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Low Cost Sustainable Dwelling

Staged Building Process

- A platform was cut into the roadside and levelled using shale from the excavation.
- The block piers were set out and levelled.
- The main beams were laid on the piers.
- The floor joists then laid on the beams.



- The deck boards were cut to give a base on which to build the panels. The deck boards were sawn on site from trees in the wood.

- The panels were constructed on the deck and laid on the chassis as they were completed.



- The panels were erected leaving off the front to make it easier to position roof trusses.



- The roof trusses were fixed and then clad in sarking board.





- The gable ladders were fixed.

- The roof was covered in VP400 membrane and counter battened.



- The building is now weatherproof.
- The walls were covered in VP400 membrane.



- The sub-floor was installed.



- The windows were fitted and interior partitions were constructed.



- First fix electrics were installed then insulation and plasterboard.



- The building was plastered, the only process done by contractors.



- Decorating and 2nd fix electrics.
- The roof shingles were produced on site from Western Red Cedar and battened on the counter battens.





- The cladding is Douglas Fir, but Western Red Cedar could have been used. The cladding is battened to the walls.



- Plumbing can be carried out at any time because of the access under the building. The under floor insulation is fitted after plumbing.
- The main floor covering depends on personal preference. Under-floor heating is easy to install.

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Build time for 2-man gang and plastering – 1.5 to 2 months.

Materials cost @ 2007 – 2008 prices - £15,000.

CONSTRUCTION MATERIALS

The chassis is Douglas Fir

The panels Douglas Fir and Sterling Board

The roof trusses are white wood to British Standard

The sarking board is sterling board

The membrane is VP400 breathable membrane

The sub-floor is shuttering ply

The insulation is ISOTEC silica based

The plasterboard and skimming offer a conventional interior finish but other materials could be used

The roof shingles are Western Red Cedar – 18” x 8”

The cladding is Douglas Fir, but could be Western Red Cedar

The deck is Western Red Cedar

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ACCOMMODATION

Sitting / Dining Room	6.5m x 6.5m
Hall	2.7m x 1.3m
Kitchen.....	2.4m x 2.4m
Bathroom	2.4m x 2.4m
Bedroom 1	3.7m x 3.2m
Bedroom 2	3.7m x 3.1m

OUTSIDE

Deck	3.0m x 6.5m
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HEATING

Woodburner with stove pipe internally then stainless steel insulated pipe in roof space and external.