Target u-values Lodge Refurbishmnet

Existing Building Refurbishment & Extension

For the new Warm Loft
the U-value is 0.16 W/m2K
For the existing Wall
the U- value is 0.55 W/m2K
For the new Floor
the U-Value is 0.25 W/m2K

Internal Partiton

12.5mm Plasterboard skimmed 12mm OSB /3 T&G board 140mm Timber Joists Allow for a Pocket Door 140mm Acoustic Insulation 1200 Gauge PP Membrane 12mm OSB /3 T&G board 12.5mm Plasterboard skimmed Internal Timber Floor

25mm Existing Floor Boards Existing Timber Joists

Ventilated Void

Infill Floor Joists with Mineral Wool Insulation Install rodent proof Mesh to keep Insulation in Place

Alternative Replace Timber Floor

Concrete Floor min 0.23 W/m2K P/A 0.62

15mm New floor finish
5mm Leveling Screed
18mm ThermoDEK with UFH
100mm Fibre Reinforced Slab to SE spec
1600 Gauge DPM and Radon Membrane
75mm PIR insulation taped
1600 Gauge DPM and Radon Membrane
Radon Sump
50mm Sand Binding
Compacted Ground

External Walls

15mm Render 500mm Natural Stone Wall Natural Finish Internal Ceiling

15mm Floor Boards
Timber Joists
12.5mm Plasterboard skimmed

Loft Insulation 0.16 w/m2K

300mm Mineral Wool Insulation in the Loft Floorboards

Roof Pitched with Natural Slate Finish

Remove and recover existing Natural Slates
Collect intact existing Slates
Repair the existing Roof Structure to SE Sepc
Install Tyvek Memebrane
Install 25mm Batten
Install new Slate Roof. Mix new with existing

Target u-values Radio Station Extension

Existing Building Refurbishment & Extension

For the new Warm Roof the U-value is 0.16 W/m2K For the new Cavity Wall the U- value is 0.26 W/m2K For the new Floor the U-Value is 0.18 W/m2K Internal Partions:

Painted surface 100mm High Density Blockwork 7.3N Painted surface

Party Separation Wall New 0.12W/m2K

15mm Render
100mm High Density Blockwork 7.3N
50mm Cavity
100mm PIR insulation taped
100mm High Density Blockwork 7.3N
Painted surface

Concrete Floor min 0.14W/m2K P/A 0.33

15mm New floor finish
70mm Cement Screed 1:4 Cement :Sand with
Continal UFH
1200 Gauge PP Membrane
150mm PIR insulation taped
1600 Gauge DPM and Radon Membrane
200mm Concrete Slab to SE spec
Radon Sump
50mm Sand Binding
Compacted Ground

Cavity Walls Block Work min 0.18W/m2K

Dulux Mist Coat
Dulux Weathershield Painted surface
2 Coat Cement Lime Sand 1:1:5 Render
100mm High Density Blockwork 7.3N
50mm Cavity
150mm PIR insulation taped
100mm High Density Blockwork 7.3N
Dulux Mist Coat
Dulux Weathershield Painted surface

Internal Partiton double Block Work

Dulux Trade Diamond Matt
Dulux Trade Blockfiller Plus
100mm High Density Blockwork 7.3N
25mm Cavity Filled with Acoustic Insulation
(33kg/m3)
100mm High Density Blockwork 7.3N
Dulux Trade Blockfiller Plus
Dulux Trade Diamond Matt

Internal Partiton double Block Work

Dulux Trade Diamond Matt Dulux Trade Blockfiller Plus 100mm High Density Blockwork 7.3N Dulux Trade Blockfiller Plus Dulux Trade Diamond Matt

External Natural Larch Shingle

Natural Larch Shingles 200 x 300 25 x 50mm 200mm CC Horizontal Batten Tyvek Breather Membrane 25 x 50mm 600mm CC Vertical Batten fixed into external Blockwork Roof Warm Flat (PIR) Low Pitch 15 Degree 0.14 w/m2K

Waterproof membrane: IKO Amourplan PSG
Single Ply Single Membrane
class AA/ AB or AC
Appearance like standing seam roof
18mm Substrate: Plywood or OSB3
150mm PIR Insulation for Warm Roof
Air and Vapour Control Layer
20mm Cement Particle Board
RCM Cemboard 1250kg/m3
20mm Cement Particle Board 1250kg/m3
18mm Substrate: Plywood or OSB3
225 x 47mm Joists to SE specification
Fill space in-between joists with High Density
Acoustic Insulation Mineral Wool (33kg/m3)

Internal Acoustic Ceiling

50mm Void filled with Acoustic Insulation Independent Joists not connected to the roof Joists to SE specification Install all plasterboard overlapping to prevent acoustic weak spots
15mm Acoustic Plasterboard (12.5gk/m3)
15mm Acoustic Plasterboard (12.5gk/m3)
15mm Acoustic Plasterboard (12.5gk/m3)
Kauf Skimmed Surface
Dulux Trade Blockfiller Plus
Dulux Trade Diamond Matt
Any Light fittings and Electric installations mounted on top of the plasterboard

Roof Warm Flat (PIR) 0.14 w/m2K

Waterproof membrane: IKO Amourplan PSG
Single Ply Membrane
class AA/ AB or AC
Appearance like standing seam roof
18mm Substrate: Plywood or OSB3
150mm PIR Insulation for Warm Roof
Air and Vapour Control Layer
20mm Cement Particle Board
RCM Cemboard 1250kg/m3
20mm Cement Particle Board 1250kg/m3
18mm Substrate: Plywood or OSB3
Joists to SE specification
Fill space in-between joists with High Density
Acoustic Insulation Mineral Wool (33kg/m3)

Internal Acoustic Ceiling

100mm Service Void
Install all plasterboard overlapping to prevent
acoustic weak spots
15mm Acoustic Plasterboard (12.5gk/m3)
12.5mm Plasterboard with Skimmed Surface
Dulux Trade Blockfiller Plus
Dulux Trade Diamond Matt

Roof Flat Canopy

Waterproof membrane: IKO Amourplan PSG
Single Ply Membrane
class AA/ AB or AC
Air and Vapour Control Layer
18mm Substrate: Plywood or OSB3
Joists to SE specification
18mm Substrate: Plywood or OSB3
Aluminium Cladding

Roof Flat Heating and Technical Services

Waterproof membrane: IKO Amourplan PSG
Single Ply Membrane
class AA/ AB or AC
Appearance like standing seam roof
18mm Substrate: Plywood or OSB3
Joists to SE specification

Design Risks & Hazards: Please inspect the site and study all drawings before any work is carried out. There are services around and pipes in the ground. Any work on an existing property should have an asbethos survey. The site is located within a park with many visitors.

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