

Foundations

Foundations to cavity walls to be constructed of concrete common brickwork up to 150mm below ground level with Class B engineering brickwork from GL to DPC level externally and concrete blockwork internally. Cavity walls and internal block walls built off 600mm x 200mm (C20 mix - 20N/mm2) concrete strip foundations to suit local ground conditions and to the satisfaction of local authority building inspector. Concrete cavity fill to finish 225mm below dpc level.

Generally

All foundations to suit local ground conditions and if the ground is found to be clay the footings are to be in accordance with NHBC guide 'Building Near Trees' and to be in accordance with BS 8004, BS5837 and to the satisfaction of the Local Authority Building Inspector. Precast concrete lintels to be laid over all openings for drainage and service runs with minimum 150mm end bearing onto adjacent brickwork.

DPCs

Cavity wall and internal blockwork walls to incorporate PVC type dpc at ground floor finished level minimum 150mm off external ground level.

Walls

Cavity walls to be 300mm overall construction to comprise inner and outer skin of 100mm Thermalite Hi-Strength 7 blockwork. Both skins laid on 1:6 mortar mix with plasticiser and bonded together with Ancon Staifix RT2 cavity wall ties, suitable for cavities up to 125mm wide, staggered in alternate rows and spaced 750m horizontally and 450mm vertically. StoRend Cote render system applied to external block skin. All cavities closed at eaves, door and window openings with Thermabate or similar insulated cavity closers. 100mm cavity partially infilled with 50mm Kingspan Kooltherm K8 Cavity Board (thermal conductivity 0.021W/mK) and with blockwork lined internally with 12.5mm plasterboard on dabs to provide a maximum "U" value of 0.24 W/m²K. plasterboard returned into all window and door openings and with continuous band of adhesive around all opening at base & head of wall and at external corners, in accordance with Accredited Construction Details with details checked on site to maintain quality assurance. **Distance to the boundary from the proposed side extension is to be no less than 1m.**

Internal Solid Walls

All new internal walls to comprise of 100mm skins of Thermalite Hi-Strength 7 blockwork with 12.5mm Gyproc Wallboard on dabs with skim finish. Walls continued up into roof space to support rafters and/or steelwork, where required.

Non-loadbearing partitions

Non-loadbearing partitions to comprise of 75mm x 50mm softwood studs @ 450mm centres, and 75mm softwood noggins @ 900mm centres, with continuous header and sole plates, 12.5mm Gyproc WallBoard plasterboard (minimum mass per unit area 10kg/m²) and 12mm Gyproc moisture resistant board to bathroom, en-suites and utility room, joints sealed complete with skim finish both sides. All stud partitions to have 60mm thick Rockwool Flexi insulation quilt between studs (minimum density 10kg/m³).

Floors

Ground Floor

Floor to comprise 75mm fibre mesh sand cement screed over 500 gauge polythene vapour control layer over 125mm Kingspan Kooltherm K3 phenolic board (thermal conductivity 0.021W/mk) or similar approved, to provide maximum U value of 0.13W/m²K, on polythene separating layer, on 150mm thick concrete slab (C25 mix- 25N/mm²) on 1200 gauge DPM, lapped minimum 100mm with all DPC's. DPM to be provided above and below the PIR insulation to the floor, or the joints suitably taped up. 25mm sand blinding on 150mm well compacted hardcore. 25mm Kingspan Kooltherm K3 phenolic board to be lapped vertically up perimeter of screed to limit thermal bridging in accordance with Part L1A 2013 Edition, section 3.90 and Robust detail 4.13 of Limiting Thermal Bridging and air leakage Robust Construction details for dwellings similar buildings amendment 1 TSO 2002.

Lintels & Steel Beams

Structural supports to new openings within external and internal walls to be provided by Catnic lintels:
Openings of 3000mm or less in cavity walls: CG90/100 220mm high
Openings of 2200mm or less in cavity walls: CG90/100 180mm high
Openings of 2100mm or less in cavity walls: CG90/100 160mm high
Openings of 1800mm or less in cavity walls: CG90/100 140mm high
Openings of 1500mm or less in cavity walls where supporting first floor construction to be: CX90/100 232mm high (extra heavy duty)
Openings in 100mm internal block walls 2100mm or less:BSD100 lintel
Openings in 140mm internal block walls 2100mm or less:BSD140 lintel
Openings in 100mm internal block walls 2100mm or less where supporting first floor construction to be: BXD100 219mm high
Openings in 100mm internal block walls 1500mm or less where supporting first floor construction to be: BXD100 143mm high

Lintels and Universal Steel Beams to be laid level and have min. end bearing of 150mm, and cased internally to give ½hr fire protection. Universal steel beam and column size and design to be confirmed by a Structural Engineer together with the associated padstones.

Windows & Doors

Proposed windows and doors to be UPVC, grey external & white internal, all with minimum 16mm argon filled gap double glazing, soft coated inner pane such as Pilkington K Glass S windows to achieve maximum "U" value of 1.50W/m²K, with fully draught stripped openable light equivalent to minimum 1/20th floor area for purge ventilation and including minimum 5,000mm² trickle vents per habitable rooms and 2500mm² for non habitable rooms (living room, bathroom, en-suite, bedrooms) for background ventilation in accordance with Part F 2010 Edition System 1 Table 5.2a.

Frames to be lapped minimum 30mm across cavity closer in accordance with Part L1A section 5.9 and Accredited Construction details under section 5.12 to limit thermal bridging. Details to be inspected on site in accordance with checklist to maintain quality assurance.
Any glazing within 800mm of floor level, and within 1500mm of floor level where within 300mm from a door and all glazing to double and side lights doors to be safety glass to comply with BS6206. Windows to all first floor bedrooms to incorporate unobstructed clear opening of 0.33m² and at least 450mm high and 450mm wide, with bottom of openable area no more than 1100mm above floor level.

Extension Roof

Roof construction to extension to comprise of gang-nailed attic trussed rafters @ 600mm centres, in accordance with BS 5268: Part 3 1985, and TRADA's recommendations. Incorporate 100 x 25mm S.W. longitudinal and diagonal bracing in accordance with BS 5268, all loose diminishing timbers required to be designed and supplied by specialist truss roof designer, all timbers at valley locations to be fixed to 18mm thick marine plywood lay boards fixed in turn to timber trusses, Rafter feet nailed to 100mm x 75mm softwood wall plates provided to external walls, with wall plate strapped to brickwork with galvanised straps at maximum 2m centres. Lateral restraint to rafters parallel to gable wall by 30 x 5mm galvanised MS straps to first three timbers parallel to wall screw fixed @ maximum 2000mm centres fixed to inner leaf of cavity wall. Main Roof to be constructed as warm roof construction, incorporating 2 layers of 60mm Kingspan Kooltherm K7 phenolic insulation between rafters, positioned level with base of rafters to allow sag of breather membrane. Rafters to be underlined with 50mm Kingspan Kooltherm K7 phenolic insulation, with all joints taped all to achieve maximum "U" value of 0.13W/m²K, all fixed in accordance with manufactures instructions. Insulation to be underlined with 12.5mm Gyproc Wallboard Duplex vapour check plasterboard and skim finish. Main Roof overlaid with Tyvec SUPRO breather membrane with joints lapped and taped and roof to be finally covered with Marley interlocking grey plain tile installed in accordance with manufactures recommendations laid on 50mm x 25mm tanalised softwood battens.

Leadwork

Abutment details to be Code 3 lead soakers, lapping minimum 100mm under each slate, overlaid with Code 4 lead flashing (stepped). Flashing lapped minimum 75mm up brickwork and turned into mortar course minimum 25mm. Abutment detail of head of canopy and new wall to incorporate Code 4 apron flashing lapped minimum 150mm up brickwork and turned into mortar course mininum 25mm, lapped over Code 3 leadwork soakers to be lapped minimum 150mm down roof. Valley troughs to be GRP. All leadwork to comply with BS 1178.

Heating

Supply pressed steel radiators all with thermostatic valve controls in accordance with Part L1B of Building Regulations. Hot water supply pipework to be fitted with inline tempering valve to limit water to 60° and with inline blending valve to bath supply to limit temprature to 48° all in accordance with paragraphs 3.64 - 3.68 of part G (2010 Edition) System installed and commissioned and with notice of commissioning provided, in accordance with paragraphs 3.69-3.80 of part G (2010 Edition) Pipework to be insulated, including provision of additional insulation to safety fittings and pipework. Heating and Hot & Cold water system to be issued with a commissioning certificate and operating/maintenance manual, in accordance with section 3.23 Part L1A (2013 Edition). All installations to be carried out by a Gas Safe operative.

Ventilation

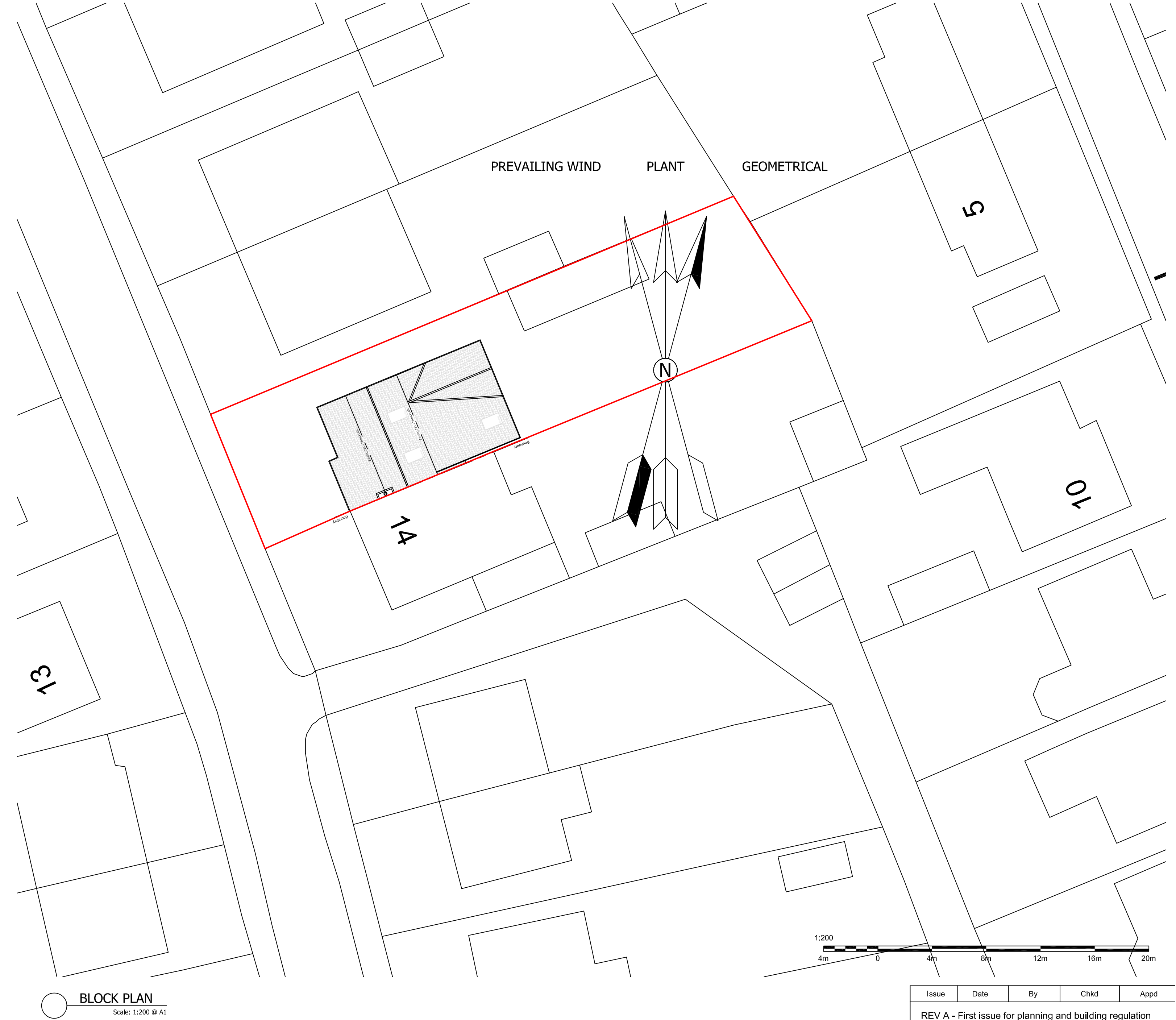
Mechanical ventilation to Bathroom, En-suite and changing room by Xpelair DX100 wall or ceiling mounted extractors. Extractors capable of min. 15l/s extraction and to incorporate minimum 15min overrun timer. Similarly mechanical ventilation to Utility and Laundry Room by Xpelair SL150 wall mounted extractor (min. 30l/s). Mechanical ventilation incorporated in the cooker hood in the Kitchen (min. 30l/s) ducted to external wall. Any ceiling mounted extractors to be ducted to roof and to terminate with Glidevale (or similar) tile ventilator.

Smoke Alarm

Install independent ionisation smoke alarm in position shown, units to be mains powered and interconnected when triggered. Units to be mounted at ceiling level, 300mm from any wall and light fitting. Carbon Monoxide detectors to be installed adjacent to stoves in lounge and living area. Smoke alarms to BS5839-6:2004. Smoke detection required to the hallway. To be mains wired with a battery backup.

Electrical Fittings

All sockets to be positioned above 450mm from floor level, and all switches to be positioned below 1200mm from finished floor level to



comply with Part M of the Building Regulations. All internal light fitting and any external lights to incorporate only fitting with LED lamps - luminous efficiency greater than 45 lamp lumens/circuit-watt and total output greater than 40 lamp lumens, with any external lights to incorporate daylight sensor, all in accordance with Part L1A section 4.13 Building Regulations (2010 Edition) and Table 40 of Domestic Building Services Compliance Guide 2010 Edition. Electrical installation to be designed and installed and tested on completion by an NICEIC registered contractor in accordance with BS 7671:2001 to comply with Part P of the Building Regulations.

Mains Water Supply and Efficiency

Mains water supply of wholesome water supplied by statutory undertaker. All wc's to be provided with dual flush mechanisms. Consumption to not exceed 125 litres/head /day with Estimated water consumption calculation provided upon completion of project in accordance with paragraphs 2.2 & 2.3 of Part G (2010 Edition).

Drainage

Bath, sink and shower and wash hand basins 40mmø pipework, pipework in combined situations 50mmø all with 75mm deep seal traps. New drains in 110mmø Marley PVC pipework to 1 in 40 falls to new IC's. Pipework with less than 0.6m cover to garden area or 0.9m cover to drive area to incorporate reinforced concrete cover slab to bear minimum 300mm onto original ground either side of drain excavation, with minimum

25mm compressible board between concrete and minimum 75mm granular bed and surround to pipework. All foul drainage to finally connect into existing foul system. Inspection chambers to be preformed 450mm diameter polypropylene chambers and bases, with Grade cast iron covers and frames. Inspection chambers greater than 1.0m deep or under drive area to be in 225mm Class B engineering brickwork, with 150mm concrete base, benching to falls, all with cast iron covers and frame. All gutters to be 116mm x 75mm black plastic ogee with rwp's to be 65mm black square plastic to connect to back inlet gullies with access gratings and to connect to existing surface water drainage. All drainage works to comply with BS EN 752 Parts 1-4

Issue	Date	By	Chkd	Appd
REV A - First issue for planning and building regulation approval.				
REV B - Revised proposal including omission of side extension, reduced rear extension and conversion of existing roof space to a bedroom.				
REV C - Added linear scale bar to block plan.				
Client				
Job Title				
16 WHEATFIELD ROAD, WIDNES, CHESHIRE, WA8 5BU				
Drawing Title				
BLOCK PLAN				
Scale at A1 1/200				
Plot ID				
Drawing Status				
FOR APPROVAL				
Job No	Drawing No	Issue		
WR-003	WR-003	REV C		