



26/03/2016

Dear Roger.

Please find the Viking "Passive Budget Build" package quote for your Passive House in Wiltshire. Previous experience indicates that this is typically 65% of the finished house construction cost depending on finishes.

To supply and erect an insulated/airtight Twin-Stud timber frame Passive House and Passive Slab Foundation.

Zero Cold Bridge, 0.11 U-value, Twin Stud wall/roof.	£110,950.00
Passive Slab Foundations 0.10 U-value.	£30,720.00
Internal walls and ceilings finished with MgO board.	£15,300.00
Ground Floor Under-floor Heating pipes plus manifold.	£5,100.00
2 Ductless/Filter-less FreshR HRV units.	<u>£4,000.00</u>

Total	£166,070.00
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The following items are included in this quote;

Passive House level air-tightness test of 0.6ACH@50Pa.
300-400mm of continuous cold bridge free insulation.
Structural and non-structural internal walls.
Internal walls and ceilings finished with MgO board eliminating plastering.
1st fix Electrical conduits factory fitted in external walls.
Acoustic Insulation fitted between floors and internal walls.
Passive Slab plumbing and drainage (1st fix plumbing is complete).
Slab floated ready for tiling.
Under-floor Heating pipes with manifold.
Ground cooling coil fitted to UF heating manifold eliminates summer overheating.
Radon barrier with ground sump and vent pipes.
Passive House Certified Ductless/Filter-less HRV system.
Crane hire.
Roof battening/membrane.
High levels of insulation eliminate the need for a 2nd floor heating system.
Building Control drawings for Twin-Stud and Passive Slab.
Engineers Structural Calculations plus 10 year structural warranty.
All Structural Steel necessary for Timber Frame structure.
Advice and follow through until project is complete.

Excluding Vat

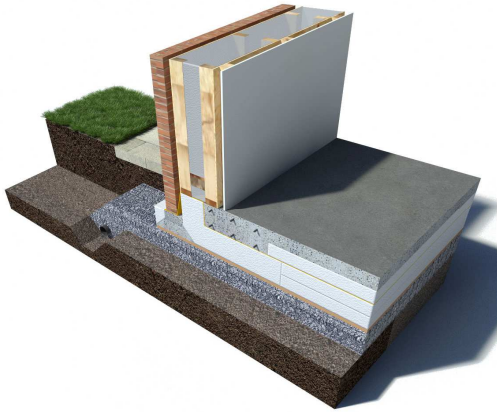
Please do not hesitate to contact me if you have any queries regarding this quotation.

Yours sincerely,

Seamus O'Loughlin
Technical/Sales Director.
Viking House Plus Ltd.

Passive Slab - 0.105W/m².K U-Value Structural Foundation System

Supply and fit of Engineer signed off Passive Slab foundation system, with an 0.105W/m².K U-value and Zero Cold Bridges (The client strips the site, installs the first 150mm of stone and the site roadway). Viking House supplies and fits 50mm levelling stone, the concrete, the steel, and the drainage pipes are brought out 1.5 metres from the finished foundation for others to connect to. Under-floor Heating pipes plus manifold are included.



Under-floor heating, drainage and ground cooling coil;

The under-floor Heating pipes and manifold fitted in the ground floor insulated slab are sufficient to provide heating for the complete house. A cooling coil buried 2m deep in the garden is connected to the UF heating manifold. In warm weather 10 degree ground water is circulated between the cooling coil and slab to keep the house cool.



Twin-Stud External Walls, 300mm, cold bridge free, 0.12W/m².K U-Value.

The 38 x 300mm Twin-Studs are generally positioned at 400 centres. Structural racking resistance is achieved by precise nailing of structurally certified wall sheeting and is covered with tear resistant breather membrane with allowances made for overlapping at panel joints and facing joists. Timber lintels over windows and doors opening allows precise load distribution.

The client supplies & erects scaffolding prior to timber frame erection.



Internal Walls

Load-bearing walls same height as external walls at 400 centres.

Non load-bearing walls less 23mm with 10mm packers supplied loose, allowing for the ceilings to be plaster boarded prior to these walls being fixed in.

Plasterboard fixing at wall junction formed by additional factory fixed studs.

38 x 89mm studs and rails positioned at centres in accordance with building regulations and structural calculations.



1st Floor Metal web joists

Web joists typically @ 400 centres with 22mm Plywood T&G decking simplifies service runs and reduces noise transmission. Web Joists are capable of taking a 50mm 1st floor screed to further improve sound-proofing and can be installed at 300mm centres for increased spans.



Twin-Stud Roof Structure, 400mm, Cold Bridge free, 0.102W/m².K U-Value.

Engineered Truss utilising tooth plate system hydraulically pressed into machine stress graded European whitewood ensuring structural integrity. Roof layout and pitch as per plan. Loose materials to form valleys, hips, etc, if applicable is included. The following items are included in the roof package: Breathable roofing felt, slating/tiling battens, bracing, 400mm cellulose insulation, airtight membrane and ceiling battens.



Insulation

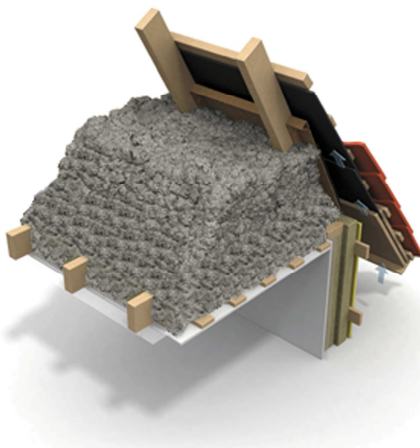
External walls

300mm of continuous, pressure pumped, high density (55kg/m³) Cellulose Insulation fitted by Viking House operatives in the factory or on site, delivering a U-value of 0.12W/m.K.



Roof

400mm of continuous pressure pumped high density Cellulose Insulation fitted by Viking House operatives delivering a U-value of 0.10W/m.K.



Air Tightness testing and Materials

Supply and fit of all airtight membrane and tapes around windows and service cavity. Passive House standard Air tightness test below 0.6ACH@50Pa is guaranteed. Air-tightness is achieved using taped OSB and/or an air-tightness membrane with a 35mm service cavity.



FreshR HRV

The Passive House Certified FreshR ductless, filter-less Heat Recovery Ventilation system is the most efficient HRV system in the world and reduces the heating demand in a Passive House by 50%. Fitting discreetly into the external wall, the return air temperature is within 2 degrees of extract air temperatures ensuring there's no cold draughts. Excellent air quality is maintained by CO₂ and humidity monitors fitted in each unit, the machines react automatically if 5 people come into the house or somebody takes a shower.





The following items are excluded from this quote;

External Doors & Windows.
Electrics. (1st fix conduit is fitted)
External block-work or cement board.
2nd fix Plumbing.
Internal doors, Architraves, Skirting.
Bathrooms and Kitchens.
Slates/Fascia/gutters.
Scaffolding.

Typical Payment Schedule

10% - Deposit on placing of order
20% - Sign off of Client Approval Drawings
20% - Delivery of Foundation materials to site
25% - Delivery of 1st load of timber frame to site
20% - Completion of Timber Frame Erection
5% - Completion of Air Tightness Test

This quote is valid for 60 days.

For any queries please contact:
Seamus O'Loughlin
Viking House Plus Ltd.
00353 87655 8699