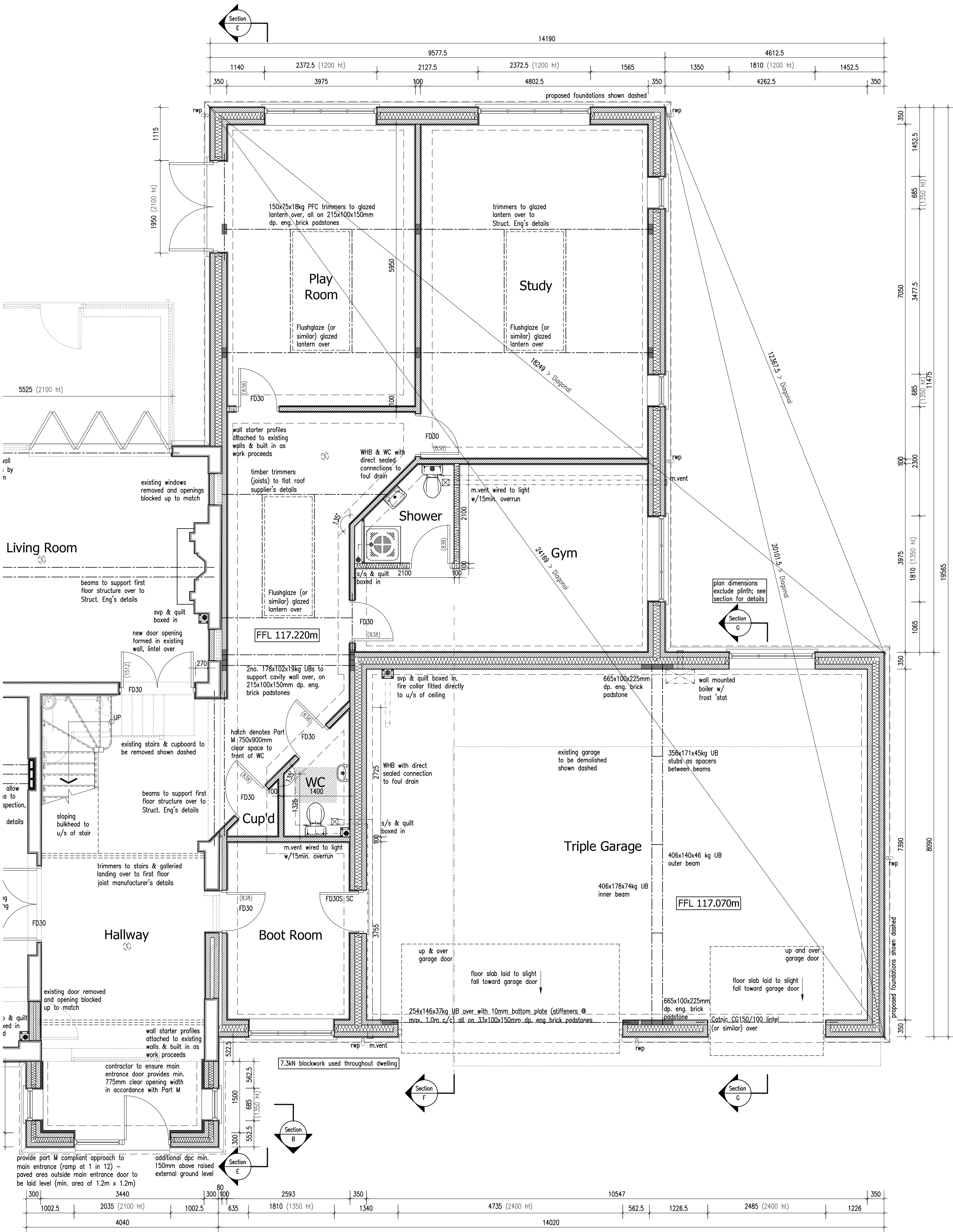




PRODUCTION DRAWING

PROPOSED REPLACEMENT DWELLING - WISEACRE - LEICESTER LANE - DESFORD - LEICESTERSHIRE

SPECIFICATION - Subject to change following SAP Assessors report

FOUNDATION
Excavate and construct concrete trench fill foundations to all external walls, chimneys and internal load-bearing walls, 800mm x 600mm wide - but minimum 1 metre deep & below the invert level of any adjacent drain. Walls built in cavity construction with lean mix concrete cavity to 25mm below d.p.c., ensure min 3 course engineering brick below d.p.c., D.p.c. to be 150mm above external ground level comprising Viqueur Zedex d.p.c. to BS5575:1984 to internal and external leaf - additional d.p.c. to be fitted min 150mm above raised ground level around Part M approach Foundations to be placed at a depth in accordance with the recommendations detailed in the NBSIC Practice Note 4.2 and to the satisfaction of the Building Inspector. NOTE: Trench fill foundations deeper than 2.5m to be designed by Structural Engineer when designed as such all details supersede this specification.

GROUND FLOOR
Existing:
75mm conc. screed (incorporating underfloor heating coils to specialist's details) on 300mm d.p.m. on 75mm Celtek GA4000 insulation board (U-value 0.18W/mK) on Viqueur 300mm d.p.m. lapped into horizontal d.p.c. on existing ground floor construction. Ensure 25mm insulated upstand to perimeter of floor. All non load-bearing ground floor walls to be built from ground floor concrete slab.
New:
75mm conc. screed (incorporating underfloor heating coils to specialist's details) on 300mm d.p.m. on 150mm Celtek XH4000 insulation board (U-value 0.13W/mK) on Viqueur 300mm d.p.m. lapped into horizontal d.p.c. on 100mm concrete floor slab on 150mm well consolidated and sand filled hardcore. D.p.m. to be taken across cavity with cavity wall filled over to provide basic Rafter protection. Ensure 25mm insulated upstand to perimeter of floor. All non load-bearing ground floor walls to be built from ground floor concrete slab. Exclude insulation board and additional layer of dpm to garage floor construction.

WALLS
Existing Building Area:
Externally of 300mm cavity construction comprising min. 20mm thickness through coloured render (Monocouche or similar approved) applied in accordance with manufacturer's details to 100mm keyed concrete blockwork outer skin. 120mm fully insulated cavity and inner leaf of 100mm 7.3N/m² load-bearing blockwork (Interbase Interlay Ultra block - min 0.44m²/KW thermal resistance) with 50mm (pla thickness) Knauf PIR insulated plasterboard, h/ll stone panels (as indicated on elevations) to have inner skin & cavity as before, insulated with 75mm Celtek CWA400 rigid cavity insulation with 25mm SureCav and 100mm nominal outer leaf of stone. Plinth to have inner skin & cavity as before, with 100mm additional blockwork support skin and 100mm nominal outer leaf of stone; brickwork splash courses below d.p.c. on blockwork below ground level 2 course plinth brick to top. DRA-THERM 32 or similar insulation to cavities. 25mm stainless steel Cavity ties to BS EN 845-12013 + A1:2016, staggered at 750mm horizontal and 450mm vertical centres, 225mm around openings. All to achieve U-value of 0.18W/mK. Make allowance for movement joints - @60m c/c in blockwork, @ 12.0m c/c in brickwork, refer to plan & manufacturer's details
New Building Area:
Externally of 350mm cavity construction comprising min. 20mm thickness through coloured render (Monocouche or similar approved) applied in accordance with manufacturer's details to 100mm keyed concrete blockwork outer skin. 150mm fully insulated cavity and inner leaf of 100mm 7.3N/m² load-bearing blockwork (Interbase Interlay Ultra block - min 0.44m²/KW thermal resistance), h/ll stone panels (as indicated on elevations) to have inner skin & cavity as before, insulated with 125mm Celtek CWA400 rigid cavity insulation with 25mm SureCav and 100mm nominal outer leaf of stone. Plinth to have inner skin & cavity as before, with 100mm additional blockwork support skin and 100mm nominal outer leaf of stone; brickwork splash courses below d.p.c. on blockwork below ground level 2 course plinth brick to top. DRA-THERM 32 or similar insulation to cavities. 25mm stainless steel Cavity ties to BS EN 845-12013 + A1:2016, staggered at 750mm horizontal and 450mm vertical centres, 225mm around openings. Internal finish of 12.5mm plasterboard on dabs - all to achieve U-value of 0.18W/mK. Make allowance for movement joints - @60m c/c in blockwork, @ 12.0m c/c in brickwork, refer to plan & manufacturer's details

Internal ground floor walls of 100mm load-bearing blockwork with 12.5mm plasterboard on dabs each side. Studwork partitions where indicated of 100mm softwood framework, compressed quilt (quilt mass equivalent to 10kg/m²) and 12.5mm plasterboard (Gypsum wallboard 10 [10kg/m²] or similar approved) and skin either side.

OPENINGS
All cavities to be closed around openings with proprietary insulated cavity closers incorporating d.p.c. or blockwork & insulated d.p.c. Linings to openings to be CATNOC or similar with minimum 150mm and bearings with stop ends and are to be factory insulated. Linings to specialist design where indicated. Weep holes above openings at maximum 450mm centres, minimum of 2 per opening.

WINDOWS
Double glazed aluminium windows, style as indicated, with 16mm argon filled air gap and a low-E coating to inner pane. All to achieve U-value of 1.4W/mK, (BFRAC certification, or similar, will be required for all windows upon issuing final certificate). G value minimum of 0.63. Where opening lights open more than 30 degrees or are sash windows, the opening lights are to be at least 1200h of the room floor area to all habitable rooms. Where opening lights open less than 30 degrees, the opening lights are to be at least 1100h of the room floor area to all habitable rooms. All new windows to be fitted with double weep seal min 1700mm above floor level. Provide draught seals to all windows, doors and rooflights. Glazing to all doors and skylights less than 1500mm above FFL, glazing within 300mm horizontally of doors and glazing less than 800mm above FFL are to be either eliminated or toughened glass to BS6206:1981 + BS EN 12602:2002. All habitable rooms are to have egress windows with a clear egress opening of 0.33m², min 450mm wide by 450mm high, with the sill height 800-1100mm above FFL. First floor windows with a sill height less than 800mm above FFL are to have a guard rail minimum 800mm above FFL OR fitted with width restrictors. Controls for all operable windows and skylights are to be located so that they may be opened, closed or adjusted safely. All window frames to comply with BS Publication PAS24:2016 or better. All windows to be mechanically fitted to the building structure.

EXTERNAL DOORS
Aluminium doors and frames to achieve U-value 1.4W/mK (rating provided by BFRAC - certificate required). Style as shown. To achieve min clear opening of 775mm. All doors to meet the security requirements of BS Publication PAS24:2016 or better (or for timber doors, Appendix B Approved Document Part Q 2015). Letter plate (min. aperture 280x40mm) & knocker or door chain be fitted to the main door (generally, front door). Where door is solid & there is no sightglass, a door viewer must be fitted. Note, where access can be gained to the house from the garage either the external garage door or the inter-connecting door shall comply with BS Publication PAS24:2016 or better.

FIRE DOORS
Ensure all new fire doors are installed as a complete door assembly consisting of the door frame, leaf or leaves, essential hardware, edge seals, glazing and any integral side panels. Doorsets are to be installed in strict accordance with manufacturer's details to achieve door set performance. All door sets should be tested under BS 467-22 guidance. All fire doorsets should be classified in accordance with BS EN 13501-2 tested to the relevant European method from the following: BS EN 1634-1, BS EN 1634-2 and BS EN 1634-3.

STEELWORK
Steel work & padstones as indicated to Structural Engineer's details and calculations. 2 layers of 12.5mm plasterboard and skim on timber noggin to provide minimum 1 hr. fire resistance or intumescent paint coating to manufacturer's specification. Any steel fixed below ground to be treated with bituminous paint.

STAIRCASE
Width of staircase and landings to be minimum 800mm, maximum pitch 42 degrees, minimum headroom of 2 metres above pitch line, hand rails minimum 900mm high, 100mm nominal spacing to balustrading. Maximum rise 220mm, minimum going 220mm. Minimum 50mm going on tapered treads at newel. Structural head and bearing where required to engineer's design. All staircase dimensions to be confirmed with stair manufacturer prior to commencement

FIRST FLOOR
New floor of 22mm moisture resistant chipboard on floor joist to specialist design. 15mm plasterboard or Gyproc wallboard 10 [10kg/m²] and skim coat to form ceiling, provide 100mm mineral wool insulation (min 10kg/m²) laid between joists in accordance with Part E. Lateral restraint to walls / floors via 30mm x 5mm mild steel straps at maximum 1800mm centres. All joists bearing on external walls to be supported on joist hangers or to be built in and sealed in compliance with the DTLR Robust Details publication. Where joist hangers are to be used full restraint hangers to comply with BS EN 845-12013 + A1:2016 should be adopted and should be clearly marked on the underside of the joist flange with the min. crushing strength of the block for which they are intended to be used. The type and size of hanger must be selected to suit the span and dimensions of the joists to be supported, and should be built in accordance with the manufacturers details securely held in place with a sufficient height of masonry above. (The above flange masonry should be allowed to mature adequately before hangers are loaded) Provide solid timber blocking to joist bearing ends.
For floors over garage provide 30mm Celtek GA4000 insulation board fixed to u/s of joists and 100mm Celtek GA4000 insulation board fixed between floor joists with ceiling finish of 20. bays of 12.5mm plasterboard (taped & staggered joints) and skim all to give 1 hr fire resistance and a U-value of 0.18W/mK.

SECOND FLOOR
New floor of 22mm moisture resistant chipboard on floor joist to specialist design. 15mm plasterboard or Gyproc wallboard 10 [10kg/m²] and skim coat to form ceiling, provide 100mm mineral wool insulation (min 10kg/m²) laid between joists in accordance with Part E. Lateral restraint to walls / floors via 30mm x 5mm mild steel straps at maximum 1800mm centres. All joists bearing on external walls to be supported on joist hangers or to be built in and sealed in compliance with the DTLR Robust Details publication. Where joist hangers are to be used full restraint hangers to comply with BS EN 845-12013 + A1:2016 should be adopted and should be clearly marked on the underside of the joist flange with the min. crushing strength of the block for which they are intended to be used. The type and size of hanger must be selected to suit the span and dimensions of the joists to be supported, and should be built in accordance with the manufacturers details securely held in place with a sufficient height of masonry above. (The above flange masonry should be allowed to mature adequately before hangers are loaded) Provide solid timber blocking to joist bearing ends.

ROOF
Roof covering as specified on 50mm x 25mm Type A imported timber battens at appropriate centres on Tylek Supro or similar breather membrane. Additional battens to all unrestrained full overlaps. Nail all bled slates to roof. All fittings to be in accordance with likeable manufacturers recommendations and instructions. Ridge ties to be mechanically fixed. Roof void ventilation to be incorporated in all cases, to be 5mm continuous @ ridge, with 10mm @ eaves with insulation at ceiling level, or 25mm @ eaves with insulation at rafter (sloping ceiling level). All roof works to be carried out in accordance with BS5534:2014 + A1:2015. Trusses: Pre-bolstered roof trusses by specialist at 800mm centres, designed, erected and braced strictly in accordance with BS EN 1995-1-2004.

Traditional: Battens and ceiling joists as specified at 450mm centres, 100mm x 75mm wall plates, UPVC fascia and soffit finish. Dormer and canopy roof areas of 100mm x 38mm C16 r/ll battens and ceiling joists at 450mm centres.
Roof areas insulated at ceiling level to receive 100mm fibreglass quilt insulation laid between ceiling joists & counter laid with 3 layers 100mm fibreglass quilt insulation over, to achieve a U-value of 0.11W/mK. Underdraw ceiling joist with vapour control barrier & 12.5mm plaster board and plaster skim, or underdraw ceiling joist with 12.5mm foiled backed plaster board and plaster skim finish.
Sloping ceilings to receive 140, layer 140mm Celtek XH4000 insulation board between rafters with minimum 50mm clear air gap over to underside of roof felt with No. layer 50mm Celtek GA4000 insulation board (with taped joints) and plasterboard finish fixed to u/s of rafters to achieve U-value of 0.15W/mK.

Vertical studs (min 125mm thickness) within attic truss design to receive 100mm Celtek GA4000 between studs and fix 40mm Celtek GA4000 to the face of studs with plasterboard and skim to achieve U-value of 0.18W/mK. Dormers of Code 4 lead on 12mm plywood, 120mm Celtek GA4000 insulation (with taped joints) between 125mm x 50mm softwood framework with 30mm Celtek TB4000 (with taped joints) and 12.5mm plaster board and skim fixed internally. Code 4 lead flashing to roof junctions and all valleys in accordance with guidance from Lead Sheet Association, and BS EN 12588. Provide draught stopping and bolt to all roof access traps. Lateral restraint to all wallplates and rafter / gable junctions via 30mm x 5mm mild steel straps at maximum 1800mm centres.

FLAT ROOF
K/O Armourspan SM (or similar) single ply membrane by specialist on 18mm approved plywood deck on 140mm Kingspan TR28 insulation board secured through vapour barrier on 12mm plywood deck to flat roof joist h/lling strips as manufacturer's requirements. 12.5mm plasterboard and skim coat ceiling all in firm warm dead construction and to achieve a min U-value of 0.15W/mK. Provide fitting strips laid to fall at min 1 in 40 to suit. Ensure min 150mm upstand at perimeter, all in accordance with manufacturer's details.

BOILER
Condensing boilers as indicated, flue to terminate minimum 300mm from any adjacent opening (where off flue boiler is to be used 800mm from openings) and in accordance with Gas Safe Register Regulations and Guidelines (or in accordance with OFTEC Regulations & Guidelines). (Gas) Heating system, in accordance with BS EN 12828:2012 + A1:2014, to incorporate thermostatic radiator valves, delayed start thermostats, timing device, frostlock ballvalve & flow controls. Dwellings to be zoned for heating circuits in accordance with SAP recommendations. Provide and supply commissioning instructions to end user
Minimum boiler efficiency - 89%
All to be in line with the HM Government document 'Domestic Building Services Compliance Guide'.

NOTICE PLATES
Every combustion appliance to have a suitably positioned label of durable material, indelibly marked to indicate its limitations of use. The label should be fixed in a secure position, such as adjacent to the gas or electricity consumer unit, the water supply stop cock or next to the chimney or hearth described.

PROVISION OF INFORMATION
A completion certificate from a competent person will be required to confirm that the combustion appliances achieve compliance with the requirements of the Building Regulations

HOT & COLD WATER
Storage vessel to comply with BS3198 and to incorporate a thermostat and inner, 210 litres capacity with a maximum heat loss of 1.42kWh/day. Hot water vessels and all pipework to be insulated. All accessible pipework to be insulated to achieve maximum U-value of 0.45W/mK. (All to be confirmed with SAP Assessment specialist)
All stored water not to exceed a temperature of 100°C. All baths to be fitted with a suitable device limiting hot water temperature to a maximum of 48°C.

DRAINAGE
New foul and storm drains with outfall as site plan in 100mm plastic pipes. Bed and surround in pea gravel at minimum 1 in 40 falls. Cast iron covers and frames to chambers. All drains passing under slabs to be surrounded in 150mm concrete including granular surround. Pre-cast concrete linings to all wall openings where drains pass through.

PLUMBING
New waste connections to air admittance valves having rising eye and access point at base.
Sink, Bath and Shower 40mm waste and 75mm trap
Wash Basin 32mm waste and 76mm trap
W.C. and Cistern 100mm branch connection
All above ground drainage to comply with BS EN 12056-2.
Re-sealing traps where applicable. Head of drainage run to be vented via soil and vent pipe, minimum 900mm above any adjacent opening.

RAINWATER GOODS
New rainwater goods to be black uPVC HUNTER or similar with 65mm downpipes.

BACKGROUND VENTILATION
Background ventilation to the whole dwelling is to be 882,000mm² (min 500mm² to all habitable rooms and 2500mm² to Kitchens, Utility Rooms and Bathrooms with external walls). All internal doors are to have a 10mm undercut. Ensure all new windows incorporate tickle vents at min 1700mm above floor level.

EXTRACT VENTILATION
Mechanical ventilation is to be installed:
Kitchen extractor fan capable of 60 l/s, or cooker hood capable of at least 30 l/s
Utility extractor fan capable of 30 l/s
Bathroom/en-suite/WC extractor fan capable of 15 l/s
with 15 minute over run & connected to light switch (internal WCs only)
Certification required on completion.
All ducts to be in rigid pipework where possible & insulated where passing through roof voids etc.
All to be in line with the HM Government document 'Domestic Building Services Compliance Guide'.

FIRE ALARM SYSTEM
Detectors where indicated to be inter-connected and makes wired with emergency battery back-up supply to central control system. To be minimum 300mm from electrical fittings and maximum 7.5 metres from any adjacent habitable room door. All to comply with BS EN 14604 & installed to BS 5839-6:2019 (min. Grade A, Cat L02)

CARBON MONOXIDE ALARM
Carbon monoxide alarms to be fitted in all rooms with a solid fuel appliance. Alarm should comply with BS EN 50291:2010 + A1:2012 and be powered by battery designed for the working life of the alarm. The alarm should incorporate a warning device to alert users when the working life of the alarm is due to pass. Alternatively, a mains powered Type A alarm to BS EN 50291 with fitted wiring (not plug-in type) may be used provided they are fitted with a sensor failure warning device.

BUILDING REGULATIONS PART E RESISTANCE TO THE PASSAGE OF SOUND
All new dwellings are subject to pre-completion testing (PCT) for demonstrating that the proposals and workmanship comply with Requirement E1 of the building regulations. The developer is to liaise with the Local Building Inspector to arrange for a satisfactory testing programme. However, as an alternative to PCT it is strongly recommended that the developer make use of the robust standard details (RSD's) as designed by the House Builders Federation (HBF) in order to eliminate the risk of acoustic testing failure. These details will need to be registered with and certified by Robust Details Limited (Tel: 03330 882141 or www.robustdetails.com)

BUILDING REGULATIONS PART L CONSERVATION OF FUEL AND POWER
Ensure all building works are undertaken in line with the Communities & Local Government document 'Accredited Construction Details - June 2007, 1st Edition'. All new dwellings must be given an energy rating, using the Standard Assessment Procedure (SAP). The rating must be displayed in the property in the form of a notice of durable material, indelibly marked.
A target emission rate (TER) & target fabric energy efficiency rate (FEE) is required for each dwelling before works commence on site. A dwelling energy rate (DER) & dwelling fabric energy efficiency rate (DFEE) is required showing that the predicted rate of CO₂ emissions & fabric efficiency of the dwelling is not greater than the TER/FEE. Any individual elements of construction may change from the U-values quoted to achieve satisfactory results overall. An air pressure test will also be required on completion by specialist contractor.

BUILDING REGULATIONS PART M ACCESS AND USE OF BUILDINGS
A level, ramped or stepped approach (design criteria in accordance with the approved document part M) to the principle entrance door, whichever is suitable to the individual design.
Overall clear width of main entrance door to be no less than 775mm.
Disabled thresholds to entrance doors.
Ground floor internal doors to be 830mm wide with linings and stops to suit 900mm structural opening.
Ambulant disabled steps internally to ground floor storey.
Electrical sockets and switches to be within 450-1200mm from finished floor level.
Ground floor WC with an unobstructed clearance of 1000mm wide and 750mm deep to the door (on frontal approach). Internally provide min. width of 900mm with a clear unobstructed access of 750mm - max. basin size 350x250mm centred max. 400mm from the front face of the W.C.

BUILDING REGULATIONS PART P ELECTRICAL SAFETY
All electrical work must be designed, inspected and tested by a person competent to do so and comply with the Electricity At Work Regulations 1989 as amended.
Installation to comply with the Electrical Safety, Quality & Continuity Regulations 2002.
Installation to be tested before being taken into service and to comply with BS7671:2018 18th edition and certification to be provided. New consumer unit (non-combustible or in non-combustible enclosure) to be located at a height (switches) of between 1350-1450mm above FFL.

BUILDING REGULATIONS PART R PHYSICAL INFRASTRUCTURE
For high speed electronic communications network.
A suitable position for at least one network termination point should be identified for each dwelling & suitable during provided to connect all such network termination points to an appropriate access point. Location of both access point and termination point to be agreed with service provider prior to completion of dwelling.

LIGHTING EFFICIENCY
Reasonable provision of efficient light fittings in new buildings to number not less than 100% of total fittings to the dwelling. Efficient light fittings are those that only take lamps having a luminous efficacy greater than 45 lumens per circuit watt.
External lighting system to include:
Automatic extinguishable when there is enough daylight, and when not required at night. OR have sockets that can only be used with lamps having an efficacy greater than 45 lumens per circuit watt (such as fluorescent or compact fluorescent lamp types, and not GLS tungsten lamps with bayonet cap or Edison screw bases)

This drawing is to be read in conjunction with Drawing No. 19.3676.01 'Topographical Survey'

This drawing is to be read in conjunction with Drawing No.'s 19.3676.36-42 'Production Drawings'

Revisions :

Figured dimensions must be taken in preference to scaled dimensions and any discrepancies are to be referred to David Granger Architectural Design Limited. Contractors, subcontractors and suppliers must verify all dimensions on site before commencing any work or making any workshop drawings. All drawings are copyright of David Granger Architectural Design Limited. Ordnance Survey Data © Crown Copyright. All rights reserved. Licence No. ARF100020449. Landmark Ref. L163616



DAVID GRANGER
ARCHITECTURAL DESIGN LIMITED

Project
Proposed Replacement Dwelling
Wiseacre
Leicester Lane
Desford, Leicestershire
Drawing Title
Production Drawing
Sheet 2 of 7
Client
Mr and Mrs D. Patel
Drawing No.
19.3676.37

Date
Oct 2023
Drawn by
JAC
Scale (A1 Size)
As Shown
Checked by
SF/MP

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