

GENERAL REQUIREMENTS & COMPLIANCE

Standards: All works to be carried out strictly in accordance with current UK Building Regulations, relevant British Standards (BS), Codes of Practice, and local authority recommendations.

Structural Calculations: All structural elements-including roof timber sizes, wall ties, ridge beam/truss specifications, lintels, and foundation depth-are subject to final structural engineer calculations prior to commencement of works.

FOUNDATIONS & GROUNDWORK

Foundations: Traditional concrete strip foundations to a minimum depth of 1,000mm below ground level (final depth subject to site conditions and site inspector approval). Concrete Specification: Minimum C20/ST2 concrete poured to a minimum depth of 150mm or as detailed by the structural engineer. underpinning/Drainage Proximity: Deepened foundations where located near tree roots or existing drainage pipes in accordance with NHBC guidelines.

GROUND FLOOR SLAB & DPC

Sub-base: Minimum 150mm well-compacted type 1 MOT hardcore, blinded with clean sand. DPM (Damp Proof Membrane): Minimum 1200-gauge (300 micron) polythene DPM laid over sand blinding, lapped a minimum of 300mm at joints and sealed. DPM to be dressed continuous up perimeter walls to link directly with the wall Damp Proof Course (DPC). Concrete Slab: 100mm minimum structural concrete slab (Grade C25/C30). Insulation: 100mm rigid insulation boards (e.g., Celotex GA4000 or PIR equivalent) laid over DPM with perimeter vertical insulation strips (25mm) to prevent thermal bridging. Floor Screed & DPC Line: Minimum 65mm sand/cement floor screed laid over insulation, reinforced with light anti-crack mesh. The finished internal screed level shall sit precisely level with the continuous wall Damp Proof Course (DPC) line, which will be positioned a minimum of 150mm above the finished external ground level.

EXTERNAL CAVITY WALLS

Outer Leaf: External stone masonry (min. 100mm thickness) to match the host dwelling in texture, color, and course pattern. Cavity: 100mm cavity incorporating full-fill cavity insulation (mineral wool or high-performance expanded polystyrene bead) as indicated on approved drawings. Inner Leaf: 100mm Thermalite high-strength lightweight aerated concrete blocks (7.3 N/mm² compressive strength). Wall Ties: Stainless steel cavity wall ties to BS EN 845-1, spaced at maximum 900mm horizontal and 450mm vertical centers (staggered), and 225mm unbonded corners. DPC: Hyload or similar heavy-duty flexible DPC installed continuous around all external walls, minimum 150mm above finished ground level.

VAULTED ROOF & INSULATION

Roof Structure: Vaulted pitch roof structure composed of timber rafters and ridge beam to structural engineer's specifications. Rooflights: Two (2 No.) Velux SK06 1140mm x 1180mm roof windows installed using genuine Velux flashing kits to suit the specified tile roof profile. Velux installation to maintain continuous roof lining, flashing, and moisture barriers. Roof Coverings: Double-lap roof tiles to match the host dwelling, laid over treated 38mm x 25mm timber battens and high-performance breathable roof underlay (e.g., Tyvek Supro). Hybrid Insulation System (Actis Hybris & Multifoil): Between Rafters: Actis Hybris honeycomb insulation installed neatly between roof rafters (thickness dictated by rafter depth to achieve target U-value of <0.15W/m²K. Under Rafters: Actis Boost'R Hybrid / HControl Hybrid reflective quilted blanket fixed beneath rafters with horizontal counter-battens, fully taped at all perimeter edges and overlaps using Actis multi-purpose tape to create a continuous vapour control layer (VCL) and air barrier. Internal Ceiling Finish: 38mm x 25mm timber counter-battens (providing air gap) covered with 12.5mm tapered-edge plasterboard and skim finish to form the finished vaulted ceiling profile.

VENTILATION & DRAINAGE

Rainwater Goods: 112mm half-round uPVC gutters discharging into 68mm round uPVC downpipes. Surface Water Disposal: All surface water runoff from roof and non-permeable areas connected into a new dedicated soakaway positioned at least 5.0m away from any building/boundary foundations, designed to BS EN 752 / BRE Digest 365 standards (or connected to existing surface water drainage network if approved). Sustainable Driveway Surface: Driveway hardstanding surrounding/approaching the garage laid using a fully permeable/porous surfacing system (e.g., permeable block paving, open-graded gravel, on gravel-lock grid system, or porous asphalt) laid over a permeable sub-base (MOT Type 3) to prevent surface water runoff onto the highway.

GLAZING, DOORS & FIRE SAFETY

Doors & Openings: Front vehicular sectional/roller door and side pedestrian door installed to manufacturer instructions. Pedestrian door to incorporate multi-point locking mechanisms. Safety Glazing: All glazing within 800mm of floor level or within 300mm of door frames to be toughened or laminated safety glass complying with BS EN 12600 (Class 1). Electrical Work : All new electrical installations, light fittings, and power outlets to be installed, tested, and certified by a competent person under an approved self-certification scheme (NICEIC / ELECSA).

