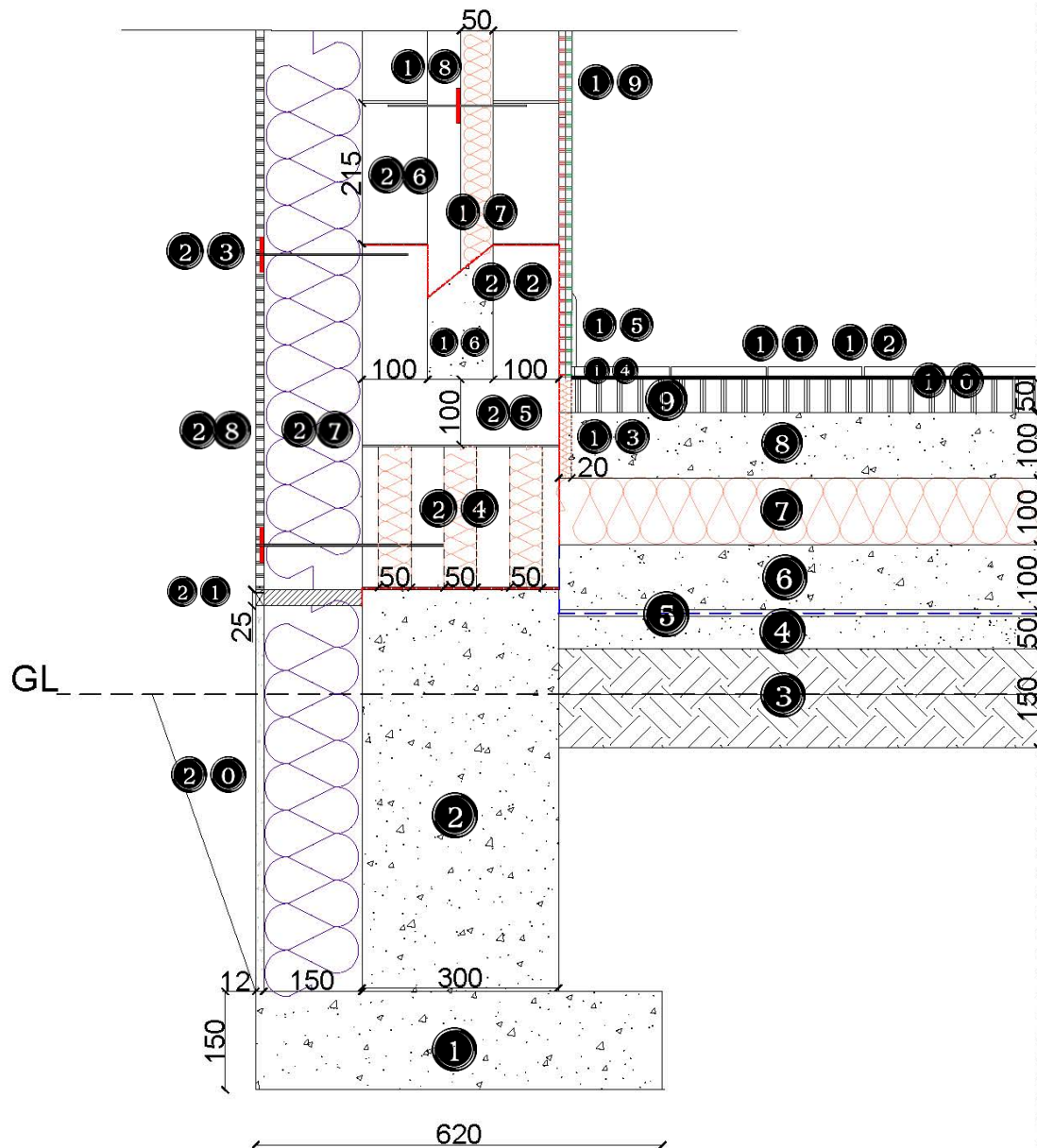


Typical Detail – Passive Light Concrete Cavity Wall to Loadbearing Screed Floor



NOTES:

- Strip foundation concrete trench 620mm wide and 150mm deep. Concrete mix - RIGAcrete Watertight, water resistant concrete, minimum cement content 220 kg/m³, strength C40/50, to BS 8500-2. Manufacturer: Leiths (Scotland) Ltd
- Reinforced concrete substructure wall up to 150 mm above ground level 300mm thick. Concrete mix - RIGAcrete Watertight, water resistant concrete, minimum cement content 220 kg/m³, strength C40/50, to BS 8500-2. Manufacturer: Leiths (Scotland) Ltd
- 150 mm thick layer of consolidated hardcore: MOT TYPE 1 SUB BASE LARGE BULK BAG, Type/Standard: MOT TYPE 1 SUB BASE, to BS EN 13242, Product Code: AGSTB020, Unit sizes: Bulk bags, Durability: Sub base aggregate. Manufacturer: Jewson Limited.
- 50 mm compacted sand binding: BUILDING SAND LARGE BULK BAG, Type/Standard: BUILDING SAND, to BS EN 13139:2002, Product Code: AGSTB001, Unit sizes: Bulk bags, Durability: Sharp sand, Manufacturer: Jewson Limited.
- DPM overlapped 150 mm upward: Type/Standard: Hyload Universal DPM (500 µm), to BS EN 13967:2012+A1:2017, Product code: 30833510. Colour and finish: blue, Unit sizes: Sheet width: 4 m, Roll length: 12.5 m, Roll weight: 23 kg. Durability: 2000 gauge. Related: Hyload DPM Jointing Tape, Product code: 30833520, Manufacturer: IKO PLC
- 100 mm thick concrete floor slab: Concrete mix - RIGAcrete High Flow, strength C16/20, to BS 8500-2. Manufacturer: Leiths (Scotland) Ltd.
- 100 mm thick extruded polystyrene: Extruded polystyrene rigid boards of pre-extruded polystyrene beds, to Approved Documents L1A, L2A, L1B, L2B (England and Wales) and Section 6 - Energy (Scotland) Type/Standard: HEXATERM Yelofaom x2i extruded polystyrene, product code: ICX21100, (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
- 100 mm thick concrete floor slab: Concrete mix - RIGAcrete High Flow, strength C16/20, to BS 8500-2. Manufacturer: Leiths (Scotland) Ltd.
- Anhydrite fluid screed layer 50mm: Gypsol XS High Strength Anhydrite Screed, Appearance: Off white fluid mortar. Density: Wet - 2200 kg/m³, dry - 2000 kg/m³. Minimum strength (28 days): CA-C30-F7. Required flow (to BS EN 13454-2): 230-270 mm. Drying time (to <75% relative humidity (RH) at 50 mm depth): Natural drying 28 days; forced drying 13 days. Can take foot traffic 24-48 hours and loading 5-7 days (based on good drying conditions of 60% RH at 20°C). Fire rating: Class A1R. Manufacturer: GYPSOL - LKAB
- Acoustic foam layer under timber boards 5mm: Earthwool® Acoustic Floor Slab 5mm resilient layer over floor screed. Dense, compression resistant, non-combustible, rock mineral wool slab made with a formaldehyde-free binder derived from rapidly renewable materials classified as Zero ODP and Zero GWP. Slab length: 900 mm, Slab width: 600 mm, Fire performance: Euroclass A1 to BS EN ISO 13501-1. Environmental: 'A' generic BRE Green Guide rating. The resilient layer turned up at the edges of the floor to isolate the walls from the screed. Manufacturer: Knauf Insulation Ltd.
- Timber floorboard, Size (w x l): 190 x 1830 mm. Thickness: 15 mm. Material: Oak 11 mm thick multi-layer ply backing with 4 mm thick solid oak veneer top layer. Finish: Hard wax oil matt. Edges: Tongue and grooved and micro bevelled on all four sides. Grade: CDE. Standards: Meets all load bearing requirements of BS 6399-1 and also compliant with BS 6399-1 Table 1, Section 3 for Museum Floors and Art Galleries for exhibitions. FSC certification: FSC 100%. Manufacturer: The Solid Wood Flooring Company
- Expansion gap for timber flooring 3mm
- Acoustic foam layer overlapped on under timber boards 20mm: Earthwool® Acoustic Floor Slab 20mm resilient layer over floor screed. Dense, compression resistant, non-combustible, rock mineral wool slab made with a formaldehyde-free binder derived from rapidly renewable materials classified as Zero ODP and Zero GWP. Slab length: 900 mm, Slab width: 600mm, Fire performance: Euroclass A1 to BS EN ISO 13501-1. Environmental: 'A' generic BRE Green Guide rating. The resilient layer turned up at the edges of the floor to isolate the walls from the screed. Manufacturer: Knauf Insulation Ltd.
- Timber floorboards expansion gap 5mm
- Concrete cavity fill stopped finished 100mm thick to prevent wall leaves overturn: Concrete mix - RIGAcrete Watertight, water resistant concrete, minimum cement content 220 kg/m³, strength C28/35, to BS 8500-2. Manufacturer: Leiths (Scotland) Ltd
- 50mm cavity insulation layer: EcoTherm Eco-Cavity Wall Insulation boards 450mm x 1200mm, fibre free rigid polyisocyanurate (PIR) insulation core faced with aluminium foil composite on both sides, overlapped up against block wall to BS EN 826: 1996 Manufacturer: EcoTherm Insulation Ltd
- Wall ties for cavity walls with retaining clips: ST1, to BS EN 845-1. Spaced 450mm vertically, 900mm horizontally. Type/Standard: Stainless Steel Wall Tie with Double Drip, WTD53-225, made from stainless steel grade 304 18/8 austenitic, cavity width 75 - 150, tie length 225mm, tie diameter 3.6, Type 3, mortar class B. Unit sizes: 225 mm. Type/Standard: Insulation Retaining Clip, Suitable for use with cavity wall ties, the insulation retaining clip is a 75mm diameter plastic disk used to hold insulation material back to the structure. Manufacturer: SIMPSON STRONG-TIE
- Internal boards: 1 x 9.5mm GTEC Megadeco and 1 x 9.5mm GTEC Megadeco/Board with silver metallised polyester film back liner, dense plasterboard with superior fire resistance, sound insulation and impact resistance. Composition: Aerated Calcium sulphate di-hydrate with fillers and fibres encased inside a white pre-sealed paper with bond edges. Cores and papers are bonded with starch. Edge glue is PVA. Complies with BS EN 520:2004+A1:2009 Type D, F, I & R. Longitudinal breaking load ≥ 650N, Transverse breaking load ≥ 250N, Reaction to fire: Euroclass A2-s1, d0, Moisture Content: < 2%, Mean Water vapour resistance factor: μ = 10 according to BS EN 12524 standard, Nail & screw pull through: > 700 N, Thermal Conductivity, λR: 0.25 W/mK product sizes: Tapered Edge, 9.5 mm thick, 2400 mm x 1200 mm, 38 kg. Finished with skim coat 3 mm thick, smoothed joining and finish: GTEC Deco jointing systems: GTEC fire rated silicone sealant, GTEC easyfinish extra, GTEC deco filler, GTEC edging bead, GTEC patching tape, GTEC joint tape, Fixing: GTEC drywall screw self drilling, GTEC Drywall Screw Self Tapping Screw and GTEC performance self tapping - Fine threaded screw, Phillips head, Carbon steel screws with Zinc Coating. Manufacturer: to BS EN 14566. Manufacturer: Etes Building Performance Sinitat.
- 12mm PermaRock Dry Dash (Dashing Aggregate) based on Dashing Mortar (DM), a specially formulated, self-coloured, polymer enriched mineral-cement. Weathering resistance: Excellent. Durability: Excellent. Colour fastness: Excellent. Colour: grey. Finished below ground level.
- Insulation edges supportive vertical and horizontal timber boards 25 mm thick and steel profiled bead for render stop above ground level. PermaRock
- Flexible DPCs. Type/Standard: Gas Resistant DPC overlapped to meet DPM. Manufacturer: Cordek Ltd.
- PermaRock mechanical fixings spanned 450mm centres vertically and maximum 900mm centres horizontally Type/Standard: Stainless Steel Wall Tie, tie length 300mm, tie diameter 3.6. Type/Standard: Insulation Retaining Clip, 75mm diameter plastic disk to hold insulation material back to the structure. Hammered into blocks.
- Cellular Dense Concrete Blocks 7.3N 215mm. Height: 215 mm, Length: 300 mm, Width: 100 mm. Colour: Grey. Compressive Strength 7.30 N per mm², Fire Rating: Class A0, BBA Approved, Type: Lightweight Block - high quality class 2 aggregates. To BS EN 717-3. Thermal conductivity: 0.88 W/mK Manufacturer: Thomas Armstrong (Concrete Blocks) Ltd. Insulation: Earthwool® Multi-purse, 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. Manufacturer: Knauf Insulation Ltd
- Airtac aerated concrete brick supporting internal and external wall leafs 300x100mm thick. Light dense concrete blocks Airtac Large, Gross Dry density 600 (+50) kg/m³, Compressive strength 3.6 N/mm², Fire resistance 4 hours, Available size: 620x430x100mm, to cut on site. Thermal conductivity: 0.17 W/mK. Manufacturer: Thomas Armstrong (Holdings) Ltd
- Above ground Airtac aerated concrete block's internal and external leaf 620 x215 x100mm thick, 3mm thin layer Mortar B. Light dense concrete blocks Airtac XL, Gross Dry density 460 (+50) kg/m³, Compressive strength 2.9 N/mm², Fire resistance 4 hours. Thermal conductivity: 0.09 W/mK. Manufacturer: Thomas Armstrong (Holdings) Ltd.
- 150mm PermaRock EPS-Premium Insulation (EPS100) supported 150mm below ground level and extended downwards to trench level: Expanded polystyrene. Incorporates microscopic particles of graphite for enhanced thermal performance and to dissipate heat. They are Chlorofluorocarbon (CFC) / hydrochlorofluorocarbon (HCFC) free, zero Ozone Depletion Potential (xODP), to BS EN 13163. Thermal conductivity (λ50/90) Lambda: 0.030 W/mK. Standard dimensions: 1200 x 600 mm, 10mm thick leaf beds. Bonding agent: PermaRock Adhesive polymer-modified cement-based compound for bonding thermal insulation boards to concrete and masonry substrates. Reinforcement layer: Basecoat: PermaRock Bedding Mortar - high-performance, polymer-modified, cement-based reinforcement layer - mineral dry powder pre-mix to add water on site. PermaRock Reinforcing Mesh - Heavy-duty alkali-resistant coated, multi-strand glass fibre reinforcing mesh. PermaRock Reinforcement Layer Fixings (stainless steel).
- PermaRock Acrylic K-Finish stippled render/ R-Finish corrugated render: High performance, ready-to-use, through-colour, synthetic resin textured renders reinforced with siloxane to impart improved water repellence. Flexible, weather resistant, water repellent and water vapour permeable. Texture: Type 'K': Stippled; Resistance to soiling: Good. Colour fastness: Good; colour shade dependent. Colour range: Over 1250 standard colours (PermaRock Colour Chart: RAL, NCS, BS 4800). Colour: Ivory.