

Construction Notes:
THIS DRAWING IS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERS CALCULATIONS AND DETAILS
All works to be in accordance with the current building regulations and Planning consent] to be read in conjunction with construction details and engineers specification. All works & materials to comply with the recommendations & requirements of all current relevant British standards, Building regulations, planning legislation and CDM Regulations. This drawing has been prepared in accordance with our best understanding of clients instructions and requirements provided as part of the brief. The contractor shall include for all works contained on the drawings whether expressed or implied. He shall be responsible for carrying out all works to the satisfaction of the local authority inspectors.

Generally;
i. Remove all existing debris, redundant switchgear. Block up openings where indicated.

PART A: Structure
Refer to additional Structural Engineers Calculations / Site inspection report. Spec generally as below:

Extension Foundations:
To be 600x200mm concrete strip foundation with min 700mm cover taken down to suitable ground all to be agreed with the building inspector. Foundations to be deeper than drainage invert levels. Allow for stepping foundation if needed. To str. eng's details. Two leaves of engineering brickwork below D.P.C level or Minimum 215mm Deep Aircrete Foundation Block as shown with concrete cavity fill up to 225mm below DPC level. Strip concrete footings - as above at least 1000mm deep, bearing onto firm clay sub strata. Overall size and depth to suit ground conditions to the satisfaction of the local authority B.C.O

Single Rear and Side Extension Ground floor construction:
Ground floor construction:
Ground floor construction:
To be 150mm concrete slab with self leveling screed and finish to clients choice on 70mm Celotex GA4000 on 1200G Visqueen dpm on 50mm sand blinding over 150mm well consolidated hardcore. Insulation to be covered with polythene before laying concrete slab and to be turned up at edge of slab. DPC and DPM to be lapped and bonded.Ensure existing timber floor is continuously vented with 40mm dia. upvc pipes under new slab to extend to terracotta vent bricks every 4th course.
Max 'U' value 0.22W/m2k,

Single Rear External Wall Construction:
Single Storey Rear Extension Wall Construction:
External facing brick to match existing house. 100mm cavity, Celcon or thermalite shield or similar approved medium density block (0.45 W/mK), 50mm Mannock Therm MC partial fill insulation or 100mm Dritherm 32 Cavity slab or similar approved. 100mm Thermalite shield inner skin with plaster on dabs, and skim internally with thistle multi-finish plaster. All walls to be fully bonded to existing walls and cavities to be continuous achieve a 'U' value of 0.28W/m2k. Stainless steel cavity ties to be provided at 450 and 750mm centres and at 300mm centres around all openings. Insulated thermabate or similar approved cavity closer's. Insulated catnic or i.g. proprietary galv steel lintels to be provided for all cavity wall openings with a minimum 150mm end bearing. Horizontal and vertical dpc's/thermal breaks to be provided at heads cills and reveals in a accordance with government accredited construction details. Cavity to be closed at eaves. 0.27w/m2k achieved.

Rear Single Store Pitched Roof Extension Construction:
Sandtoft Britlock 2020 Interlocking concrete tiles to match existing in colour, size and style laid to gauge with min. 100mm headlaps on 50mm x 25mm tanlised softwood battens secured with wire nails to BS5534. Tyvek or Kingspan nilvent breathable membrane laid to manufacturers instructions. (150mm) laps laid horizontally over specifiers rafters. 150X47mm sc3 rafters at 400mm centres secured to a 100mm x 50mm softwood wallplate strapped down to the external cavity walls already specified and to existing house wall via wallplate 100 x 50mm bolted at 400mm c/c. Timbers to run adjacent to side walls of extension infilled with 100mm Mannok Therm MR Insulation partially filling space between roof joists. A minimum 50mm air space must be maintained between the insulation and the top of the joists to avoid condensation. Underside of Joists plated with 62.5mm Mannok Therm Laminat-Kraft PIR insulation boards insulated Board (50mm insulation - 12.5mm plasterboard) to create VCL + Air Leakage Barrier, to give a U-value = 0.17W/m²K. Install 19mm exterior grade upvc fascia board and soffit at eaves to receive 100mm dia UPVC half round gutter draining to a 68mm rwp.

Strapping for Roof: Walls should be strapped to roofs at 2m centres. All external walls running parallel to roof rafters to be restrained at roof level using 1000mm x 30mm x 5mm galvanised mild steel horizontal straps or other approved to BSEN 845-1 built into walls at max 2000mm centres and to be taken across minimum 3 rafters and screw fixed. Provide solid noggins between rafters at strap positions. All wall plates to be 100 x 50mm fixed to inner skin of cavity wall using 30mm x 5mm x 1000mm galvanized metal straps or other approved to BSEN 845-1 at maximum 2m centres

New Fascia & Soffit Boards: to match existing with 25mm continuous patented vent to u/s to provide adequate cross flow ventilation. 68mm downpipe with 100mm half round UPVC gutter (to match existing).

Internal stud walls at ground and first floor: Non load Bearing
Stud partitioning to BS5234, consisting of 50 x 100mm treated vertical swd studding and noggins at 600mm centres horizontally, noggins at 900mm c/c vertically including sole plates. faced both sides with 12.5mm plasterboard and skim finish. Infill voids with 100mm Rockwool insulation. Provide double joists where the stud runs parallel to the floor joists. Vapourcheck to Ensuites & bathrooms. scrimmed and skimmed to give 1/2 hour FR. Install new FD30 half hour fire resisting doors as shown in a suitable frame.

Internal Walls - Load Bearing:
100mm solid blockwork with no void, to BS6073 in accordance with structural engineers details.

Lintels:
Unless otherwise stated, lintels to be Catnic combined steel to BS5977 (sizes as recommended by supplier). Provide Min 150mm bearing with padstones to suit. All lintel backs to have min. 30mins. fire resistance and insulated to prevent cold bridging where necessary. Where steel UB's are used they are to be braced together 300mm from each bearing point and at mid span and set to concrete padstones each end. 30Mins. fire protection.

Structural Steels: - To be connected on site to manufactures details, loading and gauge details determined by str.eng. All steels to be encased with plasterboard to achieve min 60mins fire resistance. Where steel beams terminate on a wall plate, 500mm x 100mm x 10mm thk. Bearer plate to be used. Connection of beams to manufacturers details and approved by Str. Eng. Grade 8.8 M16 connection bolts to be used as per detail on drg.

PART B: Fire Safety
Precautions against fire spread:
i. All compartment walls to extend to underside of roof in 1hr FR. construction, fire stopped at junction with roofing using mineral wool.
ii. Elements of structure to be 1/2Hr FR. construction.
iii. SVP's in-between floors to be fire stopped and sound insulated at floor junctions with 25mm mineral wool and 2 layers of Gyprock plasterboard or similar approved method.
iv. SVP's generally to be encased in 1/2 Hr FR. construction. Where SVP passes through floor fit "Quelfire" collar fixed in accordance with manufacturers instructions.
v. Balanced flue terminals within 2000mm of ground level to have protective guard.
vi. All floors as indicated to be protected to the underside of joists with 1no layers of 12.5mm plasterboard and skim.

Fire Alarm:
Mains operated linked smoke alarms to be provided as indicated on plans, or Mains powered heat detectors / sounders to be installed to kitchen & mains powered smoke detectors / sounders to be installed to living space and hallways, served from separate fused supply, and be interconnected all wiring to IEE regulations, alarms to have standby power supply and to be installed in accordance with BS5839-6:2004.

Internal Doors:
FD30S Internal Fire rated Timber doorset
Any reference in this specification to a Fire Resisting Door shall be taken to include the frame / lining and conformity with the requirements for fire resistance when tested in accordance with BS 476: Parts 8, 22 and 31 (including for the provision of a combined intumescent strip and flexible cold smoke seal to top and sides of the door). All doors to be certified as capable of achieving full half hour fire resistance in conjunction with their frames. All doors should be rendered and maintained self-closing and close fitting into a minimum 12.5mm deep rebated frame. Provide intumescent strips and smoke seals as required. All works to comply with BS476:1987 (Part 8, 22 & 31). FD30S doors are required wherever the door in question opens onto the protected escape route, i.e. the common parts of the accommodation, and to kitchen doors.

PART C: Resistance to Moisture and contaminants:

PART E: Sound Insulation
N/A

PART F: Means of Ventilation
1. Ensuite Bathrooms and kitchens to be additionally ventilated using mechanical extract fan providing the following air change rates.

Bathrooms: 15/s
Kitchens: 60/s

All kitchens and bathrooms to be ventilated using Ventaxia T 150mm mechanical extract fans with humidistat controls. Where bathroom is internal, control to be linked to light switch with pre set 15min. run on. All fans to have anti back draught shutters and adellie fire shutters behind the fan. Connect fan to single SVP taken vertically through floors or roof to external air with cowl 3. All windows to have trickle vents min. 4000mm2.
4. Roofs to be cross ventilated using proprietary lead slate

All Bathrooms fans / Ensuite rooms to be fitted with a mechanical extract fan capable of a least 15 Ltrs /sec Extract rate, if serving windowless bathroom have at least 4 No air changes per hour with 15min overrun facility.

Utility Room: Mechanical ventilation ducted to external air capable of extracting at a rate of 30Ltrs p/s Internal doors should be provided with a 10mm gap below the door to aid ventilation.

Roof Ventilation - Where a wall and roof junction occurs, a minimum gap of 50mm must be maintained at eaves above insulation to allow air flow into roof void. Patented roof vents to be fitted to roof slope to give a minimum of 2500mm sq. Vent area per meter of roof to give cross flow ventilation to roof space. Ventilation to habitable rooms to be not less than 20th of the total floor area - a min. of 3 air changes per hour. Trickle vents to be fitted to all windows to all habitable rooms to give background ventilation area and to provide 8000mm sq.

Windows:
All new windows to Front and Rear elevation be in Upvc frames to clients specification to match existing, units to have 20mm sealed double glazed units incorporating low emissivity k glass to achieve a maximum 1.6 w/m k u value all opening lights to have draught seals, window stays to be lockable. Approved trickle vents to be fitted min 9000mm2 per window. Windows to be double glazed in Pilkington K Glass, argon filled with soft low E coating to inner pane. Windows to have openers equal to min 1/20 floor area.

Escape Windows - Provide emergency egress windows to Bedroom 1 and Bedroom 4 and to dresser of bedroom 2. Windows to have an unobstructed openable area of 450mm high x 450mm wide, minimum 0.33m sq, the bottom of the openable area should be not more than 1100mm above the floor. The window should enable the person to reach a place free from danger from fire.

PART H: Drainage and waste disposal
Prior to any drainage excavations commencing the contractor should check all invert levels and positions of existing drains, sewers and manholes. All run directions & levels to be confirmed on site by the contractor and approved L.A. Building Control. All new drains within domestic curtilage to be Polypipe plastic or equal laid to min 1in 40 falls for 100dia with granular bed and surround unless otherwise agreed. Any drains taken under floors to have 150 granular surround and lintels over where taken through or under walls. Drains in vehicular areas or in gardens where less than 600 cover can be achieved are to have concrete protection slab over. Any diversion of any existing land drains crossing thrid site to be carried out using pipes to match existing diameter all to be agreed on site with building inspector. Gullies to be inspection pattern... Continued

