



Specification Notes – 1116 SUGAR LANE, KNOWLSEY, L34 0ES

General Notes

- All dimensions and details shall be checked on site by the contractor prior to commencing work. Any error must be brought to the attention of the Architect. All dimensions are in millimeters. No scaling of drawings is permitted.
- All work is to be carried out to the satisfaction of the Building Control Authority / LABC Officer, and in full accordance with the latest amendments to the Building Regulations and Approved Documents. A Building Control completion certificate shall be issued on completion. Any deviation from the Approved Documents must have prior consent of the controlling authority (i.e. LABC or Approved Inspector, as appropriate), and be confirmed as such in writing.
- All materials used must be of an approved quality, and upon request, samples submitted to and approved by the local authority in writing prior to construction commencing. Full verification of quality of materials to be submitted to the client upon request.
- All services installed strict accordance with relevant statutory authority recommendation and bye laws etc.
- All new manhole positions to be agreed on site between the builder / principal contractor and the Building Control Officer / Approved Inspector (as appropriate). All new and repositioned drainage gullies are to be connected to the existing main drainage runs, unless otherwise stated, to the satisfaction of the Building Control Officer / Approved Inspector.



Foundations & Slab

- The foundation design/size and depth must be agreed on site between the builder / principal contractor and the Building Control Authority / LABC Officer.
- Provide 600mm min wide x 300mm min depth concrete strip foundation to all masonry construction as specified on drawing & /or in accordance with Engineers Specification. Foundations are to suite site conditions and adjoin existing footings as applicable, design and depth to be agreed on site with the Local Area Building Control Officer. Concrete shall be ready-mixed Portland Cement to BS12 with specified strength GEN1 C30/37 mix in accordance with BS5328 delivered to site by nearest supplier. Excavation for foundations to be stored on site and backfill with best of excavation material. To be inspected by the Building Control Officer before fill. All necessary formwork to be securely fixed and taken down to adequate firm support by competent builder.
- All foundation brickwork up to DPC level shall be either clay common brickwork to BS 3921 / EN 1996 or where visible, Class B engineering brick (F2/S2), minimum compressive strength to be not less than 20.5N/mm². Durability designation: FL; water absorption less than 7%.
- External DPC [VISQUEEN or similar approved] to be minimum 150mm above external ground level except where level access thresholds are required. Refer to specific construction detail for these situations. NB. Ensuring DPC is well lapped and sealed with slab DPM.



- Provide concrete floor construction to comprise of: 65mm sand and cement screed on 150 thick concrete slab (Grade C30/37 – Gen 1) on visqueen 1000 gauge DPM on 100mm CELTOTEX GA4000 floor board insulation with 25mm upstand to full perimeter, on 1200 gauge DPM on 50mm sand blinding on a MOT type 1 sub-base compacted in layers of 150mm as required to the satisfaction of the Local Building Inspector. Detail of existing slab to be confirmed prior to installing the new slab. All to the approval of the Building Control Inspector.

External Walls

- External wall construction to be 302.5mm cavity construction consist of: 102.5mm facing brickwork colour and specification to match existing, 100mm cavity with 90mm Kingspan Kooltherm K106 cavity wall board full fill insulation (low emissivity aluminium foil faced both sides) with 10mm residual cavity or equal approved, 100mm Thermalite Turbo or similar lightweight concrete block inner leaf, finished with 12.5 mm plasterboard internally with 3mm skim finish. Construction to achieve an elemental U value of 0.18W/m²K.
- Securely fix new walls to existing main structure with s/s crocodile wall connector with adjustable anchor ties in compliance with BS1449 Pt 2 & BS1243 with 10mm movement joint with Fosroc Epandafoam filler and pointed with Fosroc Thioflex One polysulphide sealant. Construct 10mm wide movement joints to position identified on drawings with stainless steel Ancon movement ties and debonding sleeves laid in mortar joint with 100mm embedment, apply Fosroc Epandafoam filler and pointed with Fosroc Thioflex One polysulphide sealant.



Cavity

- To have 10mm wide clear cavity with 'Thermabate', or similar approved pvc-u box section cavity closures to the required width fixed to all horizontal & vertical window and door openings. 90mm Kingspan Kooltherm K106 cavity wall board full fill insulation is to be secured with batts over wall ties at specified spacing. All works to cavity to comply with BS5628 Pt 3 & BS5250n(condensation) and to achieve Target "U" Value 0.18 W/m²K.
- Cavity ties to be austenitic stainless steel double triangle Type 4 Housing Cavity Wall Tie (Expamet PT250 or similar) in accordance with BSI DD 140: Part 2 and set out at maximum 900mm centres horizontally and 450mm centres vertically (density of 2.5 ties/m²), laid staggered, with additional fixings at corners, openings, movement joints and roof verges, i.e. ties positioned no further than 225mm away horizontally and spaced not more than 300mm apart vertically. If required, vertical movement joints to be introduced in accordance with the requirements of BS 5628-3. Shear resistance to be provided through use of suitable masonry movement ties with debonding sleeves.
- VISQUEEN ZEDEX CPT high performance(or similar) dpc's shall be installed a minimum 150mm above external ground level and lapped a minimum 100mm with new and /or existing, and sealed.
- Any weak mix cavity fill shall finish 225mm below DPC level and be sloped towards the external leaf.

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- The tops of all new cavity walls are to be sealed. Horizontal and vertical insulated dpc's to be installed around all openings in external walls. All dpc's to be VISQUEEN ZEDEX CPT (o.s.a.) high performance damp proof courses, installed to manufacturer's recommendations and in accordance with normal good practice for the detailing of damp proof courses as set out in the relevant clauses of BS 5628: Part 3: 2001, BS 8000: Part 3: 2001 and BS 8215: 1991.
- All external window and door openings to have dpc's to all jambs, sills and heads. All cavity tray dpc's over window and door lintels shall be one single length application with stop ends and protrude a minimum of 150mm past the end of the lintel into the cavity, protrude beyond the vertical jamb dpc by at least 25mm, and be provided with stop ends. Vertical dpc's to be provided via installation of Kingspan KOOLTHERM 100 cavity closers (which form an integral dpc) or similar.
- Ordinarily, weepholes should be provided in the external leaf immediately above the dpc @ maximum 900mm centres, with not less than two weep holes provided over any door or window.

Roof

- Roof construction to consist of: Roof tiles to match existing, laid in accordance with manufactures details and recommendations , secured to 50 x 25mm pre-treated tanalised SW battens on on Redland 'Spirtech 250' vapour permeable underlay (laid unsupported with a slight sag [10mm] and not pulled taut) osa, on grade C16 timber rafters 50x175mm @400mm centres to engineers design and specifications with 120mm Kingspan K107 pitched roof board osa between rafters, positioned on 100mm x 75mm pre-treated timber wall plate securely fixed to head of internal leaf of masonry. Ceiling finished 32.5mm Kingspan K118 insulated plasterboard osa with 3mm skim. Roof construction to provide a performance U-value of 0.15 W/m²K.
- Rafter layout shown on the drawings is indicative only.
- Wall plate galvanised steel anchor straps to be a minimum 30 x 5mm and installed @ 2m centres. Lateral restraint straps shall be installed up the pitch of the roof @ max. 2m centres to provide lateral restraint support to all flanking walls / gables.
- Battens: Sawn softwood, species to BS 5534: 2003 Code of practice for slating and tiling, Clause 11.3. Size: 50 x 25mm for rafters/supports not exceeding 450mm. Each batten to be fixed to each support using splay nailing at ends with 65 x 3.35mm galvanised smooth round nails, grading to BS 4978.
- Preservative treatment: OS double vacuum suitable for timbers in Hazard Class 1 or 2, as Section Z12 of the NBS and WPA Commodity Specification C8. For additional guidance, refer also to BS 8417: 2003. No batten to be less than 1200mm long.



- New Code 4 lead flashings shall be formed in full accordance with the tile manufacturer's recommendations and in accordance with The Lead Development Association detailing. All new lead shall be coated with patination oil to prevent staining.
- New fascia / soffit boarding to be UPVC or other agreed with client.
- Roof insulation is to lap over the wall plate to align with the cavity wall insulation, providing a continuous thermal envelope in order to prevent cold bridging.

Windows & Doors

- Unless a higher standard of thermal performance is requested by the client, all new glazing shall be 28mm thick sealed double glazed units comprising 6mm float glass outer pane / 16mm cavity, argon gas filled / 6.4mm laminated low emissivity inner pane to achieve a maximum centre pane U-value of 1.2 W/m²K.
- Area of new glazing to be no greater than the sum of the area of existing glazing (structural openings) to be lost as a result of the construction of the extension, plus 25% of the floor area of the new extension.
- Opening ventilation to habitable rooms to be not less than 1/20th of floor area
- As per AD Part L1B Conservation of fuel and power (Existing Dwellings), minimum standards for controlled fittings are as follows (area-weighted average values): Windows and rooflights = 1.60 W/m²K, Doors = 1.80 W/m²



Drainage & Plumbing

- Underground drainage to consist of 100mm diameter UPVC proprietary pipe work to give a 1:40 fall. Surround pipes in 100mm pea shingle. Provide 600mm suitable cover (900mm under drives). Shallow pipes to be covered with 100mm reinforced concrete slab over compressible material. Provide rodding access at all changes of direction and junctions. All below ground drainage to comply with BS EN 1401-1: 2009.
- Rodding access to be provided at all changes of direction.
- Underground quality proprietary UPVC 450mm diameter inspection chambers to be provided at all changes of level, direction, connections and every 45m in straight runs. Inspection chambers to have bolt down double sealed covers in buildings and be adequate for vehicle loads in driveways.
- All new above ground drainage and plumbing to comply with BS EN 12056-2:2000 for sanitary pipework. All drainage to be in accordance with Part H of the Building Regulations. Wastes to have 75mm deep anti vac bottle traps and rodding eyes to be provided at changes of direction. Size of wastes pipes and max length of branch connections (if max length is exceeded then anti vacuum traps to be used)
Wash basin - 1.7m for 32mm pipe 4m for 40mm pipe
Bath/shower - 3m for 40mm pipe 4m for 50mm pipe
W/c - 6m for 100mm pipe for single WC
All branch pipes to connect to 110mm soil and vent pipe terminating min 900mm above any openings within 3m.
Or to 110mm upvc soil pipe with accessible internal air admittance valve complying with BS EN 12380, placed at a height so that the outlet is above the trap of the highest fitting.
- Waste pipes not to connect on to SVP within 200mm of the WC connection. Supply hot and cold water to all fittings as appropriate.
- SVP to be extended up in 110mm dia UPVC and to terminate min 900mm above any openings within 3m. Provide a long radius bend at foot of SVP.



- All rainwater goods to be UPVC to agreed with client. New gutters and downpipes to be deep capacity type with 75mm diameter being the minimum size of pipe. Pipes and gutters to be fixed in strict accordance with the manufacturer's details. Hopper locations are on drawings, new gullies and downpipe locations to be agreed on site between the contractor and Building Control Officer / Approved Inspector to best suit the existing / amended drainage layout. The contractor shall allow for all modification works to allow new connections to existing drainage, as required.
- All drainage and connections should be to the complete satisfaction of the district building surveyor.
- Existing heating system to be assessed for capacity and extended as necessary.
- The heating and hot water systems are to be commissioned so that at completion the systems and their controls are left in the intended working order and can operate efficiently for the purposes of conservation of fuel and power.
- Design and installation of new and extended LPHW heating systems and the like are to be undertaken by a CORGI registered contractor.
- Pipe work should be insulated in all voids within the building envelope and within spaces normally heated if those spaces may be maintained at temperatures different to those maintained in other zones.
- New radiators shall be fitted in new rooms with thermostatic valves to allow for local control. Existing radiators are to be fitted with TRV's if they do not currently have them.



Electrical

- All electrical installations / alterations must be designed and installed to BS 7671:2008 Requirements for electrical installations. IEE Regulations. 17th Edition (formerly IEE/BSI Requirements for electrical installations), and be undertaken by a registered electrician, ECA member or similar.
- All new electrical fittings shall display the British Standard Approved Kite symbol and MK Shield of Approval.
- All electrical work is required to meet the requirements of the latest revisions to Part P of the Building Regulations, and must be designed, installed, inspected and tested by a person competent to do so, i.e. a competent person registered under a self-certification scheme for electrical installation as detailed in Appendix E of the Approved Document.
- Upon completion, an appropriate BS 7671 electrical installation certificate must be issued for the work by a person competent to do so.
- All new sockets to be positioned at 450mm above FFL unless otherwise stated (eg. kitchen sockets above worktops).
- All new switches to be positioned at 1100mm above FFL unless otherwise stated.
- Existing fire detection and alarm systems to be extended as necessary to incorporate the new extension. All dwellings are to be provided with a fire detection and alarm system in accordance with the relevant recommendations of BS 5446 Components of automatic fire alarm systems for residential premises, Part 1 Specification for self-contained smoke alarms and point-type smoke detectors.



- Heat detector/smoke alarm to be provided within the new kitchen area. Detector type: optical (photo electrical).
- Where more than one smoke alarm is installed, they should be linked so that the detection of smoke by one alarm operates the alarm signal in all of them.
- Provide mechanical extract ventilation to kitchen via oven extract hood, to achieve 30 litres per second.
- Cooker hoods should be 650mm - 750mm above the hob surface or in accordance with the manufacturer's written instructions.
- Provide mechanical extract ventilation to bathroom/en-suites/WC's, to achieve 15 litres per second and to operate via light switch with 15 minute overrun.

Structural Elements

- All internal partitions to be built up to the underside of the structural roof or floor over and fire stopped with mineral wool insulation and fire resistant seal to achieve 1/2 hour fire resistance.
- 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.
- Structural details to be in strict accordance with the Structural Engineers calculations.



- Where steelwork members bear onto concrete pad stones, refer to structural engineers details and calculations.
- Structural steelwork and metalwork to be thoroughly clean and free from scale, rust and dust. Where not embedded into in concrete it should have one layer of red oxide paint immediately before fixing.
- All elements of structure to have a minimum $\frac{1}{2}$ hour fire resistance.

Thermal Performance

- As per AD Part L1B Conservation of fuel and power (Existing Dwellings), minimum standards for new thermal elements are as follows (area-weighted average values):
 - Walls = 0.18 W/m²K;
 - Pitched Roofs (insulation @ rafter level) = 0.15 W/m²K
 - Flat Roofs = 0.15 W/m²K;
 - Floors = 0.18 W/m²K
 - Windows = 1.4 W/m²K