

#### **Foundations**

•New foundations to be strip footings of 1:2:4 mix concrete, 600x225mm deep to new cavity walls at a minimum depth of 1000mm below adjacent ground level. •All foundations to be to the satisfaction of the local authority.

## **Ground Floor**

•To achieve a U value of 0.22w/m2k • New floor to to be 65mm sand / cement screed with wire mesh reinforcement on 75mm Celotex GA4075 insulation on 100mm O/S concrete on 1200 gauge Visqueen DPM on 150mm sand blinded, well compacted hardcore. Insulation boards to be overlaid with min 500 gauge polythene vapour control layer. • Provide 20mm thickness Celotex TB4020 perimeter insulation to full depth of floor screed to eliminate cold bridging. •All joints in DPM to be properly lapped and sealed. New floor to be at same level as existing house.

## <u>New External Walls</u>

•To achieve a U value of 0.28 w/m2k (minimum requirement) • Cavity walls to be 102mm blockwork rendered in colour and texture to match existing house with 75mm cavity partially filled with 45mm Celotex CG4045 cavity insulation board (or similar approved) and 100mm Thermalite Shield blockwork inner leaf with 12.5mm plasterboard on dabs to internal face.

Provide S/S wall ties to BS 1243:1978 at 450mm vertical and 750mm horizontal centres (staggered)
Provide insulated DPC's to all openings within cavity walls using Type H1 cavity closers by Cavity Trays Ltd.

### New Internal Stud Partitions

•To be constructed using 50x150mm tsw studs at maximum 450mm centres provide90mm celotex GA4000 between studs to achieve U value of 0.28W/m2K. Provide 1 layer of 12.5mm plasterboard - Gyproc Wallboard TEN or similar approved (min mass to be 10kg/m2) and skim to both faces.

### Roof to rear single storey extension

•Rooflights installed to manufacturers instructions

•To achieve a U value of 0.18 w/m2k •Roof pitch to be a fall of 1:80 using tsw firrings.

•New roof construction to be Sarnafil single ply membrane abutting existing roof to be weather proofed to match existing, on 19mm WBP ply decking on joists specified by the Structural Engineer. Joists to be supported at eaves on 100x75mm SW wallplate. Wallplate to be strapped down to walls using 1200x300x6mm MS straps at 900mm centres. •Install Glidevale FV250 Ventilator at eaves, fixed in accordance with manufacturers instruction •Abuttment ventilation to be provided equivalent to a 25mm continuous strip.

•Provide 100mm Celotex FR5000 insulation between rafters with 40mm Celotex FR500 under joists with 12.5mm plasterboard and skim to finish.

•Provide minimum code 4 lead apron flashing at abutment of wall with new roof, 75mm minimum upstand turned into brickwork joint by 25mm and wedged at 450mm c/s. Apron to extend down roof slope by at least 150mm. Lead to dress over proposed flat section of roof and dressed over roof slope as indicated. •Rafters to be double up around rooflight, see Structural Engineers calcs for further details

<u>Ventilation</u> •New windows to provide trickle ventilation of 5000mm2 to habitable rooms and 2500mm2 to all other rooms. •Provide ventilation at the opening of the eaves equivaltent to 10mm strip and 5mm strip at high level. • Provide cooker hood or mechanical extractor fan within kitchen area capable of extracting 30 litres / second (adjacent to hob) 60 litres / second if situated elsewhere.

•Purge ventilation to kitchen is to be provided via a combination of door/window openings within extension equal to 1/20th of the combined floor area

•New WC to have mechanical extract capable of extracting 15 litres /sec with a 15 minute overrun system incorporated within.



Side Elevation as Existing

### <u>Glazing</u>

•New windows and doors to achieve a U value of 1.6w/m2k, to be upvc with toughened safety glass as necessary in accordance with Doc N of the Building Regulations. •Windows and doors will have draught stripping and the building will be built in an airtight manner. •Skylight to be installed following manufacturers guidelines

### •New bathroom window to have obscure glazing

<u>Drainage</u>

•Provide new 100mm Upvc gutters with 75mm downpipes as indicated. •Drains to be laid at minimum falls of 1:40.

•New rainwater pipes to connect to new soakaway at a minimum of 5m from any foundations all to satisfaction of Local Authority. New rwp's to have roddable access gullies.

•Drainage runs to new ground floor bathroom to connect to existing waste run for WC •Any existing drains running beneath new extension to be encased in concrete, to the satisfaction of the Local

Authority.

•Concrete lintels are to be provided where drains pass through walls. •NOTE : Allowance is to be made for carrying out of percolation tests to determine the size and construction of the

new soakaway, all in accordance with Building regulation requirements and procedures. •EXISTING DRAINAGE ROUTES ARE UNKNOWN AND ARE TO BE CONFIRMED, AND CONNECTIONS TO BE TO FULL APPROVAL OF BUILDING CONTROL.



Side Elevation as Proposed





•New steel work and lintels to have 30 minute fire resistance, encased in 15mm glass roc fire case s. •All lintels to have minimum end bearings of 150mm unless indicated otherwise. Limit thermal bridging by providing insulation batts to all combination lintels in cavity walls.

•Provide 2no CGE90/100 lintels to windows in proposed extension

•Provide CGE90/100 lintel to opening in to WC •Check Structural engineers for bifolding door lintel and internal steels and associated roof make up •Check suitability of existing lintels.

# <u>Services</u>

New radiators to be fitted with thermostatic radiator valves.
New electrical installation to be in full accordance with part P of the Building Regulations. Electrical installation is to be in full accordance with and certified to BS 7671.

# Energy Conservation

## Continuity of insulation and air tightness

The building fabric should be constructed so that there are no reasonably avoidable thermal bridges in the insulation layers caused by gaps within the various elements, at the joints between elements and at the edges of elements such as those around window and door openings. Reasonable provision should also be made to reduce unwanted air leakage through the new envelope parts. Therefore it is proposed to adopt design details such as those set out in the TSO Robust Details catalogue.

**Nb:** All dimensions must be checked on site before proceeding.



# Side Elevation as Proposed

Abuttment ventilation to be provided equivalent to a 25mm continuous strip.

Sarnafil single ply membrane abutting existing roof on rafters at 450 centres.

Install Glidevale FV250 Ventilator

100mm Celotex FR5000 insulation between rafters and also 40mm

below rafters 100mm blockwork inner leaf with a 12.5mm finishing coat of plaster to internal face

Celotex perimeter insulation to edge of screed

New strip footings 600x225mm at 1000mm below adjacent ground level

65mm sand / cement screed with

wire mesh reinforcement 75mm Ceotex insulation overlaid

with min 500 gauge polythene 100mm O/S concrete slab on

1200 gauge Visqueen DPM

150mm sand blinded, well compacted hardcore.



**Nb:** All dimensions must be checked on site before proceeding.

