

GENERAL CONSTRUCTION GUIDANCE 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 & seal preservative liberally applied to all 'dry' bushes.

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 existing 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 information only. No liability is accepted by KPD for 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 cdM regulations 2015. Boundaries shown are for identification only and are not to be taken as a legal definition.

Notes: 1. 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. 2. 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. c/c's and screwed to existing wall with snc. 50mm long no.12 stainless steel screws in plastic plugs. 3. All new timbers shall be strength class C16 to BS5268 part 2 unless noted otherwise. All new timber 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 'Expanol' or similar. 4. 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. 5. All new steelwork shall comply fully with BS5950. The contractor shall take all necessary site dimensions and levels prior to commencement of fabrication. 6. 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. 7. All existing brickwork to have a compressive strength of 21N/mm sq, built in 1:1.6 cement:sand mortar unless stated otherwise. 8. Concrete padstones to be grade C35 10mm maximum size aggregate with 300kg/m3 m.p.c. 9. Floor joists to be doubled up below new baths 10. Joist size to be determined by structural engineer Building regulations approval, cdM regulations, health & safety, temporary work and interim stability

1. 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. 2. 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: a) Excavation below existing foundation levels when in close proximity to existing foundations b) Underpinning c) Working with machinery when adjacent to or over existing occupied buildings d) 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. 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.

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 lateral and on the neutral axis, lapped min 200mm and bent nearly around walls, if deemed necessary by structural engineer.

Build up external walls in two skins of 7N solid dense concrete 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 to avoid the raise of water through absorption. All joints to be lapped min. 150mm (basic RDM measure).

VERTICAL DPC:

at abutments of external cavity wall to solid 215 wall. Cavity fill to finish minimum 225mm below.

Cavity trays and weepholes to be provided above structural openings and base of cavity to provide basic radon protection. Weep holes at 450mm centres over lintels

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 wetted and tape sealed. None to existing dpm are to be wetted 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 0.14.

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 receive 1200g PIFA polyurethene dpm with 150mm min laps & to be carried up walls to lap with dpm.

All joints in dpm to be wetted, lapped and sealed. 100mm Kingspan Thermafloor T770 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.m per horizontal metre run of each wall.

All periscopic vents to have pvc lintel over in inner leaf.

At least one periscopic vent within 450 of corner/return.

EXTERNAL WALLS

Construction to comprise: 103 brick to match existing, 100mm cavity filled with 100mm Drytherm32 100mm blockwork inner lining to be 62.5mm insulated plasterboard on dabs and skim finish, achieving U-val 0.18 W/m²K

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

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 mast pointing. 100mm Dpc behind all wall and ties.

CAVITY

To be cleared of all mortar droppings and closed at all openings at top of wall cavity closers. Lean mix concrete cavity fill to 225mm min. below DPC.

MORTAR

Shall be at least in strength 1:1:8 Portland cement/time/line 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.

LIMITING AIR LEAKAGE

The cavity wall 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-breakin TB3000 boards.

All cavity closures must be fire 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.

STRUCTURE

FOUNDATIONS, STEEL BEAMS, PURLINS, RAFTERS, LINTELS, FLOOR JOISTS, PADSTONES & BEARINGS, SUSPENDED SOLID FLOORS, BLOCK STRENGTH, LATERAL RESTRAINT, SCREEN WALLS, RETAINING WALLS, ALL MOVEMENT JOINTS, PIER SIZES & STRUCTURAL STABILITY OF WALLS, BUTTRESSES ETC., TO BE DESIGNED BY STRUCTURAL ENGINEER.

ALL EXTERNAL DOORS AND WINDOWS TO BE DOUBLE GLAZED

Windows and doors to be glazed with 24mm minimum sealed double glazed units comprising Low E glass or K glass of 0.15 emissivity and 16mm gap giving a U value of 1.5W/sq.m K

Velux windows to be fitted with double glazed units giving u value of better than 1.5W/sq.m K and to have double rafters to both sides, top & bottom

All new first floor bedrooms to have windows capable of being used as a means of escape ie: a minimum of 0.33sq.m, and at least 450mm wide & 750mm high clear opening with the cill between 800 & 1100mm above floor level

Windows to have min 1/20th floor area as opening lights and 1/10th floor area as glazed area to all habitable rooms.

VENTILATION

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

Kitchens to have background trickle ventilator of 4000 sq. mm plus an operable window and a mechanical extract fan capable of extracting 30 litres per second if a cooker hood or a fan located elsewhere capable of extracting 50 litres per second.

Ventilation to an internal pvc 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 10mm gap under the door. W/c'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.m and to be provided with an extract fan capable of extracting 15 litres per second and operated intermittently plus an operable window.

Utility Room to have trickle vent of 4000sq.m 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.

DRAINAGE

New 100mm drain system constructed in plastics.

Drain to be protected with 75mm concrete slab laid to the full width of the trench 150mm above the pipe where less than 600mm of cover.

All drains to be surrounded by pea gravel.

Concrete lintels provided to both leaves of external walls and internal wall where drains pass through. 50mm space all round drainpipe with masking both sides of 9mm Supalux board.

All drainage laid in accordance with BS.8301.

RAINFATER

All rainwater gutters, downpipes etc, to be black Upvc and to discharge via trapped access glands to a suitably sized soakaway

PLUMBING

All new soil and vent pipes to be 100mm dia. Upvc fixed with wall brackets at 2.0M centres.

All bends in SVP to be so constructed as to have the largest possible radius of curvature and no change in cross section of the pipe throughout the bend.

New & Existing SVP to discharge to outside air via tile vent or similar approved terminal.

Internal S & VP to be boxed in using 50 x 50 s.s. timber framing and 12.5mm plasterboard and skim.

All waste connections to S & VP's to be separated from the 100mm dia. WC. connection by 200mm measured vertically.

Sinks to have 40mm dia. Upvc branch pipes. Lavatory basins to have 32mm wastes up to 1.7 metre length.

Increased to 40mm up to 3.0 metre lengths. 50mm wastes over 3.0m

Hot and cold water to all sinks & wh's

All earthing of pipework is to be concealed.

All sanitary fittings to be individually trapped with 75mm deep seal traps.

Stub vent pipes to be fitted with air admittance valve above the spillover level of the highest appliance connected to it.

The boxing to the stub pipe to have an air vent grille at high level.

Hot water to bath to be limited to 480watts C by use of in line blending valve to comply with the requirements of BS EN111:1989

Anti-syphon traps to BS 3943 into soil vent pipe or air attaining valve as indicated. No branching to discharge into SVP lower than 450mm above invert of tail of the bend at the base of the stack.

Access plate to be provided at the base of each tack immediately above FFL min 200mm bend at the base.

ALL WATER INLETS AND DRAINAGE, AS WELL AS POSITIONS OF NEW OR RELOCATED MANHOLES TO BE AGREED WITH THE BUILDER ON SITE

SOAKAWAYS

Position on site to be agreed with L.A. inspector but must be a of 5M from any building and subject to the results of standard percolation test.

FALLS:Foul and Surface water drains to be laid at 1:50 min unless otherwise stated.

Foul water drainage runs and connections to be inspected and fully agreed by the Building Control prior to backfilling of trenches

New drains to be connected to mains sewerage system to have permission obtained by relevant statutory authority.

MANHOLES

For depths of over 900 mm to be constructed in Class B engineering brickwork, min wall thickness 225 mm, and flush pointed internally.

Base slab to be 150 mm thick concrete. Benching channel to be 30 degrees and topped with monolithic render (1:1 mortar).

Back filling to chamber should not be carried out until 48 hours after construction and hand packed with selected hard material.

Manholes deeper than 1.0 m to be fitted with iron steps set at 300 mm apart vertically and 200 mm apart horizontally.

Inspection chambers 900mm deep max to be Hepworth or similar 450mm dia polypropylene fitted in accordance with the manufacturers details and instructions

HEATING

to be extended small bore h.w. radiator system

Thermostatic control in ground floor hall space and thermostatic valves to all radiators

New floor areas to have underfloor heating system if required

Space and water heating also controlled using a manually adjustable timer

Heating system generally to comply with the requirements of BS5449:1990

Existing boiler to remain in existing position. Details to be found on site visit.

Hot water & heating systems Hot water & heating system to be sealed gas fired condensing combi boiler with automatic ignition with balanced flue - outlet to terminate externally through the external wall 300mm from any opening light. System to be designed & installed by a Capita gas safe registered heating engineer/contractor. All radiators are to be convactor type with thermostatic valves. New boilers to have a SEDBUK rating of 88.

Rating & capacity of existing boiler to be checked for adequacy to ensure enough spare output to be capable of servicing new extension.

PART Q

SECURITY DOORS

All external doors and windows to be designed to meet security requirements of British Standard Publication PAS 24:2012 and letter plates to have max aperture of 260 x 40mm and to be located as per par 1.3 of Part Q.

Main doors to each dwelling to have door viewer, door chain or door limiter.

All door and window frames to be mechanically fixed to the structure in accordance with the manufacturers instructions.

WINDOWS

Windows to ground floor level, basement and easily accessible rooflights manufactured to meet the security requirements of British Standards publication PAS 24:2012, or designed and manufactured in accordance with Appendix B of Approved Document Q.

All door and window frames to be mechanically fixed to the structure in accordance with the manufacturers instructions.

PART R

INFRASTRUCTURE

In accordance with Part R of the Building Regulations, provide physical infrastructure from the service providers network access point to the occupiers network termination point) so that copper or fibre optic cables or wireless devices capable of delivering broadband speeds greater than 30Mbps can be installed.

ENERGY CONSERVATION

Low Energy at 40 lumens per circuit watt efficacy in accordance with L1 para 42 to be fitted to all rooms.

AUTOMATIC FIRE DETECTION

Automatic fire detection system to be installed in accordance with BS 5839 Part 6 2019. This system needs to be a minimum grade D (Mains powered with a battery back up and interlinked). In this instance it will require a category LD3 with smoke detectors in the hallway and landing with a heat detector in the kitchen.

Note: If ceiling mounted it is to be at least 300mm from any wall or light unit. If wall mounted it is to be fixed between 150 and 300mm below the ceiling. The smoke alarm is not to be located immediately above a stair shaft so that easy access is available to the unit and it is to be located within 7 metres of a kitchen or living room or within 3 metres of a bedroom.

Electrician to supply commission certificate on completion.

SD Smoke detectors to be provided in positions shown.

CO Carbon Monoxide detector fitted in rooms with a boiler

HD Heat Detector fitted in kitchen

FD30 = Fire Door with 30 Minutes (minimum) integrity & rising butt hinges self closing

FD30s = 30 Minutes integrity fire door with self closing device and smoke stop and intumescent sealant

ELECTRICAL INSTALLATION

All new cable runs to be concealed, no surface wiring is to be used. Switches, sockets and other electrical equipment controls are to be positioned at a height usable by all (a between a height of 450mmx1200mm above finished floor level in accordance with approved document M.

All work to comply with the latest edition of the IEE code. Contractor to allow for extending existing circuits as necessary.

Energy efficient bulbs & fittings to be provided in areas indicated thus (E) one number light fitting installed which will only take lamps having a luminous efficacy greater than 40 lumens per circuit-watt.

Any new external mounted light fitting are to be fitted with energy efficient Either a lamp not exceeding 150watts per fitting with automatic switch off when there is insufficient light at night when light is not required or a light fitting with a socket that can only be used with bulbs having an efficiency greater than 40 lumens per circuit watt.

All electrical works to be carried out to meet the requirement of part P of the building regulations by a person competent to do so.

Prior to completion the local authority are to be provided with a copy of either: An electrical installation certificate issued under a competent person scheme or An electrical installation certificates as defined in BS 7671 signed by a person competent to do so.

ELECTRICAL INSTALLATION AND POSITIONS OF SOCKETS AND LIGHTS TO BE DISCUSSED WITH BUILDER OR ELECTRICIAN

AN ELECTRICAL CERTIFICATE SHOULD BE OBTAINED BY THE CLIENT

BOILER RELOCATION

If boiler is relocated a Gas Certificate should be obtained by the client.

COMMISSIONING

Upon completion of the works the builder is required to issue to the building inspector a notice confirming that the fixed building services have been installed in accordance with a procedure approved by the secretary of state. A set of operating and maintenance instructions should be left for the occupier.

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Technical Guidance Notes

All Dims in millimeters unless otherwise stated. Do not scale except for planning purposes. If in doubt - Ask This drawing is confidential and is the property of Keenan Project Designs Ltd. © Copyright	Scale 1:25 	KEENAN PROJECT DESIGNS	KEENAN PROJECT DESIGNS		CLIENT:	DATE:	DRAWN BY:	PROJECT LEAD:	
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