



PROPOSED FLAT ROOF CONSTRUCTION
 Single ply, gyp liquid roof or felt roof coverings laid in accordance with manufacturers guidelines on min 150mm rigid slab insulation on breather membrane on 22mm exterior grade roof decking on sw fixings on 50 x 200 (24) sw roof joists at 400mm centres with 12.5mm foil backed plasterboard and skim to underside (ALL TO ACHIEVE A U VALUE OF 0.15 W/M2 deg C).

PROPOSED PITCH ROOF CONSTRUCTION
 The finished roofing materials will comprise CONCRETE INTERLOCKING TILES to match existing (to suit pitch). Lay to the required gauge on 38 x 25 softwood treated timber battens on Zylek roofing underfelt to BS 5534. All secured to 50 x 125mm (C24) rafters at 600mm centres secured to 50 x 100mm wallplate at either side. Horizontal and vertical holding down straps for lateral restraint to rafters and wall plates will comprise of Birtley 30x5 galvanised mild steel proprietary straps secured at intervals not exceeding 2.00m. Provide 270mm Rockwool or similar quilt insulation between 50 x 100mm ceiling joists at 400mm centres top layer at 90deg to lower layer, 12.5mm Gyproc vapour check ceiling finishes. (ALL TO ACHIEVE A U VALUE OF 0.15 W/M2 deg C). Maintain min 50mm ventilation gap between top of insulation and underside of sarking felt. A proprietary eaves ventilation system will be secured comprising of 1000mm x 10mm continuous strip ventilator secured to the top of the fascia board and running the entire length of the roof structure to provide a continuous flow of unobstructed air supply to the roof voids. Accessories will include the likes of underfelt supports, ventilation trays, profile eaves filters and eaves vent clips etc. Any valleys to be constructed from either Codès leadwork or with the use of proprietary valley materials as recommended by the manufacturers.

LATERAL RESTRAINT TO ROOFS
 All roofs should be suitably anchored with BIRTLEY or CATNIC type metal anchors comprising of galvanised mild steel straps having a cross section of 30mm x 5mm x 1000mm secured to brickwork and timbers at intervals not exceeding 2m to provide horizontal and vertical restraint.

DAMP PROOF COURSES AND MEMBRANES
 The horizontal and vertical damp proof courses will comply with the requirements of BS 743 and will be of a pitch polymer DPC material such as RUBEROD HYLOAD and will be incorporated in the following locations:
 (a) Not less than 150mm above ground levels to all loadbearing walls and continuous with the inner leaf and with oversite concrete floor slab damp proof membranes.
 (b) Positioned vertically and built into the jambs of all external door and window openings and behind cills and door thresholds. Insulated cavity closers.
 (c) Positioned horizontally to all external door and window openings and behind all cills and door thresholds.

GROUND FLOOR CONSTRUCTION
 Provide 100mm concrete slab on 100mm rigid slab insulation on gas retardant dpm on 25mm sand bedding on min 150mm well compacted hardcore.

BELOW GROUND DRAINAGE SYSTEMS
 Below ground drainage pipes will comprise of either 100mm diameter Hespworth verified clayware to BS 65 or 100mm diameter PVCU to BS 5481/BS 4862 laid on granular bedding materials to BS 822 Table 4. The selected fill materials should be free from stones larger than 40mm, clay exceeding 100mm, timber, frozen materials or vegetable matter. Where rigid pipework of less than 150mm diameter have less than 300mm of cover or a rigid pipe of 150mm diameter or more has less than 600mm of cover, then these pipes should be suitably encased within 150mm of concrete surround. Where flexible pipework are not located under a highway and have less than 600mm of cover then these pipes should be suitably encased within 150mm of concrete surround. When drainage runs are within 1.000m of any foundation and the level of the drainage trench is below the level of the foundation then that trench should be suitably backfilled with concrete. Any drainage pipe which may penetrate through a building structure below the finished ground level will be protected with a lintel support and a settlement gap of not less than 50mm which incorporates a flexible material to provide necessary protection to the drainage. All gravity drainage will have a minimum fall requirement of 1:40 to provide for self-cleaning velocities. All gully systems will be back inlet trapped type unless otherwise stated. Inspection chambers/ manholes up to a maximum depth of 900mm may be a proprietary system of PVCU material otherwise they will be constructed of 150mm thickness concrete base slab 1:2.4 mix with benching formed in 1:2 concrete mortar to 1:12 gradients. All trowelled smooth with appropriate channels, branches and connection bends. The walling of the chamber will be constructed with 215mm thickness Class B engineering brickwork to BS 3921 formed in English Garden wall bond to the required invert. 150mm concrete cover slab with the appropriate haunching forming the cover levels and frame. The inspection chamber cover will be mild steel and medium duty screw down sealed type unless otherwise stated. On completion of the works the entire drainage system will be tested for water tightness to the satisfaction of the local authority building control officer. (APPROVED DOCUMENT H BUILDING REGULATIONS). Any drainage under building to be exposed and fully encased in concrete.

NATURAL MECHANICAL MEANS OF VENTILATION
 Ventilation openings to any habitable room to be in accordance with the Approved Document Building Regulations. Natural ventilation openings to be not less than one twentieth of the floor area of the room. All windows to have permanent ventilation louvers in the form of trims fitted to the head of the window frames to provide 8000mm² of additional ventilation.

BRICKWORK BLOCKWORK CONSTRUCTION
 The external facing materials will be of a suitable material approved by the Local Planning Authority, comprising of 100 thickness brickwork to the external leaf constructed with 1:1.5 cement lime sand, to match existing, with 100mm cavity incorporating 90mm rigid slab insulation material, 100mm thickness THERMALITE SHIELD blockwork on the internal leaf constructed with 1:1.5 cement lime sand with 13mm lightweight plaster surfaces internally finished. (ALL TO ACHIEVE A U VALUE OF 0.18 W/M2 deg C). The external and internal leaves are to be securely retained with approved wall ties to BS 1243. Positioned 450mm apart vertically and 750mm apart horizontally, provide wall ties at max 300mm centres vertically at opening in cavity walls, within 225mm of the sides of openings. All cavities will be closed at the jambs and the eaves with insulated cavity closers and Hyload damp proof course system. All cavities closed at the jambs, cills, and head situations will be suitably insulated to prevent cold bridging. New cavities to be continuous with existing to prevent moisture transfer and cold bridging. Movement joints to the external walling will be filled with Serviced Aerofil materials with Evode Low Modulus Silicone Sealant to brickwork faces. Existing foundations subject to additional loadings are to be exposed and checked for adequacy. New foundations to be min 600 x 225mm concrete strip 900mm below ground level, foundations to be subject to ground conditions which are unknown. Underpin existing wall subject to additional loading.

WINDOWS/GLAZING REQUIREMENTS
 UPVC double glazed materials to match existing. The glazing requirements will be double glazed sealed units to BS 6206. When any glazing system is within a height of 800mm from a floor level in internal or external walls and 1500 mm from floor level in a door side screen then safety glazing will be introduced to comply with the current codes of practice. Glazing to be double-glazed with 16mm air gap gas filled and a soft low E coating. (ALL TO ACHIEVE A U VALUE OF 1.4 W/M2 deg C). Provide Velux Type rooflight fitted in accordance with manufacturers instructions, including flashing kit to existing utility roof. Provide roller shutter door to store.

LINTOLS SUPPORT OF STRUCTURAL OPENINGS
 All lintels unless otherwise stated will be BIRTLEY hot dipped galvanised mild steel cavity tray combined steel lintels to BS 5977 to the sizes and grades as recommended by the manufacturer. All lintels must achieve a minimum end bearing support of 150 mm. When the bearing is less than 150 mm a concrete caststones will be designed to accommodate the desired loading criteria. All lintels will be installed with insulated voids to prevent cold bridging. All lintels will receive plaster finishes to the backs and soffits to provide for half-hour fire protection of the surfaces.
 Refer to Structural Engineers detailed information for supporting steelwork details.

ELECTRICAL INSTALLATIONS
 All new electrical work is to be designed, installed, inspected and tested in accordance with BS 7671 (IEE Wiring Regulations 18th Edition) and Part P and Part L1B of APPROVED DOCUMENT. The work is to be undertaken by a registered installer, with a certificate of compliance produced and passed to Building Control on completion of the works. All the sockets switches and lighting requirements shown on the drawings are indicative and should be used for tender quotation purposes only. Client agreement and detailed requirements must be obtained thereafter. Fire detection and Alarm systems will be installed and wired in complete accordance with BS 5839, Part 1. Smoke detection systems will be optical and obscuration pattern types and will be fed exclusively from uninterrupted mains feed supply. Emergency Lighting systems will be designed in accordance with BS 5266 Part 1 Provide low energy light fitting that number not less than 3 per 4 of all new fittings.

GENERAL
 All work to be in accordance with the Building Regulations.
 Provide thermostatic radiator valves to all new radiators.
 All cavities to be continuous to prevent moisture transfer and cold bridging.
 Any pipework outside insulated area shall be adequately insulated.
 The drawings have been prepared only in sufficient detail and accuracy for a local authority application, consequently reference must be made to the relevant British Standards, Codes of Practice and BSAs, certificates relevant to the work in hand. The contractor must visit site to acquaint themselves with the extent and nature of the works, site access, adjacent buildings and boundary wall, trees etc.
 Drainage runs are indicative and subject to being exposed and verified on site.
 Ground conditions are not known consequently the depths shown are provisional and the depths of foundations should take into account the location of the existing sewers / drains.

