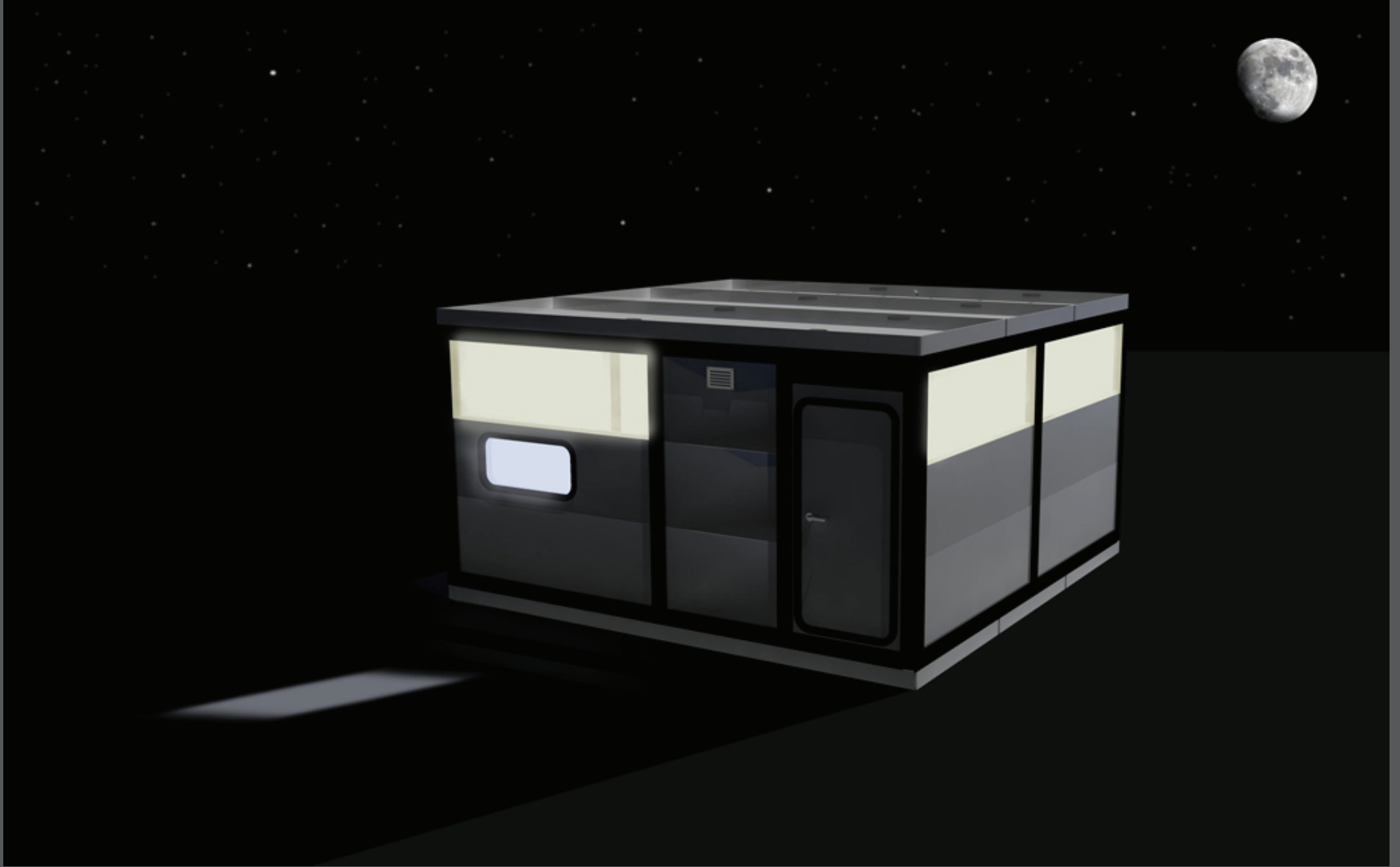


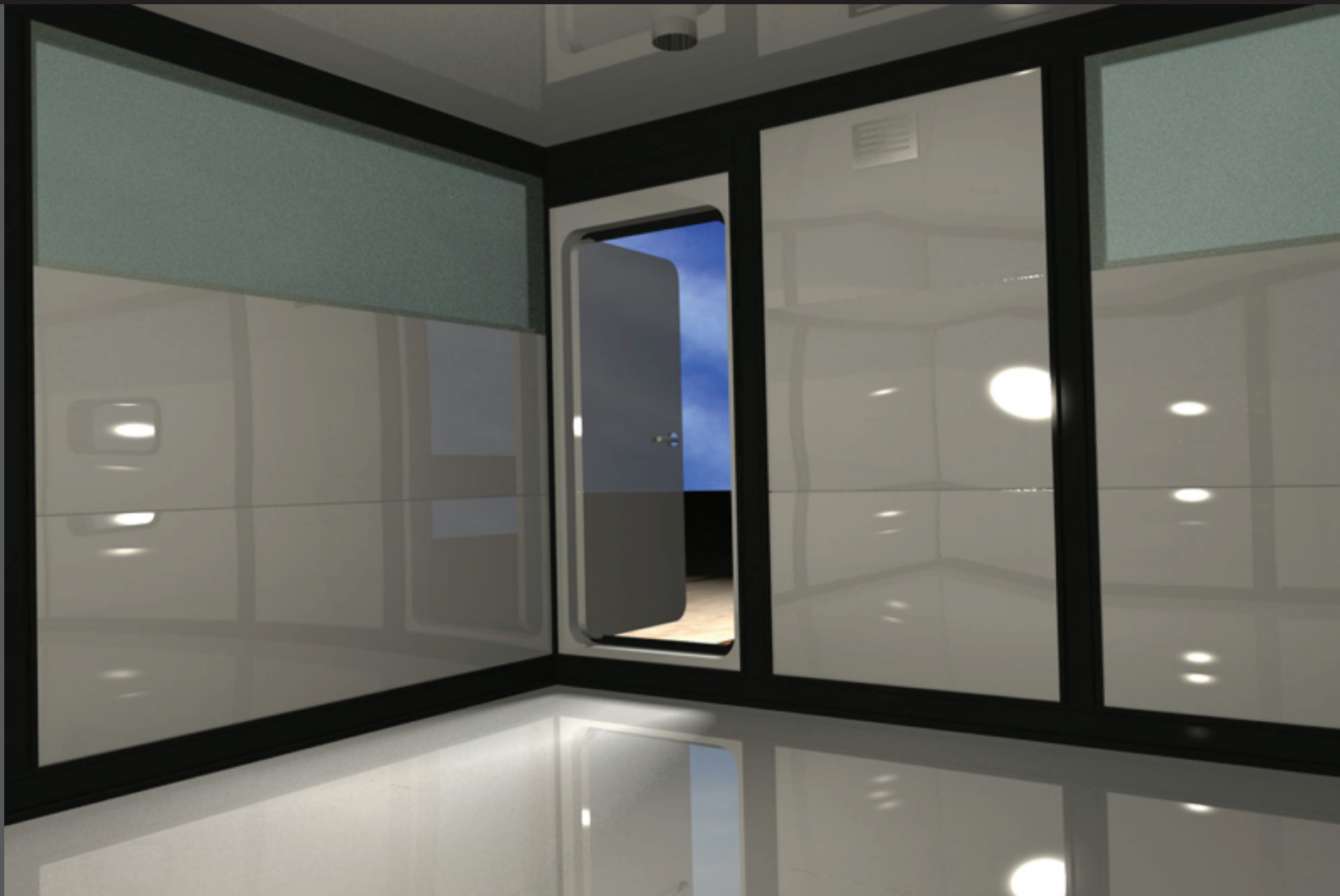
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PODPASSIV

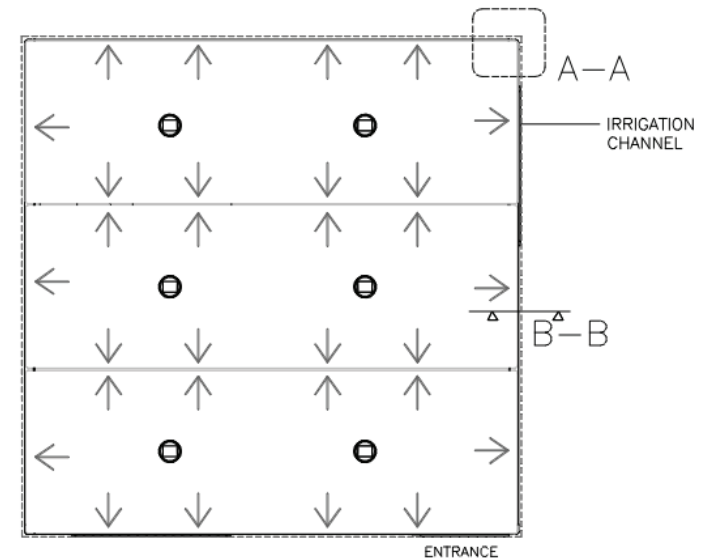
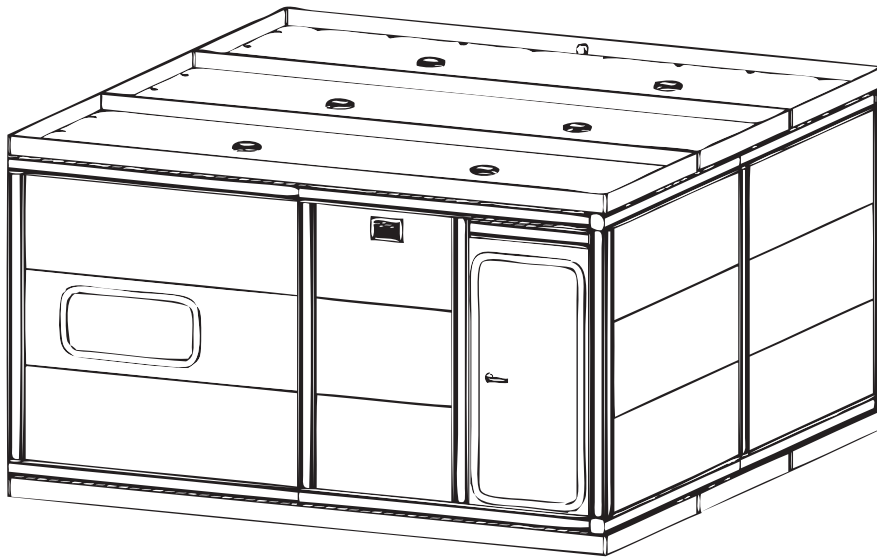
All intellectual property rights for PODPASSIV are the property of Charlie Greig Bespoke Homes Ltd. Patent Pending: GB 1013995.4
Registered Community Design Nos. 001231930-0001 / 001232227-0001 / 001232227-0002 / 001232227-0003



PODPASSIV



PODPASSIV

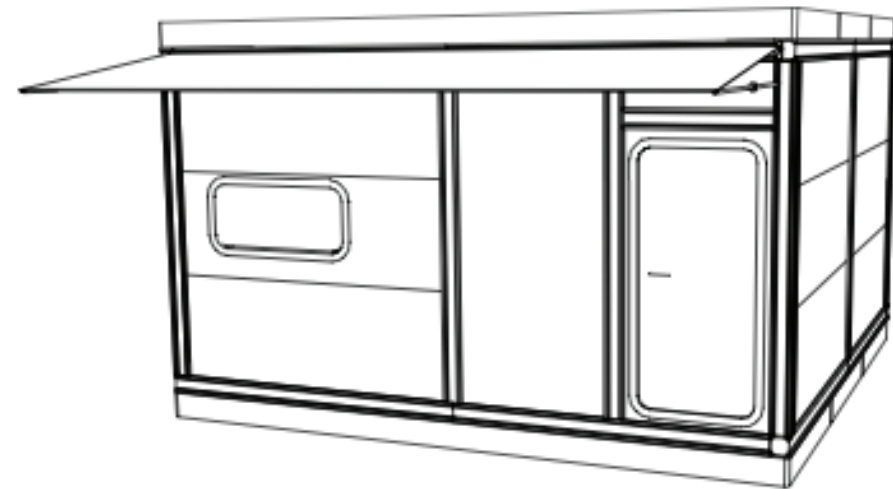
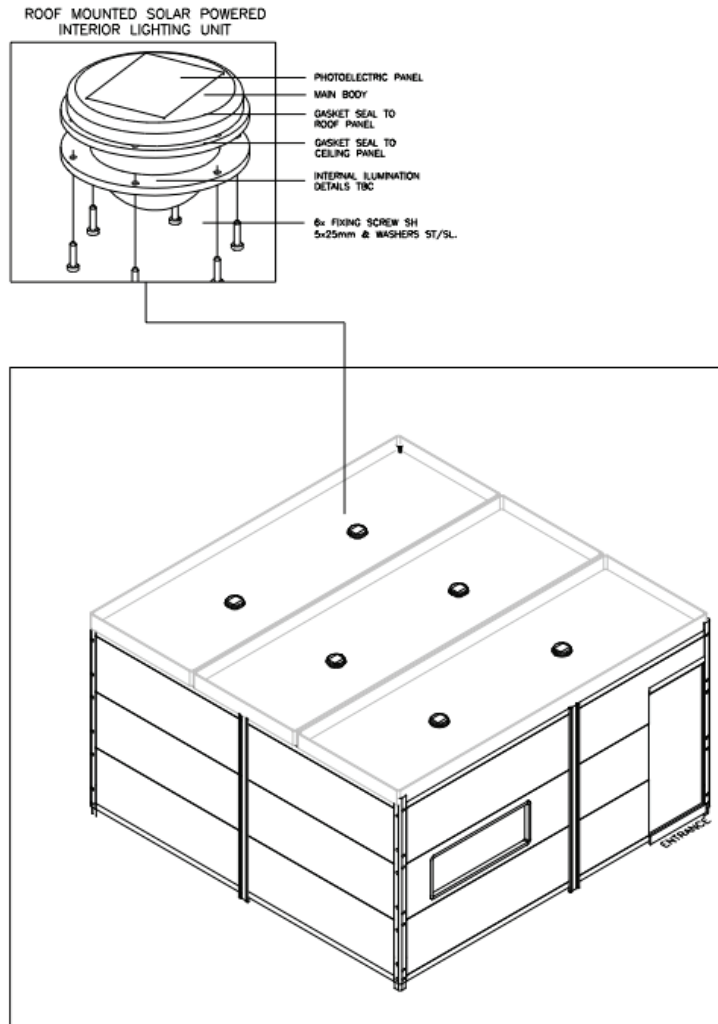


The PODPASSIV shelter is a prefabricated building supplied in kit form that offers a semi permanent solution to housing needs in disaster zones where supplies of clean water and electricity are unavailable. The shelter uses 100% recycled plastic which is 100% recyclable, resistant to extreme temperatures and is naturally ventilated.

For ease of manufacture the building consists of only four moulds, wall sections, upright and horizontal posts, roof and floor trays and a door panel section. This makes erection very simple, as each section is a repeat of the last. Due to the opaque nature of the plastic the top section of the wall panel, used for storage of harvested rainwater, allows light to penetrate externally to provide ambient lighting at night. Unlike Tents and other temporary housing solutions, the PODPASSIV life shelter has a expected life span of 5-10 years, is robust, secure, waterproof and is easily erected by two people in under three hours.

Rainwater is collected in the roof trays and is fed into 7 sections of wall panel.

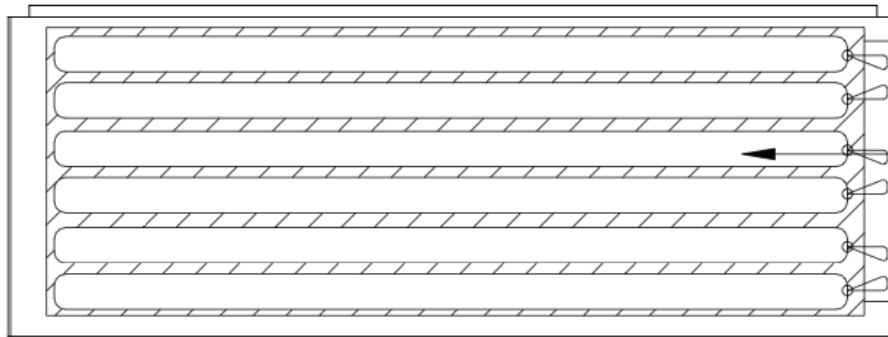
An emergency hatch is also provided in the roof area for escape in flood conditions and provides additional ventilation through mesh screens.



Inserted in the roof trays are 6 solar pod lamps which are sealed internally and externally with rubber to provide a watertight seal and can be replaced easily. These are switched. Exposure to daylight will produce a minimum of 5 hours of light at night.

A canvas canopy can be provided which is attached to the building to provide additional shading and cover for the preparation of food and for cooking.

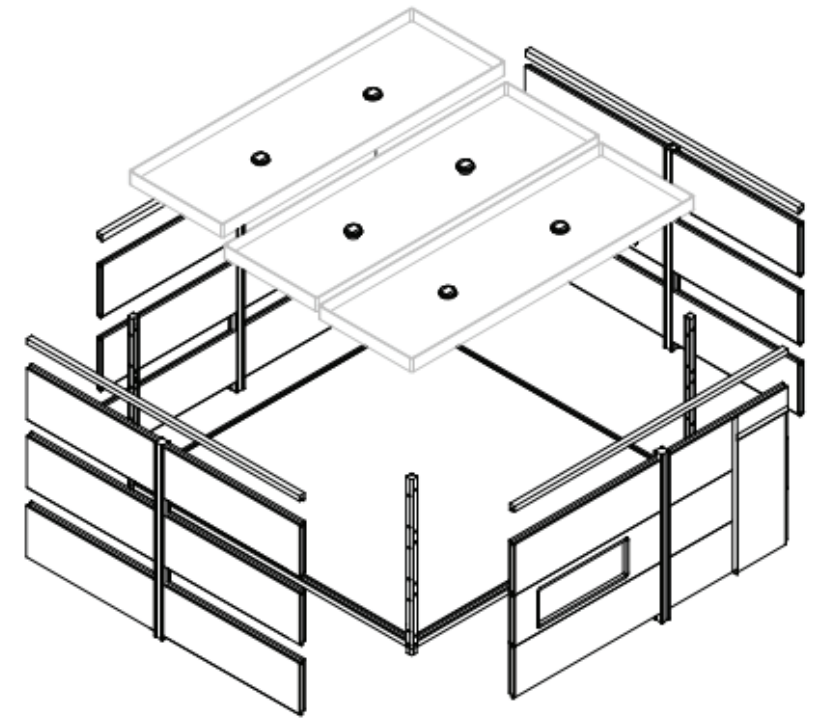
LOWER PANEL CONSTRUCTION DETAILS



HOLLOW WALL PANELS TO BE PACKED WITH INDIVIDUALLY FILLED BAGS INSERTED THROUGH THE END PANEL APERTURE USING EITHER FOUNDATION SOIL, SAND OR GRAVEL.

HOLLOW WALL PANELS TO REMAIN EMPTY DURING TRANSPORTATION PERIOD.

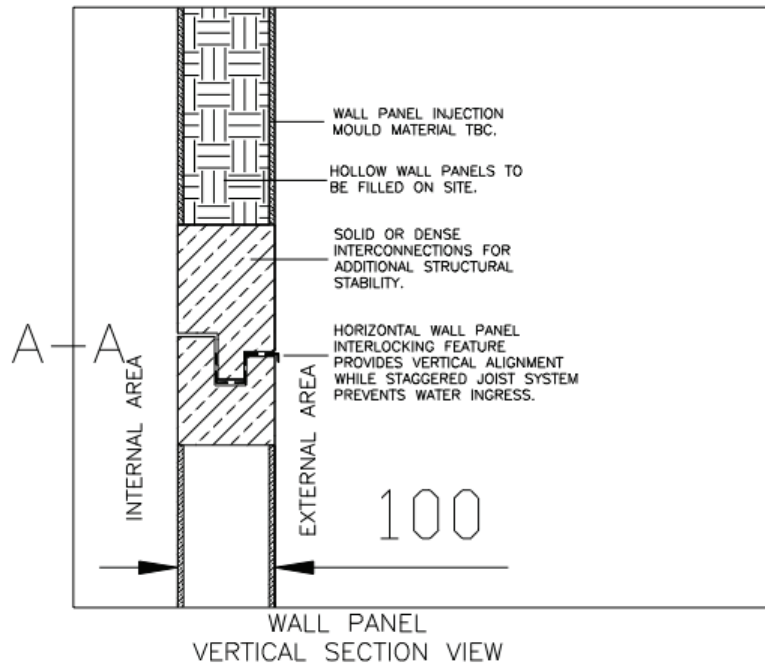
SECTION VIEW



The bottom two cavity wall sections allow pre-filled cloth or film bags to be inserted utilising available ballast such as water, sand, earth or broken concrete from dilapidated buildings which provide weight and stability.

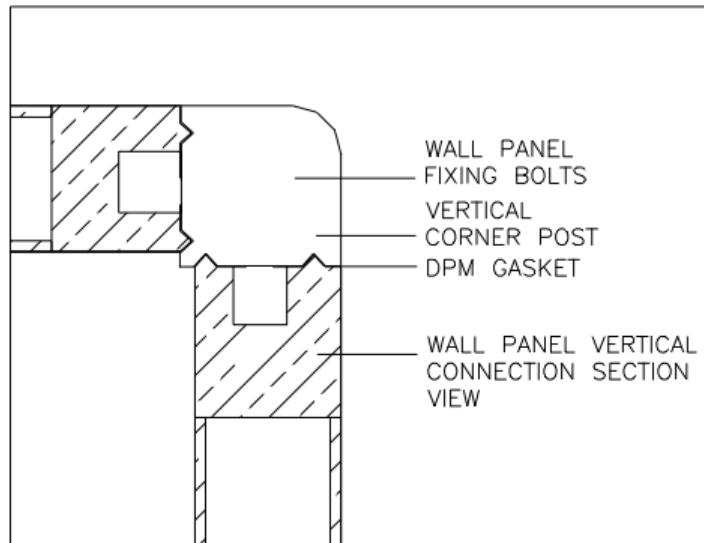
These cylinder sacks can be inserted and removed easily, providing thermal mass insulation to protect against heat and cold and create a temperate climate internally. Expected U values are between 0.04 and 0.12 depending on materials used. A soya foam or gel can also be used. The top panel sections surrounding the building are sealed at both ends and act as a water storage facility. The total building holds approx 476 litres of rainwater serviced by an internal tap. A contaminated water filtration system is provided with each home to supply clean drinking water.

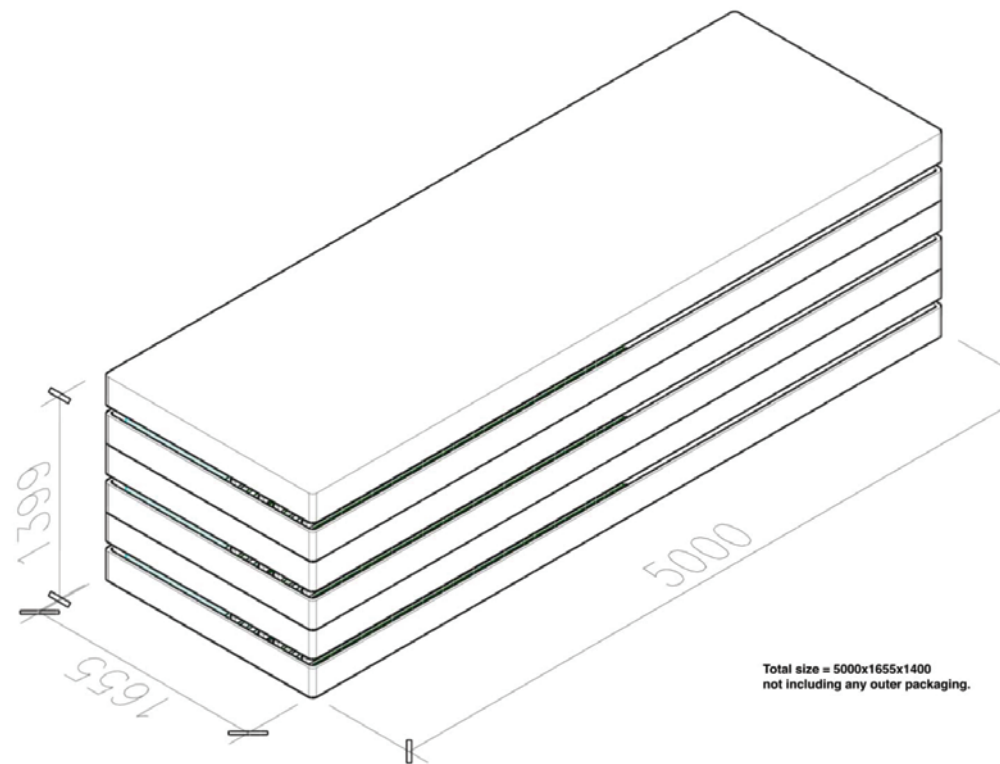
Construction of the building is straightforward and can be built by two to three people in less than three hours. The floor sections are laid first by interlocking the sections together to provide a raised floor area. Corner and floor posts are added to accept the horizontal wall sections, which when in position are filled with ballast before vertical posts are connected for the next section. The building is built in a anticlockwise direction with the door section to be fitted last.



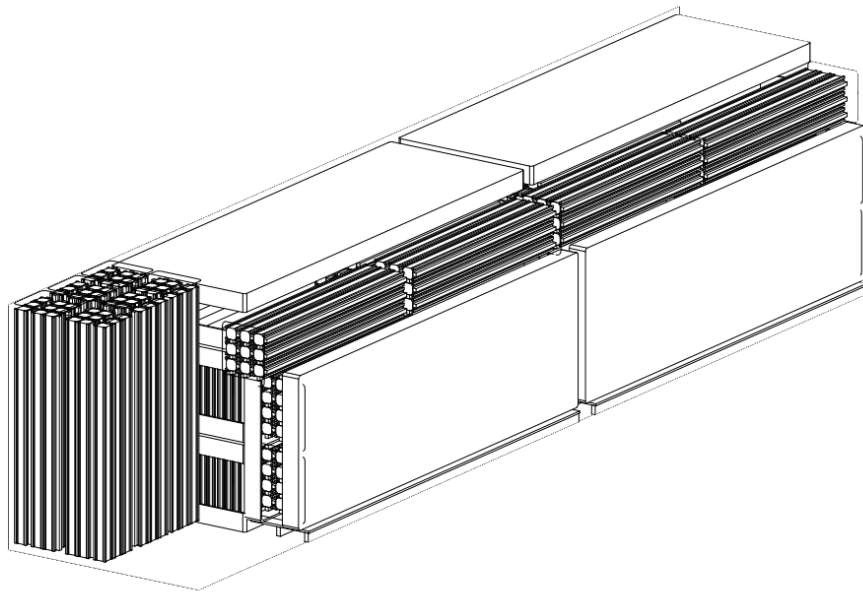
The horizontal panels interlock for additional structural stability and provide vertical alignment while staggered joints prevent water ingress.

Corner sections work in much the same way using a tongue and groove configuration to provide precise alignment.

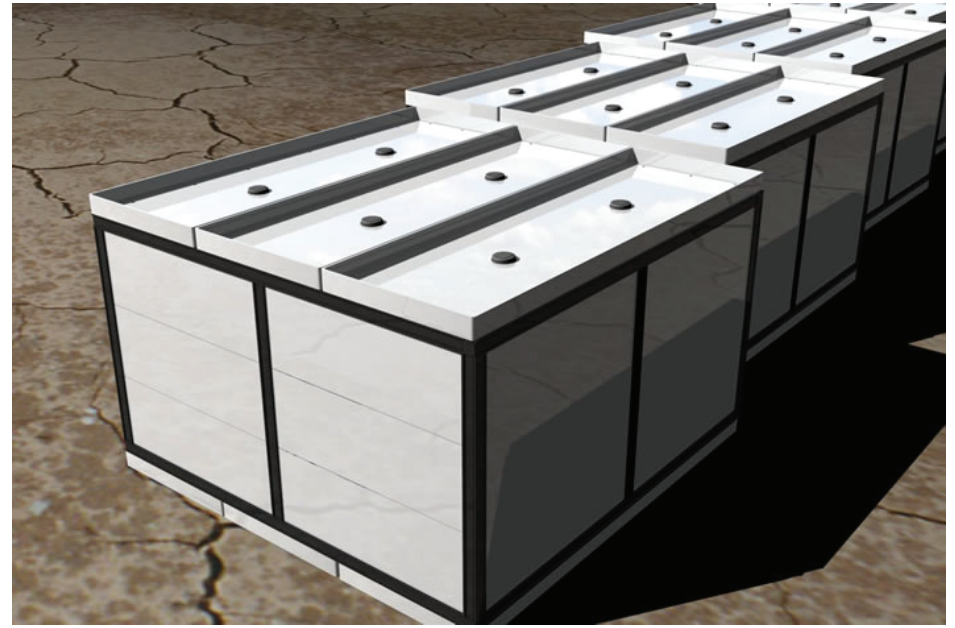




The PODPASSIV shelter has been designed to be a compact unit which incorporates all fixings, posts, bags and wall sections which are packed within the roof trays for shipping.



To utilise the maximum capacity in a standard 40ft sea container, sections will be packed in bundles which allow 10 homes to be shipped in one container, therefore reducing shipping costs.



Communities of PODPASSIV shelters can be erected within days, offering a watertight sustainable housing solution that will restore dignity and create a sense of well-being. Natural resources provide energy, water, heating / cooling and the necessary security.

The buildings can be taken apart with ease and sterilized for future use, adding to its recyclability. A bolt on facility is available to connect additional buildings to create larger accommodation or buildings for multi use.



Families in disaster zones are in desperate need of Shelter, Water, Heating / Cooling and Security to be able to continue life with dignity. PODPASSIV offers the solution to all of the above.



PODPASSIV

DESIGN BRIEF

- Lightweight construction using 100% recycled plastic.
- Shelters can be joined together to provide additional accommodation.
- Flat Packed for easy transportation. The wall panels, posts and fixings fit inside the roof sections.
- Fast Easy assembly with minimum tools required.
- Minimum on-site ground works during construction. Shims may be required to provide a level base.
- Operational through temperature range -20 °C to +40°C.
- Extreme Weather resistant.
- Combined elements to form a rigid construction.
- Waterproof Interlocking Panel system.
- Rainwater harvesting from roof drainage into seven panels that feed a tap/sink system internally able to collect 476 litres at full capacity.
- Contaminated Water Filter system to provide clean drinking water.
- Wall panels can be used for composting to generate heat in colder climates.
- Thermal mass insulation is achieved by utilising available earth, sand, water or rubble.
- Cloth sacs allow efficient filling and removal of materials from wall sections.
- Energy efficient lighting system powered by Solar Cells.
- 1x Entrance door with watertight rubber seal to open outwards in the event of flood.
- 1 x plastic glass windows with rubber seal.
- Emergency exit through roof hatch.
- Reinforced Floor Panels.
- Natural ventilation.
- Opaque plastic allows illumination through the top panels used for water storage. This provides additional communal lighting.
- Optional canopy can be provided for additional external shading in extreme heat.
- Optional flat packed Internal wall dividers and furniture can be provided.
- Homes measure L5000mm x W1655mm x H1399mm when flat packed for shipping. A maximum of 10 homes fit into a standard 40ft sea container.
- Air-conditioning powered by photovoltaics, bullet / blast proof cladding to provide options for surgical & security applications.

For more information, please contact:

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