

NOTES

EXISTING STRUCTURE

Existing structure including foundations, beams, walls and lintels carrying new and altered loads are to be exposed and checked for adequacy prior to commencement of work and as required by the Building Control Officer.

BEAMS

Supply and install new structural elements such as new beams, roof structure, floor structure, bearings, and padstones in accordance with the Structural Engineer's calculations and details. New steel beams to be encased in 12.5mm Gyproc FireLine board with staggered joints, Gyproc FireCase or painted in Nullifire S or similar intumescent paint to provide 1/2 hour fire resistance as agreed with Building Control. All fire protection to be installed as detailed by specialist manufacturer.

LINTELS

For uniformly distributed loads and standard 2 storey domestic loadings only. Lintel widths are to be equal to wall thickness. All lintels over 750mm sized internal door openings to be 65mm deep pre-stressed concrete plank lintels. 150mm deep lintels are to be used for 900mm sized internal door openings. Lintels to have a minimum bearing of 150mm on each end. Any existing lintels carrying additional loads are to be exposed for inspection at commencement of work on site. All pre-stressed concrete lintels to be designed and manufactured in accordance with BS 8110, with a concrete strength of 50 or 40 N/mm<sup>2</sup>and incorporating steel strands to BS 5896 to support loadings assessed to BS 5977 Part 1. For other structural openings provide proprietary insulated steel lintels suitable for spans and loadings in compliance with Approved Document A and lintel manufactures standard tables. Stop ends, DPC trays and weep holes to be provided above all externally located lintels.

STRAPPING FOR PITCHED ROOF

Gable 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.

STRAPPING OF FLOORS

Provide lateral restraint where joists run parallel to walls, floors are to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps or other approved in compliance with BS EN 845-1 at max 2.0m centres, straps to be taken across minimum of 3 joists. Straps to be built into walls. Provide 38mm wide x ¼depth solid noggins between joists at strap positions.

STRIP FOUNDATION

Provide 225mm x 600mm concrete foundation, concrete mix to conform to BS EN 206-1 and BS 8500-2. All foundations to be a minimum of 1000mm below ground level, exact depth to be agreed on site with Building Control Officer to suit site conditions. All constructed in accordance with 2004 Building Regulations A1/2 and BS 8004:1986 Code of Practice for Foundations. Ensure foundations are constructed below invert level of any adjacent drains. Base of foundations supporting internal walls to be min 600mm below ground level. Sulphate resistant cement to be used if required. Please note that should any adverse soil conditions be found or any major tree roots in excavations, the Building Control Officer is to be contacted and the advice of a structural engineer should be sought.

NOTES (Cont.)

SOLID FLOOR INSULATION UNDER SLAB

To meet min U value required of 0.22 W/m<sup>2</sup>K  
Solid ground floor to consist of 150mm consolidated well-rammed hardcore. Blinded with 50mm sand blinding. Provide a 1200mm gauge polythene DPM, DPM to be lapped in with DPC in walls. Floor to be insulated over DPM with 75mm Kingspan Kooltherm K3. 25mm insulation to continue around floor perimeters to avoid thermal bridging. A VCL should be laid over the insulation boards and turned up 100mm at room perimeters behind the skirting, all joints to be lapped 150mm and sealed, provide 100mm ST2 or Gen2 ground bearing slab concrete mix to conform to BS 8500-2 over VCL. Finish with 65mm sand/cement finishing screed with light mesh reinforcement. Where drain runs pass under new floor, provide A142 mesh 1.0m wide within bottom of slab min 50mm concrete cover over length of drain. Where existing suspended timber floor air bricks are covered by new extension, ensure cross-ventilation is maintained by connecting to 100mm dia UPVC pipes to terminate at new 65mm x 215mm air bricks built into new cavity wall with 100mm concrete cover laid under the extension. Ducts to be sleeved through cavity with cavity tray over.

WALLS BELOW GROUND

All new walls to have Class A blockwork below ground level or alternatively semi engineering brickwork in 1:4 masonry cement or equal approved specification. Cavities below ground level to be filled with lean mix concrete min 225mm below damp proof course. Or provide lean mix backfill at base of cavity wall (150mm below damp course) laid to fall to weepholes.

SOLID EXTERNAL WALL

To achieve min U-value 0.28W/m<sup>2</sup>K  
Wall constructed using brickwork to match existing at least 328mm thick. Insulate wall on the inside using 62.5mm Kingspan Kooltherm K18 insulated dry lining board fixed to 25 x 50mm battens at 600mm centres to provide a nominal 25mm cavity between the masonry and insulation. Fix a vapour control layer under the insulation. Finish with a plaster skim.

SOLID EXTERNAL WALL

To achieve min U-value 0.28W/m<sup>2</sup>K  
Wall constructed using dense block, r value 1.13, (Armstrong dense, Masterblock Monacrete 100s) at least 250mm thick. Rake out joints in the wall to a depth of at least 10mm and apply two coats of render at least 20mm thick with a scraped or textured finish. The rendering mix to comply to BS EN 13914-1:2005 with waterproof additive. Insulate wall on the inside using 65mm Kingspan K6. Batten out to provide a nominal 25mm cavity between the masonry and insulation. Provide a vapour control layer under the insulation.

Full Fill Cavity Wall

To achieve minimum U Value of 0.28W/m<sup>2</sup>K  
New cavity wall to comprise of 105mm facing brick to match existing. Full fill cavity with 110mm Rockwool Cavity insulation as manufacturer's details. Inner leaf to be 100mm block K value 1.13, e.g. Lafarge Stancrete. Internal finish to be 12.5mm plasterboard on dabs. Walls to be built with 1:1:6 cement mortar.

DPC

Provide horizontal strip polymer (hyload) damp proof course to both internal and external skins minimum 150mm above external ground level. New DPC to be made continuous with existing DPC's and with floor DPM. Vertical DPC to be installed at all reveals where cavity is closed.

NOTES (Cont.)

WALL TIES

All walls constructed using stainless steel vertical twist type retaining wall ties built in at 750mm ctrs horizontally, 450mm vertically and 225mm ctrs at reveals and corners in staggered rows. Wall ties to be suitable for cavity width and in accordance with BS 5268-6.1: 1996 and BS EN 845-1: 2003

EXISTING TO NEW WALL

Cavities in new wall to be made continuous with existing where possible to ensure continuous weather break. If a continuous cavity cannot be achieved, where new walls abuts the existing walls provide a movement joint with vertical DPC. All tied into existing construction with suitable proprietary stainless steel profiles.

CAVITIES

Provide cavity trays over openings. All cavities to be closed at eaves and around openings using Thermabate or similar non combustible insulated cavity closers. Provide vertical DPCs around openings and abutments. All cavity trays must have 150mm upstands and suitable cavity weep holes (min 2) at max 900mm centres.

INTERNAL STUD PARTITIONS

100mm x 50mm softwood treated timbers studs at 400mm ctrs with 50 x 100mm head and sole plates and solid intermediate horizontal noggins at 1/3 height or 450mm. Provide min 10kg/m<sup>3</sup>density acoustic soundproof quilt tightly packed (eg. 100mm Rockwool or Isowool mineral fibre sound insulation) in all voids the full depth of the stud. Partitions built off doubled up joists where partitions run parallel or provide noggins where at right angles, or built off DPC on thickened concrete slab if solid ground floor. Walls faced throughout with 12.5mm plaster board with skim plaster finish. Taped and jointed complete with beads and stops.

INTERNAL MASONRY PARTITIONS

Construct non load bearing internal masonry partitions using dense concrete blocks built off thickened floor slab and tied at 225mm centres with proprietary steel profiles or block bonded to all internal and external walls. Walls faced throughout with 12.5mm plasterboard on dabs with skim plaster finish or 13mm lightweight plaster.

INTERMEDIATE FLOORS

Intermediate floor to be 25mm t&g flooring grade chipboard or floorboards laid on C24 joists at 400mm ctrs (see engineer's calculation for sizes and details). Lay 100mm Rockwool mineral fibre quilt insulation min 10kg/m<sup>3</sup>or equivalent between floor joists. Ceiling to be 12.5 FireLine plasterboard with skim plaster set and finish. Joist spans over 2.5m to be strutted at mid span using 38 x 38mm herringbone strutting or 38mm solid strutting (at least 2/3 of joist depth). In areas such as kitchens, utility rooms and bathrooms, flooring to be moisture resistant grade in accordance with BS EN 312:2010. Identification marking must be laid upper most to allow easy identification. Provide lateral restraint where joists run parallel to walls, floors are to be strapped to walls with 1000mm x 30mm x 5mm galvanised mild steel straps or other approved in compliance with BS EN 845-1 at max 2.0m centres, straps to be taken across minimum 3 no. joists. Straps to be built into walls. Provide 38mm wide x ¾depth solid noggins between joists at strap positions.

|                                                                                                                                    |             |            |          |       |          |        |              |                                                                                    |                             |        |                          |       |      |          |
|------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|----------|-------|----------|--------|--------------|------------------------------------------------------------------------------------|-----------------------------|--------|--------------------------|-------|------|----------|
| Title<br>Notes 1 of 2                                                                                                              | Drawn By    | Name       | A.Jones  | Sig.  | A.Jones  | Date   | Jan'21       | <div><div><div>A</div><div>W</div><div>J</div></div><div>3 D SOLUTIONS</div></div> | 01                          | Jan'21 | First Issue              | AJ    |      |          |
|                                                                                                                                    | Checked By  | Name       | B. Islam | Sig.  | B. Islam | Date   | Jan'21       |                                                                                    | Rev.                        | Date   | Description of Revisions | Drawn | Ck'd | App'd    |
|                                                                                                                                    | Approved By | Name       | B. Islam | Sig.  | B. Islam | Date   | Jan'21       |                                                                                    | Status Construction         |        |                          |       |      |          |
|                                                                                                                                    | Scale       | 1:100 @ A3 |          | Sheet |          | 7 of 8 |              |                                                                                    | Contractor's Drawing Number |        |                          |       |      |          |
| Project Title<br>Single Storey Rear and Side Extension to<br>20 Hilbre Road, Burnage, Manchester, M19 2PU<br>For Mr & Mrs B. Islam | UOM         |            | From     |       | To       |        | AWJ-20HIL-07 |                                                                                    |                             |        |                          |       |      |          |
|                                                                                                                                    | Map Grid    |            |          |       |          |        |              |                                                                                    |                             |        |                          |       |      | Revision |