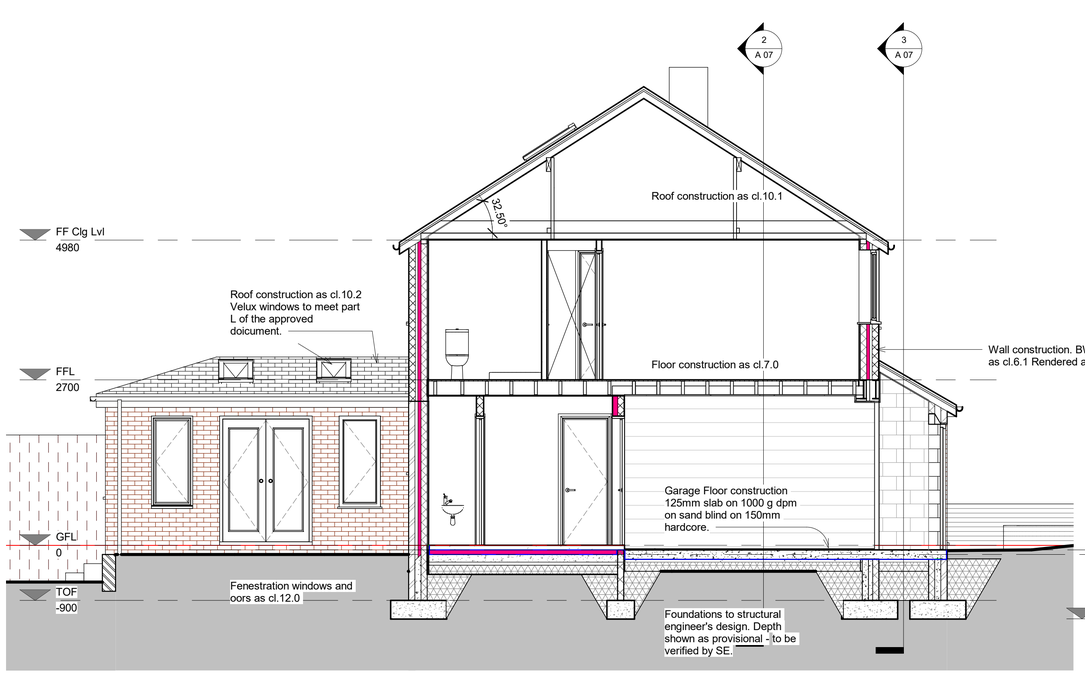
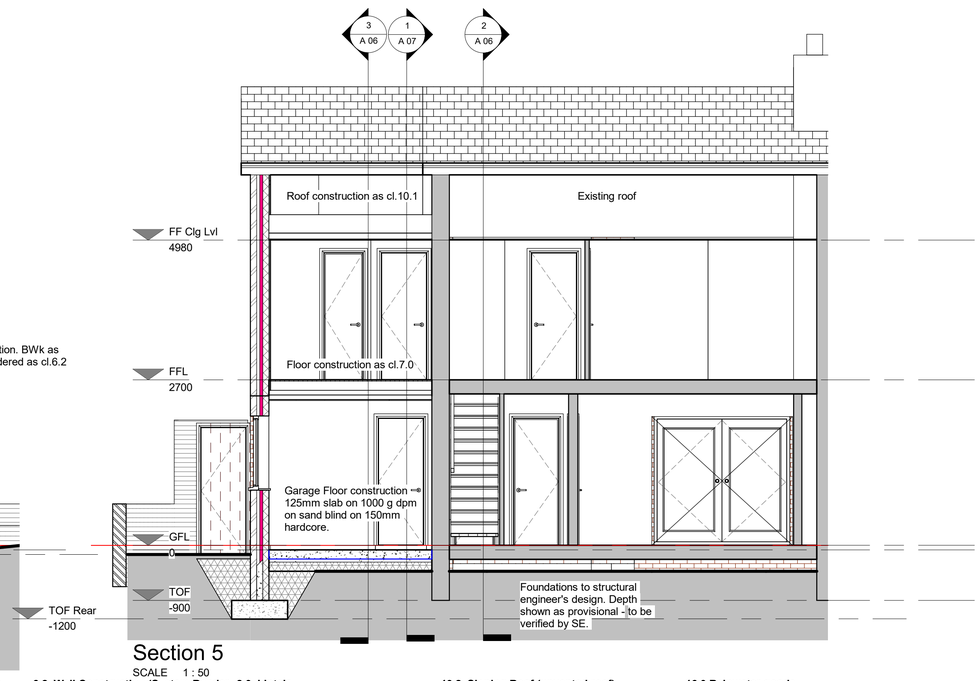


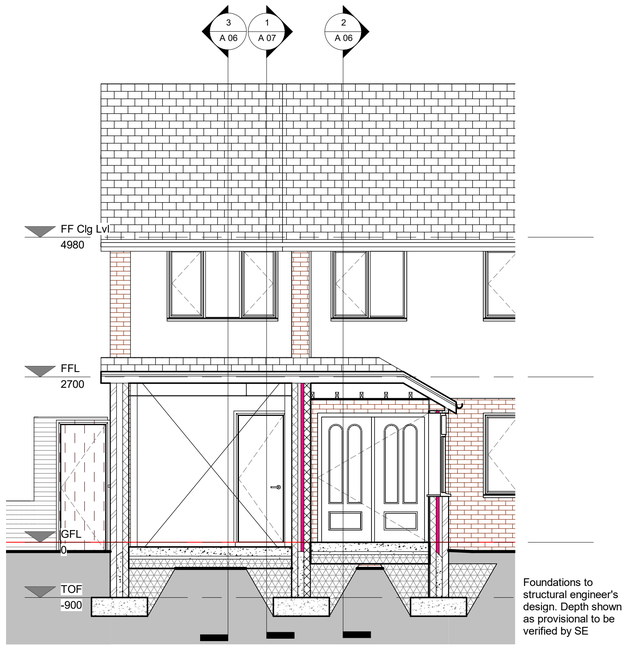
Section 4

SCALE 1 : 50



Section 5

SCALE 1 : 50



Section 6

SCALE 1 : 50

Scale 1 : 50

0 0.5 1 2.5 5 m

N

1.0 Foundation

Foundations designed by structural engineer taking account of the mining report. Depth to be verified by Structural engineer depending on ground conditions.

2.0 Drainage Works

Drainage works designed by Engineer to complete satifaction of the LA and utilities provider.

Surface Water:
Side extension works of equivalent area to exising footprint therefore proposed SW drainage will utilise existing SW drain into sewer.

Single storey extension into a soakaway depending on ground permiability. Otherwise drained into the combined sewer.

Foul Water
Utilising existing foul drainge connection into sewer.

Prior to any works being carried out the contractor is to check the location and invert level of the existing drainage systems on the site. All drainage work to be inspected and approved by the Approved, Building Inspector, prior to being covered up.

Generally: All new drains and accessories to be 110mm nominal size Polypipe or similar approved PVC-U underground drainage pipework to BS 4660, laid to falls as indicated on the drainage layout. All works in strict accordance with the manufacturers recommendations. Generally pipework under the building to be laid in class 'S' granular material bed and surround and encased in 150mm concrete where within 300mm of underside of floor slab, backfill to trenches to be selected as dug material and or MOT type 1 stone material to vehicular areas, all subject to building inspector approval. Pipework beyond the building to be laid in class 'S' granular material bed and surround subject to analysis and confirmation of ground conditions/soil types.

Generally 100mm diameter drains having less than 450mm cover are all to be encased in 150mm concrete as the manufacturers recommendations.
Pre-cast concrete lintels to be provided over all drains passing through masonry walls and or protected in accordance with Structural Engineers details where passing through foundations. To allow for possible differential movement provide flexible joint min 150mm away from wall/foundation to form rocker pipe as manufacturers recommendations.
All existing drains local to the construction works to be rodded, flushed through and dye tested to ensure the integrity of the whole system upon completion.
Polypropylene Inspection Chambers;
450mm dia inspection chamber and base to be installed on 100mm bed of suitable as dug or granular material in accordance with BS 5955: part 6 1980 and care should be taken to ensure the bedding material is evenly compacted under the base so the chamber is fully supported. Installed in accordance with manufacturers instructions and recommendations.

3.0 Construction part L Compliance
Approved document L says that the building fabric should be constructed so that there are no reasonablky avoidable thermal bridges in the insulation levels within various elements and where these meet other elements such as those around door and window openings. Provision should be made to reduce unwanted air leakage through parts of construction. Firstly by making sure that each element is built to a good standard ensuring that all gaps are filled; mortar joints in walls for example and that where components meet with other components there is filling, partressing, and mastic sealing of all joints as this will have a marked effect on the energy efficiency of the building.

4.0 Steelwork
Design of the steelwork to be as the structural engineer's design and specification and dimensionally compliant with the architect's general arrangement and detailed drawings. Final checks to be made on site prior to order and manufacture.

5.0 Ground Floor Construction
New Floor: 75mm Isocrete sand cement screed on 500 gauge polythene isolating vapour layer (lapped 300mm and taped, on 75mm Kingspan Kooltherm K103 PIR insulation on 125mm conc slab on 1200 gauge DPM, lapped 300mm and taped, on sand blinding to 150mm min of sulphate free hardcore. A maximum of 600mm built up in well compacted 150 layers. The above construction gives a min U value of 0.19 W/M2K which exceeds the min u value of 0.22W/M2K

6.1 Wall consstruction (Facing Brick)
Proprietary wall starters ancon or similar to Structural enginners spec.
312mm cavity wall construction comprising of 102mm faving brick, 110mm cavity partially filled with 50mm Kingspan Kooltherm 108 PIR, partial fill insulation leaving 60mm (to allow for additional render thickness on adjoining rendered block wall) clear cavity. Inner skin of 100mm 7 newton dense block faced with 12.5mm gypsum plasterboard (tapered edged, joints skim and filled) and BG multifinish skim. all edges to have galv trims to give reinforced and neat finish against abutments. Cavity wall ties (stainless steel double triangle with cavity wall restraint as per BR443) as specified by the structural engineer or otherwise structural engineer endorsed: installed at 900 centers horizontally and 225mm (every third course within 300mm of wall openings and min 50mm embedded in mortar joint. The above construction to achieve calculated U value of 0.25W/m2K..
2.Cavity closers: Closers to vertical reveals to be proprietary insulated hyload DPC or equivalent to optimise block surface for solidity.
3.Closers to window cills to be proprietary full cavity close units.
4.Proprietary Hyload DPCs provided at floor level 150mm above GL and to all opening reveals.
5. Cavity trays provided as integral to lintel or overlaid as a hyload membrane.
Weepholes provided with inserts every 900mm.

6.2 Wall Construction (System Render Applied)
Proprietary wall starters ancon or similar to Structural enginners spec.
312mm cavity wall construction comprising of 10mm proprietary through coloured render on 100mm outer block, 100mm cavity partially filled with 50mm Kingspan Kooltherm 108 PIR, partial fill insulation leaving 50mm clear cavity. Inner skin of 100mm 7 newton dense block faced with 12.5mm gypsum plasterboard (tapered edged, joints skim and filled) and BG multifinish skim. all edges to have galv trims to give reinforced and neat finish against abutments. Cavity wall ties (stainless steel double triangle with cavity wall restraint as per BR443) as specified by the structural engineer or otherwise structural engineer endorsed: installed at 900 centers horizontally and 450ctrs vertically and 225mm (every third course within 300mm of wall openings and min 50mm embedded in mortar joint. The above construction to achieve calculated U value of 0.24W/m2K..
2.Cavity closers: Closers to vertical reveals to be proprietary insulated hyload DPC or equivalent to optimise block surface for solidity.
3.Closers to window cills to be proprietary full cavity close units.
4.Proprietary Hyload DPCs provided at floor level 150mm above GL and to all opening reveals.
5. Cavity trays provided as integral to lintel or overlaid as a hyload membrane.
Weepholes provided with inserts every 900mm.

7.0 First floor construction;
22mm CABERBOARD 'P5 T&G' flooring grade chipboard on C16 timber floor joists sized to match existing first floor structure (Min' requirement: C16 44 x 195mm at no greater than 400mm centres), when planning joist spacings, a clearance of 25mm to 75mm between the first joist and the wall face should be allowed. Polythene separation layer lapped and taped.
110mm Kingspan Kooltherm K103 PIR insulation. Floor underdrawn using 15mm British Bypsum fire line plasterboard with all joints taped and a smooth skimmed finish. The above construction to give 1 hr fire resistance and 0.22 W/M2K U value.

All members running parallel to walls to be restrained using 30 x 5 x 1200mm mild steel straps in compliance with BS EN 845-1, at maximum 1.2m centres carried across outer three joists and into inner leaf of wall. Contractor to determine best suited positions. Where joists are supported on hangers restraint straps along the direction of the joists at not more than 2m centres are required or where joists are built into a wall and bear at least 90mm on the wall no restraint straps are required along the joist direction.

Notches for services to be in accordance with NHBC standards. Floor joists to be doubled up under first floor partitions with noggins where there is no joist directly under. Joists to be fixed via SIMPSON 'Strongtie Joist Hanger' or similar. All to be inspected by Building Inspector.

8.0 Lintels
Provided in accordance with the structural engineer's calculations and specification and drawings.

Cavity Walls/Internal masonry Walls:
All lintels in cavity walls to be of IG type or equivalent with an insulated core and integral cavity tray. All sized in accordance and installed with the Structural Engineer's/Manufacturer's requirements but of contractor's choice.

All lintels to have a min end bearing of 150mm except where stated by Structural Engineer. Overall length of lintel to be checked on site prior to order.

9.0 Anchor Straps.
Lateral Support at roof level: Provide 30mmx5mm-galvanized MS anchor straps fixed at centres not exceeding 2000mm (as
shown on A1/2 diagram 19 (a) 1992 building regulations). All to comply with A1/2 part C 1992 (as amended) Building Regulations and CP.111: 1970.

Vertical Strapping of wall plate: Provide 30mmx5mm, 1metre in length - galvanised MS anchor straps fixed at centres not exceeding 2000mm (as shown on A1/2 diagram 19 (c) 1992 building regulations) All to comply with A1/2 part C 1992 (as amended) Building Regulations and CP.111: 1970.

Lateral support at timber, floors and ceilings: Fixed to a minimum of 3 floor and or ceiling joists (as shown on A1/2 diagram 18 1992 building regulations). Straps to be built into external walls at centres not exceeding 2000mm as work proceeds to give the required lateral restraint in accordance with diagram 18 of the Approved Document.

10.1 Sloping Roof (Cold roof - vented roof space)
Concrete interlocking single lapped interlocking tile to match existing on 50 x 38mm tan roofing battens on on 50x38 counter battens on 0.5 mm Nilvent breathable membrane on C16 150x44mm tanalised rafters at 600mm centres, Ridge Steel in accordance with Structural engineers (SE) design. Purlins Tan C16 225x 75mm. Connections in accordance with SE design.

300mm of quilt mineral wool insulation laid between the joists and perpendicular to the joists. The above construction to achieve 0.16w/m2K min.

Glidevale over eaves vent to achieve min of 25mm continuos gap and dry ridge system to achieve min of 10mm continuous air gap at the ridge.

10.2 Sloping Roof (unvented roof)
Concrete interlocking single lapped interlocking tile to match existing on 50 x 38mm tan roofing battens on Kingspan nilvent breathable membrane, on 18mm external grade plywood on 50x38 counter battens on 0.5 mm Nilvent breathable membrane on C16 150x44mm tanalised rafters at 400mm centres, Ridge Steel in accordance with Structural engineers (SE) design. All in accordance with structural engineers design. The above construction to achieve 0.15W/m2K.

11.0 Internal Partitions
Stud partitions to be constructed of 100x50 regularised SW framing. Studs to be installed at 400mm centres secured to head and sole plates, noggins at 600ctrs. Partitions to be faced both sides with 12.5mm tapered edged plasterboard (joints to be scrimmed and filled) allowed to dry and then skim finish applied. All voids filled with sound deadening quilt.

12.0. Double glazed windows and doors
UPVC glazed window designed and installed by specialist (FENSA approved) to achieve a U value of 1.6 W/M2K and 1.8 W.M2K (doors) respectively. Areas of glazing when calculated give no greater than 40% of the surface of the external wall. The opening lights no less than 20 % of the floor area. Trickle vents to be provided to all habitable rooms eq 8000mm2

13.0. Electrical work -
To be carried out by a competent contractor registered under one of the new self-certification schemes. E.g. A person registered by BRE Certification Limited (a) British Standards Institution (b) ELECSA Limited (c), NICEIC Certification Services Limited (d) Zurich Certification Limited (e) in respect of that type of work. Fittings in positions of owner's choice. Sockets 450mm above floor and 150mm above worktop level and light switches 1200mm above floor level.

14.0 Soil & vent pipes
100mm dia. soil & vent pipe to be connected to 90^{0} rest bend via short length of straight pipe at base connection to main foul run. via 100mm dia. pipework.
Svp's at heads of runs to be vented at roof level, pipe to be fitted with pipe flash at roof penetration and to terminate with p.v.c. vent cowl. Svp to terminate 900mm above eaves level, to be fitted with a 'wire cage' or perforated cover which does not restrict air flow.

15.0 Sanitary goods and waste
Internal pipework and associated fittings to be upvc by Marley, or similar approved manufacturer to BS. 5255: 1976 and BS. 5572: 1978. All joints to be of the '0' ring seal type. Minimum branch size and seal depths to be as follows:

Wash hand basin	32 dia. 75mm seal
Sink	40 dia. 75mm seal
Bath/Shower	40 dia 75mm seal
W.C.	100 dia 50mm seal
SVPs	100 dia.

All traps to be anti-syphon type deep seal traps Marley multi boss connectors to be provided at all main toilet waste/svp connection.

16.0 Rainwater goods
Gutter to be Marley Deepflow or similar approved with 68 mm dia. downpipes complete with all fittings as necessary, Black in colour. Downpipes to be in positions shown on plans, with overall installation of rainwater dispersal system carried out in accordance with manufacturers recommendations.

17.0 Mechanical Ventilation
Mechanical ventilation provided to the ensuite to give min 15 litres with overun to clear moisture linked to light switch with isolater.

18.0. Smoke detectors
Provide and fix self-contained smoke alarms fixed to the ceiling at least 300mm away from any wall. Detector to be within 7000mm of kitchen and living room and provided within 3000mm of all bedrooms. At least one detector will be provided to each floor and to be interconnected and permanently wired to a separately fused circuit. If a smoke detector is wall mounted this will be placed between 150mm-300mm below the ceiling level and not over a radiator.

18.0. Heating
Where the boiler is upgraded to meet extra load. The heating and hot water will be supplied by a condensing type boiler with a minimum SEDBUK value of 86%.

19.0. Leadwork
All leadwork to comply with requirements of BS6915 miled lead sheet to BS 1178 to be used as follows:

Lead soakers to be code 3or4. Apron and cover flashings , hip and ridge, pitched valley gutters, weatherings to cornices, parapets etc, lead slates and chimney/parapet box and tapered gutters to be code 5to8.

All dimensions where shown are to be checked prior to the order or manufacture of components.

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All discrepencies to be brought to the attension of APT Architectural services LTD immediately. This drawings shall be read in conjunction with all other drawings produced for the project including other consultants and specialists drawings.

The contractor is to make good preparation before starting the job including carring out a thorough Risk Assessment method statement and this will include scanning for underground services. The contractor must make any checks on dimensions, including any sewer invert levels before commencing works.
The contractor must notify where necessary the HSE of any works which fall under the CDM regulations. And carry out work safely in respect of its own employees and the general public.

Works must comply with all statutory bodies and meet industry standards including building regulations and codes of practice.

Rev	Description	Date

CODE	SUITABILITY DESCRIPTION
STATUS	PURPOSE OF ISSUE

APT Architectural Services Ltd.
New builds and extensions
Email: adrianptaylor@outlook.com
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PROJECT

Residential Extension at No8 Oxhey Drive, Biddulph, Staffordshire. ST87EU

TITLE

Sections - As Proposed

CLIENT

Andrew Robinson

DRAWN BY	CHECKED BY	DATE
Author	Checker	04/06/20

SCALE (@ A1)	PROJECT NUMBER
1 : 50	1002

DRAWING NUMBER	REV
A 07	