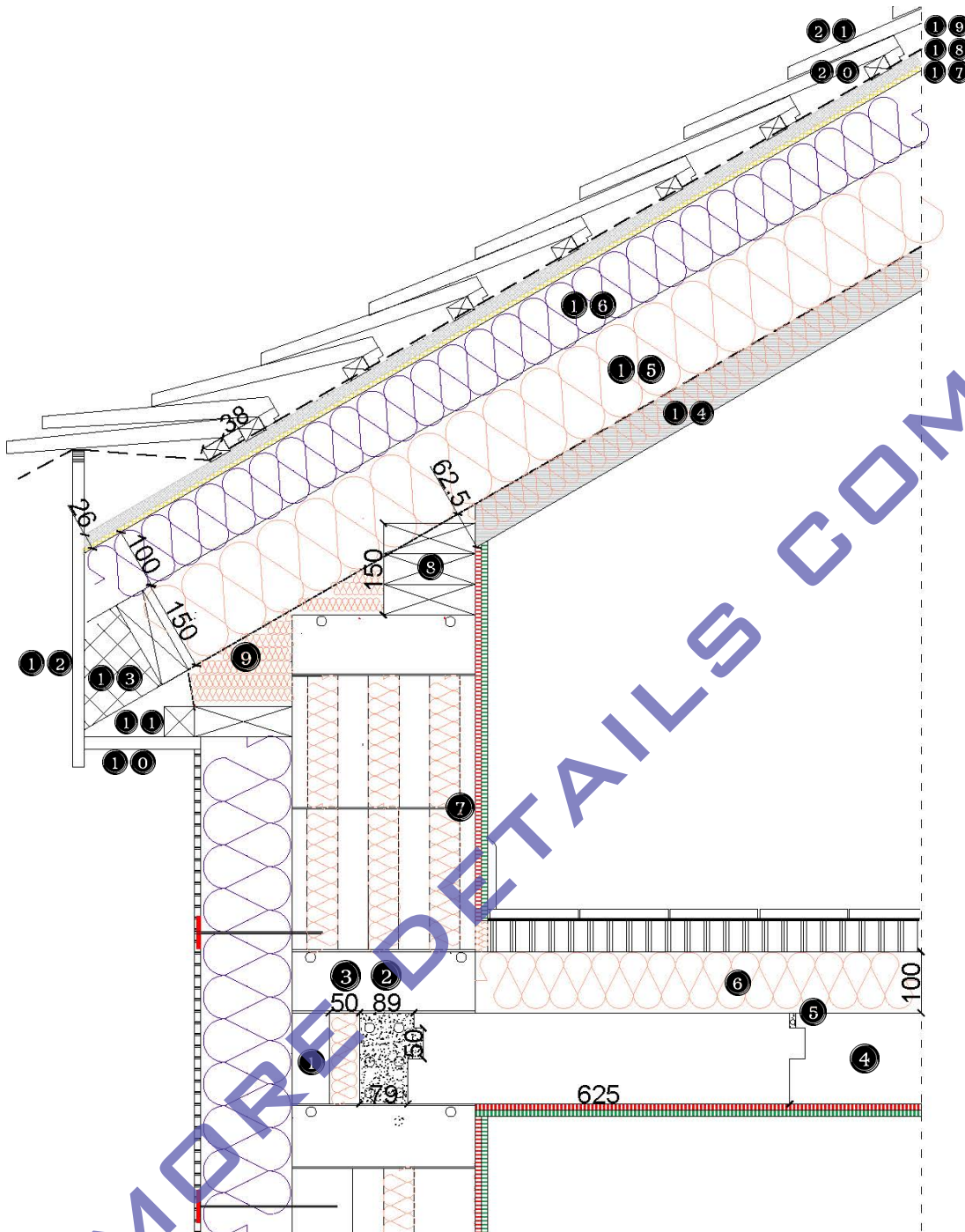


Typical Detail – Passive Light Concrete Cavity Wall to Timber Roof



NOTES:

1. Backing Airtec aerated concrete blocks 620 x215x60mm thick, 3mm thin layer Mortar B for intermediate floor joint, Light dense concrete blocks Airtec Foundation 245 sawed to shape, Gross Dry density 530 (+50) kg/m³, Compressive strength 3.6 N/mm², Fire resistance 4 hours. Thermal conductivity: 0.11 W/mK. Manufacturer: Thomas Armstrong (Holdings) Ltd.
2. Concrete joint cavity fill 89/79mm thick. Concrete mix - RIGAcrete Watertight, water resistant concrete, minimum cement content 220 kg/m³, strength C28/35, to BS 8500-2. Manufacturer: Leiths (Scotland) Ltd. Reinforced with reinforcement bars 8mm diameter bedded into in situ concrete. Ribbed bar to BS 6744, Stainless steel, Durability: Ultimate Tensile Stress 550 N/mm², Minimum 0.2% proof stress (effective yield) 550 N/mm². Manufacturer: Ancon
3. 50mm cavity insulation layer backing internally backing Airtec aerated concrete blocks 620 x215x60mm thick: EcoTherm Eco-Cavity Wall Insulation boards. Manufacturer: EcoTherm Insulation Ltd
4. Ytong aerated, grooved concrete slabs 6000-8300 x625 x150mm thick, 3mm thin layer Mortar B. Light dense, reinforced concrete intermediate floor slabs, Gross Dry density 550 (+50) kg/m³, Compressive strength 4.4 N/mm², Fire resistance 4 hours (class A1). Thermal conductivity: $\lambda_{10,dry} = 0.14$ W/(mK). Manufacturer: Xella Gruppe
5. Floor slabs concrete joint cavity fill 15mm thick: Concrete mix - RIGAcrete Watertight, water resistant concrete, minimum cement content 220 kg/m³, strength C28/35, to BS 8500-2. Manufacturer: Leiths (Scotland) Ltd. Reinforced with reinforcement bars 8mm diameter bedded into in situ concrete. Ribbed bar to BS 6744, Stainless steel, Durability: Ultimate Tensile Stress 550 N/mm², Minimum 0.2% proof stress (effective yield) 550 N/mm². Manufacturer: Ancon
6. 100mm thick extruded polystyrene: Extruded polystyrene rigid boards of pre-extruded polystyrene beads, to Approved Documents L1A, L2A, L1B, L2B (Energy and Wales) and Section 6 - Energy (Scotland) Type/Standard: WATERN Yelofoam x2) extruded polystyrene, product code: IC2100, (available from JEWSON Limited), U-value (W/mK) - 0.034, Colour and finish: Square edge detail, Unit sizes: 2500 x 600 x 100mm, Durability: High compressive strength - 300 kPa to BS EN 826 and BS EN 1606, High water resistance. Manufacturer: Cellecta Ltd.
7. 5mm mortar class M4 layer - Krend Mix mortars. Manufacturer: K Rend (Kilwaughter Minerals Ltd)
8. Double sole plate 50x150mm thick - Scots pine wall plates, Type/Standard: BS 4978:2007+A2:2017, grade C16 specified in BS EN 1995-1-1:2004+A2:2014, Unit sizes: 150 mm x 50 mm, Manufacturer: Stewart Milne Group. Included: Vertical restraint straps, Type/Standard: Medium Twist Strap, to BS EN 845-1, Unit sizes: Ref. MTS12 - dimensions 32x305x15mm, holes 14 \emptyset 4 - 2 \emptyset 10, fasteners x 12 - 3.75 x 30, load capacity 4.02 kN. Durability: Pre-galvanized mild steel. Framing anchors, Type/Standard: Framing Anchor/Universal Framing Anchor, to BS EN 845-1, Unit sizes: Ref. A34, Dimensions and drill holes (mm) 306x3x36, Number of Fasteners x 8 - 3.75 x 30mm, downloads 1.30 kN, Durability: Pre-galvanized mild steel. Manufacturer: SIMPSON STRONG-TIE
9. Insulation overlapped within roof structure Earthwool® OmniFit, OmniFit Slab - Multi-purpose, non-combustible, glass mineral wool roll for installation by friction fitting. Flexible and robust made with a formaldehyde-free binder derived from rapidly renewable materials classified as zero ODP and zero GWP. Thermal conductivity (K-value): 0.034 W/mK. Roll width: 1200mm. Fire performance: Euroclass A1 to BS EN ISO 13501-1. Environmental: 'A' generic BRE Green Guide rating. Manufacturer: Knauf Insulation Ltd.
10. Soffit board 20mm thick - Scots pine soffit board, Type/Standard: BS 4978:2007+A2:2017, grade C16 specified in BS EN 1995-1-1:2004+A2:2014, Unit sizes: 20 mm thick, cut to size, Manufacturer: Stewart Milne Group.
11. Soffit supportive batten 50x50mm - Scots pine battens, Type/Standard: BS 4978:2007+A2:2017, grade C16 specified in BS EN 1995-1-1:2004+A2:2014, Unit sizes: 50x50mm, Manufacturer: Stewart Milne Group.
12. Fascia with perforated polyethylene fascia ventilator grille - Scots pine soffit board, Type/Standard: BS 4978:2007+A2:2017, grade C16 specified in BS EN 1995-1-1:2004+A2:2014, Unit sizes: 20 mm thick, cut to size, Manufacturer: Stewart Milne Group. Over Fascia Ventilation System grille: Length: 900 mm, Material: High-density polyethylene. Durable and resistant to decay. Colour: Black. Manufacturer: Timloc Building Products.
13. Rafters 50x200mm thick - Scots pine rafters, Type/Standard: BS 4978:2007+A2:2017, grade C16 specified in BS EN 1995-1-1:2004+A2:2014, Unit sizes: 150 mm x 50 mm, Manufacturer: Stewart Milne Group. Included: Roof connectors, Type/Standard: Nail plates, to BS EN 845-1. Unit sizes: Ref. NP100/300, Dimensions and drill holes (mm) 100 x 300x1.5, 68 holes, diameter \emptyset 4.1, Durability: Pre-galvanized mild steel. Truss Clips, Type/Standard: Truss Clip, to BS EN 845-1. Unit sizes: Ref. TCP47, width 47mm, Fasteners (3.75mm x 30mm) to rafter x 6, to wall plate x 6, uplift load 3.3 kN. Durability: Pre-galvanized mild steel. Manufacturer: SIMPSON STRONG-TIE
14. 62.5 mm insulated lining plasterboard Eurothane® PL - high performance rigid polyisocyanurate (PIR) foam board with a 12.5mm tapered edge plasterboard bonded to one side for use as an internal lining. Faced on the reverse with a multi-layer kraft paper and aluminium foil. Manufactured to ISO 9001 Quality and ISO 14001 Environmental Management Systems. Manufactured using a blowing agent with zero ozone depletion potential (ODP) and low global warming potential (GWP). Low thermal conductivity of 0.022 W/mK (insulation component). Plasterboard laminate gives Eurothane® PL a Euroclass B-s1, d0 fire performance. CE marked in accordance with harmonised European standard EN 13950. Board size: 2400 x 1200 mm. Manufacturer: Recticel Insulation.
15. EcoTherm Eco Versal Insulation Board, 450mm x 1200mm, 150mm thick, fibre free rigid polyisocyanurate (PIR) insulation core faced with aluminium foil composite on both sides, to BS EN 826-1:1999. Manufacturer: EcoTherm Insulation Ltd
16. 100mm PermaRock EPS-Premium insulation (EPS100) layer over rafters.
17. Nova Ultra+ Breather Membrane, versatile, dual approved breathable membrane. Composition: PP - non woven. Breathable microporous film. PP - non woven. Standard width: 1.5 m. Roll length: 50 m. Technical data: Weight: 95 g/m². Tensile strength MD/CD: 210/105 N/50mm. Elongation MD/CD: 65/70%. Tear resistance MD/CD: 75/90 N. Resistance to air penetration: 0.045 m³/m²h/5.0pa. Water vapour transmission properties: 0.02 m. Resistance to water penetration: W1 Class. Resistance against fire: E Class. Stability to low temperature: -40°C. UV resistance: Install as per BS 5534:2014 + A2: 2018 UV guidance. Manufacturer: Nova Ltd.
18. Sarking boards, Type/Standard: softwood grade to BS5268-2:2000 and to CP112 part 2, Unit sizes: 600x1200x18mm thick, Durability: OSB softwood C16. Manufacturer: Stewart Milne Group.
19. Roofing felt underlay, Type/Standard: Monartile Supa R Roofing Underlay - Polypropylene (pp) hydrophilic spun bond with a strong reinforcing grid encapsulated with a polyethylene (PE) top coating layer to BS EN 13707:2004+A2:2009 Part 2, product code 3007197, Unit sizes: Material thickness: 0.79mm, Water vapour resistance: 250 Nm/sg, weight of 150 g/m², in 1 x 50 m roll size. Durability: Type W1 strength. Manufacturer: BML UK & Ireland.
20. Tile supportive counterbatten 25x38mm - Scots pine battens, Type/Standard: BS 4978:2007+A2:2017, grade C16 specified in BS EN 1995-1-1:2004+A2:2014, Unit sizes: 50x50mm, Manufacturer: Stewart Milne Group.
21. Roof tiles - DuoPlain Tile - concrete plain, interlocking tile. Batten size: 38 x 25 mm for up to 450 mm support spacing. 50 x 25 mm for up to 600 mm support spacing. Tile head-lap: 80-95 mm. Pitch: 25-90°. Gauge: Minimum: 173 mm. Maximum: 188 mm. Linear cover: 300 mm. Covering capacity: 17.7 tiles/m². Weight (at maximum gauge): 55 kg/m². Slate Grey to BS5534:2014, Comprehensive strength (minimum): class 4 hall. Manufacturer: BML Redland