

Oak Lawn



BREs LVI 2021

REV A

Option	Units	Basement Wall	External Wall	Dwarf Walls Loft	Dormer Walls	Ground Floor	Basement Floor	Terrace Deck Over Basement	Pitched/Flat Roof	Flat Loft Insulation	Crown Roof	Windows/ Glazed Doors	Heating System	Delayed Start Thermostat	HW Cylinder	Renewables (PV)	Mechanical Ventilation	Air- Permeability	DER vs TER Improvement	DFEE vs TFEF Improvement	DPER vs TPER Improvement
Type	Plot No	U Value	U Value	U Value	U Value	U Value	U Value	U Value	U Value	U Value	U Value	U Value	Make	Y/N	(litrres)	(kWp)	Type	m ³ /hr/m ²	%	%	%
House	1	0.18	0.17	0.17	0.20	0.13	0.10	0.18	0.12	0.13	0.10	1.20	Ecodan 14.0 kW	Y	570.00	n/a	MVHR	3	81.42	2.54	65.69

Element	U Values	Description
Basement Wall	0.18	Modelled as: 100mm Kingspan Styrozone N 300 R insulation over membrane and 100mm Hanson Thermalite H-Strength 7 block over insulation with 20mm plaster finish
External Wall	0.17	Modelled as: Bricks in Flemish bond with snapped headers; 150mm cavity with wall ties. with 100mm Kingspan Kooltherm K8 or equivalent approved insulation; 140mm Hanson Thermalite Hi-Strength 7 block inner leaf with 20mm plaster.
Dwarf Walls Loft	0.17	Modelled as: 50mm unventilated cavity and 75mm Kingspan K107 with softwood timber studs, 25mm Kingspan K118, 12.5mm Gypsum plasterboard (shelter resistance of 0.5 applied)
Dormer Walls	0.20	Modelled as: 25mm slightly vented air layer with softwood timber studs, 20mm Softwood timber, 135mm Kingspan K103 with 90mm softwood timber studs, 12.5mm acoustic/fire resistant plasterboard
Ground Floor	0.13	Modelled as: 250mm thick Concrete floors, 25mm Kingspan Kooltherm K103 insulation with 500 gauge slip sheet over. Min 65mm reinforced screed with underfloor heating
Basement Floor	0.10	Modelled as: 65mm screed, 125mm Celotex GA4000 PIR Insulation, 75mm XPS over concrete floor
Basement Pool Floor	0.22	Modelled as: 65mm Screed, 90mm Celotex GA4000 PIR Insulation, 100mm Concrete
Terrace Deck Over Basement	0.18	Modelled as: 250mm thick reinforced concrete deck, Liquid Membrane waterproofing barrier, drainage / protection layer over waterproofing and 200mm Kingspan Styrozone N 300 insulation
Pitched/Flat Roof	0.12	Modelled as: 25mm slightly vented air layer and 180mm Kingspan K107 between rafters, 32.5mm K118 to underside
Flat Loft Insulation	0.13	Modelled as: 25mm Gypsum SoundBloc, Vapour control layer (4000MNs), 150mm Kingspan K107 with 100mm Softwood Timber battens (shelter resistance of 0.5 applied)
Crown Roof	0.10	Modelled as: Kingspan Thermaroof TR27, 18mm WBP play laid to falls with Liquid VCL applied to top, 100mm TR27 first then 120mm TR27 over ready for Single Ply membrane
Windows / Glazed Doors	1.20	Double Glazed, Low E, G - Value (0.7)
Roof Lights	1.20	Double Glazed, Low E, G - Value (0.63)
Construction Details (PSI values)	-	Notional Values used - SRE recommend calculating Psi values at detailed design stage
Boiler	-	Modelled as: Mitsubishi Ecodan 14.0kW 35°C
Controls	-	Time and Temperature Zone Control
Heating Emitters	-	Underfloor Heating
HW Cylinder	-	570 Litres, Standing Heat Loss of 2.44 kWh/day - model based on MEGAFLO Eco Plus Unvented Hot Water Cylinder
Secondary Heating	-	n/a
Mechanical Ventilation	-	Modelled as: Balanced Mechanical Extract Ventilation with Heat Recovery (MVHR), Vectaire WHHR-Maxi Plus BY (MVHR Efficiency: 84, SFP: 0.94)
Lighting	-	100% Low Energy Lighting - CFL or LED
Renewables	-	n/a
Overheating	-	Overheating Assessments will need to be carried out as part of Building Regulations 2021 Part O
Notes		

Sign Off of details	Name	PP M Maclean	Date	24.11.2023	On behalf of the contractor/client:	Name	Date
	Sign	(on behalf of SRE)				Sign	