



**Construction Notes Continued**

**PITCHED ROOF CONSTRUCTION** - Roof construction to comprise of licensed manufacturers prefabricated roof trusses at max. 600c/c all designed, installed and braced in accordance with BS 5268, Pt 3, 1985. Final design layout and truss calculations to be submitted to Building Control for approval prior construction of roof. Trusses fixed top of studwork walls. Roof finish to comprise of orange clay pantiles fixed to 50 x 25mm s/w treated tie battens fixed on one layer of Proctor Roofshield vapour permeable membrane. Roof to be insulated with 270mm fibreglass quilt laid in two layers 90 degrees to each other. 100mm between joists and 170mm over joists. Provide open eaves with fascia board to accept gutters. Ceilings to comprise 1 layer of 12.5mm foilbacked plasterboard with taped and filled joints to receive finish to suit clients' choice. Code 5 lead valleys. Provide open eaves with fascia board to accept gutters. Code 5 lead valleys.

**VAULTED ROOF CONSTRUCTION OVER PROPOSED KITCHEN/DINER/LIVING AREA** - Roof construction to comprise of licensed manufacturers prefabricated king post roof trusses with purlins spanning between to separate structural engineer's design. Provide rafters to engineer's design with roof finish to comprise of orange clay pantiles fixed to 50 x 25mm s/w treated tie battens fixed on one layer of Proctor Roofshield vapour permeable membrane. Insulate sloping ceiling with minimum 70mm Celotex between rafters ensuring a 50mm ventilation gap is maintained above the insulation and provide Celotex PL4000 insulation between rafters (65 + 12.5mm) to underside of rafters with taped joints and a plaster skim coat finish to suit clients' choice. Provide open eaves with fascia board to accept gutters. Code 5 lead valleys.

**SECURITY MEASURES** - Provisions to be made to resist unauthorised access to new annex with all new entrance door sets and windows to be designed and tested to meet the security requirements of BS PAS24:2012 or designed and manufactured in accordance with Approved Document Q Appendix B for bespoke joinery with all frames mechanically fixed in accordance with manufacturers instructions. Entrance door should have a door viewer or other means such as a clear glass panel within door or an adjacent window next to the door set to see callers. The same door set should be fitted with a door limiter or chain. NOTE - Electronic audio-visual door entry systems can be used to identify visitors. Letter plates where provided to have an aperture of 200 x 40mm and be located/designated to hinder anyone attempting to gain access by a stick or hand incorporating a flap or other features restricting access.

**INFRASTRUCTURE PROVISION FOR HIGH SPEED COMMUNICATION NETWORK CABLES** - A suitable position for at least one network termination point should be identified within the annex with suitable underground/above ground ducting provided to connect network termination to an appropriate access point and terminal chamber located below ground.

**DISABLED PROVISIONS** - Provide hard paved level approach to principle entrance door with a gradient not steeper than 1:20 and with no cross falls more than 1:40. Principle entrance door to have a min. clear opening width of 775mm with a level threshold. Ground floor internal doors to have min. clear opening width of 750mm with ground floor WC having 775mm clear opening width.

**VENTILATION** - Mechanical ventilation to be provided to bathrooms, shower rooms, utilities, kitchens and WC accommodation where present. Mechanical vents to be generally manually operated fans with 15litres/second discharge rate to bathrooms, shower rooms and WC accommodation, 30litres/second to utilities and 60litres/second to kitchens all ducted directly to outside. Windowless WC and other wet area accommodation fans to be linked to light switch and have a 15 minute overrun. All new internal doors serving accommodation to have a 10mm air transfer gap at bottom.

**BEAMS** - Provide timber beams in positions indicated on plan bearing on new timber posts to separate structural engineer's design.

**SMOKE DETECTION** - Provide mains operated, interlinked smoke detection system in accordance with BS5839-6:2004 permanently wired to a separately fused circuit at distribution board with smoke detectors fitted with a capacitor or battery back up. Smoke detectors to be provided in kitchen/diner/living area within 7m of doors to habitable rooms. Detectors to be situated at least 300mm from any wall and light fitting.

**WATER EFFICIENCY** - A water efficiency calculation to be provided upon completion of the property with sufficient information for the building owner to maintain water efficiency of the building. Submit to Building Control for approval confirming that the total water usage will not exceed a maximum of 125litres/person/day.

**HEATING SYSTEM** - Provide Dakin Altherma air source heat pump whole house heating system providing hot water and space heating. System comprises of an outdoor air source heat pump connected to an indoor hydronic providing heat via an exchanger unit supplying hot water to radiators and a domestic hot water tank. Space heating to be controlled by programmer and thermostats. Hot water cylinder to have factory-applied coating of 35mm thick PU-foam having a minimum density of 30kg/m<sup>3</sup>. Altherma heating system to be designed and installed by registered Dakin contractor in strict accordance with manufacturers instructions.

**PLUMBING** - All appliances to have pvc waste systems with 75mm deep seal anti-siphon traps with cleaning eyes on all waste pipes on changes in direction. Where indicated beams to have 32mm waste pipes, baths, showers and sinks to have 30mm waste pipes all discharging into new or existing 100mm dia. soil and vent pipes, trapped gullies or 100mm dia. stub stack. New or extended SVP's where permitted to terminate 900mm above any opening within 3m and fitted with a vermin proof cage. Above waste pipes where exceeding permitted lengths (Up to 1.7m for 32mm dia. wastes and 3m for 30mm) to be increased to 50mm dia. where permitted lengths exceeded including common wastes where indicated on plan. Any bends within wet part of a SVP to be provided with rodding access points. Any waste pipes in excess of 40mm in diameter passing through fire separating walls or floors to be fitted with half hour fire collars where passing through roof/floor or encased in two layers 15mm plasterboard to give half hour fire resistance.

**DRAINAGE** - New drains where indicated to comprise 100mm dia. upvc pipes bedded on and surrounded in 150mm pea shingle. Pipes laid generally to 1:40 falls with a max 1:80 fall where a WC is connected at the head of the run. Provide new drains, gullies and upvc inspection chambers in positions where indicated on plan all discharging to New Klargester Biotec 1 IPS sewage treatment unit positioned minimum 7m from buildings discharging to new sub-surface irrigation soakaway - size of which to be determined by a percolation test in strict accordance with Klargester's manufacturers instructions positioned 5m from any building or highway. Inspection chambers fitted with medium duty covers in gardens and foot paths and heavy duty covers in drives. Inspection chambers in drives to be bedded on and surrounded in 150mm of concrete.

**SURFACE WATER DRAINAGE** - 100mm half round upvc guttering fixed to fascia board and discharging into new or extended/existing upvc downpipes (positions as indicated on plan). New down pipes where indicated to discharge into rain water shoes connected to 100mm dia. upvc drains, bedded and surrounded in 150mm pea shingle, laid to 1:40 fall discharging by priority to 1.2m cubed soakaways positioned 5m from any building or highway. Size of soakaway to be determined by a percolation test in strict accordance with BRE Digest 365. Where the ground conditions do not permit the use of a soakaway then the surface water should then be discharged into the existing drainage system ensuring all gullies are trapped and drain runs accessible for rodding purposes with the final layout discussed and agreed on site with Building Control.

**ROBUST CONSTRUCTION** - Robust Construction should be utilised throughout the proposed works ensuring the wall insulation is taken 150mm below damp proof course level to overlap with the floor perimeter insulation upstand and meets at eaves level with the roof insulation to maintain continuity.

**Construction Notes**

**GENERAL SPECIFICATION** - All works are to comply with the current Building Regulations, British Standards and Codes of Practice referred to herein but not specifically mentioned. The works shall be carried out to the full satisfaction of the local authority Building Control Officer, Approved inspector or other body including submission of all necessary notices and payment of fees. All products referred to on the drawing and this specification are to be used strictly in accordance with the manufacturer's recommendations. Before starting any works, all site conditions and dimensions are to be checked and verified by the builder and any discrepancies reported to the client. Allow to supply and fit all new finishes/fittings to match existing unless otherwise specified, eg. doors/frames, windows, door and window furniture, skirtings, architraves, dado/picture rails etc. All softwood used in a structural capacity to be FSC or PEFC certified, min C16 grade (to BS 5268 pt 2, 1991) unless otherwise specified.

**STRUCTURAL DESIGN** - Construction specification to be read in conjunction with any structural calculations relating to project.

**ELECTRICS** - All electronics to be wired in accordance with latest IEE Regulations. Power outlets and light fittings to be located as directed by applicable BS. Provide 100% efficient lighting to have an efficiency of 145lm/w. Examples of suitable lamps include fluorescent tubes and compact fluorescent lamps (not GLS tungsten lamps with bayonet cap or Edison screw bases). Fixed external lighting to be controlled via sensors which automatically turn off lights when not required and when there is sufficient daylight. Each external light fitting should not have a lamp capacity exceeding 150W. All electrical work required to meet the requirements of Part P (Electrical Safety) must be designed, installed, inspected and tested by a registered person competent to do so. Prior to completion the Council should be satisfied that Part P has been complied with. This will require an appropriate BS 7671 electrical installation certificate to be issued for the work by a registered person competent to do so. All switches and sockets to be positioned in a zone between 450mm and 1200mm above finish floor level.

**METERS** - Gas and electric meters to be located in positions as agreed by client and installed in strict accordance with service providers instructions. Connection of services to be carried out by gas and electric providers nominated contractors. Water meters to be installed by Anglian Water.

**HEALTH AND SAFETY** - The client is to be aware that the work should only be executed by competent builders who are fully proficient in all forms of safety procedure relating to all aspects of building, demolition and temporary shoring and the safe operation of all plant and equipment including personal protection. The Principal Contractor is responsible for preparing a Construction Phase Health and Safety Plan before commencing work, which shall include all necessary method statements and risk assessments and details of welfare facilities relating to the work shown on the plans and detailed in the specification. This document shall be made available to the Client if required. For domestic clients, the Principal Contractor is responsible for notifying the HSE if the project is to last more than 30 working days or involve more than 20 workers working simultaneously at any point in the project or exceed 500 person days. Upon completion of the work, if there has been more than one contractor involved in the project, the Principal Contractor shall provide a Health and Safety File to the Client. This shall contain as-built information, details of underground services, any hazardous materials used, health and safety maintenance instructions, maintenance manuals, all certificates and consents and details of any residual hazards that remain.

**PARTY WALL ACT** - Main contractor to ensure that there will be no undermining of foundations to adjacent properties and where applicable new works of any nature that are within 3 meters of adjacent owners property and boundary walls, the main contractor is to ensure all relevant notices are served, and agreements obtained in accordance with the Party Wall Act 1996, before any works are commenced.

**ENCROACHMENT** - No part of the structure above or below ground is to encroach over the boundary of adjacent properties without written consent from owners.

**FOUNDATIONS** - Final depth and size to be agreed on site with Local Authority Building Control Officer. Foundations shown in 1:50 scale concrete (200mm aggregate). Min. depth of 1m below finished ground level. Where trees are present in cohesive sub-soils depth to be determined in accordance with NHC Standard foundation depth guidance notes - Chapter 4.2 or Structural Engineer consulted for final design. Drains where present passing through foundations to be sleeved and surrounded in a flexible material with vermin shield to outside face of foundations. Foundation to be provided under all cavity walls, external walls and load bearing internal walls where indicated on plan. Foundations taken below invert levels of any adjacent drains within 1m and public sewers where indicated on plan with Build Over Agreements sought from Anglian Water prior to any commencement of work within 3m of public sewers.

**SUB-STRUCTURE** - Solid walls below ground level where present to consist of solid flinton brickwork to correspond with thickness of wall/plinth above dpc including any piers indicated. Cavity walls below ground level to consist of two skins of flinton or similar frost resistant brickwork built off foundation concrete with 100mm cavity between filled to within 150mm of the external ground level with lean mix concrete ensuring cavity extends a minimum of 225mm below dpc level. Both skins are to be tied together with stainless steel wall ties. The outer face of the wall is to be built using facing bricks from external ground level to dpc.

**GROUND FLOOR CONSTRUCTION** - 65mm Sand Cement screed on 100mm oversite concrete on 500 gauge vapour check barrier on 100mm Celotex floorings grade insulation on 1200g polythene DPM on 100mm minimum well consolidated and bladed hardcore. Provide perimeter insulation upstand (Min. R-value 0.75m<sup>2</sup>K/W) on edges of floor slab adjacent external walls and semi-exposed walls. 1200g polythene dpm to have min. 600mm laps and taped joints. DPM to unite with DPC in internal and external walls. Provide A142 reinforcement fabric 1.2m wide in oversite concrete on lines of internal non load bearing block partition walls and underground drainage/ducting where present.

**DAMP PROOF COURSE** - Tyload or similar approved damp proof course to full thickness of all solid walls, individual skins of cavity walls, partitions and chim. all having a minimum of a 100mm sealed lapped joints. Continuous damp proof course to be provided around the building/extension and lapped onto the existing dpc, positioned in all external walls at least 150mm above surrounding ground or paving level.

**WALL CONSTRUCTION** - The masonry walls above dpc level are to be constructed in cavity work comprising of an outer skin of 102mm facing brickwork formed in situ to a course of plinth stretchers and Code 4 lead apron. 100mm cavity fully filled with Dritherm 32' fibreglass insulation batts taken 150mm below level of floor insulation with adequate support provided by wall ties. The inner skin to comprise 150mm 'Thermalite turbo' blockwork or similar block. The skins of the cavity wall are to be tied together using stainless steel wall ties, spaced at 450mm centres vertically and 900mm centres horizontally staggered and doubled up at reveals. The cavities are to be closed at all window and door openings with insulated cavity closers overlapping frames by 30mm. Masonry returns and piers less than 550mm to be reinforced with 'Bnk-10r' reinforcement provided in each block course and every third brick course. The walls above the masonry plinth are to be constructed in timber frame construction comprising of 140 x 50mm C24 G-grade studs at 400mm centres with 200 x 150mm sole plate fixed to inner skin of plinth with DPC sandwiched between. Fill voids between studs with 90mm Celotex insulation and finish internally with Celotex PL4000 (25 + 12.5mm) with plaster skim coat. The wall construction is to attain a min. U Value of 0.28 W/m<sup>2</sup>K. Provide externally timber weatherboarding fixed to treated vertical battens and counter battens fixed through 12mm exterior quality plywood and Tyvec breather membrane into timber studs. Internal partition walls to be constructed in timber stud work built off new floor construction where indicated. Studwork partition walls constructed of regulated 100 x 50mm C16 grade timbers at 400mm centres with 100 x 50mm head plate, sole plate and nogging to suit plasterboard joints. Provide fibreglass insulation to infill voids and finish both sides with 15mm plasterboard with taped joints and a plaster skim coat. Provide oak frame supporting structure designed by separate structural engineer in general living area.

**LATERAL RESTRAINT** - Restraint straps to be provided at 2m c/c at roof level and floors above ground level where present. Straps to span minimum 3 no. joists with nogging between joists on line of straps.

**LINTELS** - Provide 2 No. 150 x 70mm C24 G-grade timber lintels over window/door openings in timber framed wall construction where present ensuring a full 100mm end bearing on double studs.

**WINDOWS/DOORS** - Provide upvc/powder coated aluminium/timber windows and doors where indicated with trickle vents to give 8000mm<sup>2</sup> (2500mm<sup>2</sup> equivalent area) to each habitable room and 4000mm<sup>2</sup> (2500mm<sup>2</sup> equivalent area) to bathrooms, en-suites, shower rooms, utilities, cloakrooms and kitchens. The windows and doors are to provide a minimum of 5% of floor area in operable window area to each room. The windows and doors are to be double-glazed with sealed units with a 16mm argon gas filled air gap and low-E glass (Emissivity value = 0.05) to achieve a max. U value of 1.6 for doors and 1.6 for windows fitted with draught seals and frames sealed at junction with walls with a flexible sealant. All new internal doors serving accommodation to have a 10mm air transfer gap at bottom.

**SAFETY GLASS** - All glazing in windows within a distance of 800mm above finished floor/ground floor level and glazing in doors and adjacent sidelights within a distance of 1500mm to be safety glass to comply with BS 6206:1981.

**ARCHITECTURAL BUILDING DESIGN SERVICES**

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Client Name and Site Address

Mrs A Dance  
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Scale Bars

0 5m 10m 15m 20m  
1:500

0 1m 2m 3m 4m  
1:100

0 1m 2m  
1:50

Project	Proposed detached annex		
Drawing Number	22/03/0130	Scales	1:50, 1:100, 1:500, 1:2500
Paper Size	A1	Revisions	B
Drawn	B,B		