

## CONSTRUCTION NOTES

### GENERAL NOTE

Before commencement of work, positions of all existing services including drainage are to be ascertained & any protective or diversion works are to be carried out as necessary. Severn trent approval may be required - contractor to check with relevant authority. Existing drainage inverts to be determined to establish adequate falls from new drainage fittings. Any necessary propping and strutting is to be carried out to ensure stability of the structure during building operations. All materials & workmanship are to comply with all building regulations, british standards & codes of practice. All timbers are to be double vacuum pressure impregnated with 'Protim Prevac.80' or similar approved preservative, with all site cuts, ends & holes etc to be treated with 'Protim' cut end preservative liberally applied by brush.

Client/builder to carry out site investigation & results to be forwarded to the building control body to establish the levels of contamination if any & the suitability of ground conditions before the works commence.

Builder to check all load bearing elements on site before any works commence on site.

The drawings are prepared to comply with the current building regulations & are to be read in conjunction with all relevant specialist drawings, calculations & details where appropriate.

All dimensions are to be checked on site by builder before work commences, and adhered to in all cases including heights etc. As noted on the drawings. KPD takes no responsibility for any alterations to these drawings.

These drawings are for building regulation approval only. Any work undertaken before approval is obtained is all at the risk of the client and builder. KPD takes no responsibility for any work undertaken at this stage.

Please note these drawings were prepared in compliance with planning and building regulations which were in force at the time of preparation. KPD accepts no responsibility for drawings relied upon, which by virtue of a change in legislation and/or to planning guidelines or building regulations, render the drawings non-compliant with such legislation/guidelines after the preparation of such drawings.

KPD accepts no responsibility for any alterations from the approved drawings.

Nothing in our appointment or provision of drawings shall be deemed to create any appointment as or obligations as a duty holder pursuant to the regulation 7 of the com regulations 2015.

Boundaries shown are for identification only and are not to be taken as a legal definition.

Notes:

- Upon commencement of the works the size and position of all existing structural elements as shown on the drawing are to be verified by the contractor.
- Existing timbers shall be exposed to allow complete timber and damp survey as necessary. All timbers shall be treated or replaced in accordance with the specialists recommendations. All timber connections are to be examined by the contractor to verify their integrity and made good of deemed necessary by the inspector. Where wall plates required replacement the new timbers are to be secured by 30x2.5mm galvanised mild steel straps at 1200mm max. ctr's and screwed to existing wall with sno. 50mm long no.12 wood screws in plastic plugs.
- All new timbers shall be strength class C16 to BS5268 part 2 unless noted otherwise. All new timber connections are to be formed using joists hangers and or framing anchors and clips supplied by 'Expanet' or similar.
- All existing masonry shall be examined by the contractor any cracked or flaked brickwork shall be repaired or rebuilt to the satisfaction of the client. any loose or soft mortar shall be raked out and repointed.
- All new steelwork shall comply fully with BS5950. The contractor shall take all necessary site dimensions and levels prior to commencement of fabrication.
- The contractor shall be responsible for the stability of the existing building whilst carrying out the proposed alterations all temporary works needing propping and shoring to the existing structure shall be designed by the contractor.
- All new brickwork to have a compressive strength of 21N/mm sq. built in 1:1:6 cement:lime:sand mortar unless stated otherwise.
- Concrete padstones to be grade C35 10mm maximum size aggregate with 300kgs/m3 o.p.c.
- Floor joists to be doubled up below new baths
- Joist size to be deemed by structural engineer

Building regulations approval, cdm regulations, health & safety, temporary work and interim stability

- The builder shall comply with the building regulations. Any work carried out on site prior to full building regulation approval from the building control body is entirely at the risk of the builder.
  - The builder shall comply with all aspects of the construction (Design & Management) regulations 2015.
- 2.1 The builder shall carry out his own risk assessments for all aspects of the Works.
- 2.2 The builder shall provide method statements for the following items of work or items as requested:
- Excavation below existing foundation levels when in close proximity to existing foundations
  - Underpinning
  - Working with machinery when adjacent to or over existing occupied buildings
  - Erection/installation of steelwork adjacent to or over existing occupied buildings
3. The builder shall maintain records of all on site changes to the drawings and calculations and provide a full set of "marked-up" drawings to show the "as-built" construction.
4. The builder is reminded that the structures stability relies on all structural elements to be completed and cured. The builder is required to consider his construction methods/sequences and to assess temporary works and bracing requirements to ensure the interim stability of partially completed

**THE PARTY WALL ACT 1996:** The client is responsible for conforming with the Party Wall Act 1996 and obtaining the necessary neighbour agreements in the required period depending on the extent of work to the party wall/boundary.

## CONSTRUCTION NOTES

### GENERAL

All work to be carried out in full accordance with current Building Regulations and 'robust details' as applicable. All on site operations to be carried out in full accordance with current Health & Safety Regulations and CDM Regulations 1994 as applicable.

### SITE CLEARANCE

Site to be cleared of all vegetable matter, turf, concrete etc to a minimum depth of 200mm below existing ground level.

### FOUNDATIONS AND FOOTINGS

New ground floor external walls to be taken down to concrete strip or trench fill foundations 600 wide Internal walls to be taken down to strip foundations 440 x 200 thick. Depths to suit site conditions and to Local Authority approval prior to pouring concrete but not less than 1000mm deep.

Foundations to be grade C.20P to BS.5328:1981 (min. mix 1:3:6) concrete incorporating 2 No. 16mm diameter m/s continuation reinforcing bars set centrally under each wall leaf and on the neutral axis, lapped min 200mm and bent neatly around corners.

Build up external walls in two skins of 7N solid dense concrete trench blocks using mortar mix 1:3 up to one brick depth below finished ground level. Fill cavity with sand cement mix.

### DAMP PROOF COURSE

To be Andersons XTRA-LOAD ELITE or equal approved polymeric DPC. To be installed to inner and outer skins of cavity walls and to all internal blockwork walls, to be located minimum 150mm above finished ground levels. All joints to be lapped min. 150mm (basic Radon measure).

VERTICAL DPC: at abutments of external cavity wall to solid 215 wall.

Cavity Trays And Weepholes

Cavity trays and weepholes to be provided above structural openings and base of cavity to provide basic radon protection.

Allow for suitable cavity tray and lead flashing to roof abutment as required

### GROUND FLOOR

If Ground conditions permit Ground bearing floor slab to be used to specification as follows:

**GROUND FLOOR SLABS AND INFILLS:**

Excavated site area to be treated with weed killer.

75mm reinforced cement/sand screed on 500-1000 gauge separation layer on 150mm Kingspan Kooltherm K103 overslab insulation (25mm edge insulation) on 100mm 100C 20P mix concrete slab. 1200gauge polythene DPM carried up at edges and lapped with dpc. If joints are required in dpm they are to be welted and tape sealed. New to existing dpm also to be welted and tape sealed. 50mm sand blinding on 150mm min crushed stone well watered and rolled hardcore.

25mm insulation to perimeter of all floors.

Construction to achieve U value of better than 0.11.

If Ground conditions don't permit using ground bearing slab then use the following suspended floor specification:

**GROUND FLOOR** Minimum of 150mm void under, Dense concrete block and precast concrete beam system to structural engineers and specialist suppliers design. Joints to grouted and trowelled off smooth to recieve 1200g PIFA polythene dpm with 150mm min laps & to be carried up walls to lap with dpc.

All joints in dpm to be welted, taped and sealed. 100mm Kingspan Thermafloor TF70 with 500g polythene separating layer laid over.

75mm sand cement screed to include underfloor heating system.

25mm insulation to perimeter of all floors.

Suspended concrete floor to be designed, manufactured and installed in strict accordance with the manufacturers & suppliers details and instructions.

Kingspan or similar approved insulation to be fitted in accordance with the manufacturers details and instructions.

Ventilation to underfloor void - periscopic vents at max 1.8m centres in external walls.

The openings to be large enough to give an actual open area of at least the equivalent to 1500sq.mm per horizontal metre run of wall. All periscopic vents to have pcc lintel over in inner leaf.

### GARAGE FLOOR

Garage floor to be raised to same level as the rest of the house.

Floor slope to be made level with concrete screed. 60mm Kingspan Kooltherm K103 to be laid over new leveld concrete screed. Separating layer to be laid over kingspan insulation before laying final 50mm concrete screed. 18mm timber finish or carpet finish.

### STUDWALLS

1No layers of 12.5mm Gyproc wall board ten (with a minimum mass per unit area of 10Kg/m2) fixed each side of studs, at 150mm crs, with 40mm non-ferrous driwall screws to 100x50 sw treated studs at 450mm crs for 900mm boards + 600mm crs for 1200mm boards. With a sound absorbent layer of Isowool Acoustic partition roll (with minimum thickness of 25mm, density of 10Kg/m3) which may be wire reinforced, suspended with the wall cavity. All joints to be well sealed. 100x50mm noggins to be fixed to support ends of boards and 900mm crs vertically between studs.

Stud walls to be skimmed with 5mm thistle board finish.

Gyproc moisture resistant board to be used in bathroom areas.

Fill all gaps around internal walls to avoid air paths between rooms.

Where partitions occur at first floor level and run parallel with joists, additional joist is to be inserted and the two bolted together.

### INTERNAL BLOCK WALLS

to be single skin lightweight concrete block dry lined with 12.5 plasterboard tapered edge plasterboard, scrim joints and skim with neat Thistle plaster.

### WINDOW AND DOOR REVEALS

All window reveals to be formed by closing cavity at jambs and cills with Thermabate or similar approved, insulated cavity closer to avoid cold bridging, installed strictly in accordance with manufacturers instructions.

### LINTELS

To be either Catnic or similar approved (or to structural engineers details) to have minimum 150mm end bearing.

### TIMBER TREATMENT

All existing timber to be checked for damage and repaired/replaced with similar materials as necessary, under the guidance and agreement of the conservation officer and the structural engineer.

All existing timbers in roof spaces to be treated against rot and infestation.

All structural timber to be pressure impregnated with an approved fungicide/insecticide preservative fluid all in accordance with BS S 4978:1975 and BS 5268.

### CEILINGS

To be 12.5mm plasterboard with scrim taped joints and 3mm skim finish. 50x50mm noggins to be provided to all unsupported edges.

### VENTILATION

All habitable rooms to have 8000 sq. mm trickle ventilation plus an openable window or door equal to 1/20th of the floor area.

Kitchens to have background trickle ventilator of 4000 sq. mm plus an openable window and a mechanical extract fan capable of extracting 30 litres per second if a cooker hood or if a fan located elsewhere capable of extracting 60 litres per second.

Ventilation to an internal wc provided by an extract fan capable of extracting 6 litres per second operated intermittently and have an overrun of 15 minutes.

Air inlet provided by a 10cm gap under the door. Wc's with window to have opening of window equivalent to 1/20th floor area does not require mechanical extract.

Bathrooms and shower rooms to have background trickle ventilator of 4000 sq.mm and to be provided with an extract fan capable of extracting 15 litres per second and operated intermittently plus an openable window.

Utility Room to have trickle vent of 4000sq.mm and fan capable of extracting 30 litres per sec.

All extracts from fans to be connected via a pvc duct to outside air, terminating in an approved grille.

### LIMITING AIR LEAKAGE

The cavity wall insulation must be taken down below damp course level, finishing 150mm below the underside of the floor slab insulation. The cavity wall insulation and roof insulation

must meet at the top of the wall

Cavity wall insulation must be carried up to the full extent of gable walls.

A 25mm upstand of insulation must be provided around the perimeter of floors, including where the floor slab touches outside wall (usually at door thresholds) using Celotex T-breaktm

TB3000 boards.

All cavity closers must befire proof and insulated.

All details are designed to comply with the robust construction manual details for air leakage and thermal bridging. A suitably qualified person should be appointed to inspect all works during construction, and shall issue a signed report on completion and issue to local authority.

### EXTERNAL WALLS

Construction to comprise: 103 brick to match existing, 100mm cavity filled with 100mm Drytherm32 100mm Celcon Solar or similar thermal blockwork inner lining to be 12.5mm plasterboard on dabs and skim finish. achieving U-val 0.23 W/m²K At the back of the extension, cavity to be 100mm.

Both leaves of wall construction to be tied together using stainless steel vertical twist ties at 900mm horizontal, 450mm vertical centres and no greater than 300mm at reveals.

Cavities to be closed at reveals with proprietary fire proof closer such as Thermabate.

Brickwork and blockwork attached to existing with Simpson Strong tie masonry connectors or similar ties

### WALL TIES

Two and a half wall ties per square metre of masonry with a maximum horizontal spacing is 900mm and a maximum vertical spacing is 450mm. Each wall tie to be set a minimum of 50mm into both masonry leaves. Cavity wall ties to be stainless steel and 225mm in length.Wall below dpc to be standard dense concrete foundation blocks or semi engineering bricks

Three courses of blue engineering bricks in 1:3 mortar to all 215mm external walls as dpc.

### BONDING OF NEW AND EXISTING WALLS

New walls to be secured to existing walls by use of stainless steel Firfix or Crocodile (or S.A.).

Fixings in accordance with manufacturers instructions complete with weather strip and mastic pointing. 100mm Dpc behind all wall end ties.

### CAVITY

To be cleared of all mortar droppings and closed at all openings at top of wall with blocks, bricks or 9mm supalux board. Lean mix concrete cavity fill to 150mm min. below dpc.

### MORTAR

Shall be at least in strength 1:1:6 Portland cement/lime/fine aggregate mortar measured by volume of dry materials up to the proportions given in BS.5628. mix to be 1:1/2:4 below dpc.

### STAIRS

Width of stairs to be 800mm min measured between handrails.

Handrails to be 900mm above pitch line of stairs measured vertically and 1000mm above landings. 2.0M (min) headroom vertically above pitch line.

Balustrade to be constructed so that a 100mm Dia sphere cannot pass through any part of it and children cannot easily climb it.

Balustrade to be constructed to resist at least the horizontal force given in BS 6399:Part 1:1996

Soffits of stairs to be any store cupboards or common spaces to give half hour fire protection comprising 2 layers 12.5mm plasterboard with joints taped and filled on 50 x 50 s.w. timber framing to u/s.

Total rise, treads, risers and pitch as indicated on the drawing.

New and existing walls and partitions enclosing staircase achieve 30 minutes fire resistance.

### RENDERED EXTERNAL WALLS

As above but outer leaf is 100mm Thermalite Shield block with 10mm Polymer render on render carrier board mechanically fixed through 20mm insulation (Kingspan Optim-R external wall system or similar approved),

### FLAT ROOF

0.15 W/m²K

Flat roof to be a warm roof with fully adhered single ply membrane on 150mm thick Kingspan Thermaroof TR27 LPC/FM on Vapour control barrier on 18mm plywood deck on (170)×47 C24 Timber Joists @400ctrs. built into internal walls or on hangers above reqd. (depth of flat roof joist to suit span)

12.5mm plasterboard with 3mm skim finish

lateral restraint: 30x5mm mild steel straps at 2.0m max centres fixed along joists or perpendicular to joists with 38x150 noggins. Strap taken down cavity by a minimumof 450mm.

Roofing and insulation all bonded in accordance with relevant manufacturers details

### PITCHED ROOF

To be plain tiles to match existing main roof pitch and fixed in accordance with BS5534 pt1 1978(1985) tiles to have 100mm maximum gauge headlap 65mm minimum, nailed using 38x12g aluminium alloy nails laid on 38 x 25mm s.w. tanalised class A battens, battens secured with galvanised clout nails.

Tiles twice nailed every third course and all tiles to be twice nailed at ridge, eaves and verge. Continuous proprietary eaves skirt at eaves.

Tyvek Untearable Breathable sarking on 150x50 rafters at 450/c/c.

100mm Kingspan K107 insulation between rafters leaving a minimum of 50mm between sarking and insulation gap provided by using 25x25 treated batten fixed to both sides of all the rafters.

82.5mm Kingspan K118 beneath rafters with all joints taped using self adhesive foil tape.

All insulation boards fitted in accordance with manufacturers detailsand instructions.

Wall plate to be bedded on mortar and fixed down to the inner leaf of the cavity wall with 30 x 5mm galvanised steel straps 1000mm long at 2000mm max. centres. All fixings to steel straps to be plugged and screwed to masonry.

### LOFT CONVERSION

21mm T&G floor boards on 150x50 c24 joists at 400 c/c supported off steel beams to engineers details and central wall off sw wallplate.

Cross bracing with 150x38 sw noggins at 1500mm max c/c

100mm mineral wool (10kg/cu.m) laid between existing ceiling joists and on top of existing plasterboard ceiling

### DORMER CHEEKS

Comprise Code 4 Lead sheet with intermediate lead 'rose' screw fixed in centre of spandrell on 12.5mm external quality plywood on 100x50 sw framing 12.5mm plasterboard & skim on 500gauge polythene vapour barrier to inside

100mm Kingspan K107 insulation boards between studs 62.5mm Kingspan K118 laminated insulation/plasterboard & plaster skim to inside.

### LEAD FLASHINGS AND SOAKERS

to all abutments to roof (see Lead Sheet Association Details)

All lead flashings to roofs abutting vertical wall to have cavity trays dressed over the flashing in the wall. Every third perpendicular joint over flashing to be left open and clear to allow cavity moisture to escape.

### EAVES & SOFFITS

Soffits and fascias to be upvc oprainted or stained, treated timber

ALL DIMS IN MILLIMETERS UNLESS NOTED OTHERWISE  
DO NOT SCALE EXCEPT FOR PLANNING PURPOSES  
IF IN DOUBT - ASK

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