
  - USD 364,635
  - 15%
- Structural Components ($AUD 211,426)
  - USD 161,233
  - 7%
- Fixtures/Furnishings ($AUD 242,158)
  - USD 184,667
  - 8%
- Construction ($AUD 1,926,937)
  - USD 1,469,482
  - 61%
EASE OF OPERATIONS

ESTIMATED ANNUAL OPERATIONAL AND MAINTENANCE COSTS

- Energy From Grid (SAUD 1,355) USD 1,030
- Potable Water Usage (SAUD 3,537) USD 2,688
- Maintenance (SAUD 10,000) USD 7,600
- Electricity Connection Charge (SAUD 387) USD 294
- Water Connection Charge (SAUD 102) USD 78
- Energy Exported to Transition Homes (-SAUD 4,183) USD 3,179

Estimated cost for Kara House (USD/yr)
EASE OF OPERATIONS

Exterior interface
- Native vegetation
- Connected backyards
- Automated irrigation

Technical interface
- Centralised controls
- Reprogrammable keycards
- Automated outdoor lighting

Occupant interface
- Minimalistic interior
- Few concealed spaces
- Easy-clean appliances